RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES



RAKCODS Health and Safety

Policies and Procedures Manual

2025-2028

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2. FOREWORD

RAK College of Dental Sciences (RAKCODS) was established in 2007 with the launch of its undergraduate Bachelor of Dental Surgery (BDS) program, which is accredited by the Ministry of Education, UAE. In line with its commitment to academic growth and postgraduate education, the College has expanded its academic portfolio and currently offers three Master of Dental Surgery (MDS) programs in Prosthodontics, Orthodontics and Periodontics. Accordingly, RAKCODS is no longer limited to undergraduate education alone, and its academic, clinical, and administrative frameworks are designed to support both undergraduate and postgraduate programs.

The RAKCODS Policies and Procedures (PnP) Manual applies to all students, interns, staff, and faculty across undergraduate and postgraduate programs. It serves as the primary institutional reference outlining the policies and procedures governing professional conduct, academic and clinical operations, patient care, and administrative practices within the College. All policies contained in this manual are aligned with the mission, vision, and strategic objectives of RAKCODS.

This edition of the Policies and Procedures Manual reflects a comprehensive institutional review and update. Although the manual was initially scheduled for revision by September 2025, the review process was extended to allow for broader consultation, governance oversight, and quality assurance processes. Consequently, the revision was completed in January 2026. This extension was undertaken to ensure completeness, consistency, and alignment with institutional, regulatory, and accreditation best practices.

A major enhancement introduced in this revision is the standardization and revision of the policy metadata table across all policies. The revised metadata structure strengthens governance by enhancing clarity, accountability, version control, approval transparency, and review scheduling. As a result, the edition number of all policies has been advanced to the next applicable edition to accurately reflect this standardized metadata update, even in instances where no substantive policy content changes were required.

In addition, several new policies have been introduced, including Diversity, Equity and Inclusion (DEI), Dental Management of Medically Compromised Patients, and the Rapid Response Team (RRT) policy. These additions further strengthen the institutional framework and reinforce RAKCODS' commitment to patient safety, inclusivity, and clinical preparedness.

While this manual applies to both undergraduate and postgraduate programs, it is important to note that policies and procedures specific to the Master of Dental Surgery (MDS) programs will be incorporated progressively. Program-specific policies will be formally included by the end of the first year of the MDS programs, or at a later stage, once these postgraduate programs and their operational processes are thoroughly established, validated, and approved through the appropriate governance mechanisms. Accordingly, such MDS-specific policies do not form part of the current edition of this manual.

RAKCODS remains committed to the fair and equitable treatment of all its stakeholders, including students, patients, staff, and faculty, in accordance with established policies. This manual is intended to serve as the principal reference document for institutional policies and procedures. Supplementary operational or administrative documents may be issued to support specific functions, provided they remain consistent with the provisions of this manual.

All departmental policies and documents must align with this manual. Substantive changes to policies are processed through the College's established governance mechanisms. The College reserves the right to interpret, amend, revise, or discontinue any policy or practice, in whole or in part, in response to changes in legislation, regulatory requirements, accreditation standards, or institutional needs. As updates occur, relevant sections of the manual will be revised accordingly, and a detailed record of changes will be maintained.

The Policies and Procedures Manual is accessible to all RAKCODS students, interns, staff, and faculty via the shared institutional folder. A hard copy is maintained with the Chairperson, Clinical Sciences, and the Manager, Quality and Patient Safety.

Purpose of the Policies and Procedures:

The policies contained in this manual are intended to:

- Enhance patient safety within RAKCODS
- Facilitate adherence to recognized professional and ethical practices
- Promote compliance with regulatory, statutory, accreditation, and quality assurance requirements
- Reduce unwarranted variation in practice
- Serve as a comprehensive resource for students, interns, staff, and faculty, particularly new personnel
- Reduce reliance on memory, thereby minimizing the risk of human error or oversight

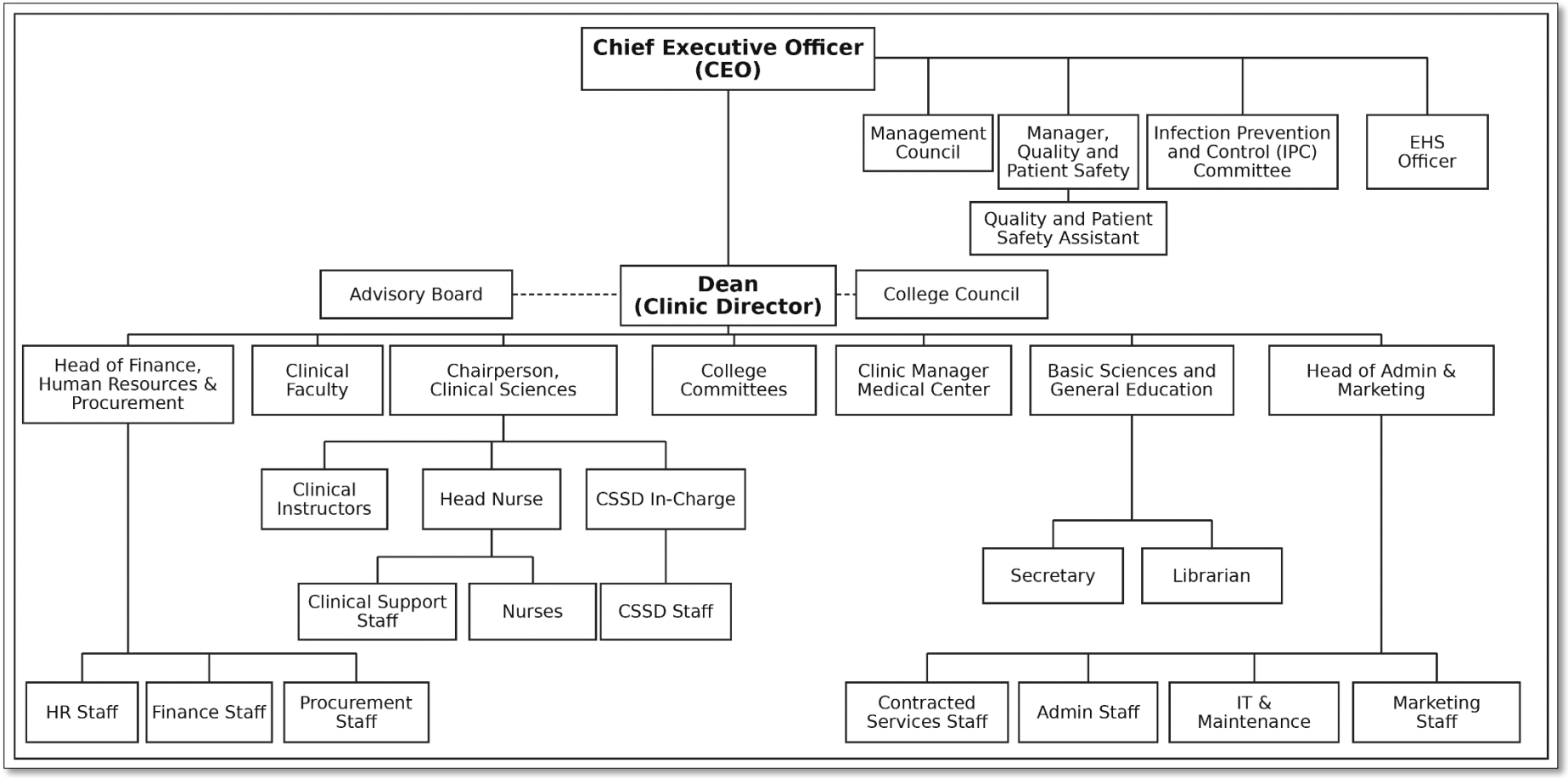
Preparation: All the faculty and staff have contributed towards the successful preparation of the policies.

Compilation and Review: The policies herewith were compiled and reviewed by Dr. Muhammed Mustahsen Rahman, Dean, and Dr. Vivek Padmanabhan, Chairperson Clinical Sciences.

Approval: All the policies have been finally reviewed and approved by the CEO of RAKCODS, Mr. Muhammad Hassan Khan.

Sincerely,
Dr. Vivek Padmanabhan
Chairperson, Clinical Sciences
Manager, Quality and Patient Safety

3. ORGANIZATIONAL CHART



Head of Finance & HR | Dean | Chief Executive Officer

4. FACULTY AND STAFF

Sr	Name	Designation
1	Dr. Muhammed Mustahsen Rahman	Dean/ Professor
2	Dr. Dusan Surdilovic	Professor
3	Dr. B Samarakoon Mudiyanselage Samadarani Siriwardena	Professor
4	Dr. Vivek Padmanabhan	Chairperson, Clinical Sciences/ Associate Professor/ Manager QPS
5	Dr. Md Sofiqul Islam	Associate Professor
6	Dr. Mohamed Ahmed Mohamed Helal	Associate Professor
7	Dr. Shaza Bishti	Associate Professor
8	Dr. Mohamed Ahmed Elsayed Mousa	Assistant Professor
9	Dr. Nada Tawfig Hashim Ahmed	Assistant Professor
10	Dr. Riham Abdelraouf Hyder Mohammed	Assistant Professor
11	Dr. Fadia Alfateh Hamed Alneel AwadAlkreem	Assistant Professor
12	Dr. Krishna Chytanya Nallan Chakravartula Sri	Assistant Professor
13	Dr. Sara Zaki Mohamed Zaki	Assistant Professor
14	Dr. Muhammad Mahmoud Albush	Assistant Professor
15	Dr. Mohamed Zahoor ul Huqh	Assistant Professor
16	Dr. Khaled Mohamed Wafaie Morsi Mohamed	Assistant Professor
17	Dr. Aliaa Ali Abdelaziz Khadre	Assistant Professor
18	Dr. Aqsa Shah Khan	Instructor / GP
19	Dr. Shumaila Azhar	Instructor / GP
20	Dr. Gabriela Kalanoska	Instructor / GP
21	Mr. Thomas Puthuppallil Joseph	Radiology Tech
22	Mr. Aldrich Acuin Reolo	Asst. Nurse
23	Ms. Melody M. Barlaan	Asst. Nurse
24	Mr. Khadim Hussain	Dental Nurse
25	Ms. Mari-Andre T. Calingasan	Dental Assistant
26	Ms. Josephine B. Velonza	Nurse
27	Ms. Raushan Aara	Dental Assistant
28	Ms. Saraswati Kumari Sah	Dental Assistant
29	Ms. Puja Dipu Das	Head Nurse/ Store-in-Charge
30	Ms. Hajara Kallidukkil	Dental Nurse
31	Ms. Martine Pekariekoue Njitarie	Assistant Nurse
32	Ms. Sherin Mariam Chacko	Nurse
33	Mr. Harvey Espinoza Magno	Nurse

Sr	Name	Designation
34	Ms. Noureen John	Assistant Nurse
35	Ms. Dayana Joseph	Assistant Nurse
36	Mr. Uzair Faqir	CSSD Technician
37	Ms. Neethu Rappai	Nurse
38	Dr. Shana Mol	Dental Assistant
39	Ms. Esther Olafehintoluwa Jayeola	Nurse
40	Ms. Amani Khalid	Dental Assistant
41	Dr. Misbah Sultana	Research & Patient Experience Officer
42	Mr. Muhammad Amir	Librarian
43	Ms. Jennivive Kareen Gomez Peña	Senior Secretary
44	Mr. Nisar Ahmed Nisar	Head - Finance, HR & Procurement
45	Mr. Muhammad Asif Khan	Finance Officer
46	Ms. Jenefer Rose Diez	Assistant Manager, Finance & HR
47	Mr. Atiq-ur-Rehman	Head - Marketing & Admin
48	Mr. Shahraiz Akbar	Deputy Manager, Marketing
49	Mr. Ibrahim Niazi	Marketing Officer
50	Mr. Mohammad Majed Khalefa	Business Promotion Officer
51	Mr. Mahmoud Ismail Mahmoud Abu Nawa	Marketing Officer
52	Mr. Muhammad Zahid Khan	Assistant Manager, Administration
53	Mr. Tarig Mohammed Alfadle Ebrahim	Maintenance Supervisor
54	Mr. Tanveer Akhtar	IT Supervisor
55	Ms. Lhamqueen Morales	Customer Service Officer
56	Mr. Kashif Nazir	Procurement/ EHS Officer
57	Ms. Aprille Mae Quinto Barcelona	QPS & Facility Assistant
58	Ms. Noor Fatima	Customer Service Assistant
59	Mr. Nur Mohammed Abutaher	Driver
60	Mr. Javeed Khan	Driver
61	Mr. Liaqat Ali	Clinic Attendant
62	Mr. Attiq ur Rahman	Clinic Attendant
63	Mr. Muhammad Farooq	Senior Attendant

5. ABBREVIATIONS USED

1. AD- Administration
2. ADR- Adverse Drug Reactions
3. ALARA – As Low As Reasonably Achievable
4. BMPs- Best Management Practices for Amalgam waste
5. Cl- Clinical
6. DHCP- Dental Health Care Providers
7. EOC – Emergency Operations Center
8. FMS- Facilities and Management Services
9. HCW- Health Care Workers
10. HEPA- High Efficiency Particulate Air
11. HIMS- Health Information Management System
12. HR- Human Resources
13. HS- Hospital Safety
14. ICRP- International Commission on Radiological Protection
15. IDA – Initial Dental Assessment
16. IM- Incident Manager
17. INA – Initial Nursing Assessment
18. IPC- Infection Prevention and Control
19. IPCC- Infection Prevention and Control Committee
20. MOHAP – Ministry of Health and Prevention
21. NU- Nursing
22. PAS- Public Address System
23. PEO – Patient Experience Officer
24. PPE- Personal Protective Equipment
25. PPMP- Planned Preventive Maintenance Program
26. QA- Quality Assurance
27. QPS- Quality and Patient Safety
28. RAK- Ras Al Khaimah
29. RAKCODS MC- RAK College of Dental Sciences Medical Center
30. RAKCODS- RAK College of Dental Sciences
31. RCA- Root Cause Analysis

6. VISION, MISSION, CORE VALUES AND GOALS

Vision

To be a leading dental institute in the UAE and the GCC region, dedicated to the pursuit of academic excellence as well as making valuable contribution to the community in oral healthcare.

Mission

To prepare graduates who have evidence-based knowledge and skills in the dental profession, enabling them to make a valuable contribution at an individual as well as at community level too. RAKCODS is also committed to contribute to the advancement of knowledge by supporting research conducted by its faculty and students, following ethical practices, in the process of encouraging lifelong learning.

Core Values

Honesty and Integrity: Upholding a commitment to truthfulness and ethical conduct, ensuring transparency and trust in all interactions.

Community and Client Centeredness: Prioritizing the needs and well-being of both the broader community and individual clients, fostering a sense of belonging and shared purpose.

Patient Safety: Dedication to providing a secure and vigilant healthcare environment, minimizing risks and ensuring the well-being of patients at all times.

Healthy and Safe Work Environment: Establishing a workplace that prioritizes the physical and mental well-being of employees, fostering a culture of safety and care.

Student Centricity: Placing students at the core of educational practices, tailoring learning experiences to their needs and providing a supportive and enriching environment.

Excellence and Continuous Quality Improvement: Committing to the pursuit of excellence in all aspects of work, coupled with an ongoing dedication to refining processes and practices for continuous enhancement.

Lifelong Learning: Encouraging a culture of continual personal and professional development, recognizing the value of learning throughout one's life.

Diversity, Equity and Inclusion: Striving for fairness and impartiality, acknowledging and addressing disparities to ensure equal opportunities and treatment for all individuals.

Innovation: Fostering a culture that embraces creativity and forward-thinking, encouraging the development and implementation of new ideas and solutions.

Client and Family Centered Care: Ensuring that healthcare services are not only patient-focused but extend to include the support and involvement of families, recognizing the importance of holistic care.

7.

ADMINISTRATION POLICIES

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Administration**	**Prepared by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Title:	**Policy on Policies**	
Policy Number:	**AD.01**	
Ownership:	**RAKCODS**	**Reviewed by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Effective (Issue) Date:	**Sep 2019**	
Edition Number	**3**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. Purpose & Scope

This policy addresses the process for developing, issuing and maintaining all RAK College of Dental Sciences (RAKCODS) policies and applies to all the associated departments, Students, Interns, faculty and staff.

2. Policy Statements

The purpose of this policy is to ensure that RAKCODS community has ready access to well-developed and understandable policies.

2.1. Policies that are easy to find, read and understand will:

2.1.1. Support the achievement of RAKCODS Vision, Mission and Core Values.

2.1.2. Achieve accountability by identifying the offices responsible for Policies.

2.1.3. Provide students, interns, faculty and staff with clear, concise guidelines.

2.1.4. Document on how the university conducts business.

2.2. RAKCODS policies will be:

2.2.1. Presented in a common format.

2.2.2. Formally approved by the authorized body.

2.2.3. Maintained centrally and accessible to all interested parties.

2.2.4. Linked electronically to procedures for implementing the policy.

2.2.5. Kept current within the framework of an organized system of change control. Policies will be clearly distinguished from related procedures according to the definitions in section III below. Individuals who are responsible for writing, updating and distributing RAKCODS-wide policies must comply with this policy. Internal policies that apply to the operations of individual units or departments may not conflict with RAKCODS-wide policy but may be more restrictive.

3. Definitions

3.1. Policy: A policy is a statement of management philosophy and direction, established to provide guidance and assistance to the RAKCODS community in the conduct of its affairs.

RAKCODS policy:

3.1.1. It is a governing principle that mandates or constrains actions

3.1.2. Has institution-wide application

3.1.3. Changes in the policy will be made at the next review unless it is a dynamic policy, the approval should be sought from the authorities for the same.

3.1.4. Helps ensure compliance with applicable laws and regulations

3.1.5. Reduces institutional risk, and

3.1.6. Approved at the executive levels of RAKCODS (Faculty, Chairpersons, Dean).

3.2. Administrative Policies: Policies governing the operations of RAKCODS.

3.3. Clinical Policies: Policies which deal with the clinics, patients and associated factors.

3.4. Nursing Policies: Policies which deal with the nursing staff

3.5. Hospital Safety Policies: Policies which deal with Infection Prevention and Control, FMS, Bio Medical, Ethics related policies.

3.6. Procedure: A procedure is a guideline or series of interrelated steps taken to help implement the policy.

3.7. Initiator: The Policy Initiator is any faculty, staff member, or student who identifies a university-level issue and develops a policy proposal.

3.8. Policy Owner: The Policy Owner is RAKCODS.

4. Policy

4.1. Policy Development: The Policy Initiator may identify a policy issue and develop it into a policy proposal. The Policy Initiator will submit the policy proposal for review and endorsement.

The following are minimum to be followed while preparing policies

4.1.1. Header information: (mandatory element)

4.1.1.1. Policy type.

4.1.1.2. Title.

4.1.1.3. Policy number

4.1.1.4. Person responsible for preparation.

4.1.1.5. Person responsible for review

4.1.1.6. Person who approved

4.1.1.7. Effective (Issue) date and review date

4.1.1.8. Edition number, next review date and the document record change will be updated accordingly

4.2. Scope: (mandatory element) Identification of parties governed by the policy.

4.3. Policy Statement: (mandatory element) Purpose of the policy and the statement of philosophy, position, rule, regulation or direction.

4.4. Definitions: (optional element) Meaning and interpretation of terms used in the policy.

4.5. Policy: (mandatory element) Description of the actual policy covering topics which include duties assigned to responsible parties and other parties as necessary; other information specific to a particular policy subject as needed; and a description of the compliance review process and specific authority to impose penalties or other remedies when noncompliance occurs, if applicable.

4.6. Effective (Issue) Date(s): (mandatory element) Initial effective date of policy.

4.7. Frequency of review and update: (Mandatory element) Measure of time during which the policy must be reviewed and updated. It is recommended that a policy be reviewed triennially, unless changes in laws or university business needs require a different review/revision schedule.

4.8. Authorization of Policies and date of approval: (mandatory element) required for initial approvals and all subsequent reviews and updates.

5. Location of Policies

To ensure ready access to all the RAKCODS policies, RAKCODS has maintained a shared folder on the desktops and laptops of all computers within RAKCODS. The same policies and procedure manual is also mailed to all stakeholders. Hard copy is available in the office of the Chairperson, Clinical Sciences and Manager, Quality and Patient Safety.

6. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2	22nd Dec 2025	The existing meta table had Policy/Procedure Type: Title: Policy Number: Ownership of Policy: Issue Date: Next Review Date: Prepared by: Reviewed and Approved by:	The revised meta table contains the following: Policy Type: Title: Policy Number: Ownership: Effective (Issue) Date: Edition Number Next Review Date Prepared by: Reviewed and Approved by:

Authorization Form

Prepared and Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Administration**	**Prepared by:** **Ms. Jenefer Rose Diez** **HR Officer**
Title:	**New Employee Orientation**	
Policy Number:	**AD.02**	**Reviewed by:** **Mr. Nisar Ahmed Nisar** **Head of Finance and HR**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. Purpose & Scope

It serves as an important element of the new employee's welcome and organizational integration. It ensures each employee receives the policies and procedures manual of RAKCODS and all other information necessary to carry his/her professional duties

RAKCODS believes that Orientations:

- It can help the employee get up to speed much more quickly, thereby reducing the costs associated with learning the job.
- Helps to reduce anxiety that results from entering an unknown situation and helps provide guidelines for behavior and conduct, so the employee doesn't have to experience the stress of guessing.
- Show that the organization values the employee and helps provide the tools necessary for succeeding in the job.

2. Procedures

When reporting for duty the employee will be given the standard General Orientation Form (**Appendix AD.02-1**) by HR team.

Orientation will consist of the following:

2.1. Review the Policy, Procedures, Rules and Regulations within seven days. (Policy & Procedure Manual).

2.2. Complete New Employee Orientation Checklist within two weeks.

2.3. A copy of the completed orientation form will be filed in the employee's record.

2.4. The standard orientation form can be obtained from HR office if not already provided

2.5. The foreign employee in the country must be taken a tour around the City especially to the main governmental authorities needed (Etisalat, FEWA, Municipality and any other as needed).

2.6. Orientation will be conducted by the Administrative Assistant and respective office representatives.

Appendix AD.02-1

RAK College of Dental Sciences

General Orientation Checklist

Staff Name: _____ Joining Date: _____

Designation: _____ Department: _____

S. No	Areas Covered			Responsible Dep't/ Process Owner	Trainer's Name	Trainer's Signature
1	Policy & procedures manual, staff policy, leave, and work timings, insurance, Cultural or Religious barriers, if any, UAE Culture and Heritage, Introduction to all staff, Basic facilities tour (Toilet, lunch, prayer area,etc)			HR Representative		
2	☐	Biometric registration for attendance		IT Supervisor		
	☐	Emails				
	☐	Printer access				
	☐	Software/ Application:				
		○ HIMS ○ UMS ○ SHF/ SPI ○ Peachtree ○ HRMS ○ Koha Library	○ Queue Mgt. System ○ X-ray/ OPG ○ CAD/CAM ○ CBCT ○ MS Office			
	☐	Hardware: Server, laptop/desktop operation, tel. exchange, WIFI, etc.				
3	Department Tour: Work Station/work area , Job roles, functions and responsibilities			Head of Department/ Dep't Representative		
4	☐	Infection control policy		Infection Prevention and Control Committee		
	☐	Environmental Cleaning				
	☐	Hand hygiene				
	☐	Sterilization requirement				
	☐	Needle stick injury				
5	Radiation Safety			Radiology Tech.		
6	☐	Medical record documentation		Quality & Patient Safety Manager		
	☐	Incident reporting				
	☐	Complaint and grievance procedure				
	☐	Care delivery model of the organization				
	☐	Quality improvement plan				
7	Ethics Framework			Ethics Committee Chairperson		
8	Fire Safety and Emergency Procedures (e.g. Location of fire exits, fire extinguishers, fire alarms, Assembly areas, RACE, PASS, Emergency numbers) and Environment, Health & Safety			FMS Representative		

Staff Signature: _____ **Remarks:** _____

HR: _____ **Date:** _____

3. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2	27th Oct 2025		Appendix AD.02-1 was changed.

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Administration**	**Prepared by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Title:	**Staffing Plan**	
Policy Number:	**AD.03**	
Ownership:	**RAKCODS**	**Reviewed by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Effective (Issue) Date:	**Sep 2019**	
Edition Number	**3**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. Purposes

1.1 To make certain that different services and departments have sufficient faculty and staff with the right skills and experience to ensure a successful work completion and is in accordance with the Ministry of Education, UAE Standards.

1.2 To plan for unpredictable situations.

1.3 To promote patient's safety.

1.4 To improve utilization of resources.

1.5 To ensure the availability of the number, type and mix of required faculty and staff to meet patient's needs.

2. Scopes

It covers all academic, clinical and managerial departments which include:

2.1 Faculty

2.2 Administrative staff including HR, Finance and Marketing

2.3 Clinical and Technical Support Staff

3. Process

The staffing plan has been developed by the Dean's office in consent with HR, Admin and Chairpersons. The staffing plan was discussed and approved by the Leadership of RAKCODS.

4. Methodology

The methodology of the staffing plan is customized to suit RAKCODS

4.1 Faculty

Academic and clinical training services are provided as per the semester schedule. However, the official duty hours are from 08:30 a.m. to 07:30 p.m., Monday to Thursday, and from 08:30 a.m. to 12:15 p.m. on Fridays. Faculty are required to work for a maximum of 40 hrs. a week as per the Ministry of Education (MOE) guidelines. The faculty are appointed in different disciplines as per the academic load and qualification as mentioned in the MOE, UAE standard (Licensure and Accreditation) 2019.

4.2 Administrative staff including HR, Finance and Marketing

HR has established the staffing requirements based on the nature of tasks and the projected workload for the year. Recruitment is in accordance with the needs and qualification required for the position.

4.3 Clinical and Technical Support Staff

RAKCODS is following a recognized staffing approach for Dental Assistants and Technicians to meet the staffing needs in the organization.

5. Assignment and Reassignment of Faculty and Staff

5.1 The process of assignment and reassignment of faculty and staff is not encouraged unless there is a specific or emergency need. It is required in some situations to review the assignment status of working faculty and staff in certain disciplines. The following points are considered in this situation:

5.1.1 The workload requirements.
5.1.2 Work nature and variation.
5.1.3 Staff request for reassignment based on cultural values or religious beliefs.
5.1.4 Others as appropriate.

6. Transfer of Responsibility from One Individual to Another

Transfer responsibility from one individual to another is limited to the same discipline.

7. Revision of the Plan

7.1 Staffing plan shall be assessed on an ongoing basis in response to selected outcome measures. Examples of outcome measures may include performance improvement, patient experience, occurrence variance reports, and employee satisfaction.

7.2 If selected outcome measures are unsatisfactory, an assessment shall be made and if necessary, staffing levels shall be adjusted to meet the academic and clinical patient care needs.

8. Faculty and Staffing Plan Monitoring

8.1 Feedback from students as recorded in the IRO survey/manual
8.2 Self-Assessment of faculty and staff
8.3 Appraisal by the supervisor and reviewer
8.4 Clinical/service indicators
8.5 Patient experience surveys

9. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Prepared and Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Administration**	**Prepared by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Title:	**Patient Registration**	
Policy Number:	**AD.04**	
Ownership:	**RAKCODS**	**Reviewed by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Effective (Issue) Date:	**Sep 2019**	
Edition Number	**3**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

To understand the criteria of patient registration within RAK College of Dental Sciences (RAKCODS) and also to know other types of patient definitions.

2. Policy Statements

2.1 The following are the conditions regarding age for registration at RAKCODS as patients.

2.1.1 Patients aged above 70 years will be registered only for consultation, and treatment will be provided at the discretion of the specialist faculty involved.

2.1.2 Patients aged below 4 years will be registered only for consultation and preventive treatment.

2.1.3 Patients with special healthcare needs, including those with physical disabilities who cannot be transferred from a wheelchair to the dental chair or are unable to sit on the dental chair, as well as patients with intellectual or developmental disabilities, will be registered only for consultation, and further management will be determined by the specialist faculty involved.

2.1.4 For minor patients—defined as individuals below 18 years of age (17 years and 11 months) and patients with special healthcare needs as mentioned in 2.1.3—legal guardians or parents are required to provide consent and sign all relevant documents

on their behalf at the reception and within the clinics. This ensures that the minor's dental care is authorized by a responsible adult who can make informed decisions regarding their treatment.

2.1.5 Upon arrival at the reception, patients will be assessed to determine whether they meet any of the criteria that preclude registration for treatment at RAKCODS. Such patients will be appropriately informed of the reasons for non-registration and guided or referred to an appropriate external healthcare facility, as applicable. If the patient chooses not to proceed with the suggested referral, it shall remain the patient's responsibility to seek care at a healthcare facility of their choice.

3. Definitions

3.1 Registered or Registrable Patients will fall within the following categories:

- **New Patient**: A patient who has not received any professional services from RAKCODS.
- **Follow up patients**: Patients in current treatment with existing files.
- **Inactive Files**: Patients files that are not under treatment for more than three months
- **Cancellation:** Patient files that need to be cancelled for reasons as per the decision of the Dean/ Chairperson Clinical Sciences/Clinical Committee. The patients will be informed regarding the cancellation and the reason.

4. Procedures

4.1 The requirements for free registration of new patients at RAKCODS is Emirates ID card or any valid photo ID.

4.2 The follow up patients will be directed to the supervising doctor of that particular patient (Follow up appointments are arranged according to the availability of supervising doctor).

4.3 A patient file will be automatically designated as inactive if no treatment has been received for a period of three months. To reactivate the file, the patient must undergo an Initial Nursing Assessment, followed by an Initial Dental Assessment. Upon completion of the Initial Dental Assessment, the patient will be placed on the waiting list and will thereafter be eligible for assignment.

4.4 Patients' files will turn to be cancelled on the following basis:

- The patient did not abide by the rules and regulations of RAKCODS.
- The patient behaved in an unethical manner with doctors, students, and administrative staff.
- The patient acts violently with doctors, students, and administrative staff either verbally or physically.

5. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2	5th Jan 2026		2.1-2.4 revised with minor changes

Authorization Form

Prepared and Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Administration**	**Prepared by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences** **Mr. Tanveer Akhtar** **IT Supervisor**
Title:	**Medical Records**	
Policy Number:	**AD.05**	
Ownership:	**RAKCODS**	**Reviewed by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Effective (Issue) Date:	**Sep 2019**	
Edition Number	**3**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

1.1 To ensure that RAKCODS medical records are accurate, complete, up-to-date, accessible and secure at all times.

2. Policy Statements

2.1 All patient records shall be stored in a digital format within HIMS (Hospital Information Management System). The IT team at RAKCODS works in association with the providers of HIMS (Max Tech Pakistan) to maintain an accurate, complete, up-to-date, accessible and secure record for each patient (client).

2.2 All records shall be stored in a secure way to prevent loss or unauthorized access.

2.3 Access to the records shall be timely and limited to relevant and authorized users after authentication in order to protect the privacy, confidentiality, and integrity of their information.

2.4 A unique identification number, Medical Record Number (MR No.) is to be used to link each record to the client.

2.5 All the treatment plans, treatment done, diagnostic tests/investigations, medications,

prescriptions, progress notes, appointments are stored in the patient file in a standardized method, together with a list of all healthcare providers inclusive of supervisors involved in the patient's care.

2.6 An audit of patient records shall be undertaken regularly. The results of the audit shall be used to improve patient records.

3. Definition/ Abbreviation

HIMS- Hospital Information Management System

4. Procedures

4.1 Management of the patient records

All medical records at RAKCODS are maintained electronically through the **Hospital Information Management System (HIMS)**. HIMS has been in use at RAKCODS for approximately five years, with the current version implemented in 2020 and customized to meet the institution's clinical, academic, and administrative requirements. The system enables secure storage and retrieval of all patient records required under institutional policies, as well as academic records related to dental students, including assessments, grades, and examinations. Management and maintenance of these records are overseen by a multidisciplinary team comprising clinicians, information technology professionals, and the designated HIMS service provider, ensuring data integrity, system functionality, and compliance with institutional and regulatory requirements. Access to HIMS is role-based and restricted to authorized personnel only. Appropriate technical and administrative safeguards are implemented to ensure data confidentiality, integrity, and availability, including secure login credentials, access controls, audit trails, and regular system monitoring. All users are required to adhere to institutional policies on data protection, confidentiality, and information security.

4.2 Security of the records

Data are stored on a central server, that is located in a secure location in the premises of RAKCODS, and that is managed and protected by RAKCODS IT Department as per its security policies. The server is protected by a two-layer firewall.

There are no HIMS files that can be saved on any storage device. However, reports generated by HIMS can be saved as PDF files or other types of files. These can be printed and shared. Users are instructed to refrain from saving any files that contain confidential

or identifying information on their personal PCs/laptops or removable storage devices (memory sticks, external hard drives). Identifying data include: Patient name, Date of birth, ID card number, and Telephone number. Any breach of confidential information must be reported to the Chairperson Clinical Sciences on an urgent basis.

At the user's end, by default, data are saved automatically to avoid any risk of loss if the user forgets to click the Save button, or in case of sudden power outage. Data is backed-up regularly.

4.3 Access to data

Data can be accessed in a timely fashion from any PC through the University secure network.

In order to ensure privacy, confidentiality, and integrity of the patient's information, access to data is controlled by a unique user ID and password. Only the IT professional/process coordinator and the process manager/owner of HIMS can issue access to new users. HIMS IDs are issued and linked to the University Unique ID numbers. The system requests a change of password every two months.

To prevent unauthorized access to an unattended user account, the Windows platform enforces an automatic logoff after minutes of inactivity.

Different levels of access and editing privileges are given to the following pre-defined system user groups according to their usage needs: manager, faculty, tutors, students, technicians, nurses, and support staff.

Radiology technicians' access is limited to the request forms and relevant workflow. Students can edit the medical records but their access is limited to patients that have been assigned to them by the Patient Flow Manager which usually is the GP Dentist. Any edition remains unapproved until a member of the teaching staff approves it.

Only the designated faculty supervisor can cancel a procedure recorded as completed, if this has been proven to be entered erroneously. The history of any change in the record (including cancellation) is recorded in the system and cannot be wiped off.

Patient records cannot be released to the patient or their relatives except by a written request made and approved by the Dean/ Chairperson Clinical Sciences in order. The patient shall be provided with a discharge summary which shall entail all details of the patient's treatment at RAKCODS.

4.4 System failure and contingency plan

The following measures are undertaken to overcome or minimize the impact of system failure:

4.4.1 Power outage

All PCs on the clinics and patient service areas are connected to an electricity generator that supplies power within 30 seconds of power outage.

4.4.2 PC/Application crash

No loss of data will incur should a PC or an application/software crash, as the data is instantly saved.

4.4.3 Server failure or loss of connection to it is very unlikely and if there is an event where there is loss of connection to the server, users will complete paper forms to record treatments undertaken on the day. The students are encouraged to maintain manual logbooks to record treatments done on a daily basis so that if there are any eventualities with the software or PC they will have a backup.

4.4.4 If there is a breach in the system or accuracy of details recorded, root-cause analysis will be conducted for the same and the issue resolved thereby. If necessary in the meantime back-up systems will be used.

4.5 Patient ID

At first registration, each patient receives a unique file number. This is linked to the unique National (Emirates) ID number/Driving License/Passport/ any photo ID and its details. Once the patient is registered successfully with these details then he will be provided with a Medical Record Number abbreviated as MR No. Henceforth, all the records within HIMS will have this MR No which makes it easier to identify the patient.

4.5.1 Patient information

- Contents of the medical file
- ID, contact details, and demographic information
- Medical and dental history, medical alerts, current medications
- Dental charts (Adult, Pediatric and Periodontal)
- Assessment/examination findings
- Diagnostic tests, their request forms and results; including, radiographs, blood tests, and images

- Services (treatments): planned, in progress and completed
- Prescriptions and Medications if any
- Incidents such as a needle-stick injury
- Treatment plans, consent forms
- List of healthcare providers involved in the patient's care.

4.5.2 Points of data collection and transition

Data are recorded at different locations in the Hospital, as the patient moves from one place to another. A flow chart has been developed to ensure a seamless transition of patients and their data (**Appendix AD.05-1**). The locations include Reception, Initial nursing assessment clinic, Initial Dental Assessment Clinic, Urgent Care Clinic, and treatment clinics (student or interns). Medical records at RAKCODS MC is maintained manually and shall be linked with HIMS by next year.

4.5.3 Quality assurance measures

The following measures are taken to ensure all records are accurate, complete, and up-to-date:

4.5.3.1 Data are entered using pre-designed forms, with some fields being compulsory. Incomplete forms trigger an alert for the user.

4.5.3.2 All changes to the medical records made by the students require approval by a member of the teaching staff. This includes treatment plan, treatment completed and handover forms. If the respective forms are not approved electronically then the students can see them as pending/sent for approval/unassigned respectively. The unapproved forms also can be seen in the approving staff/ faculty supervisor logins.

4.6 Training

All users receive training on the system. Newly joined students and faculty receive full training in the format of demonstrations, pre-designed exercises, and clinical scenarios. Existing users receive regular updates by e-mail or during the clinical orientation sessions at the start of each academic term.

4.7 Data Audit

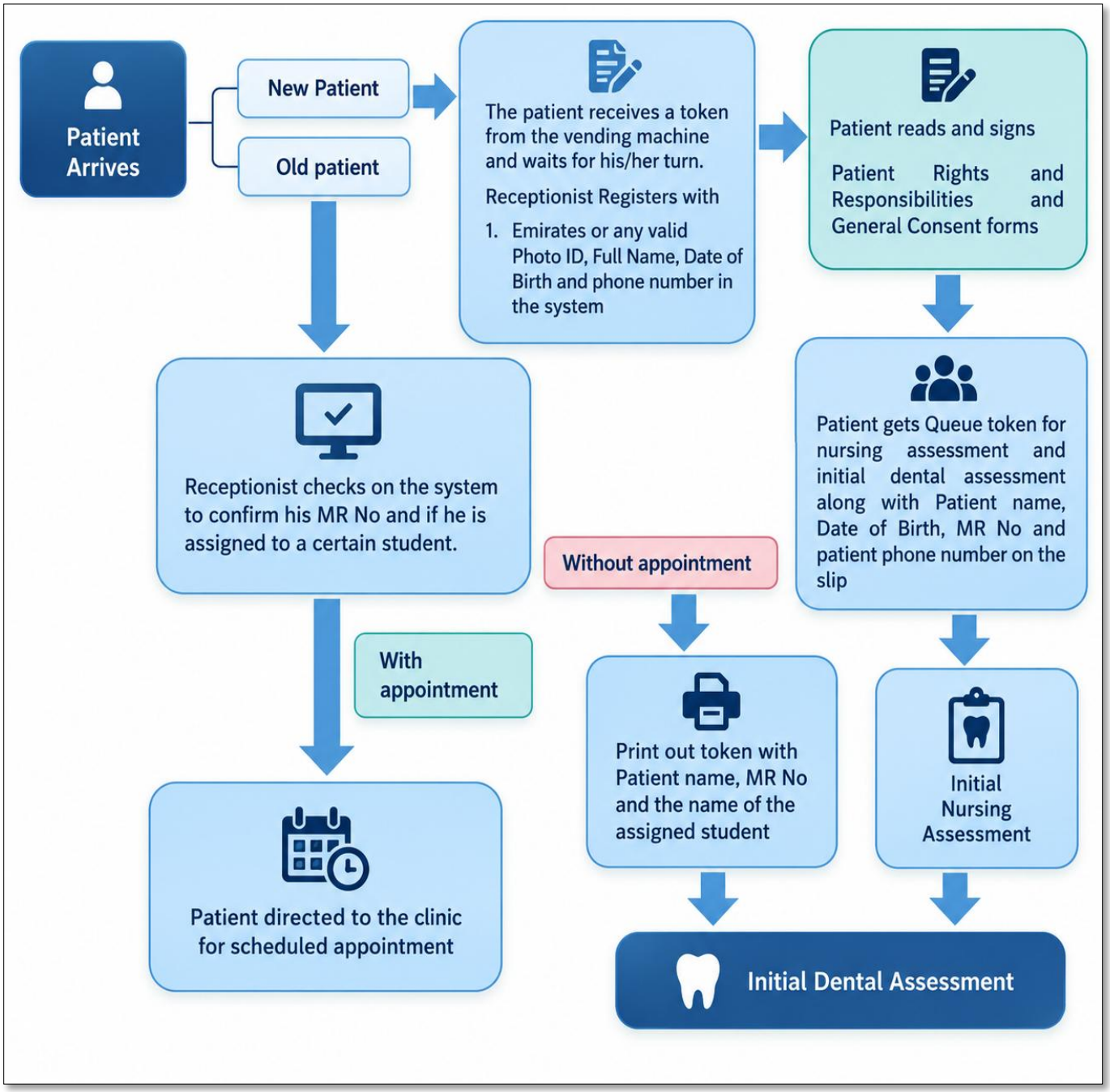
An audit of records is undertaken annually unless there is an urgent need. Continuous improvements are made as per the decisions during meetings on HIMS. The annual audit results are used to improve patient records.

5. Tools/Appendices

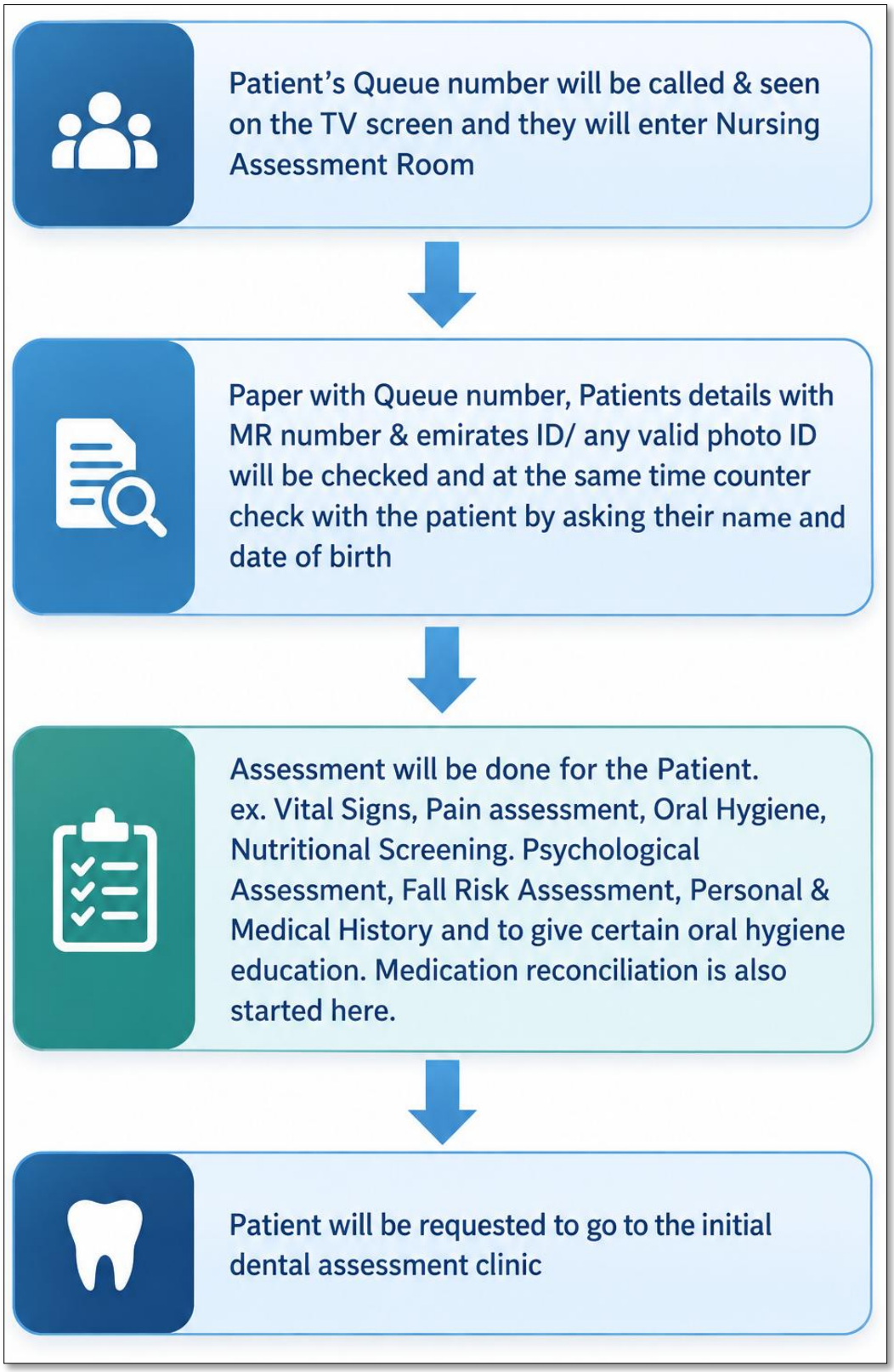
5.1 Appendix AD.05-1: Patient Flow at RAKCODS

Appendix AD.05-1: Patient Flow at RAKCODS

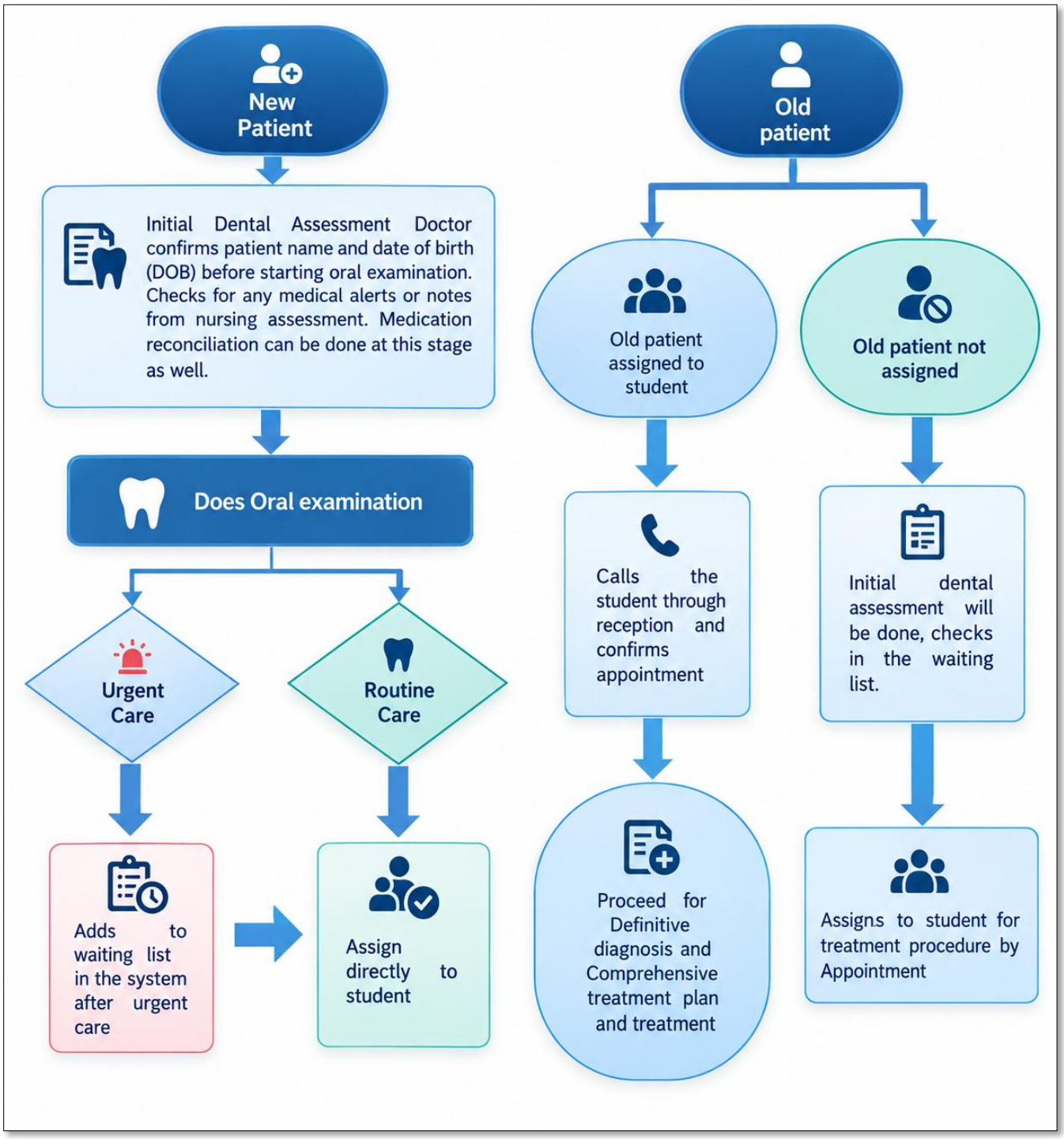
1. Patient Registration Process



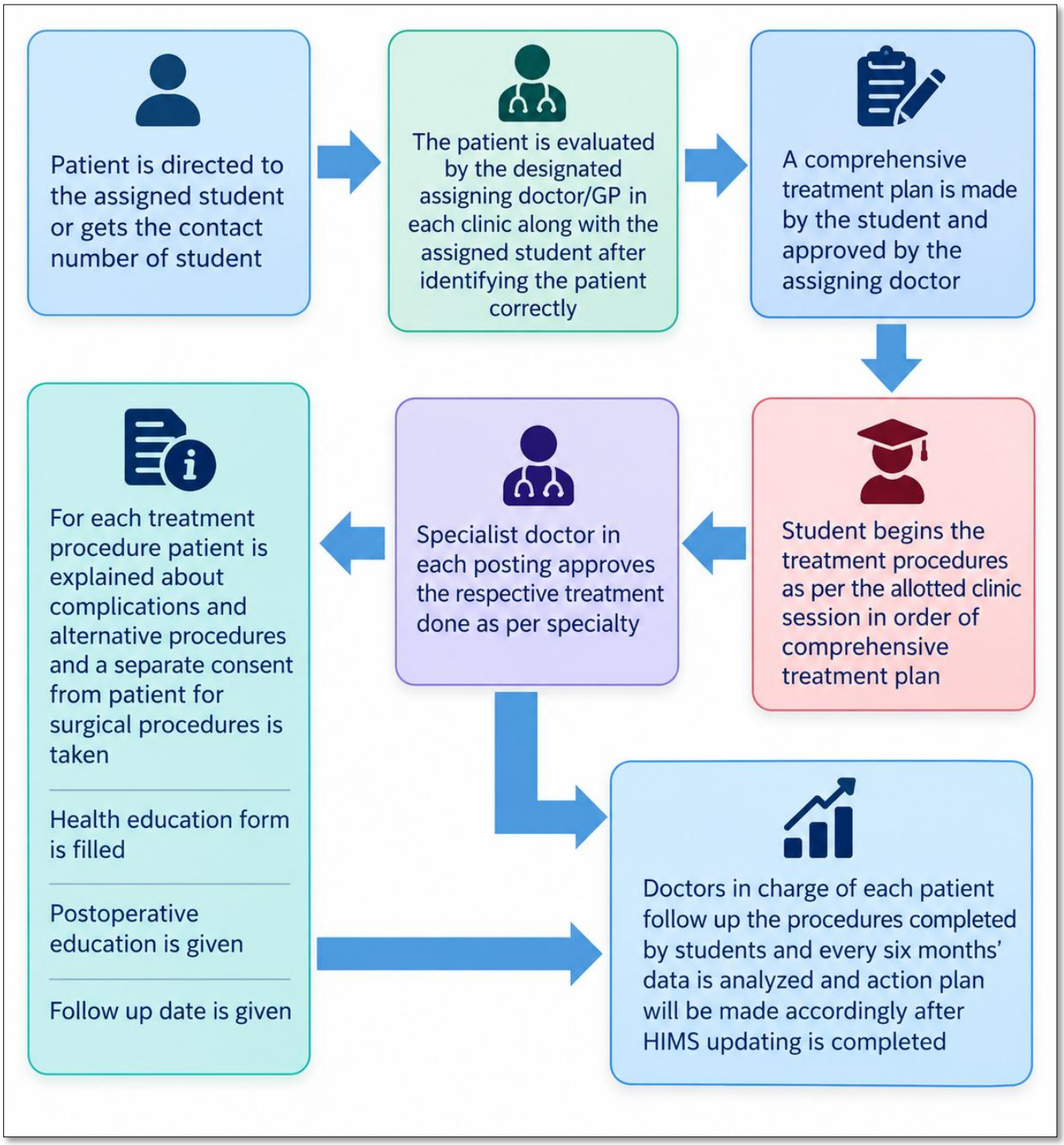
2. Initial Nursing Assessment



3. Patient Initial Dental Assessment



4. Patient assigned and comprehensive treatment plan, treatment and follow up:



5. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2	05th Jan 2026	From the flowchart: Assessment will be done for the Patient. ex. Vital Signs, Pain assessment, Oral Hygiene, Nutritional Screening, Psychological Assessment, Fall Risk Assessment, Personal & Medical History and to give certain oral hygiene education. Initial Dental Assessment Doctor confirms patient name and date of birth (DOB) before starting oral examination. Checks for any medical alerts or notes from nursing assessment	Assessment will be done for the Patient. ex. Vital Signs, Pain assessment, Oral Hygiene, Nutritional Screening, Psychological Assessment, Fall Risk Assessment, Personal & Medical History and to give certain oral hygiene education. Medication reconciliation is also started here. Initial Dental Assessment Doctor confirms patient name and date of birth (DOB) before starting oral examination. Checks for any medical alerts or notes from nursing assessment. Medication reconciliation can be done at this stage as well. Medication reconciliation was added to the flow charts of both Initial Nursing Assessment and Initial Dental Assessment.

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Administration**	**Prepared by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Title:	**Patient Rights and Responsibilities**	
Policy Number:	**AD.06**	**Reviewed by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	
Edition Number	**3**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

To ensure that the basic rights of a human being for independence in expression, decision and action, concern for personal dignity and human relationships are preserved for all patients, and to define the responsibilities of patients seen at RAK College of Dental Sciences (RAKCODS). The scope of the policy is for RAKCODS. This policy is prepared after consultation and inputs as received from client representatives.

2. Policy Statement

The patients have rights and responsibilities defined. All the staff need to know this, abide by it and to be followed uniformly throughout the organization. The approved bill of rights at RAKCODS is attached herewith.

3. Definitions and Abbreviations

3.1. Patient Rights: The basic rights of human beings for independence of expression, decision and action and concern for personal dignity and human relationships. The approved bill of rights at RAKCODS is attached herewith.

3.2. Patient Responsibilities: Patient responsibilities include those actions on the part of patients and /or their families that are needed so that healthcare providers can provide

appropriate care, make accurate and responsible care decisions, and address patients' needs.

3.3. **RAKCODS:** RAK College of Dental Sciences

4. Procedures

4.1. All patients would be made aware of their rights and responsibilities at the time of registration by the receptionist at the reception counter. The patient will sign once he understands and is ready to comply with.

4.2. In case of language barrier, patients are informed of their rights and responsibilities in a language and manner they can understand through the available Interpreters (designated interpreters as attached herewith).

4.3. The Patient Bill of Rights & Responsibilities has been accepted and approved by Dean, RAKCODS. This Bill of Rights includes but is not limited to:

4.3.1 Privacy for all examinations, procedures & treatment

4.3.2 Identification and respect of Patient Values and Beliefs

4.3.3 Confidentiality of patient information

4.4. The Dean allocates all resources required to put this policy to complete and continuous action in RAKCODS.

4.5. The Patient Bill of Rights and Responsibilities shall be explained to patients at the reception by designated reception staff at the time of registration or initial contact.

4.6. All RAKCODS staff should read and understand their responsibilities in protecting patient rights. Staff should be able to explain their responsibilities in protecting patient rights.

4.7. Staff must ensure that protecting Patient Rights is an integral part of all their daily activities and functions.

4.8. Each Patient will be entitled to the rights mentioned in the bill of rights. On the other hand, he/she must respect his/her responsibilities mentioned in the 'Bill of Patient Rights and Responsibilities'.

4.9. Bill of Patient Rights and Responsibilities will be explained in Orientation Programs for all clinics newly assigned employees and students and interns.

PATIENT BILL OF RIGHTS

Patients at RAKCODS have the RIGHT to:

1. Receive impartial care with dignity and respect without discrimination, respecting your values and religious beliefs. This care shall be subject to availability, without interfering with other patients' safety and the work environment and without contradiction with RAKCODS rules & regulations.
2. Receive comprehensive medical care with the aim of reaching proper diagnosis and treatment of illness.
3. Know the identity of the doctor or other healthcare practitioners responsible for your care.
4. Receive appropriate pain assessment and management.
5. Receive comprehensive information in a manner you can understand (from the healthcare team) about your or the patient's condition, diagnosis, proposed treatment, any change in your health status and the cause of these changes, alternative treatments, potential benefits and drawbacks to the proposed treatment, likelihood of successful treatment, possible problems related to recovery and possible results of non-treatment.
6. Have an interpreter (if available) if the language presents a problem to understand the details of your care and the treatment provided to you.
7. Give or not give your written General Consent for treatment when you enter the clinic.
8. Give or not to give your written informed consent before surgery or any invasive procedures, anesthesia, and any other high-risk procedure and treatment.
9. Participate in care decisions. RAKCODS encourages Patients, Parents or Legal Guardians to participate in planning and implementing treatment together with the Dental assistants and physicians, to the extent they wish.
10. Maintain your need for privacy for all clinical interviews/examinations, procedures, and treatments and the confidentiality of all of your information.
11. Refuse the treatment (if you would like to) and to be informed of the medical consequences due to your refusal.
12. Refuse examination or observation by any person not directly responsible for your care. In such an event, such people should have your permission to be present during case discussion, consultation, examination and treatment.
13. Be protected from physical, verbal and psychological assault.
14. Have a family member or a guardian as an escort (if need be).
15. Give complaints and suggestions through the head of clinical Committee (07-2269373) without any fear of reprisals about the care and services you are receiving and to have the clinic respond to you.
16. Access your medical record as per our clinic policy & regulations.
17. Appropriate assessment and pain management and receive education for yourself and your family about pain and pain management.

Patient Bill of Responsibilities

Patients at RAKCODS have the RESPONSIBILITY to:

1. Respect and value the clinic rules and regulations while paying a visit or approaching for consultations.
2. Show consideration for and deal with other patients and staff with respect.
3. Respect the privacy of other patients.
4. Provide complete and accurate information about present complaints, past illnesses, hospitalizations, treatments, present medications (if any), known sensitivities to medication and any other matter relating to your health. This should include infectious diseases like Hepatitis B, HCV and HIV.
5. Follow the healthcare provider's instructions.
6. Accept responsibility for refusing treatment or not following the treatment plan, even after the risk of not following it has been explained.
7. Attend your appointment on time. If you want to cancel any appointment, inform the assigned Healthcare provider 24 hours in advance.
8. Observe safety regulations, including the 'no smoking' policy.
9. Take the dental check-ups on time, without delay.
10. Avoid bringing valuables to the clinic since the clinic is not responsible for them.
11. Ensure that mentally imbalanced patients must always be accompanied by a family member or a guardian to serve as an escort.
12. Take medications as ordered.
13. Ask questions if what is said by your Care giver is not understood.
14. As a part of infection control measures in the clinic, patients are asked not to bring personal belongings.

5. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Administration**	**Prepared by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Title:	**Patient Experience**	
Policy Number:	**AD.07**	
Ownership:	**RAKCODS**	**Reviewed by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Effective (Issue) Date:	**Sep 2019**	
Edition Number	**3**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

RAKCODS is committed and dedicates itself to providing patient/client-centered health care service. It encourages patient and family to provide feedback about their experience when they were treated here. This feedback helps the administration to improvise upon the experience that these patients can have at RAKCODS.

2. Policy Statement

The feedback on patient experience is collected from the patients/clients and their families using a questionnaire. The results of this survey will be used to improve the health care and delivery services of RAKCODS.

3. Procedures

3.1 Patients' experience is recorded using an easy to fill questionnaire (**Appendix AD.07-1**) which will then be analyzed to understand the possible areas of improvement. This improvement will be suggested by a quality improvement committee.

3.2 The survey is available in 3 languages: Arabic, English and Urdu.

3.3 Areas of poor patient experience will be addressed by the Quality Improvement and Patient Safety Committee.

3.4 A designated Patient Experience Officer is responsible for overseeing the administration, collection, and completion of patient experience surveys.

3.5 Compiled patient experience findings are summarized and displayed on the designated display screens at the end of every month to promote transparency, feedback, and continuous quality improvement.

4. Tools/Appendices

4.1 Appendix AD.07-1 – Patient Experience Survey

Appendix AD.07-1 – Patient Experience Survey

Patient Experience Survey

MR NO

Name (optional)

Date

Experience Criteria	**Yes**	**No**
Are you aware of your rights and responsibilities as a patient in this hospital?		
The arrangements of appointment time was convenient for you		
Are you satisfied with your student –dentist/dentist?		
Was the problem for which you visited RAKCODS corrected?		
Would you recommend RAKCODS clinic to any of your family or friends who need dental treatment?		
Were you satisfied with the faculty/staff who supervised treatment?		
Did you feel that the student dentist was adequately trained for the treatment he did?		
Are you satisfied with the hand hygiene practices of the student doctor and staff?		
Were the student dentist/faculty/staff compassionate and ready to hear your concerns?		
Do you believe the instruments used in your treatment are clean?		
Did you receive adequate information on your condition?		
Did you receive adequate information on the treatment plan and follow-up?		
Did you receive adequate information on how to care for your oral health (brushing, flossing, diet, etc)?		

Any other Comments:
Suggestions to improve the knowledge/training/education to enhance our services:

مسح تجربة المريض

MR NO:

الاسم (اختياري):

التاريخ:

معايير الرضا	نعم	لا
هل أنت على دراية بحقوقك ومسؤولياتك كمريض في هذا المستشفى؟		
تنظيم أوقات المواعيد كان مناسب لك		
هل أنت راضي عن الطالب ـ طبيب أسنان / طبيبة أسنان؟		
هل تم حل مشكلتك التي زرت المشفى بسببها؟		
هل تنصح بعيادة رأس الخيمة لطب الأسنان لأي من أفراد أسرتك أو أصدقائك الذين يحتاجون إلى علاج الأسنان؟		
هل كنت راضيًا عن الأطباء المشرفين على العلاج؟		
هل شعرت أن الطالب قد تلقى تدريباً كافياً على العلاج الذي قام به ؟		
هل كان طبيب الأسنان / هيئة التدريس / الموظفون متجاوبين و مستعدين للاستماع مخاوفك؟		
هل أنت راضٍ عن ممارسات نظافة اليدين التي يتبعها الطالب الطبيب والموظف؟		
هل تعتقد أن الأدوات المستخدمة في علاجك نظيفة؟		
هل تلقيت معلومات كافية عن حالتك؟		
هل تلقيت معلومات كافية عن خطة العلاج والمتابعة؟		
هل تلقيت معلومات كافية عن كيفية العناية بصحتك عن طريق الفم (بالفرشاة، والخيط، والنظام الغذائي، وما إلى ذلك)؟		

اقتراحات لتحسين المعرفة / التدريب / التعليم لتحسين خدماتنا**:**
أخرى تعليقات ي

4. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2	05th Jan 2026	3.4 The patient experience survey forms will be evaluated at the end of every semester and a report generated.	3.4 A designated Patient Experience Officer is responsible for overseeing the administration, collection, and completion of patient experience surveys.
2	05th Jan 2026	New addition	3.5 Compiled patient experience findings are summarized and displayed on the designated display screens at the end of every month to promote transparency, feedback, and continuous quality improvement.

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Administration**	**Prepared by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Title:	**Patient Complaints**	
Policy Number:	**AD.08**	**Reviewed by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

RAKCODS is committed and dedicates itself to providing patient/client-centered health care service. It encourages patients and family to provide feedback about their experience when they were treated here. This feedback helps the administration to improvise upon the experience that these patients can have at RAKCODS.

2. Policy Statement

The feedback could be a complaint or suggestion or a comment. Whatever the patient or family provides is collected. The suggestion/complaint boxes are reviewed weekly by the Quality and Patient Safety Committee and action is taken appropriately. The feedback provided by the patients and their family will be used to improve the health care and delivery services of RAKCODS.

3. Procedures

3.1 Patients or their family members may formally submit a complaint by contacting the designated Patient Experience Officer (PEO), Dr. Misbah, at RAKCODS. Upon expressing the intent of filing an official complaint, the complainant will be provided with the approved complaint form or access to the complaint registry by Dr. Misbah. Once a complaint is submitted, it is reviewed and addressed by the PEO, in coordination

with relevant team members. The Chairperson, Clinical Sciences and Quality & Patient Safety (QPS) shall be informed of the complaint and its resolution status. The form is attached as **Appendix AD.08-1.**

3.2 Patients can use forms kept with the suggestion/ complain boxes on each floor. This can be filled and dropped into the box. These forms will be reviewed by the administration and necessary action will be taken (**Appendix AD.08-2**).

3.3 The patients complain/suggestion/comments forms will be evaluated every week and appropriate resolutions will be provided.

3.4 Complaints requiring immediate action or urgent attention, as determined by the team, shall be addressed without delay. Such complaints necessitating prompt intervention and resolution are documented in a dedicated complaint tracking log, which is maintained on the shared google sheets and accessible to the Quality and Patient Safety (QPS) Office and the Head Nurse. This process ensures systematic tracking, accountability, and documentation of the resolution status of all complaints.

4. Tools / Appendices

4.1. Appendix AD.08-1 – Patient Complaint Form

4.2. Appendix AD.08-2 – Patient Suggestion/ Comments Form

Appendix AD.08-1 – Patient Complaint Form

RAK Medical and Health Sciences University

RAK College of Dental Sciences

Digital/ Hard Copy-Based Complaint Form

If you have difficulty writing your complaint, you may call our administration at 07-2222593 or send an email to complaints@rakcods.com

Please click on the appropriate option from the list below to indicate the service you would like to make a complaint about. You can choose more than one.

◯ Administration ◯ Clinics ◯ Facilities ◯ Others

Date and time of Incident: _____

Date and time of Complaint: _____

Floor of Incident: ◯ Ground ◯ First ◯ Second ◯ Others……

Describe your complaint. Give as much information as possible, such as what happened, when and where it happened, who was involved.

My preferred method of contact:

Salutation: ☐Mr. ☐Miss ☐Mrs. ☐Ms.

Name

Mobile

Email address

Submit

Thank you for completing and submitting this form to RAKCODS. If you have provided your email address, you will receive an acknowledgement of your complaint.

Appendix AD.08-2 – Patient Suggestion/ Comments Form

RAK Medical and Health Sciences University
RAK College of Dental Sciences

YOUR OPINION MATTERS

Name (optional):……

Mobile No:
……

E mail ID:……

Location (floor):

Ground	1	2	3	4	5	6	7

Suggestions:

……

……

……

Comments:

……

……

……

Complaints:

……

……

……

How do you want us to respond (please tick)?

☐ Phone	☐ Email	☐ In-person

Thank you
RAKCODS

RAK Medical and Health Sciences University
RAK College of Dental Sciences

رأيك يهم

الاسم(اختياري):……
الموبايل رقم: ……
الايميل: ……

المكان(الطابق)

7	6	5	4	3	2	1	أرضي

اقتراحات

……

……

……

تعليقات

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……

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شكاوي

……

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……

معك؟ نتواصل ان تريد كيف

☐ الهاتف	☐ البريد الإلكتروني	☐ شخصيًا

لكم شكراً
الأسنان لطب الخيمة رأس كلية

5. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2	05th Jan 2026	3.1 Patients/ team members can officially file a complaint by meeting the responsible person, Ms. Puja Dipu Das who is the Head Nurse of RAKCODS. Once the patient, faculty, staff or students meet them and they express that they want to officially file a complaint then Ms. Puja Dipu Das will provide them with the official complaint form or the complaint registry. Once the form or registry is filled then it is usually solved by the Head Nurse along with the other team members and the Chairperson, Clinical Sciences and QPS will be reported to. The form is attached as Appendix AD.08-1.	3.1 Patients or their family members may formally submit a complaint by contacting the designated Patient Experience Officer (PEO), Dr. Misbah, at RAKCODS. Upon expressing the intent of filing an official complaint, the complainant will be provided with the approved complaint form or access to the complaint registry by Dr. Misbah. Once a complaint is submitted, it is reviewed and addressed by the PEO, in coordination with relevant team members. The Chairperson, Clinical Sciences and Quality & Patient Safety (QPS) shall be informed of the complaint and its resolution status. The form is attached as Appendix AD.08-1.
2	05th Jan 2026	3.4 However, if there are complaints which require immediate action or attention as understood by the team will be dealt with accordingly	3.4 Complaints requiring immediate action or urgent attention, as determined by the team, shall be addressed without delay. Such complaints necessitating prompt intervention and resolution are documented in a dedicated complaint tracking log, which is maintained on the shared google sheets and accessible to the Quality and Patient Safety (QPS) Office and the Head Nurse. This process ensures systematic tracking, accountability, and documentation of the resolution status of all complaints.

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Administration**	**Prepared by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Title:	**Diversity, Equity and Inclusion**	
Policy Number:	**AD.09**	**Reviewed by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Oct 2025**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**1**	
Next Review Date	**30 Sep 2028**	

1. Purpose

RAK College of Dental Sciences (RAKCODS) is committed to fostering a learning, working, and clinical environment that embraces diversity, ensures equity, and promotes inclusion across all aspects of institutional life. This policy affirms our dedication to creating a culture of respect, belonging, and opportunity for all—regardless of background or identity.

2. Scope

This policy applies to all faculty, staff, students, interns, visitors, and patients at RAKCODS. It governs behavior, institutional practices, recruitment, curriculum, teaching, clinical care, and all interactions within the college and affiliated clinical environments.

3. Definitions

- Diversity: The presence of differences including race, gender, age, ethnicity, religion, ability, sexual orientation, socioeconomic status, nationality, language, and life experience.
- Equity: Fair treatment, access, and opportunity for all, while striving to identify and eliminate barriers that prevent full participation.
- Inclusion: The active, intentional, and ongoing effort to ensure that diverse individuals are fully integrated and empowered within our institution.

4. Policy Statements

RAKCODS commits to the following principles:

a.) Inclusive Learning and Working Environment

- Foster a respectful and supportive environment where all individuals feel welcomed, safe, and valued.
- Encourage inclusive language, curriculum, and teaching practices.

b.) Non-Discrimination

- Ensure zero tolerance toward any form of discrimination, harassment, or exclusion based on identity or personal background.

c.) Equitable Opportunities

- Promote equitable access to educational, clinical, research, and leadership opportunities.
- Support academic and professional success across all groups.

d.) Recruitment and Representation

- Strive for diverse representation in faculty, staff, and student recruitment.
- Apply equitable hiring, admission, and advancement processes.

e.) Awareness and Training

- Provide ongoing education and awareness initiatives about unconscious bias, cultural sensitivity, inclusive communication, and allyship

f.) Feedback and Reporting

- Establish a safe and confidential process to report discriminatory behavior or non-inclusive practices.
- Investigate all reports fairly, with corrective measures as needed.

g.) Inclusive Patient Care

- Ensure that all patients are treated with dignity, empathy, and cultural sensitivity.
- Provide equitable and respectful care free from discrimination.
- Encourage inclusive communication and consideration of patients' linguistic, cultural, and personal needs.

5. Responsibilities

Group	Responsibilities
Leadership & Dean	Set a tone of inclusion and ensure policy implementation.
Faculty	Integrate inclusive teaching and mentor students from diverse backgrounds.
Students	Demonstrate respect, cultural sensitivity, and ethical behavior.
HR & Admin	Promote equitable recruitment, grievance handling, and access.
Clinical Staff	Deliver inclusive and equitable care to all patients.

6. Monitoring and Review

- The DEI policy will be reviewed as applicable.
- Feedback may be solicited anonymously from staff, students, and patients to guide improvements.
- DEI metrics (e.g., student and patient diversity, retention rates, staff representation) will be tracked to assess impact.

7. References

7.1 American Dental Association. *Diversity and Inclusion Toolkit for State and Local Dental Societies*. Chicago (IL): ADA; 2021. Available from: https://www.ada.org/-/media/project/ada-organization/ada/ada-org/files/membership/dental societies/ada_diversity_inclusion_toolkit_2021.pdf

7.2 American Dental Education Association. *ADEA Faculty Diversity Toolkit*. Washington (DC): ADEA; 2020. Available from: https://www.adea.org/initiatives/diversity/adea-faculty-diversity-toolkit1

7.3 American Dental Education Association. *Climate Study Communication Toolkit*. Washington (DC): ADEA; 2022. Available from: https://www.adea.org/docs/default-source/default-document-library/adea/diversity/adea-climate-study-communication-toolkit---september-2022.pdf

7.4 American Dental Education Association. *Policy on Diversity and Inclusion*. Washington (DC): ADEA; 2022. Available from: https://www.adea.org/initiatives/diversity/adea-policy-on-diversity

7.5 American Dental Education Association. *Checklist to Promote Diversity, Equity and Inclusion*. Washington (DC): ADEA; 2022. Available from: https://www.adea.org/initiatives/diversity/diversity-checklist

7.6 Moren Cross J, Karimbux N. Commentary: ADEA Faculty Diversity Toolkit. *J Dent Educ*. 2020 Dec;84(12):1328–1330. Available from: https://doi.org/10.1002/jdd.12317

6. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Prepared and Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

8.

CLINICAL POLICIES

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Clinical**	**Prepared by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Title:	**Patient Identification**	
Policy Number:	**CL.01**	**Reviewed by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	
Edition Number	**3**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

To provide an identification system to ensure that RAK College of Dental Sciences (RAKCODS) patients are properly identified and safeguarded prior to any care, treatment or services provided. Patient identification is very important for patient safety, which is one of our strategic priority.

2. Policy Statements

2.1. All patients in RAKCODS will be identified using a minimum of two patient identifiers.

2.2. RAKCODS patients as they get registered have at least a minimum of three identifiers namely Patient's full name, Date of birth and their valid ID number.

2.3. RAKCODS patients are identified using minimum 2 identifiers and they are the **Patient's full name and Date of Birth.**

2.4. Patients in RAKCODS are identified before leaving the reception, at the initial nursing assessment, Initial Dental Assessment (IDA), when the patient is being assigned, on the dental chair before beginning history recording and treatment planning by students and at every next visit.

2.5. The patients are counterchecked by the instructors and supervisors available in the clinics before their history is recorded & treatment planning initiated on the Hospital Information Management System (HIMS).

2.6. The policy and the use of identifiers is a consistent practice within the building and clinics of RAKCODS.

3. Procedures

3.1. RAKCODS reception will confirm patient identification through two identifiers which are **Patient full name and Date of Birth** soon after registration to confirm.

3.2. A unique identification number shall be prepared for the patient at the reception which will be henceforth referred to as the **MR No**.

3.3. Prior to any history recording, treatment planning and performing treatment procedures the healthcare professional providing the care is responsible for verifying the patient's identification by utilizing two identifiers: Patient Full Name and Date of Birth. Supervisors and instructors within the clinics shall also verbally assess the patient to ensure proper identification.

3.4. If the patient is unable to provide two identifiers verbally (if has a communication or language deficit, he/she cannot respond) refer to the information on his/her ID card (Ensure that information matches other records as appropriate e.g. consent form, etc.), the MR no slip can also be used for verification purposes.

3.5. If the identification card is illegible, missing, or contains information that is incorrect; the diagnosis, treatment, medication, or procedures will not be done until the patient is properly identified.

4. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2	05th Jan 2026	3.4 If the patient is unable to provide two identifiers verbally (if has a communication or language deficit, he/she cannot respond) refer to the information on his/her ID card (Ensure that information matches other records as appropriate e.g. consent form, etc.).	3.4 If the patient is unable to provide two identifiers verbally (if has a communication or language deficit, he/she cannot respond) refer to the information on his/her ID card (Ensure that information matches other records as appropriate e.g. consent form, etc.), the MR no slip can also be used for verification purposes.

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Clinical**	**Prepared by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Title:	**Patient Triage**	
Policy Number:	**CL.02**	**Reviewed by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	
Edition Number	**3**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. **Purpose and Scope**

   To meticulously route patients either for urgent care or routine care based upon their presentations and thereby its confirmation clinically.

2. **Policy Statement**

   All patients visiting RAKCODS need to be triaged appropriately before being guided into the waiting list.

3. **Procedures**

   3.1 Every patient will undergo a preoperative assessment, which encompasses a thorough examination of their medical history at the IDA.

   3.2 Patients categorized as ASA I and II will receive treatment within RAKCODS. However, patients at high risk (ASA III-VI) may necessitate consultation with an anesthesiologist or other appropriate specialists. These patients will be referred appropriately

   3.3 Once the patient is in the Initial Dental Assessment (IDA) the doctors there decide if the patient is an urgent care patient or is a routine care patient.

   3.4 If the decision at the IDA is that the patient needs urgent care, then he/she is routed to the urgent care clinic. In the urgent care clinic, the problem of the patient is solved on an urgent basis and then he is guided into the normal waiting list as a routine patient from

where the patient will be assigned accordingly.

3.5 If the decision at the IDA is that the patient needs routine care and that there is no emergency, he/she is guided into the waiting list from which the patient is assigned to the students accordingly.

3.6 Patients requiring urgent care may include, but are not limited to, the following conditions:

- Acute abscesses
- Post extraction bleeding
- Severe dental pain which is not relieved by the over-the-counter medications
- Facial swelling
- Surgical post-operative osteitis (dry socket)
- Dental trauma with avulsion/luxation
- Crown/bridge cementation if it has de-cemented

3.7 Once the patient is on the waiting list every effort is made for the patient to get the earliest possible appointment for comprehensive treatment.

3.8 Emergency Care – During the times when the building is closed, in case any patient who was treated and returns with any acute pain, then the security is required to communicate with the faculty or staff who are available on the emergency care schedule. The faculty/staff concerned will prescribe medications if needed or also consider visiting RAKCODS to treat the patient to alleviate the symptoms before being re-appointed to normal clinics. All the details need to be entered into HIMS.

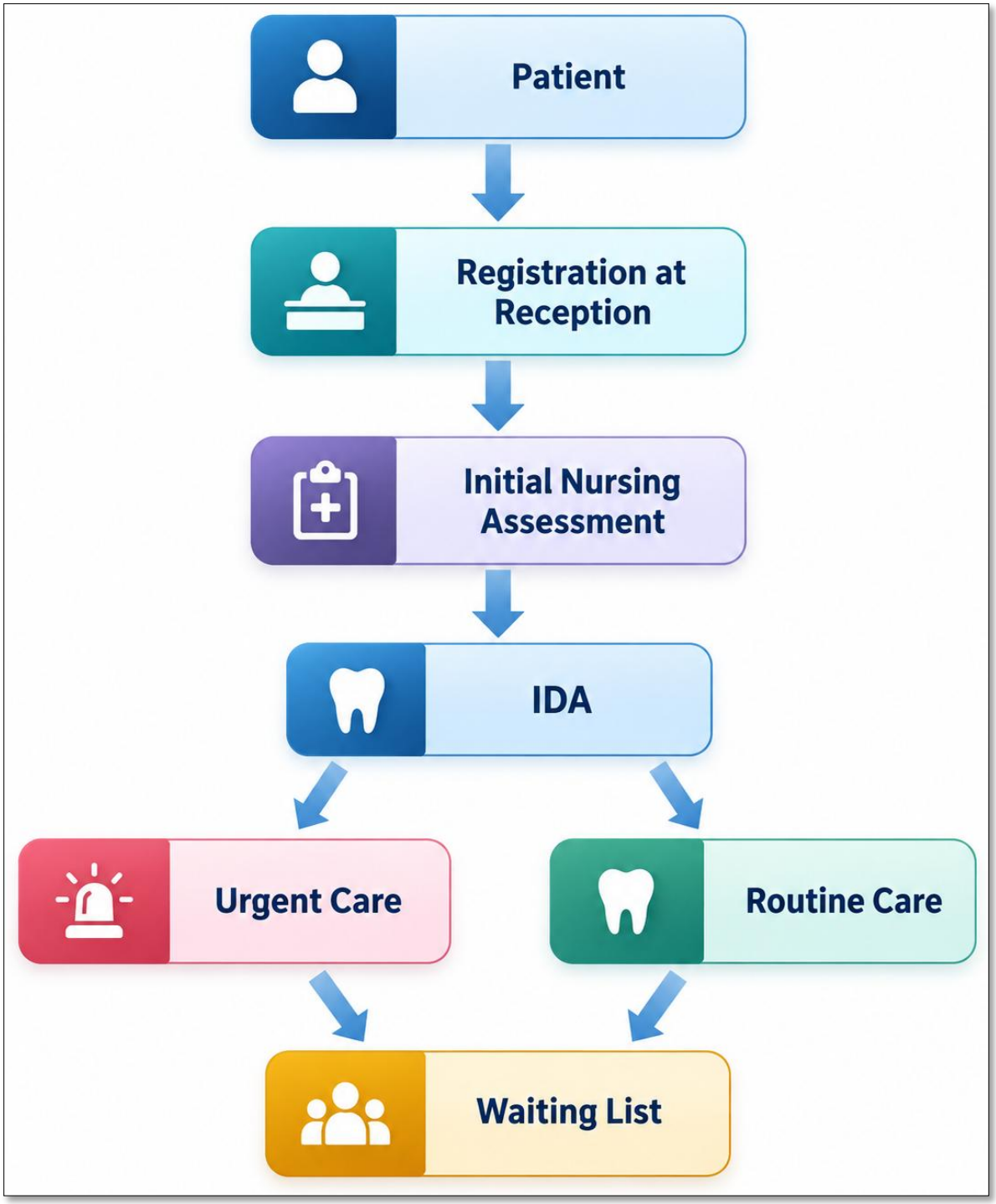
4. References

4.1 https://www.asahq.org/standards-and-practice-parameters/statement-on-asa-physical-status-classification-system

5. Tools/Appendices

5.1 Appendix CL.02-1 - Patient Flow to Urgent and Routine Care

Appendix CL.02-1 - Patient Flow to Urgent and Routine Care



6. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2	05th Jan 2026	3.6 The patients who will be considered as urgent care will include	3.6 Patients requiring urgent care may include, but are not limited to, the following conditions:

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Clinical**	**Prepared by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Title:	**Follow Up Protocol**	
Policy Number:	**CL.03**	**Reviewed by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

RAKCODS ensures that all patients who have completed treatment are followed up to ensure their wellbeing.

2. Policy Statement

All patients who are being screened at the Initial Dental Assessment (IDA) are given a follow up appointment three months after the screening. The IDA doctor who screens the patient becomes the supervising doctor for the patient and is responsible for any concerns with respect to the patient.

3. Procedures

3.1 Once the IDA is done for any patient, he/she is given a follow-up appointment by the supervising doctor.

3.2 The supervising doctors are responsible to follow up with the patient along with the student

3.3 At any moment of time the supervising doctor can review the treatment status of the patient

3.4 Once the follow up is completed the details are entered on the system

3.5 If the follow up date is rescheduled, then the same is mentioned as well

4. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Clinical**	**Prepared by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Title:	**Patient Handover, Referral and Discharge Summary**	
Policy Number:	**CL.04**	**Reviewed by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	
Edition Number	**3**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. Purposes & Scopes

1.1. To provide standardized guidelines to handover patients to different students or between specialties/disciplines within RAK College of Dental Sciences (RAKCODS)

1.2. To provide standardized guidelines to refer patients to other healthcare practitioners outside clinic, other healthcare settings, or other organizations to meet their continuing care needs.

1.3. To provide standardized guidelines to discharge patients when they finish their treatment with us and would like to go to another care. The discharge summary can be provided also to the patient if for some reason he/she wants to leave RAKCODS as he may not be convinced of our treatment.

1.4. To identify the health care provider who is responsible for the Handover, Referral or Discharge Summary of patient.

2. Policy Statement

2.1. RAK College of dental Sciences shall have a process for Handover, Referral and Discharge Summary of patients to other healthcare providers for the following reasons:

2.1.1. Handover - When the patient needs to be assigned to another student to complete his/her requirements

2.1.2. Referral- When the patient needs consultation with a doctor from outside hospital

2.1.3. Discharge Summary- When the patient needs to be treated at another care/ facility and needs details of treatment that was carried out here at RAKCODS.

3. Procedures and Responsibilities

3.1. **Handover:** The patient can be handed over from one student to another provided the presenting student has finished his requirements or has finished his quota of requirements. The reason for Handover should be mentioned within HIMS. The Handover can be done by the clinical instructors, staff and faculty who are provided with privileges.

3.2. **Referral:** The referral of patients can be done by the nurses within the initial nursing assessment after discussion with the IDA doctor, the Initial Dental Assessment (IDA) doctor's and the supervising doctor's (the doctor who completed the IDA for the patient). If INA does the referral, it needs to be consulted with the Chairperson, Clinical Sciences.

3.3. **Discharge Summary:** Usually provided by the supervising doctor. This is provided for patients who are willing to continue treatment elsewhere and require documents as to their present status.

4. Tools/ Appendices

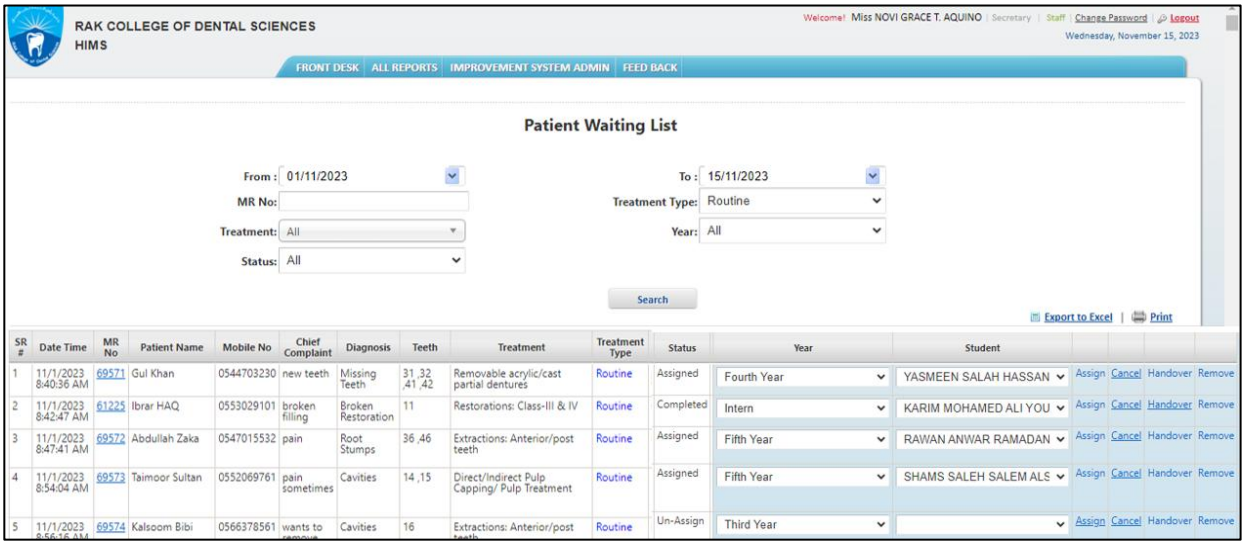
4.1. Appendix CL.04-1 - Patient Handover Page

4.2. Appendix CL.04-2 - Patient Referral Letter

4.3. Appendix CL.04-3 - Patient Discharge Summary

4.4. Appendix CL.04-4 - Monitoring of Client Transitions outside RAKCODS

Appendix CL.04-1 - Patient Handover Page



RAK COLLEGE OF DENTAL SCIENCES
HIMS

Welcome! Miss NOVI GRACE T. AQUINO | Secretary | Staff | Change Password | Logout
Wednesday, November 15, 2023

FRONT DESK | ALL REPORTS | IMPROVEMENT SYSTEM ADMIN | FEED BACK

Patient Waiting List

From : 01/11/2023 To : 15/11/2023
MR No: Treatment Type: Routine
Treatment: All Year: All
Status: All
Search
Export to Excel | Print

SR #	Date Time	MR No	Patient Name	Mobile No	Chief Complaint	Diagnosis	Teeth	Treatment	Treatment Type	Status	Year	Student				
1	11/1/2023 8:40:36 AM	69571	Gul Khan	0544703230	new teeth	Missing Teeth	31 ,32 ,41 ,42	Removable acrylic/cast partial dentures	Routine	Assigned	Fourth Year	YASMEEN SALAH HASSAN	Assign	Cancel	Handover	Remove
2	11/1/2023 8:42:47 AM	61225	Ibrar HAQ	0553029101	broken filling	Broken Restoration	11	Restorations: Class-III & IV	Routine	Completed	Intern	KARIM MOHAMED ALI YOU	Assign	Cancel	Handover	Remove
3	11/1/2023 8:47:41 AM	69572	Abdullah Zaka	0547015532	pain	Root Stumps	36 ,46	Extractions: Anterior/post teeth	Routine	Assigned	Fifth Year	RAWAN ANWAR RAMADAN	Assign	Cancel	Handover	Remove
4	11/1/2023 8:54:04 AM	69573	Taimoor Sultan	0552069761	pain sometimes	Cavities	14 ,15	Direct/Indirect Pulp Capping/ Pulp Treatment	Routine	Assigned	Fifth Year	SHAMS SALEH SALEM ALS	Assign	Cancel	Handover	Remove
5	11/1/2023 8:56:16 AM	69574	Kalsoom Bibi	0566378561	wants to remove	Cavities	16	Extractions: Anterior/post teeth	Routine	Un-Assign	Third Year		Assign	Cancel	Handover	Remove

Appendix CL.04-2 - Patient Referral Letter



RAK College of Dental Sciences
HIMS

Notes

Add Notes

Referral Form

Patient Detail

Patient Name:B/O Muhammad Yahya Muhammad
Date Of Birth: Tuesday, November 15, 2016
MR No:53216
Nationality: United Arab Emirates
Gender: Male
Contact Number:0566074845

Referral Detail

Referred to Facility Saqr Hospital **Speciality/Service** CheckUp **Priority** Routine
Need for Transportation Yes No
Arrangement made If(Yes)
In Case of emergency, please refer the patient to contracted hospital as per policy.

Clinical Information

Reason for Referral
Brief History:
Examination Findings: **Diagnosis:**
Treatment Done:
Relevant Tests Investigations: Attached Not Applicable
Past Medical History:
Current Medication:
Allergies / Adverse Medications Events:
Relevant Family History:
Relevant Social History (including smoking status and alcohol consumption):
Additional Relevant information (including special needs, disabilities,clinical warnings):
Patient's condition (in case of referral):
Patient's condition on arrival at the receiving organization:
Follow up:

Save

Appendix CL.04-3 - Patient Discharge Summary

RAK COLLEGE OF DENTAL SCIENCES

Address: P.O.Box :12973, Ras al Khaimah
Contact #: 971-72222593
Fax #:

Discharge Summary

Date & Time :	25 Dec 2019 2:24PM	MR No / Visit No :	49362/50434	Supervisor:	Dr. Dragana Pajevic (D36864)
Name :	Mr. Ahmed Hasan	Age :	50 Years 10 Months 19 Days	Gender :	Male

Treatment Summary

SR #	Date Time	Chief Complaint	Final Diagnosis	Teeth	Treatment	Treatment Plan	Incharge	Student	Progress Notes
1	12/19/2019 2:11:17 PM	Edentulous ( )	Aggressive periodontitis (Generalized) (	Full Mouth	Scalling, Root Planing, Polishing	1-OHI education motivation 2-SPRP 3-follow up after a week 4-extraction of hopeless tooth 5-follow up after 2 weeks 6-prsothesis 7-maintanace phase	Dr. Abdullah Abdul Salam Al Yagob (0)	Ms Mehria Wazin	SPRP is done
2	12/19/2019 2:13:22 PM	Root Stumps ( )	Necrotic pulp (	45	Extractions: Anterior/post teeth	extraction of 45	Dr. Abdullah Abdul Salam Al Yagob (0)	Ms Mehria Wazin	extraction done

Condition at discharge: Patient is conscious,alert and responsive

Discharge Instructions: Continue post operative instructions

Comments: The patient wants to meet another doctor at RAK Hospital

Name and Signature of Supervisor: Dr. Dragana Pajevic (D36864)

Appendix CL.04 - 4 - Monitoring of Client Transitions outside RAKCODS

RAK Medical Health and Sciences University
RAK College of Dental Sciences

Monitoring of Client Transitions

As with other activities, client transitions should be monitored and evaluated for effectiveness, to ensure that the system is functioning consistently and meets the needs of patients in a timely manner. The following indicators are used by RAKCODS to monitor transitions:

1. Report on client transitions from HIMS (handovers/referrals/discharge summaries) made:
2. Monthly patients follow up audit
3. Patient complaints/suggestions/feedback reports

5. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2	05th Jan 2026	3.2 Referral: The referral of patients can be done by the nurses within the initial nursing assessment after discussion with the IDA doctor, the Initial Dental Assessment (IDA) doctor's and the supervising doctor's (the doctor who completed the IDA for the patient).	3.2. Referral: The referral of patients can be done by the nurses within the initial nursing assessment after discussion with the IDA doctor, the Initial Dental Assessment (IDA) doctor's and the supervising doctor's (the doctor who completed the IDA for the patient). If INA does the referral, it needs to be consulted with the Chairperson, Clinical Sciences.

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Clinical**	**Prepared by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Title:	**General & Informed Consent**	
Policy Number:	**CL.05**	**Reviewed by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. Purpose & Scope

To assure patient and family participate in his/her healthcare decisions.

2. Policy Statements

2.1. Consent will be obtained from the patient as and when required during the course of treatment after explaining to them the full details of the procedure.

2.2. General consent will be obtained by the receptionist as the patient is getting registered.

2.3. The informed consent shall be taken by the treating dentist for procedures as mentioned in **Appendix CL.05-3**.

The following factors shall be considered in the process of Informed consent:

2.3.1. The patient's condition.

2.3.2. The proposed treatment(s).

2.3.3. The name of the clinical instructor providing treatment

2.3.4. Potential benefits and drawbacks.

2.3.5. Possible alternatives.

2.3.6. The likelihood of success.

2.3.7. Possible problems related to recovery and

2.3.8. Possible results of non-treatment.

Where an individual is considered unable to give informed consent, another person or a substitute decision maker is generally authorized to give consent on their behalf e.g. parents or legal guardians of female relative. The Concerned Dental assistant (or assistant student) is responsible for ensuring that a signed "Informed Consent Form" is in the patient's file prior to the beginning of the procedure.

3. Definitions/ Abbreviations

3.1. General Consent – The patients agree to the points as described in the general consent form, inclusive of that they may be treated by more than one student doctor and supervising doctor. They also agree that their records can be used for academic or research purposes (**Appendix CL.05-1**).

3.2. Informed Consent – It is the agreement or permission by the patient/ substitute decision maker accompanied with full information on the nature, risks and alternatives of a medical procedure or treatment before the clinical instructors or other health care professional begins the procedure or treatment. After receiving this information, the patient either consents to or refuses such a procedure or treatment (**Appendix CL.05-2**).

3.3. Substitute Decision maker- The priority order of substitute decision makers is:

3.3.1. Parents

3.3.2. Spouse

3.3.3. Adult Children

3.3.4. Adult brothers or sisters

3.3.5. Adult Grandchildren

3.3.6. Legal Guardian

4. Procedures and Responsibilities

4.1. General consent is required for any assessment or screening, Physical examination, radiological evaluation, and administration of medications including local anesthesia and other diagnostic procedures and dental treatments.

4.2. General consent will be obtained to treat all new patients and is documented in the General Consent form.

4.3. Reception staff will take the general consent at the time of registration.

4.4. When a general consent is obtained patients and families are given information on the scope of the general consent such as which tests and treatments are included in the general consent. Patients are also given information about those tests and treatment for which separate informed consent will be obtained.

4.5. General consent is valid for lifetime.

4.6. Signed "Informed consent" shall be obtained before invasive procedures**, (Refer list of Procedures requiring Informed Consent) Appendix CL.05-3.**

4.7. The patient has the **right to reasonably participate in decisions** involving his/her health care. To the degree possible, this shall be based on a clear, concise explanation of his / her condition and of all proposed technical procedures, including the possibilities of any risk of mortality or serious side effects, problems to recuperation, and probability of success to the patients, parents or legal guardians by treating clinical instructors and Dental assistants.

The patient shall not be subjected to any procedure without his/her voluntary acceptance, and informed consent, or that of his/her legally authorized representative. Where medically significant alternatives for care or treatment exist, the patient shall be so informed.

4.8. The patient has the right to know name of the student and supervising clinical instructor under whose supervision the student is performing the procedures or treatment. If the patient requests any additional information like experience, length of time with the organization, etc. on the practitioner responsible for his or her care, then the same would be provided to the patient.

4.9. Specific Guidelines

4.9.1. The treating student / supervising Clinical instructor will give the following information to the patient or the patient's substitute decision maker in lay terms which would make it easy for the patient to take the decision before signing the consent form.

4.9.1.1. The patient's condition.

4.9.1.2. The proposed treatment(s).

4.9.1.3. The name of the person providing treatment

4.9.1.4. Potential benefits and drawbacks.

4.9.1.5. Possible alternatives.

4.9.1.6. The likelihood of success.

4.9.1.7. Possible problems related to recovery and

4.9.1.8. Possible results of non-treatment.

The treating student under supervision of the Clinical instructor shall document the discussion on Informed Consent for invasive and high-risk dental procedures. This shall then be signed by patient or substitute decision maker.

If the patient or their family members need any additional information, they should be addressed and made them understand of any doubts or clarifications.

4.9.2. A substitute decision maker may sign the consent on behalf of the patient if the patient is;

4.9.2.1. Incapable of providing an informed consent.

4.9.2.2. Mentally incapacitated

4.9.2.3. Unconscious

4.9.2.4. Has received sedation.

4.9.2.5. Physically incapable of signing the form.

Patients may delegate the responsibility of signing the informed consent to immediate family member or substitute member.

4.9.3. All the information prior to obtaining the informed consent is given to the patient in the language they understand.

4.9.3.1. When the patient does not speak or understand the predominant language of the community, he/she shall have access to an interpreter from the available list in the clinic kept at various patient care areas.

4.9.3.2. The date and time of signing shall be clearly indicated.

4.9.3.3. The informed consent form shall be valid for thirty days (30) from the time of signature by the patient or his substitute decision maker.

4.9.3.4. The decision regarding the patient's ability to make an informed consent shall be the ultimate responsibility of the supervising clinical instructor.

5. Tools/ Appendices

5.1. Appendix CL.05-1 General Consent.

5.2. Appendix CL.05-2 Informed Consent for invasive dental procedure.

5.3. Appendix CL.05-3 List of Procedures requiring Informed Consent.

5.4. Appendix CL.05-4 Informed Consent for pregnant patients

Appendix CL.05-1 - General Consent Form

RAK COLLEGE OF DENTAL SCIENCES

General Consent for Dental Treatment

Patients, patient representatives, parents and guardians please read this form carefully

I give my consent for Examination, Diagnostic procedure (X-Rays, Blood investigations etc.) and treatment to be provided by student dentists under the supervision of clinical instructors at **RAK College of Dental Sciences**.

Understand that as a patient I/my child/my relative:

1. May experience some problems during examination and treatment that my student dentist cannot predict. These include but are not limited to:
   - 1.1. Pain, discomfort or swelling or minor injuries to related structures
   - 1.2. Infection and bleeding
   - 1.3. Short-term/ long-term numbness of the teeth, gums, tongue, lips, cheek or chin
   - 1.4. Unplanned reaction to a drug, dental materials, latex etc.
   - 1.5. Jaw joint (TMJ) problems
   - 1.6. Breathing in or swallowing a dental instrument or dental material
   - 1.7. Unplanned reaction to local anesthesia
   - 1.8. Any complication may result in additional treatment

2. All records including X-rays, photos, medical records:
   - 2.1 Will remain the sole property of RAK College of Dental Sciences.
   - 2.2 These records may be used for teaching, research and publication.
   - 2.3 These records can be provided to you as per request.

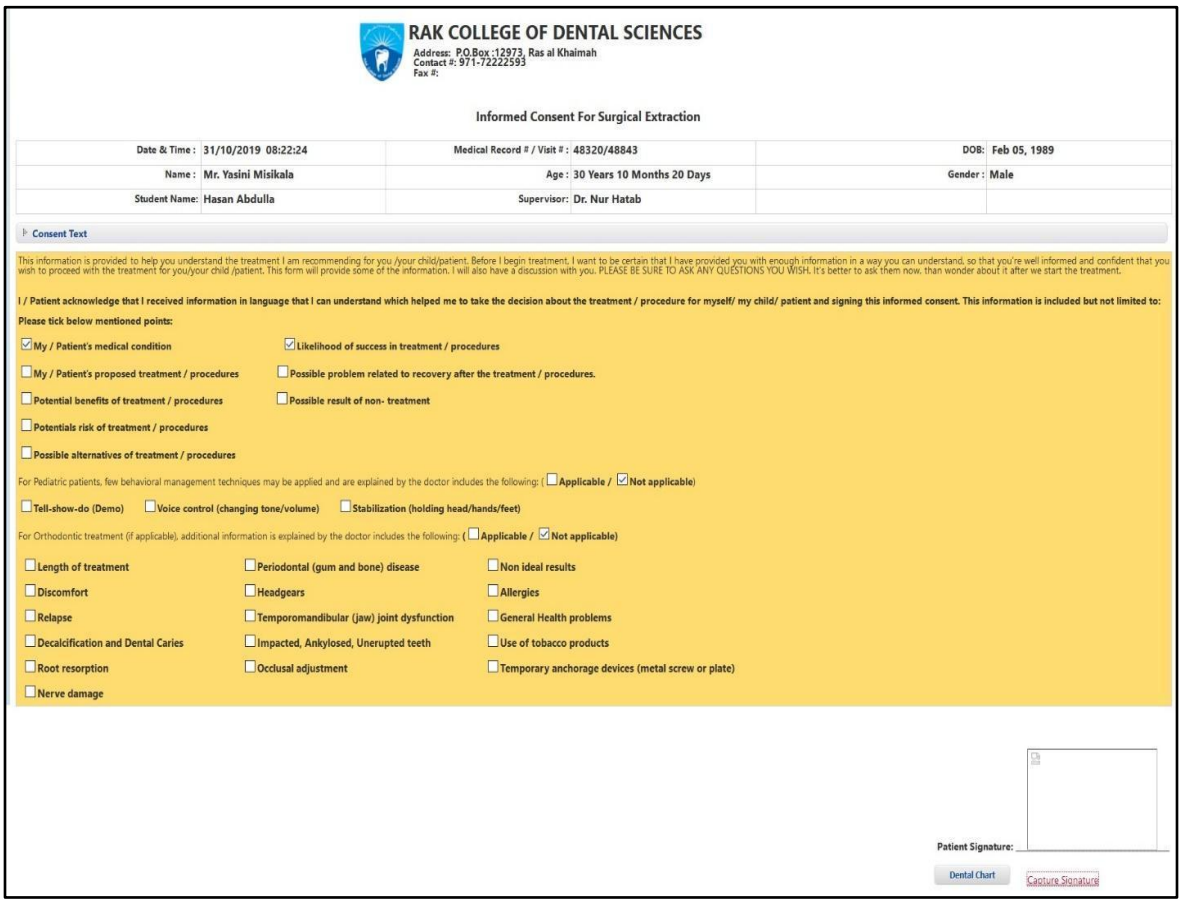
3. It is my/our responsibility
   - 3.1 To follow the post-treatment protocols
   - 3.2 To ask doubts or questions about any risks involved in my examination and treatment
   - 3.3 To seek more dental care, after receiving urgent care treatment, as recommended. Urgent Care treatment (for example: relieving pain or extractions) is not complete dental care.
   - 3.4 To provide correct information regarding the history of any medical conditions or COVID 19 if any.

4. No treatment for the following
   - 4.1. I comprehend that if my doctor diagnoses an issue with my second molars, it won't be addressed at RAKCODS, and I'll need to seek treatment elsewhere.
   - 4.2. I understand that root canal treatment of third molars may not be done and the extraction of this tooth will have a long waiting list

---

Patient/ Parent/ Legal Guardian/ Representative Signature & Date

Appendix CL.05-2 - Informed Consent



RAK COLLEGE OF DENTAL SCIENCES
Address: P.O.Box :12973, Ras al Khaimah
Contact #: 971-72222593
Fax #:

Informed Consent For Surgical Extraction

Date & Time :	31/10/2019 08:22:24	Medical Record # / Visit # :	48320/48843	DOB:	Feb 05, 1989
Name :	Mr. Yasini Misikala	Age :	30 Years 10 Months 20 Days	Gender :	Male
Student Name:	Hasan Abdulla	Supervisor:	Dr. Nur Hatab		

Consent Text

This information is provided to help you understand the treatment I am recommending for you /your child/patient. Before I begin treatment, I want to be certain that I have provided you with enough information in a way you can understand, so that you're well informed and confident that you wish to proceed with the treatment for you/your child /patient. This form will provide some of the information. I will also have a discussion with you. PLEASE BE SURE TO ASK ANY QUESTIONS YOU WISH. It's better to ask them now, than wonder about it after we start the treatment.

I / Patient acknowledge that I received information in language that I can understand which helped me to take the decision about the treatment / procedure for myself/ my child/ patient and signing this informed consent. This information is included but not limited to:

Please tick below mentioned points:

- ☑ My / Patient's medical condition
- ☑ Likelihood of success in treatment / procedures
- ☐ My / Patient's proposed treatment / procedures
- ☐ Possible problem related to recovery after the treatment / procedures.
- ☐ Potential benefits of treatment / procedures
- ☐ Possible result of non- treatment
- ☐ Potentials risk of treatment / procedures
- ☐ Possible alternatives of treatment / procedures

For Pediatric patients, few behavioral management techniques may be applied and are explained by the doctor includes the following: (☐ Applicable / ☑ Not applicable)

☐ Tell-show-do (Demo) ☐ Voice control (changing tone/volume) ☐ Stabilization (holding head/hands/feet)

For Orthodontic treatment (if applicable), additional information is explained by the doctor includes the following: (☐ Applicable / ☑ Not applicable)

- ☐ Length of treatment
- ☐ Discomfort
- ☐ Relapse
- ☐ Decalcification and Dental Caries
- ☐ Root resorption
- ☐ Nerve damage
- ☐ Periodontal (gum and bone) disease
- ☐ Headgears
- ☐ Temporomandibular (jaw) joint dysfunction
- ☐ Impacted, Ankylosed, Unerupted teeth
- ☐ Occlusal adjustment
- ☐ Non ideal results
- ☐ Allergies
- ☐ General Health problems
- ☐ Use of tobacco products
- ☐ Temporary anchorage devices (metal screw or plate)

Patient Signature: _____

Dental Chart Capture Signature

Appendix CL.05-3 - List of Procedures Required Informed Consent

1. Surgical Extractions
2. Periodontal Surgery

Appendix CL.05-4 - Radiology Consent Form



RAK COLLEGE OF DENTAL SCIENCES
Address: P.O.Box :12973, Ras al Khaimah
Contact #: 971-72222593
Fax #:

General Consent Form For X-Ray

Date & Time :	20/01/2020 09:05:03	Medical Record # / Visit # :	46400/51753	DOB:	11/1/1979 12:00:00 AM
Name :	Mr. Test TEST	Age :	40 Years 3 Months 18 Days	Gender :	Female

Consent Text

Informed Consent

I have been fully informed of the risks involved in radiating a pregnancy and assume the responsibility for any consequences from the procedures I am about to have.

موافقة مسبقة

لقد تم إطلاعي بشكل كامل على المخاطر التي ينطوي عليها تشعيع الحمل وتحمل المسؤولية عن أي تبعات ناجمة عن الإجراءات التي توشك على إجرائها.

Patient Signature: _____

Capture Signature
Radiology Room

6. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2	05th Jan 2026		**Appendix Cl. 05-1** The General Consent Form has been revised and replaced with a new version.

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Clinical**	**Prepared by:** **Dr. Fadia Alfateh Hamedalneel Awadalkreem** **Assistant Professor**
Title:	**Dental Technology and Laboratory Services**	
Policy Number:	**CL.06**	**Reviewed by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. Purposes & Scopes

1.1 To assist RAK College of Dental Sciences (RAKCODS) students, faculty and staff in obtaining the highest standards of highest standards of safe, effective, and compliant laboratory services for our patients.

1.2 To encourage and enhance knowledge, learning, and collaboration between faculty, students, staff and approved commercial laboratories to support competency-based education and clinical service delivery.

1.3 To monitor and assess quality assurance and continuous quality improvement of all stages of laboratory work to ensure patient safety.

2. Procedures

2.1 All laboratory prescriptions are handwritten to the contracted lab. Duplicate copies of the laboratory prescription are maintained in the Prostho lab cabinet by the junior instructor in charge.

2.1.1 The student/intern must initially fill out a laboratory job card from clinic, including with all patient details and the work to be done duly signed by the faculty/ senior instructor in charge prior to laboratory dispatch.

2.1.2 All required text entries and clinical details must be completed by the student/intern and checked by the faculty supervisor.

2.2 All laboratory prescriptions will be handwritten by the in-charge faculty/junior instructor and signed only after the following requirements are fulfilled:

2.2.1 The clinical laboratory job card with complete and accurate details are submitted.

2.2.2 Drawings and design instructions are completed on the laboratory job card and the casts.

2.2.3 The licensed faculty/senior instructor must sign the laboratory job card prior to submission.

2.2.4 Along with laboratory job card, the pouched work to be sent to the lab are inspected by faculty/ junior instructors for accuracy, infection control compliance, and completeness before writing the laboratory prescription to ensure patient safety.

3. Selection and Authorization of Laboratory

3.1 Faculty is the provider

3.2 The faculty member provider may select any licensed dental laboratory in the UAE and ensuring the laboratory holds valid regulatory approval.

3.3 The laboratory must be an approved service provider.

4. Laboratory Working Schedule

The standard laboratory working schedule is listed below. Time schedules will vary depending on many factors including: on case complexity, material selection, and laboratory workload. A Technician in charge will inform faculty and/or junior instructor when the case is submitted if additional time will be needed. Furthermore, dental laboratories may occasionally need to extend this time due to unforeseen circumstances. Communications will be carried out appropriately. All communications, including revised timelines, shall be documented and communicated through approved channels.

Required items for submitting cases to the laboratory:

A. Removable Prosthodontics

Complete denture

1. Mounted or unmounted master casts.
2. Record base and wax rim properly adapted and verified clinically.
3. Denture teeth as per approved mould and shade selection.
4. Gingival acrylic shade for processing as recorded on the laboratory prescription.

Removable Partial Denture Framework

1. Mounted master cast (unless opposing a full denture that has not been fabricated).
2. Master cast surveyed and tripoded (do not draw a design on the master cast).
3. Diagnostic cast with framework design drawn on it and approved by faculty.
4. Framework design is drawn on the laboratory prescription with written instructions.
5. The shade of facing as selected and documented.
6. Framework with wax rim/functional impression where indicated.
7. Denture teeth as per approved selection.
8. Gingival acrylic shade for processing as documented on the laboratory prescription.

B. Fixed Prosthodontics

Single Crown

1. Full arch impression (defect-free and properly disinfected).
2. The diagnostic cast, the cast of the provisional or a wax-up as applicable.
3. Opposing cast accurately articulated when required.
4. Interocclusal record properly recorded and verified.
5. Custom incisal guide table for anterior restorations where applicable.

Fixed Partial Denture / Multiple Crowns

1. Full arch impression (properly disinfected and free of defects).
2. Mounted working casts with verified articulation.
3. Interocclusal record accurate and clinically verified.
4. The mounted diagnostic cast, the cast of provisionals or a wax-up as applicable.
5. Custom incisal guide table for anterior restorations where indicated.

Quality Assurance (QA)

Dental laboratory quality assurance is an integral part of student learning and patient **care**, ensuring patient safety, accuracy, and accountability. There are three phases of QA associated with laboratory work:

1. Pre-submission: Before submitting a case to the lab, students must:
   a. Review all components with their supervising instructor to verify completeness and accuracy.
2. Review the lab prescription and all submission components with the faculty/junior instructor (All students should be familiar and comply with these guidelines).
3. Submission: All cases will be reviewed by the laboratory technician in charge, who is appointed by the Manager of the Dental Laboratory, upon receipt of the case. If an appropriate component of the checklist is missing, or if there is a problem with the case that would compromise patient care, the case will be returned at the laboratory administrator's discretion for correction and documentation. The laboratory technician in charge will provide the supervising faculty or the senior instructor with suggestions for correction to ensure compliance with quality and patient safety standards. After corrections are made, the case is resubmitted with the signature of the supervising faculty on the lab prescription and clearly marked as a repeat submission for traceability.
4. Case Return: Upon return from the lab, student and faculty will inspect the work and after checking on patient, if the work is found unsatisfactory, it will be sent to the laboratory for repeat, with the reason clearly identified, documented, and communicated to the laboratory to ensure quality improvement and traceability.

Infection Control Policies and Procedures

Infection control measures of RAKCODS stipulate that all dental impressions, prostheses, and other items that are transported to the Dental Laboratory should be disinfected by the student prior to dispatch to the laboratory. As an additional precaution to ensure the health and safety of all laboratory technicians, administrators, students, and patients, every item should also undergo secondary disinfection in the laboratory before being handled, with documentation of compliance to ensure patient safety, traceability, and accreditation compliance.

It is recommended that a chemical disinfectant with at least an intermediate level of disinfectant efficacy be used on all laboratory materials in accordance with RAKCODS infection control

Committee guidelines. In order to minimize the risk of cross-contamination, there will be separate receiving and dispensing areas. In addition, all cases being returned to students should be disinfected prior to dispensing. This will significantly eliminate the risk of any cross-contamination of infectious microorganisms to the students, instructors, and patients.

As stated above, all items entering the dental laboratory must be disinfected; however, care must be taken to ensure that the disinfection procedures do not adversely alter the integrity of the cases being received. For example, an impression can be distorted if not handled with appropriate materials, timing, and technique.

The following section provides a summary of the appropriate selection of disinfection methods that should be employed with various items based on material compatibility and manufacturer recommendations. These guidelines should be followed to ensure proper disinfection while preserving dimensional accuracy and to maximize the chances of a well-made and well-fitting prosthesis in compliance with patient safety and quality assurance standards.

Impressions

Impressions must be rinsed thoroughly with water to remove saliva, blood, and debris and then properly disinfected before being poured in the RAKCODS laboratory to ensure patient, students, staff, and laboratory safety. They can be disinfected by spraying with an approved impression disinfectant material or by immersion in a compatible disinfecting product. Since the compatibility of an impression material with a disinfectant varies, the manufacturers' recommendations for proper disinfection should be followed after the approval by the Infection Control Committee. The use of a disinfectant requiring no more than 30 minutes of contact time is recommended. However, impression materials that are hydrophilic should be disinfected with a product requiring no more than 10 minutes. Disinfected impressions should be clearly labelled as such on the sealed pouch prior to pouring, to ensure traceability and compliance with infection control protocols.

Each impression consists of two levels of criticality from an infection control perspective:

1. The impression tray is considered a critical item and should be autoclaved after use according to RAKCODS sterilization protocols.
2. The impression material is considered a semi-critical item and should be appropriately disinfected before pouring in accordance with approved guidelines.

Impressions must be inserted in a sealed bag after spraying/immersion and rinsing off, and before they are poured.

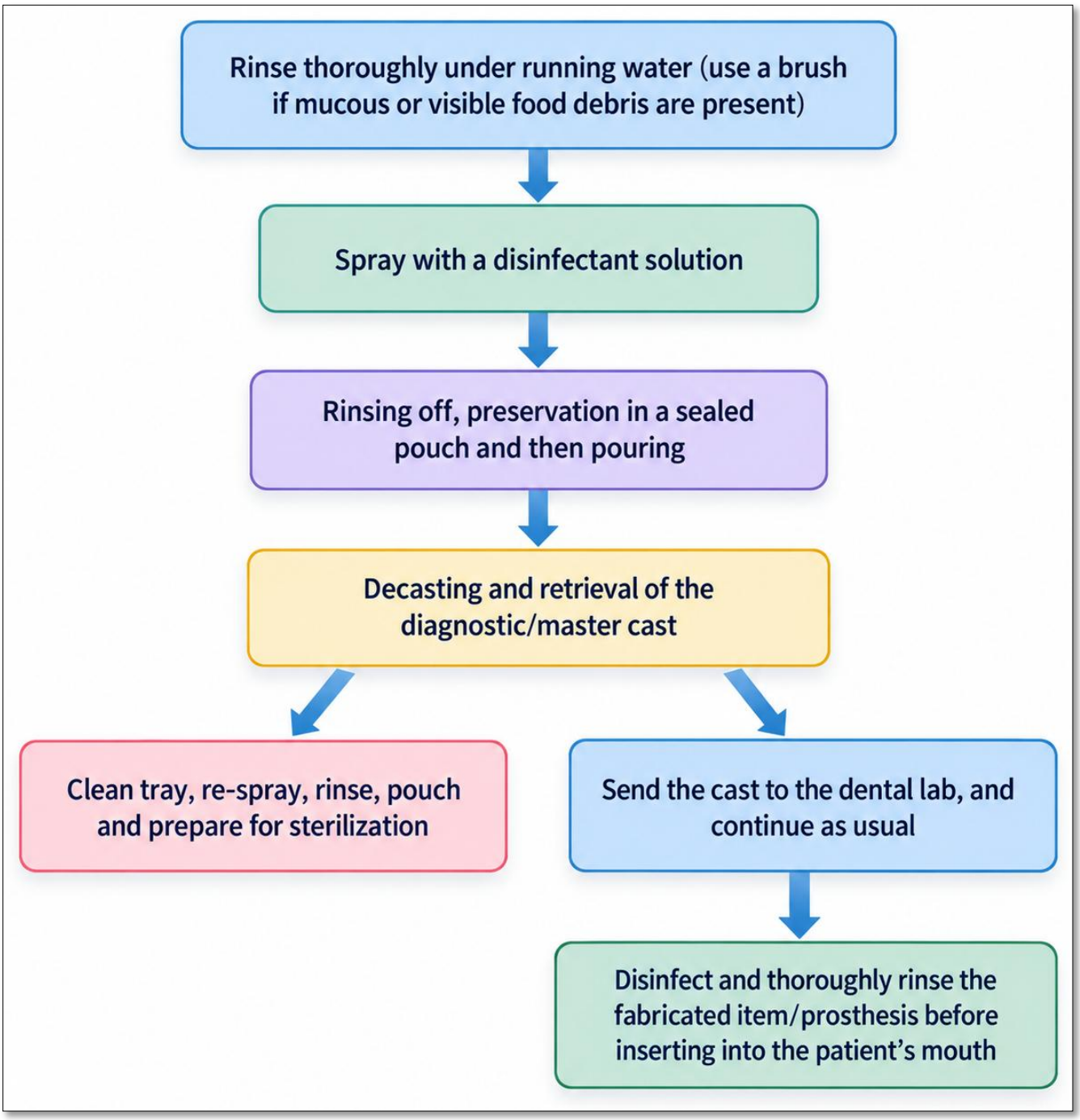
Following pouring, the cast must be examined for any inaccuracy, and the prosthetic design must be drawn and approved by the supervising faculty prior to dispatch to the laboratory, accompanied by a duly signed laboratory request including all the requested details.

Students shall retain the impression tray and, following appropriate cleaning, hand it over to the clinical nurse for sterilization in accordance with institutional infection control protocols.

5. Tools/Appendices

5.1 Appendix CL.06-1 – Summary of the Steps:

Appendix CL.06-1 – Summary of the Steps:



Casts, Prostheses, Wax Rims, and Jaw Relation Records

All casts, fixed or removable prostheses, jaw relation records, articulators, etc. which have had patient exposure must be disinfected before their submission to the laboratory in accordance with RAKCODS infection control protocols. These items should be clearly labelled and identified as to the status of disinfection to ensure traceability and patient safety. If it is clearly identified that stone casts have been disinfected, no future disinfection procedures are necessary.

The following table provides general guidelines for disinfection solutions and methods utilized during routine restorative clinical and laboratory procedures.

Recommended Disinfection Methods:

RECOMMENDED DISINFECTION METHOD	
IMPRESSIONS	• Rinse under running tap water (use a brush if mucous or visible food debris are present). • Spray with or immerse in an approved, material-compatible disinfectant for the manufacturer-recommended contact time for disinfection • Rinse thoroughly again to remove residual disinfectant • Pour with stone after completion of disinfection and labelling.
STONE CASTS	• Spray until wet or immerse in an appropriate disinfectant for the recommended contact time for disinfection as per RAKCODS guidelines.
PROSTHESES APPLIANCES	• Rinse under running tap water to remove surface contaminants. • Spray with or immerse in an approved alcohol-free disinfectant for the recommended contact time for tuberculocidal- level disinfection • Rinse thoroughly again and dry • Acrylic items can be stored in diluted mouthwash or an approved storage solution, as per manufacturer recommendations.

Personal Protection

Each laboratory technician must take the necessary precautions to ensure his/her personal safety in the laboratory in accordance with RAKCODS and International occupational health and safety policies.

Protection, which should consist of:

1. Eye protection (with side shields) should be worn while performing any laboratory work to prevent eye injury from debris or splashes.
2. Masks should be worn while performing any laboratory work that creates aerosols and/or dust/metal particles and should preferably be performed under vacuum extraction and bench protective shielding.
3. Gloves shall be worn when handling known or potentially contaminated materials to minimize the risk of cross-contamination.

   These guidelines should be strictly adhered to due to the occupational risk of injury and/or contamination inherent in a dental laboratory environment and to ensure compliance with the standard occupational safety requirements.

   Any occupational injury, exposure incident, equipment malfunction, or breach of infection control protocols occurring within the dental laboratory shall be reported immediately through the RAKCODS incident reporting system in accordance with RAKCODS occupational health and safety policies.

6. **Document Change Record:**

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Clinical**	**Prepared by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Title:	**Oral Health Promotion**	
Policy Number:	**CL.07**	**Reviewed by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

RAK College of Dental Sciences (RAKCODS) believes in empowering individuals and communities to take responsibility for their oral health as this is also one of the strategic goals.

2. Policy Statement

RAKCODS incorporates oral health education and promotion activities both at a patient level and at a community level.

3. Procedures

RAKCODS conducts health promotion activities at a community and also at an individual patient/family level.

3.1. Health Promotion Activities at a Community Level

RAKCODS goes for community visits to various schools and organization during the academic year. At these schools or organizations our healthcare providers provide free dental screening and also education. The oral hygiene education is done via presentations and tabletop demonstrations. These children and people are encouraged to visit RAKODS for their comprehensive free treatment.

3.2. Health Promotion Activities at an Individual/ Family Level

RAKCODS provides quality treatment for all the patients who visit us and the treatments are free of cost. All expenses are incurred by the organization. Patients once they are at the individual stations of our healthcare providers are engaged in an educational program regarding their oral health. Means by which they can improve their oral hygiene are also explained. Videos from YouTube and demonstrations are provided to help make sure that the patients have understood well as to how to maintain their oral hygiene. The healthcare providers also use the interdisciplinary health education form within HIMS which ensures all possible guidance is provided to the patients and their family.

3.3. Health Promotion by Community Campaigns

RAKCODS provides community campaigns to its patients within RAKCODS. The patients are grouped and discussions are done on common topics including oral hygiene maintenance, the importance of hand hygiene etc.

4. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2	05th Jan 2026	3.2 Health Promotion Activities at an Individual/ Family Level RAKCODS provides absolutely free treatment for all the patients who visit us. The patients once they are at the individual stations of our healthcare providers they are engaged in an educational program regarding their oral health. Means by which they can improve their oral hygiene is also explained. Videos from you tube and also demonstrations are provided to help make sure that the patients have understood well as to how to maintain their oral hygiene. The healthcare providers also use the interdisciplinary health	3.2 Health Promotion Activities at an Individual/ Family Level RAKCODS provides quality treatment for all the patients who visit us and the treatments are free of cost. All expenses are incurred by the organization. Patients once they are at the individual stations of our healthcare providers are engaged in an educational program regarding their oral health. Means by which they can improve their oral hygiene is also explained. Videos from YouTube and demonstrations are provided to help make sure that the patients have understood well as to how to maintain their oral hygiene. The healthcare providers also use the interdisciplinary health education

Edition Number	Review Date	Description of Change	
		Current	**Revised**
		education form within HIMS which ensures all possible guidance is provided to the patients and their family.	form within HIMS which ensures all possible guidance is provided to the patients and their family.

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Clinical**	**Prepared by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Title:	**Reporting Occurrence Variance, Near Miss, Adverse and Sentinel Events**	
Policy Number:	**CL.08**	**Reviewed and Approved by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

The purpose of this policy is to establish clear systems for reporting Occurrence Variances which are graded as events, near miss, adverse events and sentinel events to provide a mechanism of identification, tracking and follow up of all incidences (Occurrence Variances) that pose an actual or potential safety risk to patients, families, contract workers, visitors, students, interns and staff.

This policy will ensure to have a positive impact in improving patient care, treatment, and services and preventing sentinel, adverse, near misses and events.

2. Definitions/ Abbreviations

2.1 Events: any event/circumstance/happening not consistent with the standard routine operations of the clinic and its staff or the routine care of a patient/visitor.

2.2 Near-miss: Is an event or situation that could have resulted in an accident, injury or illness to a client but did not, either by chance or through timely intervention.

2.3 Adverse event: Is an unexpected and undesirable incident directly associated with the care or services provided to the client. The incident occurs during the process of

receiving health services. The adverse event is an adverse outcome, injury or complication for the client.

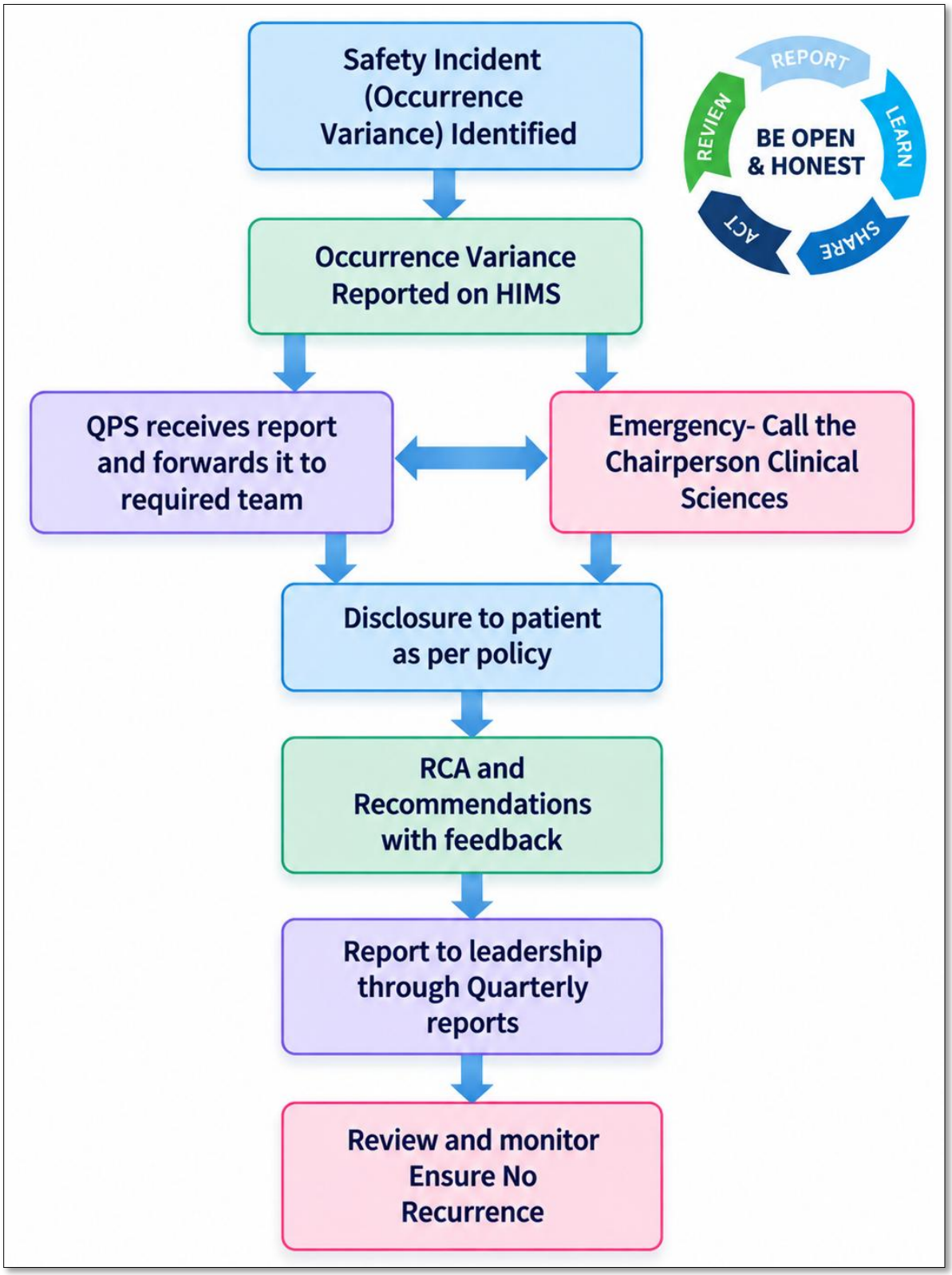
2.4 **Sentinel Event:** Is an adverse event that leads to death or major and enduring loss of function for a recipient of healthcare services. Major and enduring loss of function refers to sensory, motor, physiological, or psychological impairment does not present at the time services were sought or began.

3. Policy Statements

3.1 It is the policy of RAK College of Dental Science (RAKCODS) that every Event, Near Miss, Adverse or Sentinel Event occurring within the clinic or as a result of the clinic carrying its activities including medication management related incidents shall be reported on HIMS using the Occurrence Variance Report (OVR) Form (**Appendix CL.08-1**).

3.2 All Occurrence Variance Reports (OVR) shall serve as a quality improvement tool and be evaluated and acted upon in a "blame-free" mindset and will follow a system review.

4. Procedure for Reporting any Occurrence Variance



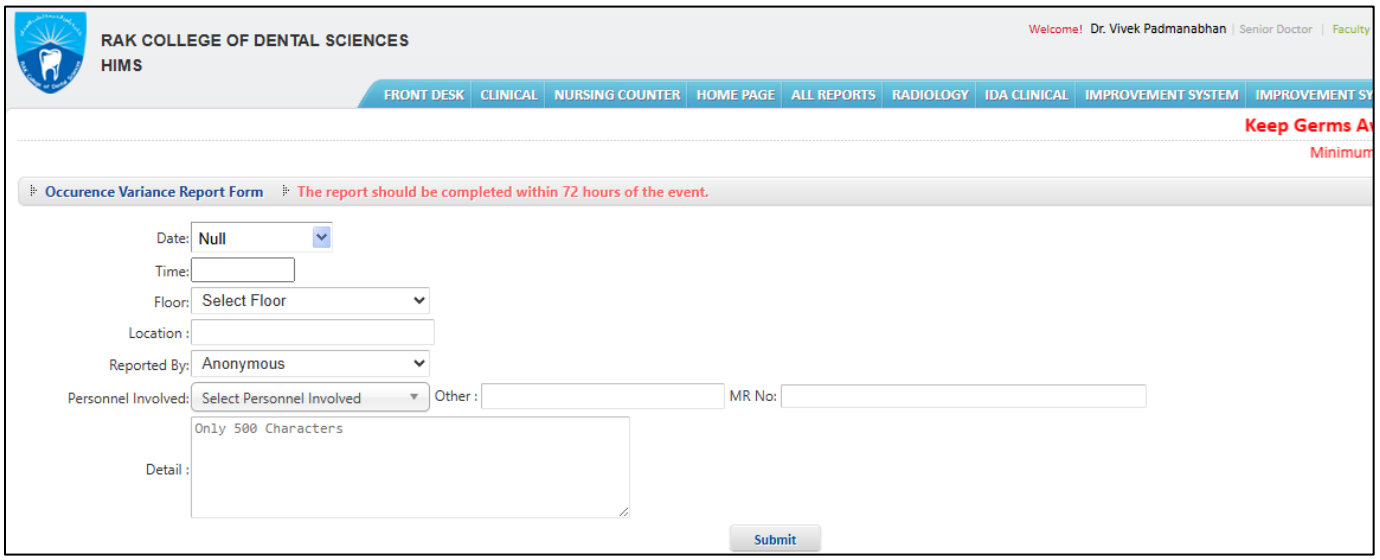
5. Tool/ Appendices

5.1 Appendix CL.08-1 - Occurrence Variance Report (OVR)

5.2 Appendix CL.08-2 - Guidelines for Occurrence Variance Reporting

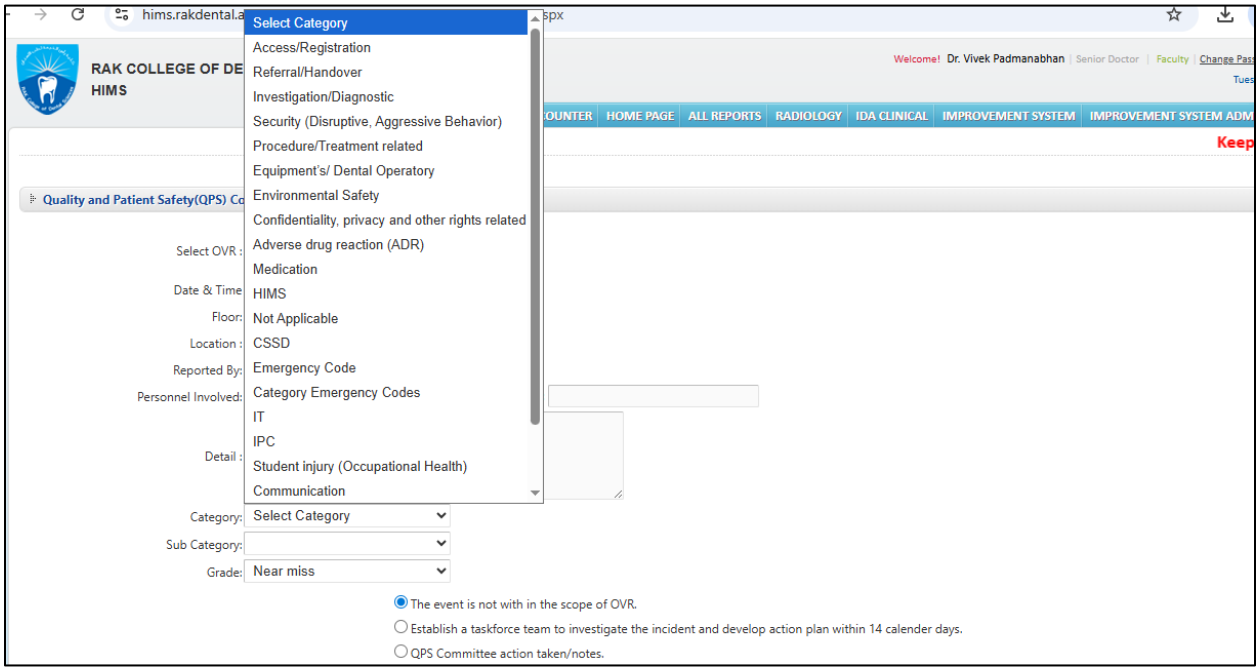
Appendix CL.08-1 - Occurrence Variance Report (OVR)

Use this form on HIMS to report Occurrence Variances, near miss events, injuries, medical situations, student/staff/faculty behavior incidents. The report should be file within 72 hours of the event.

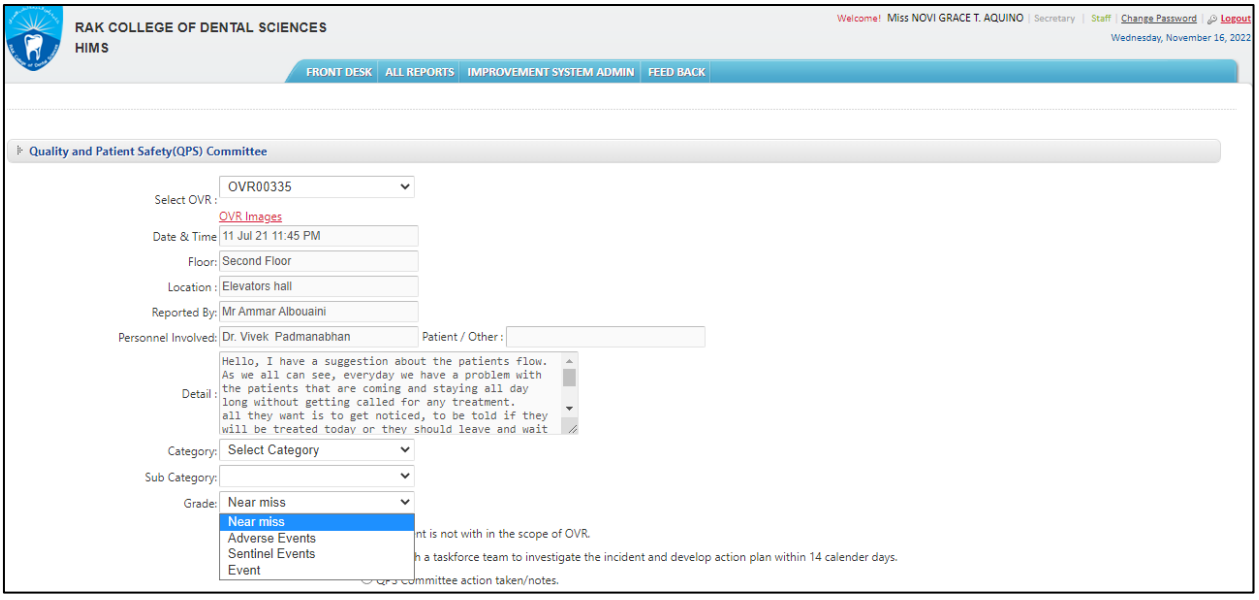


Appendix CL.08-2 - Guidelines for Occurrence Variance Reporting

Category:



Grade



6. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Clinical**	**Prepared by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Title:	**Disclosure of Adverse Events**	
Policy Number:	**CL.09**	
Ownership:	**RAKCODS**	**Reviewed by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Effective (Issue) Date:	**Sep 2019**	
Edition Number	**3**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 ep 2028**	

1. Purpose and Scope

RAKCODS ensures a structured process for disclosing sensitive health information discovered incidentally during patient care, as well as patient safety incidents arising from treatment procedures at RAKCODS.

2. Policy Statement & Procedures

2.1 All health information is to be considered confidential, and should only be discussed with the patient, or with the patient's legally authorized representative, and in accordance with the legality of the United Arab Emirates and the ethical Codes of Conduct.

2.2 Health information that becomes known to the healthcare provider incidentally or those adverse events that occur as a result of the dental procedures being provided at RAKCODS and that is considered sensitive, include the following:

2.2.1 Infectious diseases following the routine screening after a sharp or splash injury, specifically: Hepatitis B, Hepatitis C, and HIV.

2.2.2 The diagnosis of cancer following a diagnostic tissue biopsy.

2.3 Before disclosing the findings to the patient and/or to the legally authorized representative, the healthcare provider should make every effort to ensure that the diagnostic tests are accurate. A repeat of the assessment is advised.

2.4 Adverse events arising from dental treatment procedures at RAKCODS shall be disclosed by the student, GP dentist, and/or faculty member, as applicable. Disclosure shall usually take place in the clinic, with patient privacy ensured. When necessary, it may take place in the faculty office in the presence of the Chairperson of Clinical Sciences and Quality and Patient Safety.

2.5 Critical health information, including biopsy findings or blood test results, shall be disclosed in a private and quiet setting, such as the office of the IPC Chairperson or the Chairperson of Clinical Sciences, to facilitate a confidential discussion with the patient.

2.6 Healthcare providers should have appropriate training from IPC in disclosing adverse events as per the policy. They should have the following documents (in hard copy) ready to be given to the patient, before the counselling session:

2.6.1 A copy of the report showing the results of the investigations to be disclosed.

2.6.2 A referral letter to a suitable medical consultant, or hospital, where the patient will seek further care.

2.7 If the patient needs a translator for interpretation, he/she should be readily available and provided.

2.8 All the doubts and concerns by the patient should be appropriately addressed by the team of health care providers.

2.9 A counsellor should also be offered and arranged if the patient agrees to go in for counselling

2.10 The supervising doctor for the patient can follow up with the patient and provide additional support if needed.

2.11 Clients, families, and team members are asked for feedback regarding their experiences with disclosure, and this data is used to review and revise the disclosure procedure as necessary.

2.12 All the disclosures need to be recorded on HIMS. In case of technical difficulties, the hard copies within the nursing station can be used as well.

3. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2	05th Jan 2026	2.4 Disclosure of information should take place in the Isolation room located on the first floor of RAKCODS, which provides a private and quiet venue for discussing the diagnosis with the patient.	2.4 Disclosure of information can take place in the office of the faculty/ Chairperson Clinical sciences, which provides a private and quiet venue for discussing the diagnosis with the patient.

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Clinical**	**Prepared by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Title:	**Patient Education**	
Policy Number:	**CL.10**	
Ownership:	**RAKCODS**	**Reviewed by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Effective (Issue) Date:	**Sep 2019**	
Edition Number	**3**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

Identify patients and family educational needs in order to facilitate understanding of the patient's health status, and care process, increase their potential to follow a therapeutic health care plan, and promote a healthy lifestyle. This is a policy for whole of RAKCODS clinics.

2. Policy Statements

2.1. The patient's educational needs pertaining to care shall be identified and addressed.

2.2. Education should include the following:

2.2.1. Diagnosis:

2.2.2. Treatment plan, expected outcomes, and potential side effects/ complications of treatment.

2.2.3. Safe and effective use of medication, if any.

2.2.4. Pain management

2.2.5. Rehabilitation technique

2.2.6. Safe and effective use of medical equipment, if any.

2.2.7. Instruction on potential food- drug interactions and counseling on modified diets, as appropriate.

2.2.8. When and how to obtain further treatment, if needed.

2.2.9. Information about any instructions given to the patient, family, and /or significant other(s) shall be provided to any individual or organization responsible for the continuing of care.

2.3. Education shall be provided in a manner and a language the patient can understand that:

2.3.1 Facilitates the patient's and/or significant other's understanding of the patient's health status and health care options selected.

2.3.2 Facilitates participation in decision making about health care options.

2.3.3 Increase patient / significant other(s) potential to follow the therapeutic health care options.

2.3.4 Increases the patient / significant other(s) ability to cope with the patient's health status/ prognosis / outcome

2.4 Enhances the patient / significant other(s) role in continuing care and promoting a healthy lifestyle.

2.5 Education shall be based on assessment of patients:

2.5.1 Ability to learn, cultural and religious practice, emotional barriers, desire and motivation to learn, education level, visual learner, and language barriers.

2.5.2 Learning needs- including the above factors and skills/ knowledge deficits.

2.6 Resources should be selected based on needs and shall include, but not be restricted to, educational information, brochures and printed materials, use of classes and groups, and variety of external resources.

2.7 Education should be adapted to appropriate age, culture and language and shall be individualized for the specific patient/ family/ significant other(s)

2.8 Once educational needs are identified, the health care worker shall determine what departments/ disciplines will be required to meet those needs. Individuals or departments involved may include:

2.8.1 Doctors

2.8.2 Dental assistants/ nurses

2.8.3 Dental Students

2.8.4 Interns

2.8.5 Radiology Technician

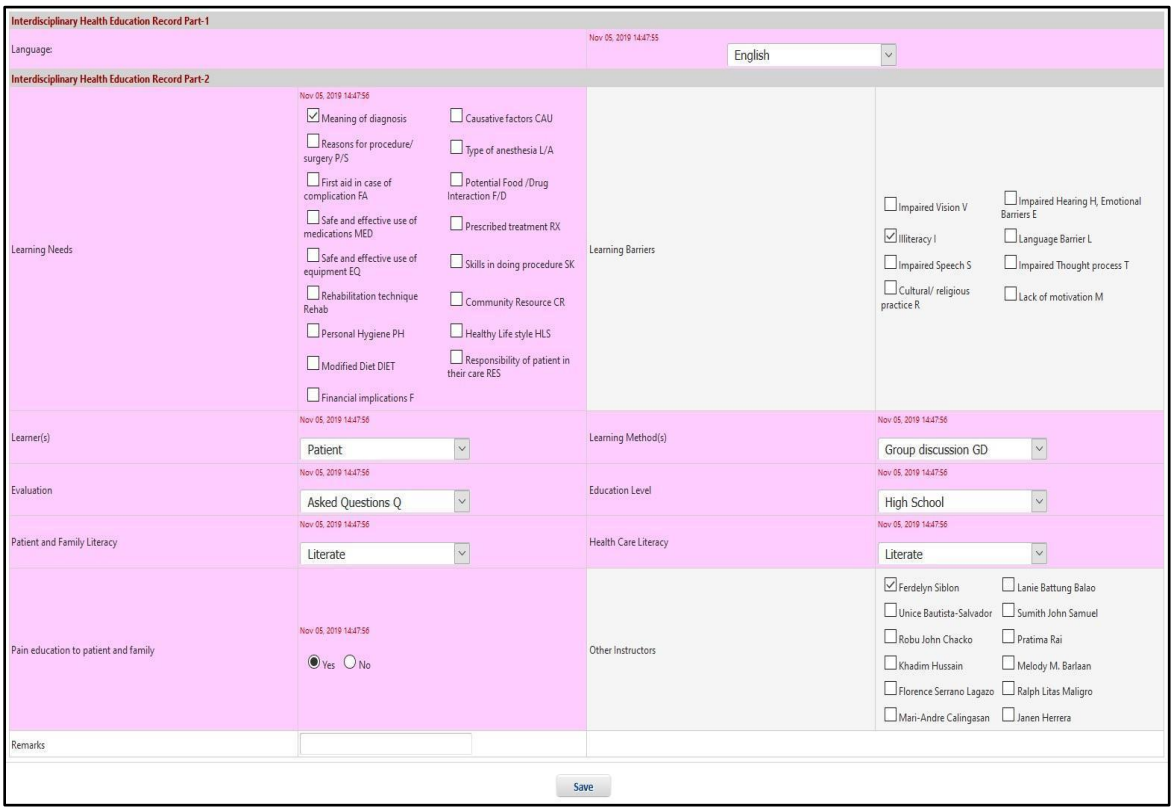
2.9 Specialized instructions regarding treatments, diet, medications, and other patient educational needs shall be documented in the patient's medical record. The patient/ family's level of understanding should also be noted, as well as any referrals and actions taken to assist the patient in meeting educational needs.

2.10 There is a process to verify if the patient and family received and understood the education provided through documentation in HIMS.

3. Tools / Appendices

3.1. Appendix CL.10-1 - Health Education Form

Appendix CL.10-1 - Health Education Form



4. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

9.

NURSING POLICIES

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Nursing**	**Prepared by:** **Ms. Puja Dipu Das** **Head Nurse**
Title:	**Dress Code for Nurses and Requirements**	
Policy Number:	**NS.01**	**Reviewed by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

To ensure that professional image of RAKCODS Nursing Staff is upheld and standards in dress code maintained. All must adhere to the clinical dress code.

2. Policy Statement

This policy applies to all RAKCODS nurses undertaking clinical duties and assignments at RAKCODS to ensure appropriate uniforms during the provision of clinical care.

3. Procedures

3.1. All nurses are required to wear the prescribed uniform and to present at work in a neat, clean and professional manner.

3.2. Cardigans/ jackets are not allowed to be worn during clinical duties.

3.3. Footwear must be safe, fully enclosed, well fitting, and secure with good support and quiet nonslip soles.

3.4. Identification name tags/badges must be worn at all times and must be clearly visible to the patients and other clients.

3.5. Hair should be clean and neat, and if longer than the bottom of the collar is to be tied back securely.

3.6. Nails should be clean and short for hand hygiene.

3.7. Nurses belonging to different cultural and religious groups may need to observe specific requirements of the prescribed uniforms that constitute an important part of their religious or cultural beliefs. Their particular needs are met in addition to ensuring the health and safety and well-being of staff and patients.

3.8. During pregnancy, maternity uniform (loose) will be worn by the nurse in exchange for the standard uniform for the duration of pregnancy.

3.9. All uniforms are laundered by the individual staff nurse.

4. Other Requirements

4.1. Personal Qualities

4.1.1. Medically fit to work:

4.1.1.1. Free from contagious diseases (Hepatitis B and C, etc.)

4.1.1.2. Good eyesight

4.1.2. The calm, confident and reassuring manner

4.1.3. The ability to relate well to people, including children and those with special needs

4.1.4. Caring for people

4.1.5. Working as a part of a team

4.1.6. A positive and flexible approach to work

4.1.7. Following instructions

4.2. Educational Qualities

4.2.1. Should be a graduate of bachelor's degree in nursing

4.2.2. Qualification of Doctor of Dental Surgery (DDS), Doctor of Dental Medicine (DMD) or Bachelor of Dental Surgery (BDS)

4.2.3. Diploma in Dental Assistant or Dental Nursing or Hygienist or its equivalent certificate.

4.2.4. Experienced in the field of Dental Nursing and General Nursing

4.2.5. Licensed as applicable

5. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Nursing**	**Prepared by:** **Ms. Puja Dipu Das** **Head Nurse**
Title:	**Care of Instruments/ Equipment**	
Policy Number:	**NS.02**	**Reviewed by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

To ensure that all borrowed instruments/equipment must be returned in the same condition.

2. Policy Statement

All instruments/equipment borrowed from the instrument room must be checked and listed on the borrower's form.

3. Procedures

3.1. Dispensing of Instruments/ Equipment

3.1.1. Borrower's form must be filled with the name, ID number and station number of the borrower.

3.1.2. Instruments are checked before dispensing

3.2. Returning of Instruments/ Equipment

3.2.1. All returned instruments/ equipment must be checked upon receiving.

3.2.2. Any broken/ damaged or missing instruments must be reported on the Occurrence Variance Report (OVR) form on HIMS and a separate log can be maintained.

3.2.3. All instruments/ equipment used in the treatment areas are brought to CSSD (Dirty Area) for the process of disinfection and sterilization.

3.2.4. Equipment that cannot be sterilized by the autoclave is disinfected.

3.2.5. All handpieces are oiled before sterilization.

3.2.6. All sterilized instruments from the CSSD are returned to the instruments room, checked and stored in the cabinets.

3.3. Inventory of instruments is done daily and in case additional instruments are needed in the clinics, a request has to be made with the approval of doctor directly involved in the usage of such instruments by the Dean. This request will be forwarded to the Store-In-Charge, and the office of store-in-charge will process the purchase of the requested items or instruments.

3.4. All handpieces and equipment that are not in good working are being reported to the Engineer.

3.4.1. A maintenance request form is given to the engineer.

3.4.2. A copy of maintenance request form with the details of the handpieces and equipment to be repaired to be retained for filing.

4. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Nursing**	**Prepared by:** **Ms. Puja Dipu Das** **Head Nurse**
Title:	**Care of Materials/ Requisition**	
Policy Number:	**NS.03**	**Reviewed by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

To provide clinic supplies and dental materials in a timely manner and to track the use of materials/ supplies in every clinic session. This policy applies to all clinics of RAKCODS.

2. Policy Statement

Request for Dental Materials/ Supplies should be done by the nurse in charge of nursing station on a weekly basis.

3. Procedures

3.1. Inventory of dental materials on a weekly basis to determine the needed materials/ supplies to be requested by the nurse in charge of nursing station.

3.2. Needed materials/supplies for the coming week are being requested through the system and approved by Chairperson-Clinical Sciences.

3.3. The Store-In-Charge then checks the material requisition and issues the materials along with the system and approval of Chairperson-Clinical Sciences.

3.4. Dental materials/supplies dispensed by the nurse in charge of the nursing station with strict compliance with infection control protocol.

3.5. Record Keeping

To ensure that appropriate and immediate action is taken in the event of damage, loss or tampering.

All records under the nursing care and computer system shall be safeguarded at all times against damage, loss or tampering.

3.5.1. Prevent and safeguard records from damage, loss or tampering.

3.5.2. Keep all records in a self-place.

3.5.3. Routine checking of records in work areas to ensure that there are no signs of water dripping from pipes. In case of repairs, notify the line manager before all records are being transferred to a safe place.

3.5.4. In case records are missing or stolen, the line manager must be contacted and the security must be notified by a written report.

3.6. Managing Patient's Welfare

To ensure that all patients are treated and taken care inappropriate manner. All patients shall be treated adhering to the patients' bill of rights as outlined in patient's rights. These are displayed in the reception area visible for the patients to read upon registration and also in the waiting areas.

3.7. Managing Student's Clinical Training

To ensure the smooth flow of the student's clinic.

All Teaching Clinics must be prepared ahead of time.

3.7.1. Clinics are prepared 30 minutes before clinic starts.

3.7.2. Dental units and chairs are checked and disinfected.

3.7.3. All instruments are ready for dispensing.

3.7.4. All materials are ready for dispensing.

3.7.5. Attendance of students is monitored and checked.

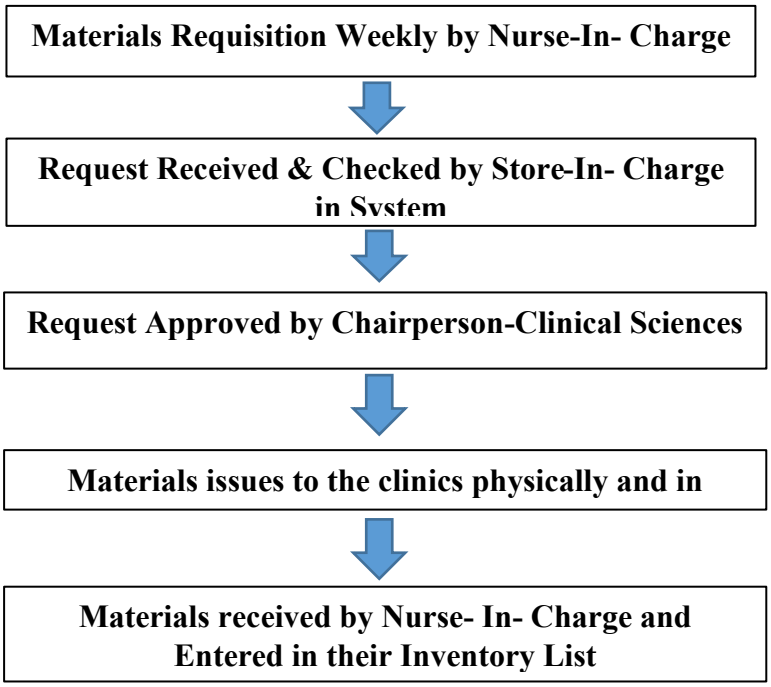
3.7.6. Infection Control Protocol for students is monitored.

3.7.7. Engineer is notified of any malfunction of the dental unit/chair for immediate service.

4. Tools/ Appendices

4.1. Appendix NS.03-1: Flowchart reflecting the Request and Approval of Material Required

Appendix NS.03-1: Flowchart reflecting the Request and Approval of Material Required



5. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Nursing**	**Prepared by:** **Ms. Puja Dipu Das** **Head Nurse**
Title:	**Occurrence Variance Report (OVR)**	
Policy Number:	**NS.04**	**Reviewed by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. **Purpose and Scope**

   To ensure that all incidents are reported in an appropriate manner and method. The policy applies to all clinics of RAKCODS.

2. **Policy Statement**

   All incidents occurring within the clinical facility shall be reported through HIMS by using the Occurrence Variance Report (OVR) form within 72 hours of the event.

3. **Procedures**

   3.1. All incidents occurring within the clinical facility must be reported in writing by the involved individuals.

   3.2. The incident form is available in the HIMS at the nursing station in every clinic and also on HIMS.

   3.3. The Quality and Patient Safety committee decides the proper action regarding the reported incident.

4. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

10.

MEDICATION MANAGEMENT POLICIES

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Medication Management**	**Prepared by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Title:	**Medication Safety & Management**	
Policy Number:	**MM.01**	**Reviewed and Approved by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2022**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**2**	
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

1.1. To maintain patients' safety and improve the quality of medication management.

1.2. To assure efficiency and effectiveness of the medication management processes in RAKCODS.

1.3. To ensure that medications are used in a consistent manner and standardized process in RAKCODS.

1.4. To ensure the processes of medication management is prepared, managed, reviewed and revised by the chairperson of clinical sciences and the chairperson of quality and patient safety, after inputs from all stakeholders including the faculty of different clinical disciplines, nurses and dean's office as applicable.

1.5. All the changes to applicable laws, regulations, standards of practice, and best practice literature are monitored and used to update medication management policies and procedures.

1.6. All the policies and procedures should be easily accessible and at all times will be available in the shared folder of the organization.

2. Policy

2.1. RAKCODS shall have a process on medication safety and management as per the

standards and regulations.

2.2. The medication safety and management process shall describe how it is designed and implemented in RAKCODS.

2.3. The details of each process are described further in relevant policies and procedures as appropriate.

2.4. Medication safety and management policies and procedures shall be prepared, implemented and monitored by the chairperson of clinical sciences and quality and patient safety committee and managed by the head nurse, the reporting of the same shall be done to the Chairperson, Clinical Sciences office.

2.5. The head nurse will be responsible for medication management processes including maintenance of the organizations medication supply, evaluating medication use and the associated incidents with the management of medications at RAKCODS.

2.6. Medication if not specified at RAKCODS is limited to the use of Local anaesthesia, the medications used will be fit to purpose for the organization and if there is any change in the list of stocked medications it will be discussed and decided by all the stakeholders through the chairperson of clinical sciences and QPS office. The same information shall be dispersed organization wide.

2.7. The process shall include the following:

a) Medication selecting and procuring
b) Medication storage
c) Medication prescribing
d) Medication administration
    i. Administration of LA
    ii. First aid
    iii. Emergency Medications
e) Medication errors and adverse events reporting (refer to OVR policy)
f) Medication recall
g) Medication expiration
h) Medication disposal

2.8. The available medications in RAKCODS (Appendix MM.01-1)

a) First Aid
b) Local Anaesthesia
c) Emergency Medications

2.9. High-alert medications are not available in RAKCODS including adrenergic antagonists, anti-arrhythmic, antithrombotic agents, cardioplegic solutions, chemotherapeutic agents, dextrose, dialysis solutions, insulin, and neuromuscular blocking agents.

2.10. HIMS database can be accessed by all staff which provides evidence-based referential drug and clinical information.

2.11. Concentrated Electrolytes, Heparin products, and Narcotic products are not available in RAKCODS.

3. Procedures

3.1. The chairperson clinical sciences committee and QPS office prepares the medication and management-related processes.

3.2. The chairperson clinical sciences committee and QPS office manages the forms for recommendations, updates, addition, and deletion.

3.3. The head nurse shall ensure that all medications are managed as appropriate in the clinical areas with the assigned nurse for each clinic.

3.4. HIMS drug database can be accessed by logging into HIMS with the unique User ID and Password.

3.5. All faculty members across disciplines provide input on the medication management process.

4. References

4.1. https://www.dha.gov.ae/Documents/Regulations/Outpatient%20Care%20Facilities%20Regulation.pdf

4.2. https://www.ismp.org/sites/default/files/attachments/2018-08/highAlert2018-Acute-Final.pdf

5. Tools/Appendices

5.1. Appendix MM.01-1 Available Medications in RAKCODS

Appendix MM.01-1 Available Medications in RAKCODS

First Aid Drugs	
1.	Mebo Ointment tube of 15g
2.	Fucidin® Ointment 2% Sodium fusidate 20mg
3.	Betadine® Antiseptic solution 125ml
4.	Paracetamol 500mg

Local Anesthesia	
1.	Lignospan Lidocaine hydrochloride 2% with adrenaline 1:80.000 1.8ml Cartridges
2.	Scandonest Mepivacaine hydrochloride 3% content: 1.8ml cartridges
3.	Topical Anaesthesia Gel Active ingredient- Benzocaine 20% with vitamin E and Xylitol
4.	Topical Anaesthesia Spray Active ingredient-20% ,gluten free

SI no.	Drug	Quantity Available	Location	Dosage	Route of Administration	Indications	Maximum Dosage per patient	Availability
1	Hydrocortisone Sodium Succinate Inj.IV	11 vials	2pc – recovery room 3pcs- ground floor, first floor and second floor crash carts	100mg powder vial	IV	Acute Hypersensitivity reactions and Anaphylaxis	100 mg, can be repeated if needed up to 300 mg.	✓
2	Water for injection-IV/IM	15pcs	3pcs – recovery room 4pcs – ground floor, first floor and second floor crash carts	5 ml	IV	Mixed with the Hydrocortisone Sodium Succinate as per manufacture guidelines		✓
3	Dexamethasone Inj. IV	9amp.	3pcs - ground floor, first floor and second floor crash carts	8 mg/2ml vial	IV	Post-operative Edema	8mg Once.	✓
4	Epi Pen (Adrenaline)-IM/Sc	3 syringes	1pc – ground floor, first floor and second floor crash carts	0.3 mg preloaded syringe	IM	Acute Anaphylaxis	0.3 mg then 0.3 mg after 5 minutes As required	✓
5	Epi Pen (Adrenaline) pediatric-IM/Sc	1 syringe	1pc – recovery room	0.15 mg preloaded syringe	IM	Acute Anaphylaxis	0.15 mg then 0.3 mg after 5 minutes As required	✓

SI no.	Drug	Quantity Available	Location	Dosage	Route of Administration	Indications	Maximum Dosage per patient	Availability
6	Chlorphenir amine Inj.- IM/ 10mg /1ml vial	10amps.	4pcs – recovery room 2pcs each– ground floor, first floor and second floor crash carts	10mg /1ml vial	IM	Allergic reactions	Adult: 10 mg for 1 dose, to be repeated if necessary; maximum 4 doses per day	✓
7	Dextrose 5% - Infusion	8bottles	2 pcs each– recovery room, ground floor, first floor, second floor crash carts	5% - Infusion- 500 ml	IV Infusion	Supportive medication		✓
8	Diclofenac Na Inj.-IM-	2amps.	2pcs – recovery room	75 mg	IM	Acute Post-operative pain	75 mg 1-2 times a day; Maximum 150 mg per day	✓
9	Paracetamol Infusion-	2 bottles	2pcs – recovery room	1000mg/ 100 ml	IV Infusion	Pain, Fever	1 G every 4-6 hours does to be administered over 15 minutes; Maximum 4 G per day	✓
10	NS 0.9% infusion- Infusion-	4 bottles	1 each – recovery room, ground floor, first floor, second floor crash carts	0.9% infusion- Infusion- 500 ml	IV Infusion	Supportive Medication		✓
11	Glucagon- IM/Sc-	1vial	1 pc – recovery room	1mg powder- 1 ml sterile water	IM	Diabetic Hypoglycemia	1mg if no response within 10 minutes IV Glucose must be given	✓
12	Salbutamol inhaler Inhalational -			0.1mg/dose	Inhalation aerosol	Asthma	1-2 Puffs up to 4 Times per day	
13	Ventolin nebules 5mg- Inhalational -nebulizer	3 pcs	1 pc each - ground floor, first floor, second floor crash carts	5mg/2.5 ml	Inhalation Nebulization	Asthma	5 mg repeated up to 4 times per day	✓
14	Phsiologica NS 5ml for neulization	9pcs.	3pcs – recovery room 2pcs - ground floor, first floor, second floor crash carts	5ml	Inhalation Nebulization	Mix with Ventolin for nebulization		✓
15	Glyceryl Trinitrate (GTN)- Sublingual	1pc	1pc recovery room	-0.4 mg/ dose spray		Angina	0.4-0.8 administered under the tongue and closed the mouth, dose can be repeated at 5 minutes intervals if needed.	✓
16	Aspirin PO(Chewable)	10tabs.	4pcs – recovery 2pcs- ground floor, first floor,	300mg tablets	PO	Unstable Angina/ MI	300 mg, Once per day.	✓

SI no.	Drug	Quantity Available	Location	Dosage	Route of Administration	Indications	Maximum Dosage per patient	Availability
			second floor crash carts					
17	Desloratadine Tablets "Aerius"	24tabs	7tabs – ground floor crash cart 10tabs – first floor crash cart 7tabs – second floor crash cart	5mg	PO	Mild Allergic Reaction and Nasal Congestions	5 mg once per day	✓

6. Document Change Record

Edition Number	Review Date	Description of Change	
		Current	Revised
2	07th Jan 2026		The list of emergency medications, lot numbers, and expiry dates has been omitted, as these details are subject to frequent changes.

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Medication Management**	**Prepared by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Title:	**Medication Selection and Procuring**	
Policy Number:	**MM.02**	**Reviewed by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Oct 2022**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**2**	
Next Review Date	**30 Sep 2028**	

1. Purpose

1.1. To ensure the availability of approved medications in RAKCODS as per the needs, and types of services provided.

1.2. To ensure meeting patients-procedure medications needs.

1.3. To maintain a sufficient supply of medications and smooth running of all teaching activities in RAKCODS.

2. Policy

2.1. The Procurement Committee receives the requests regarding medications needed from the clinical faculty/staff.

2.2. The Procurement Committee oversees the establishment of an unbiased, transparent, efficient, and timely procurement of medications.

3. Procedures

3.1. The Procurement Committee shall develop selection criteria for medications including medication efficacy, safety, and cost with input from the specialty faculty in the use of the medications.

3.2. The Procurement Committee approves the purchase requests through SPI software.

3.3. The Procurement Committee does the technical evaluation for all the suppliers' offers to choose the matching offers.

3.4. Following the delivery of the purchased items, the committee does a technical report to ensure that the supplied items match the requested specification.

3.5. Sample medications are not accepted to be received nor stored in RAKCODS (only dental materials).

3.6. Medications approved will be procured and stored in the RAKCODS store as per need and consumption rate.

3.7. Maintaining medication supply shall follow the RAKCODS Store Inventory.

3.8. Additional medications- if any other medication is needed for RAKCODS than the usually used then the request has to be received which is then discussed appropriately and then proceed as applicable.

3.9. The supply chain of local anaesthesia is followed up with and maintained. The containers are checked on delivery to ensure there is no damage or tampering of the medications received. If there are any problems noticed, appropriate action will be taken as applicable including the return of medications to the supplier.

4. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Medication Management**	**Prepared by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Title:	**Medication Storage**	
Policy Number:	**MM.03**	**Reviewed by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Oct 2022**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**2**	
Next Review Date	**30 Sep 2028**	

1. Purpose

1.1. To assure the quality and safety of the medications stored in RAKCODS.

1.2. To optimize medications storage conditions to maintain their effectiveness.

1.3. To ensure that medications are stored as per the standards and regulations.

2. Policy

2.1. All medications in RAKCODS shall be stored under appropriate storage conditions as per the manufacturer's guidelines.

2.2. This applies to the nursing stations in clinics.

2.3. All medication storage areas shall be maintained safe and secured.

2.4. All medication storage areas shall be cleaned and organized regularly.

2.5. Medications stored in RAKCODS storage areas shall be with restricted access.

2.6. Medications shall be protected from loss in RAKCODS.

2.7. Medication storage areas' temperature and humidity shall be monitored daily by a digital thermometer. The result shall be documented accordingly. The concerned staff shall be aware of the required actions in case the temperature is out of normal range. (Appendix MM.03-1)

2.8. Medication storage areas shall be monitored and recorded accordingly.

2.9. In case of a power outage, immediately report to the FMS team.

2.10. Manager Quality and Patient Safety shall audit medication storage in RAKCODS (Appendix MM.03-2).

2.11. Near-expiry medications shall be clearly identified and reviewed for timely use or return, as appropriate. Expired and contaminated medications shall be removed from usable stock, clearly labelled, and securely segregated in a designated area pending disposal. Disposal shall follow applicable Ras Al Khaimah Waste Management Agency requirements, using approved waste containers and an authorised waste contractor, together with the manufacturer's instructions where applicable.

2.12. When RAKCODS is notified that medications have been discontinued or recalled by the manufacturer, the affected medications are stored away from medications in current use, pending removal or disposal.

2.13. Medications stored in nursing stations in RAKCODS clinics shall be checked for storage conditions.

2.14. Sample medications are not allowed to be stored in RAKCODS.

2.15. Medication shortage- as the inventory of clinics is maintained weekly by the in-charge nurses and a monthly check is maintained for the main store, the chances of having a shortage of medication especially local anesthesia is unlikely. However, there are suppliers who are available to provide readily and in case if we have a supply chain issue then we will follow whatever the ministry directive is. Also the inventory of most of the materials at RAKCODS is kept at 25% of the required inventory for the year, this also allows RAKCODS to prevent itself from shortage of supplies.

2.16. If there is any change in the medications used at RAKCODS, it shall be informed to all the stakeholders by mail or training as necessary.

3. Procedures

3.1. All medications will be stored under appropriate storage conditions, storage areas are regularly cleaned and organized.

3.2. The staff will monitor and document medication storage temperature and humidity daily.

3.3. The assigned nurses assure appropriate storage conditions of all medications stored in the nursing stations and storage areas in clinics.

3.4. The FMS including the bio-med engineer shall respond to cases if the temperature is out of normal range and liaise with FMS.

3.5. The nurse in charge shall ensure all medications are labelled with expiration date and warnings as appropriate.

3.6. If there are any notifications from the manufacturer regarding withdrawal of a certain shipment or lot number, then appropriate action is taken upon as advised by the manufacturer or if there is any directive from government authorities.

4. References

4.1. https://www.dha.gov.ae/Documents/Regulations/Policies/Pharmacy%20Guidelines_Final.pdf

4.2. https://mohap.gov.ae/assets/download/1d7d895/Check%20list.doc.asp

5. Tools / Appendices

5.1. Appendix MM.03-1 - Log Record Sheet for Monitoring Temperature and Humidity for the Store Rooms

5.2. Appendix MM.03-2 - Log Record Sheet for Monitoring Temperature and Humidity for the Nursing Station

5.3. Appendix MM.03-3 - Medication storage area checklist

Appendix MM.03-1

Log Record Sheet for Monitoring Temperature and Humidity for the Store Rooms

RAK COLLEGE OF DENTAL SCIENCES

TEMPERATURE & HUMIDITY MONITORING SHEET

MONTH & YEAR:

STORE 1																														
Temperature	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
≤14°																															
15°C - 30°C (acceptable temperature)																															
≥31°																															
Humidity																															
≤ 19%																															
20% - 60% (acceptable humidity)																															
≥61%																															
STORE 2																															
Temperature	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
≤14°																															
15°C - 30°C (acceptable temperature)																															
≥31°																															
Humidity																															
≤ 19%																															
20% - 60% (acceptable humidity)																															
≥61%																															
CHEMICAL STORE ROOM																															
Temperature	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
≤14°																															
15°C - 30°C (acceptable temperature)																															
≥31°																															
Humidity																															
≤ 19%																															
20% - 60% (acceptable humidity)																															
≥61%																															
SIGNATURE																															

*Put √ (check) for normal values *Write the value if on red areas **Please communicate with Biomed Engr. for values on red areas

Appendix MM.03-2

Log Record Sheet for Monitoring Temperature and Humidity for the Nursing Station

RAK COLLEGE OF DENTAL SCIENCES

TEMPERATURE & HUMIDITY MONITORING SHEET

CLINIC/Area: **NURSING STATION**

Temperature	MONTH, YEAR																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
≤14°																															
15°C - 30°C (acceptable temperature)																															
≥31°																															
Humidity	Date																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
≤ 19%																															
20% - 60% (acceptable humidity)																															
≥61%																															
Signature																															

Appendix MM.03-3

Medication storage area checklist

#	Description	Yes	No	Remarks
1.	Medication Labels	☐	☐	
2.	Availability of Expiry Date	☐	☐	
3.	Temperature/ Humidity Log	☐	☐	
4.	Clean/ dust-free environment	☐	☐	
5.	The store area is restricted	☐	☐	
6.	Adequate lighting, heating, & ventilation	☐	☐	
7.	Proper storing / Organized	☐	☐	
8.	Empty passageways	☐	☐	
9.	Expired items stored separately	☐	☐	
10.	Other comments			

Inspector Name:

Nurse in-charge Name:

Date:

6. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Medication Management**	**Prepared by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Title:	**Medication Reconciliation and Prescribing**	
Policy Number:	**MM.04**	**Reviewed by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Oct 2022**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**2**	
Next Review Date	**30 Sep 2028**	

1. Purpose

1.1. A medication reconciliation process is used to communicate complete and accurate information about medications across care transitions at RAKCODS.

1.2. At RAKCODS, medication reconciliation is a three-step process. 1. Best possible medication history 2. Identifies and resolves medication discrepancies and 3. Communicates a complete and accurate list of medications to the client and the next care provider.

1.3. At RAKCODS it involves the INA nurses, IDA doctors, faculty, and clinical instructors partnering with clients and families to create a Best Possible Medication History (BPMH), resolve discrepancies, and communicate an accurate medication list.

1.4. Medication reconciliation is integrated into the RAKCODS Patient Safety Plan as a key Patient Safety Area and is managed by an interdisciplinary team comprising INA nurses, IDA doctors, faculty, and clinical instructors.

1.5. The team members will be provided training regarding rationale, need and methodology of medication reconciliations and prescriptions practiced at RAKCODS.

1.6. To identify, establish and implement the list of abbreviations, symbols, and dose designations that are not to be used – **'Do Not Use List'**

1.7. The **'Do Not Use List'** mentioned on 1.1 includes abbreviations, symbols, and dose designations as identified on Institute for Safe Medication Practices (ISMP)

1.8. To establish a standardized process for prescribing medications in RAKCODS be it electronic or paper based

1.9. To assure the safety and effectiveness of the medications prescribed.

1.10. To define the elements of a complete prescription.

1.11. To define a process for verifying patients' medication history to the prescription.

1.12. At RAKCODS, https://www.omnicalculator.com/health/pediatric-dose is used for prescriptions of pediatric medications. Alternatively, https://www.mdapp.co/pediatric-dose-calculator-470/ is also used.

1.13. Prescriptions at RAKCODS is strictly provided by supervising faculty and instructors.

1.14. A periodic audit (quarterly audit) will be conducted on the prescriptions sent from RAKCODS through HIMS to ensure compliance with the **'Do Not Use List'.**

1.15. Based upon the audit reports, improvements can be made as applicable and necessary.

2. Policy

2.1. Medication reconciliation aims to establish the most precise and comprehensive list of a patient's current medications. This list is then compared with prescribed or administered medications during care transitions. At RAKCODS, the initial nursing assessment primarily handles medication reconciliation, with potential modifications during the initial dental assessment and student clinics under faculty supervision. Monthly reports in HIMS allows the Clinical Leadership and QPS Office to monitor medication reconciliation for RAKCODS patients and its compliance.

2.2. Medication reconciliation includes the following:

a) Step 1: Obtain a Best Possible Medication History (BPMH) by performing a thorough patient medication interview

b) Step 2: Confirm the accuracy of the history by accessing additional sources of information using available information, past medical records, additional prescriptions brought by patients, medication boxes/bottles, et.

c) Step 3: Reconcile the history with the newly prescribed medications

d) Step 4: Supply accurate medication information – should be communicated to the client/family by educating the patient

2.3. Additional suggestions to aid in completing a medication history interview:

a) Use open-ended questions when possible (ex. “What medications do you take for your diabetes?”)

b) Ask patients about routes of administration other than oral medicines. Patients often forget to mention creams, ointments, lotions, patches, eye drops, ear drops, nebulizers, and inhalers.

c) Ask about medications prescribed by other providers or specialists (ex. “Does your cardiologist prescribe any medications for you?”)

d) Ask patients about adherence and how often they miss doses.

e) Ask patients if their doctor recently started them on any new medicines, stopped medications they were taking or made any changes to their medications.

2.4. For inquiring about OTC drugs, additional prompts may include:

a) What do you take when you get a headache?

b) What do you take for allergies?

c) Do you take anything to help you fall asleep?

d) What do you take when you get a cold?

e) Do you take anything for heartburn?

2.5. Clients' records on HIMS should be completed and prescription is generated with the following information:

a) Date

b) Patient Name

c) Provider Name

d) Drug Name

e) Dosage

f) Frequency

g) Start and End Date (Duration)

2.6. Medications shall be prescribed to clients under the supervision and approval of the licensed faculty.

2.7. Patients must be identified by two identifiers (Full Name and Date of Birth) before medication prescribing as per the RAKCODS Patient’s Identification Policy.

2.8. The patient's medical and medication history shall be reviewed before the prescription.

2.9. Allergies shall be recorded in the patient's medical history.

2.10. Care providers shall perform medication reconciliation before dental procedures and upon medication prescription.

2.11. Care providers obtain the following information to reconcile the medications:

a) Medication Name

b) Medication Dosage

c) Frequency

d) Route

e) Purpose (indication)

f) Time of the last dose if applicable

2.12. Care providers may request a consultation from another concerned medical specialty to ensure that the medication reconciliation is performed.

2.13. Medications used during procedures e.g. local anesthesia and emergency shall be verified and monitored by licensed faculty during and after administration.

2.14. Emergency medications shall be managed according to the Emergency Medications policy.

2.15. Legible prescriptions shall be used for prescribing medications to clients when manually done.

2.16. The **'Do Not Use List',** abbreviations, symbols, and dose designations should NEVER be used when communicating medical information, internal communications, verbal prescriptions, and medication records. (Appendix MM.04-1)

2.17. The **'Do Not Use List',** abbreviations, symbols, and dose designations should NEVER be used in medication-related documentation when handwritten or entered as free text into a computer/ HIMS.

2.18. It is always encouraged to stay alert and not to get distracted as faculty are prescribing medications for the patients on the student's portal and ensure they sign on the print of the prescription.

3. Procedures

3.1. Team members including INA nurses, faculty, instructors will be provided with education about the **'Do Not Use List'** at orientation and when changes or updates are made to the list.

3.2. BPMH will begin at the INA then at the IDA and then clinic wide at RAKCODS

3.3. Care providers reconcile medication for potential interaction.

3.4. The Computerized Prescriber Order Entry (CPOE) system used at RAKCODS includes alerts for medication interactions, drug allergies and maximum doses for certain drugs.

3.5. The faculty have the authority to over-ride the alerts shown in HIMS as long as they are valid.

3.6. A periodic audit will be conducted regarding the number of over-riding of alerts done and action or re-training done as necessary.

3.7. The medication information stored in the CPOE will be regularly updated as applicable.

3.8. Licensed faculty shall verify and approve the updated history including medications on HIMS.

3.9. Care providers prescribe a complete and legible prescription, verified and approved by the licensed faculty.

3.10. Signature of the supervising faculty is mandatory without which the prescription will be considered null and void.

3.11. Care providers record an incident in case of any variation from this policy according to the OVR policy.

4. References

4.1. Barnsteiner JH. Medication reconciliation. In: Hughes RG, editor. Patient safety and quality: an evidence-based handbook for nurses. Rockville (MD): Agency for Healthcare Research and Quality; 2008. p. 1–14.

4.2. World Health Organization. High5s project: standard operating protocol for medication reconciliation. Geneva: World Health Organization; 2014.

4.3. World Health Organization. Medication safety in transitions of care. Geneva: World Health Organization; 2019. WHO/UHC/SDS/2019.9.

4.4. American Society of Health-System Pharmacists, Agency for Healthcare Research and Quality. MATCH toolkit for medication reconciliation. Rockville (MD): Agency for Healthcare Research and Quality; 2012.

4.5. Joint Formulary Committee. British National Formulary (BNF) 92. London: BMJ Group and Pharmaceutical Press; 2026.

5. Tools/Appendices

5.1. Appendix MM.04-1 - ISMP's List of Error-Prone Abbreviations, Symbols, and Dose Designations

5.2. Appendix MM.04-2 The "Do Not Use" List, Abbreviations and Symbols Based on the ISMP

5.3. Appendix MM.04-3 LIST OF APPROVED ABBREVIATIONS AND SYMBOLS

Appendix MM.04-1 ISMP's List of Error-Prone Abbreviations, Symbols, and Dose Designations

Abbreviations	Intended Meaning	Misinterpretation	Correction
µg	Microgram	Mistaken as "mg"	Use "mcg"
AD, AS, AU	Right ear, left ear, each ear	Mistaken as OD, OS, OU (right eye, left eye, each eye)	Use "right ear," "left ear," or "each ear"
OD, OS, OU	Right eye, left eye, each eye	Mistaken as AD, AS, AU (right ear, left ear, each ear)	Use "right eye," "left eye," or "each eye"
BT	Bedtime	Mistaken as "BID" (twice daily)	Use "bedtime"
cc	Cubic centimeters	Mistaken as "u" (units)	Use "mL"
D/C	Discharge or discontinue	Premature discontinuation of medications if D/C (intended to mean "discharge") has been misinterpreted as "discontinued" when followed by a list of discharge medications	Use "discharge" and "discontinue"
IJ	Injection	Mistaken as "IV" or "intrajugular"	Use "injection"
IN	Intranasal	Mistaken as "IM" or "IV"	Use "intranasal" or "NAS"
HS **hs**	Half-strength At bedtime, hours of sleep	Mistaken as bedtime Mistaken as half-strength	Use "half-strength" or "bedtime"
IU**	International unit	Mistaken as IV (intravenous) or 10 (ten)	Use "units"
o.d. or OD	Once daily	Mistaken as "right eye" (OD-oculus dexter), leading to oral liquid medications administered in the eye	Use "daily"
OJ	Orange juice	Mistaken as OD or OS (right or left eye); drugs meant to be diluted in orange juice may be given in the eye	Use "orange juice"
Per os	By mouth, orally	The "os" can be mistaken as "left eye" (OS-oculus sinister)	Use "PO," "by mouth," or "orally"
q.d. or QD**	Every day	Mistaken as q.i.d., especially if the period after the "q" or the tail of the "q" is misunderstood as an "i"	Use "daily"
qhs	Nightly at bedtime	Mistaken as "qhr" or every hour	Use "nightly"
qn	Nightly or at bedtime	Mistaken as "qh" (every hour)	Use "nightly" or "at bedtime"
q.o.d. or QOD**	Every other day	Mistaken as "q.d." (daily) or "q.i.d. (four times daily) if the "o" is poorly written	Use "every other day"
q1d	Daily	Mistaken as q.i.d. (four times daily)	Use "daily"
q6PM, etc.	Every evening at 6 PM	Mistaken as every 6 hours	Use "daily at 6 PM" or "6 PM daily"
SC, SQ, sub q	Subcutaneous	SC mistaken as SL (sublingual); SQ mistaken as "5 every;" the "q" in "sub q" has been mistaken as "every" (e.g., a heparin dose ordered "sub q 2 hours before surgery" misunderstood as every 2 hours before surgery)	Use "subcut" or "subcutaneously"
ss	Sliding scale (insulin) or ½ (apothecary)	Mistaken as "55"	Spell out "sliding scale;" use "one-half" or "½"
SSRI **SSI**	Sliding scale regular insulin Sliding scale insulin	Mistaken as selective-serotonin reuptake inhibitor Mistaken as Strong Solution of Iodine (Lugol's)	Spell out "sliding scale (insulin)"
i/d	One daily	Mistaken as "tid"	Use "1 daily"
TIW or tiw	3 times a week	Mistaken as "3 times a day" or "twice in a week"	Use "3 times weekly"
U or u**	Unit	Mistaken as the number 0 or 4, causing a 10-fold overdose or greater (e.g., 4U seen as "40" or 4u seen as "44"); mistaken as "cc" so dose given in volume instead of units (e.g., 4u seen as 4cc)	Use "unit"
UD	As directed ("ut dictum")	Mistaken as unit dose (e.g., diltiazem 125 mg IV infusion "UD" misinterpreted as meaning to give the entire infusion as a unit [bolus] dose)	Use "as directed"

Dose Designations and Other Information	Intended Meaning	Misinterpretation	Correction
Trailing zero after decimal point (e.g., 1.0 mg)**	1 mg	Mistaken as 10 mg if the decimal point is not seen	Do not use trailing zeros for doses expressed in whole numbers
"Naked" decimal point (e.g., .5 mg)**	0.5 mg	Mistaken as 5 mg if the decimal point is not seen	Use zero before a decimal point when the dose is less than a whole unit
Abbreviations such as mg. or mL. with a period following the abbreviation	mg mL	The period is unnecessary and could be mistaken as the number 1 if written poorly	Use mg, mL, etc. without a terminal period
Drug name and dose run together (especially problematic for drug names that end in "l" such as Inderal40 mg; Tegretol300 mg)	Inderal 40 mg Tegretol 300 mg	Mistaken as Inderal 140 mg Mistaken as Tegretol 1300 mg	Place adequate space between the drug name, dose, and unit of measure
Numerical dose and unit of measure run together (e.g., 10mg, 100mL)	10 mg 100 mL	The "m" is sometimes mistaken as a zero or two zeros, risking a 10- to 100-fold overdose	Place adequate space between the dose and unit of measure
Large doses without properly placed commas (e.g., 100000 units; 1000000 units)	100,000 units 1,000,000 units	100000 has been mistaken as 10,000 or 1,000,000; 1000000 has been mistaken as 100,000	Use commas for dosing units at or above 1,000, or use words such as 100 "thousand" or 1 "million" to improve readability

Drug Name Abbreviations	Intended Meaning	Misinterpretation	Correction
To avoid confusion, do not abbreviate drug names when communicating medical information. Examples of drug name abbreviations involved in medication errors include:			
APAP	acetaminophen	Not recognized as acetaminophen	Use complete drug name
ARA A	vidarabine	Mistaken as cytarabine (ARA C)	Use complete drug name
AZT	zidovudine (Retrovir)	Mistaken as azathioprine or aztreonam	Use complete drug name
CPZ	Compazine (prochlorperazine)	Mistaken as chlorpromazine	Use complete drug name
DPT	Demerol-Phenergan-Thorazine	Mistaken as diphtheria-pertussis-tetanus (vaccine)	Use complete drug name
DTO	Diluted tincture of opium, or deodorized tincture of opium (Paregoric)	Mistaken as tincture of opium	Use complete drug name
HCl	hydrochloric acid or hydrochloride	Mistaken as potassium chloride (The "H" is misinterpreted as "K")	Use complete drug name unless expressed as a salt of a drug
HCT	hydrocortisone	Mistaken as hydrochlorothiazide	Use complete drug name
HCTZ	hydrochlorothiazide	Mistaken as hydrocortisone (seen as HCT250 mg)	Use complete drug name
MgSO4**	magnesium sulfate	Mistaken as morphine sulfate	Use complete drug name
MS, MSO4**	morphine sulfate	Mistaken as magnesium sulfate	Use complete drug name
MTX	methotrexate	Mistaken as mitoxantrone	Use complete drug name
NoAC	novel/new oral anticoagulant	No anticoagulant	Use complete drug name
PCA	procainamide	Mistaken as patient controlled analgesia	Use complete drug name
PTU	propylthiouracil	Mistaken as mercaptopurine	Use complete drug name
T3	Tylenol with codeine No. 3	Mistaken as liothyronine	Use complete drug name
TAC	triamcinolone	Mistaken as tetracaine, Adrenalin, cocaine	Use complete drug name
TNK	TNKase	Mistaken as "TPA"	Use complete drug name
TPA or tPA	tissue plasminogen activator, Activase (alteplase)	Mistaken as TNKase (tenecteplase), or less often as another tissue plasminogen activator, Retavase (retaplase)	Use complete drug names
ZnSO4	zinc sulfate	Mistaken as morphine sulfate	Use complete drug name
Stemmed Drug Names	**Intended Meaning**	**Misinterpretation**	**Correction**
"Nitro" drip	nitroglycerin infusion	Mistaken as sodium nitroprusside infusion	Use complete drug name
"Norflox"	norfloxacin	Mistaken as Norflex	Use complete drug name
"IV Vanc"	intravenous vancomycin	Mistaken as Invanz	Use complete drug name
Symbols	**Intended Meaning**	**Misinterpretation**	**Correction**
ʒ ℥	Dram Minim	Symbol for dram mistaken as "3" Symbol for minim mistaken as "mL"	Use the metric system
x3d	For three days	Mistaken as "3 doses"	Use "for three days"
> and <	More than and less than	Mistaken as opposite of intended; mistakenly use incorrect symbol; "< 10" mistaken as "40"	Use "more than" or "less than"
/ (slash mark)	Separates two doses or indicates "per"	Mistaken as the number 1 (e.g., "25 units/10 units" misread as "25 units and 110" units)	Use "per" rather than a slash mark to separate doses
@	At	Mistaken as "2"	Use "at"
&	And	Mistaken as "2"	Use "and"
+	Plus or and	Mistaken as "4"	Use "and"
°	Hour	Mistaken as a zero (e.g., q2° seen as q 20)	Use "hr," "h," or "hour"
Φ or ⊘	zero, null sign	Mistaken as numerals 4, 6, 8, and 9	Use 0 or zero, or describe intent using whole words

Appendix MM.04-2 The "Do Not Use" List, Abbreviations and Symbols Based on the ISMP

THE "DO NOT USE" LIST, ABBREVIATIONS AND SYMBOLS BASED ON THE ISMP

Unacceptable Abbreviation	Intended Meaning	Misinterpretation	Acceptable Alternative
Medication Names			
MS MSO4	Morphine sulfate	Mistaken for *magnesium sulfate"	Write "morphine sulfate"
MgSO4	Magnesium sulfate	Mistaken for "morphine sulfate"	Write "magnesium sulfate"
Abbreviations for drug names		Misinterpreted due to similar abbreviations for multiple drugs	Write drug names in full
Dose			
Trailing zeros: Zero written after decimal points (Unacceptable e.g. 1.0 mg) **Exception: Trailing zeros may be used in non-medication-related documentation when there is a clear need to demonstrate level of precision, such as for laboratory values, study measurement of lesion sizes, or catheter and therapeutic tube sizes.	1 mg	Misread as "10mg"	Do not use terminal zeros for doses expressed in whole units. (Write as "1 mg")
Missing Leading Zeros: Zero missing before decimal points (Unacceptable e.g. .5mg)	0.5 mg	Misread as "5mg"	Always use zero before a decimal point when the dose is less than a whole unit. (Write "0.5 mg")
Apothecary units		Unfamiliar to many practitioners. Confused with metric units.	Use metric units
U	Unit	Misread as "zero (0)", "four (4)", or "cc (cubic cm)".	Write "unit"
IU	International unit	Misread as "IV (Intravenous)" or "10 (ten)"	Write "unit" or "international unit"

Unacceptable Abbreviation	Intended Meaning	Misinterpretation	Acceptable Alternative
µg	Microgram	Misread as "mg"	Write "mcg"
"o"	Hour(s), i.e. "q1o"	Misread as a zero when handwritten, i.e. every "10"	Write "Hr"
"	Inch	Misread for "11"	Write out inch
>	Greater than	Misinterpreted as the Number "7" or the Letter "L"	Write "greater than"
<	Lesser than	Confused for one another	Write "less than"
@	"at"	Mistaken for the Number 2	Write "at"
Frequency			
QD, Q.D., q.d., qd OD	Once daily	The period after "Q" can be mistaken for "I" (as in "QID") or "O" (as in "QOD")	Write "daily" or "once daily"
QOD, Q.O.D., q.o.d, qod	Every other day	The "O" can be mistaken for a period (as in "Q.D.") or "I" (as in "Q.I.D")	Write "every other day"
Letter "d" (Unacceptable example: x 3d)	Days	Mistaken for "doses"	Write "days" or "doses"
TIW or tiw	Three times a week	Mistaken for "three times a day"	Do not use this abbreviation. Specify which days of the week.
AD			Right ear
AS			Left ear
AU			Each ear
cc			ml
DPT			DTaP
IU			International units
OD			Right eye
os			Po
OS			Left eye
OU			Either eye
sc or sq			Subcutaneous
U			Units
µg			mcg

Appendix MM.04-3 LIST OF APPROVED ABBREVIATIONS AND SYMBOLS

LIST OF APPROVED ABBREVIATIONS AND SYMBOLS

Sr. No	Abbreviation	Full Name
1	RCT	Root Canal Treatment
2	RCF	Root Canal Filling
3	W.L.	Working Length
4	L.A.	Local Anesthesia
5	T.F.	Temporary Filling
6	GIC	Glass Ionomer Filling
7	C.F	Composite Filling
8	A.F	Amalgam Filling
9	PFM crown	Porcelain Fused to Metal Crown
10	RPD	Removable Partial Denture
11	Ex	Extraction
12	OPG	Orthopantomography
13	FPD	Fixed Partial Denture
14	IM	Intramuscular
15	OCC	Occlusal
16	M	Mesial
17	D	Distal
18	B	Buccal
19	L	Lingual
20	DO	Disto-occlusal
21	MO	Mesio -occlusal
22	MOD	Mesio-occluso-distal
23	#	Number
24	11	Upper Right Central Incisor
25	12	Upper Right Lateral Incisor
26	13	Upper Right Canine
27	14	Upper Right first premolar
28	15	Upper Right second premolar
29	16	Upper Right first molar
30	17	Upper Right second molar
31	18	Upper Right third molar
32	21	Upper Left Central Incisor

Sr. No	Abbreviation	Full Name
33	22	Upper Left Lateral Incisor
34	23	Upper Left Canine
35	24	Upper Left first premolar
36	25	Upper Left second premolar
37	26	Upper Left first molar
38	27	Upper Left second molar
39	28	Upper Left third molar
40	31	Lower Left Central Incisor
41	32	Lower Left Lateral Incisor
42	33	Lower Left Canine
43	34	Lower Left first premolar
44	35	Lower Left second premolar
45	36	Lower Left first molar
46	37	Lower Left second molar
47	38	Lower Left third molar
48	41	Lower Right Central Incisor
49	42	Lower Right Lateral Incisor
50	43	Lower Right Canine
51	44	Lower Right first premolar
52	45	Lower Right second premolar
53	46	Lower Right first molar
54	47	Lower Right second molar
55	48	Lower Right third molar
56	Max	Maxillary
57	Md	Mandibular
58	OHI	Oral Hygiene Instructions
59	Tr/Rx	Treatment
60	Dg/Dx	Diagnosis
61	Ca(OH)2	Calcium hydroxide
62	Gen	Generalized
63	NB Injection	Nerve Block Injection
64	NAD	No Abnormality Detected
65	N.A.	Not Assessed
66	N/A	Not Applicable
67	MB cusp	Mesio-Buccal

Sr. No	Abbreviation	Full Name
68	ML cusp	Mesio-Lingual
69	DB cusp	Disto-Buccal
70	DL cusp	Disto-Lingual
71	P cusp	Palatal Cusp
72	M.H	Medical History
73	D.H	Dental History
74	CEJ	Cemento enamel junction
75	BP	Blood Pressure
76	CLP	Cleft lip and palate
77	e.g.	For example
78	ENT	Ear, Nose and Throat
79	EO	Extra oral
80	IO	Intra oral
81	LFH	Lower facial height
82	UFH	Upper facial height
83	MRI	Magnetic Resonance Imaging
84	CT	Computed Tomography
85	CBCT	Cone-beam Computed Tomography
86	PA view	Posteroanterior view
87	AP view	Anteroposterior view
88	Ppm	Parts per million
89	SS	Stainless steel
90	Ni-Ti	Nickel titanium
91	TMJ	Temporomandibular joint
92	TMPDS	Temporomandibular pain and dysfunction syndrome
93	TMJD	Temporomandibular joint disorder

6. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised
2	10th Jan 2026		Revised the references

Authorization Form

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RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Medication Management**	**Prepared by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Title:	**Antibiotics**	
Policy Number:	**MM.05**	**Reviewed and Approved by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2022**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**2**	
Next Review Date	**30 Sep 2028**	

1. Purpose

1.1. To provide an evidence-based internationally-standardized approach to the safe and effective use of antimicrobial medications.

1.2. To ensure the utilization of antimicrobial guidelines is safe, appropriate, and reflects current evidence.

1.3. To optimize clinical outcomes and minimize unintended consequences of antibiotic use (ex: toxicity, antibiotic resistance, the emergence of infections).

1.4. To develop clinical practice guidelines for prioritizing common bacterial dental infections in RAKCODS.

1.5. To ensure the involvement of the patient and raise their health knowledge regarding antimicrobial use and their adverse event.

1.6. To promote the optimum use of antibiotic agents, including their choice, dosing, route, and duration of administration.

2. Policy

2.1. This policy applies to all children and adults coming to RAKCODS with the listed diagnosis:

a) Dental abscess with systemic involvement

b) Periodontal abscess with systemic involvement

c) Necrotizing Periodontal Diseases

d) Pericoronitis

2.2. This policy applies to patients undergoing dental procedures that require prophylactic antibiotics to prevent infective endocarditis as applicable.

3. Procedures

a. General considerations for care providers

i. Confirm the presence of infection by clinical presentation and radiographic investigations.

ii. Use appropriate antibiotics: use full therapeutic doses, with the right dose, frequency, route of administration, and duration of treatment.

iii. Consider using narrow-spectrum antibiotics.

iv. Antibiotics are appropriate for oral infections when there is evidence of spreading infection or systemic involvement (fever, malaise).

v. Educate patients about the side effects of medication.

vi. Consider a follow-up plan with the patient if symptoms worsen or do not improve.

vii. Keep the risk of antimicrobial-resistant in mind when prescribing.

b. Patient Assessment:

i. The patient should be assessed for antimicrobial needs based on the following criteria:

a) The nature of infection/ location

b) Signs of fever and malaise indicate a potential for infection

c) The medical condition that might predispose the patient to certain infections e.g.: immune deficiency, immune-suppression

d) Age

e) Allergies (Penicillin allergy). Patients should be carefully questioned about their history of antimicrobial allergies to determine whether a true allergy exists before selection of antimicrobial agents

f) Some medications may have adverse systemic effects (e.g.: renal or liver impairment)

g) Vital signs

h) Weight and temperature

ii. The oral examination includes:

a) Dental and soft tissue examination including lymph nodes

b) Radiographs should be obtained when indicated

iii. The care provider shall prescribe the appropriate antimicrobials on HIMS/ prescription including:

a) Name of antibiotic

b) Dose

c) Indication

d) Duration

e) Route of administration

c. Antimicrobial Selection

i. The selected antimicrobial should only cover the likely pathogen based on the nature and site of infection taking into consideration other patient risk factors to reduce the emergence of multidrug-resistant pathogens.

ii. The spectrum of activity of antimicrobial chosen should be as narrow as possible covering the likely pathogens.

iii. Broad-spectrum antibiotics such as clindamycin, co-amoxiclav, and clarithromycin should be restricted to the second-line treatment of severe infections only.

Antibiotics choices for oral bacterial infection in RAKCODS

Dental Abscesses	
Disease information	As a first step in the treatment of bacterial infections, use local measures. For example, drain pus if present in dental abscesses by extraction of the tooth or through the root canals, and attempt to drain any soft-tissue pus by incision or through the periodontal pocket in case of periodontal abscess. However, do not attempt to drain a cellulitis-type swelling. The guidance recommends that antibiotics are appropriate for oral infections where there is evidence of spreading infection (cellulitis, lymph node involvement, swelling) or systemic involvement (fever, malaise). In addition, other indications for antibiotics are acute necrotizing ulcerative gingivitis and pericoronitis where there is systemic involvement or persistent swelling despite local measures. Broad-spectrum antibiotics such as clindamycin, co-amoxiclav, and clarithromycin should be restricted to the second-line treatment of severe infections only. • Signs and symptoms of non-spreading infections may include: Pain, Swelling (Intra-oral), Mobile tooth, Tender tooth, Tender gum, and Sinus tract/fistula. • Signs and symptoms of spreading dental infection (systemic involvement): Pyrexia (Fever), Malaise, Regional lymphadenopathy, Extra-oral swelling/cellulitis, Trismus Difficulties with swallowing and breathing, Raised tongue and floor of the mouth, Drooling. Note: that patients who have recently taken a course of antibiotics (within the preceding six weeks) have an increased risk of harboring bacteria resistant to that drug and should therefore be prescribed an alternative.
Local measures	If pus is present in a dental abscess, drain by extraction of the tooth or through the root canals. Soft tissue pus, drain by incision.
First-line antibiotic (in case of ineffective local measures or systemic involvement)	An appropriate 5-day regimen is a choice of: **Adult:** Amoxicillin Capsules- 500mg + Metronidazole- 400mg In patients who are allergic to penicillin, an appropriate 5-day regimen is: Metronidazole Tablets-400 mg **Do not prescribe metronidazole for patients taking warfarin** **Pediatric:** Amoxicillin 125mg-5ml / 250 mg -5ml

	*Metronidazole is not licensed for use in children under 1 year
Second-line antibiotic	If a patient has not responded to the first-line antibiotic prescribed, check the diagnosis. • Co-amoxiclav is active against beta-lactamase-producing bacteria that are resistant to amoxicillin and can be used to treat severe dental infection with spreading cellulitis or dental infection that has not responded to first- line antibacterial treatment. • Clarithromycin is active against beta-lactamase-producing bacteria and can be used to treat severe dental infection with spreading cellulitis or dental infection that has not responded to first-line antibacterial treatment. • Clarithromycin is active against beta-lactamase-producing bacteria.
Periodontal Abscesses	
Antibiotic	Amoxicillin- 500 mg 1.0-g loading dose, then 500 mg three times a day for 3 days • Reevaluation after 3 days to determine the need for continued or adjusted antibiotic therapy Penicillin Allergy metronidazole, 200–250 mg, t.i.d., for the duration of the active lesion (2–3 days) Clindamycin • 600-mg loading dose, then 300 mg four times a day for 3 days Azithromycin (or Clarithromycin) • 1.0-g loading dose, then 500 mg four times a day for 3 days

Necrotizing Periodontal Diseases	
Disease information	use antiseptic agents; chlorhexidine-based mouth rinses (at 0.12– 0.2%, twice daily) are recommended. Other products have also been suggested, such as 3% hydrogen peroxide diluted 1:1 in warm water, and other oxygen-releasing agents, which not only contribute to the mechanical cleaning of the lesions but also provide the antibacterial effect of oxygen against anaerobes Metronidazole, at a dose of 250 mg every 8 hours, may represent the first line of treatment, due to its effectiveness against strict anaerobes
Local measures	remove supra-gingival and sub-gingival deposits and provide oral hygiene advice. Limited debridement in the acute phase.

Antibiotic treatment	If drug treatment is required (systemic involvement like swelling, fever or lymphadenopathy), an appropriate 5-day regimen is: Metronidazole Tablets, 400 mg *Do not prescribe metronidazole for patients taking warfarin.
Pericoronitis	
Disease information	Signs and symptoms of operculum are swollen, red, and often ulcerated, Pain, Trismus, Swelling, Halitosis, Fever, and Regional lymphadenitis.
Local measures	Carry out irrigation and debridement. In certain cases, consider extraction of the upper wisdom With spreading infection or persistent swelling consider antibiotics For severe infections, consideration should be given to using both amoxicillin and metronidazole in combination. Where there is significant trismus, the floor of the mouth swelling, or difficulty breathing, transfer the patient to the hospital as an emergency.
Antibiotic treatment	If drug treatment is required (systemic involvement like swelling, fever or lymphadenopathy), an appropriate 5-day regimen is: Metronidazole Tablets, 200 mg *Do not prescribe metronidazole to patients taking warfarin.
Cardiac Conditions	
Disease information	According to the American Heart Association and American Dental Association, antibiotic prophylaxis before dental procedures involving manipulation of the gums seems reasonable for patients with cardiac conditions. It's required in the following conditions: • Patients with prosthetic cardiac valve • Previous infective endocarditis • Congenital heart disease • Cardiac transplantation • Rheumatic heart disease When to consider antibiotic prophylaxis in dental procedures? **High-risk procedures**. Antibiotic prophylaxis is indicated: Dental procedures requiring the manipulation of the gingival (including extractions and scaling) or periapical region of the teeth (including root canal procedures) or perforation of the oral mucosa, Oral/periodontal surgery, Periodontal procedures, Endodontic instrumentation beyond the apex or apical surgery, intraligamentary local anesthetic injections. **Low-risk procedures**. No antibiotic prophylaxis:

	Local anesthetic injections in non-infected tissue, Treatment of superficial caries not requiring gingival manipulation, Removal of sutures, Dental X-rays, Placement or adjustment of removable prosthodontic or orthodontic appliances or braces, following shedding of deciduous teeth, Following trauma to the lips or oral mucosa. Special Circumstances: • Antibiotics for prophylaxis should be administered in a single dose before the procedure. • If the dosage of antibiotic is inadvertently not administered before the procedure, it may be administered up to two hours after the procedure. • For patients already receiving an antibiotic that is also recommended for IE prophylaxis, then a drug should be selected from a different class; for example, for a patient already taking oral penicillin for other purposes; clindamycin would be recommended. • Management of patients with prosthetic joints undergoing dental procedures: in general, for patients with prosthetic joint implants, prophylactic antibiotics are not recommended before dental procedures to prevent prosthetic joint infection. • Consult a patient's orthopedic surgeon always.

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5. Tools / Appendices

5.1 Appendix MM.05-1 Common drug usage in Dentistry

Appendix MM.05-1 Common drug usage in Dentistry

Adult

Antibiotic	Dose	Frequency
Amoxicillin	500mg	8 hourly for 5 days
Amoxicillin plus clavulanic acid	375mg 875+125mg	8 hourly for 5 days 12 hourly for 5 days
Clarithromycin	250mg – 500mg	12 hourly for 5 days
Metronidazole	400mg 200mg	12 hourly for 5 days 8 hourly for 5 days

Pediatric

Antibiotic	Strength	Dose	Frequency
Amoxicillin	125mg/5ml 250mg/5ml	5-25mg/kg/dose	3 times a day
Amoxicillin plus clavulanic acid	156mg/5ml	22.5mg/kg/dose	3 times a day
Amoxicillin plus clavulanic acid	457mg/5ml	22.5mg/kg/dose	Twice a day
Clarithromycin	125mg/5ml	7.5mg-15 mg Kg/dose	Twice a day
Metronidazole	200mg /5ml 125mg/5ml	15-30 mg/kg	Twice a day

6. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised
1	06th Jan 2026		references updated

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
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Policy Type:	**Medication Management**	**Prepared by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Title:	**Administration of Local Anesthesia**	
Policy Number:	**MM.06**	**Reviewed by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Oct 2022**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**2**	
Next Review Date	**30 Sep 2028**	

1. Introduction

In anesthesia, the safe administration of drugs involves timely administration, preventing errors in drug administration, and reducing the chance of misdirecting drugs. It is the clinician's responsibility to realize that medication administration presents special challenges in the perioperative environment and to ensure safe dental practices. Clinicians are typically responsible for prescribing, administering, documenting, and monitoring local anesthetics.

A safe drug administration includes both correct administration practices and consideration for the medical condition of the client. Local anesthetic safety can be improved by identifying the causes of errors related to drug management and use and by actively implementing techniques accepted as likely to reduce such errors, such as regular auditing and review of practices.

2. Purpose

2.1. Using these guidelines, clinicians can make sure that they are meeting all safety standards when providing local anesthesia and minimizing adverse reactions.

2.2. Additionally, they assist healthcare facilities in ensuring safe handling, proper documentation, and appropriate access to local anesthesia.

2.3. The guidelines do not override the requirements of the MOHAP, but rather complement them.

3. Scope

This document is intended to apply to all RAKCODS clinicians and students administering local anesthesia.

4. General Principles

The aims of safe administration of local anesthesia are: Administer the correct medication to the correct client at the correct time, in the correct dose, by the correct technique. Furthermore, to accurately record this information in the template note of HIMS of the client's medical record.

In addition to the pharmacology of the medicines they prescribe and administer, clinicians providing anesthesia should also have an understanding of possible complications of drug administration and how to manage these complications. The clinicians who provide anesthesia should be aware of human factors that contribute to medication errors and take measures to prevent them. By collaborating with hospital staff, medications can be made available and presented safely. The regular audit of medication handling and reporting of errors in medication administration will enhance safe medication management and use.

5. Guidelines

5.1. Purchasing decisions on local anesthetics

Consideration should be given to factors relevant to reducing the risk of drug errors in purchasing and inventory management. When there is an interruption in supply, the purchasing strategy of a hospital can also significantly impact the availability of local anesthetics. The head of the procurement committee should consult before making any decisions regarding the purchase and presentation of drugs. Each type and concentration of drug should be separated.

5.2. Storage of local anesthetics

It is important to arrange anesthesia drugs and workspace formally with attention to orderliness and the position of dental cartridges. It is best to store similar medications together. Standardization within the institution is highly desirable. It should always be the goal to reduce complexity and eliminate redundancy. Consideration must be given to secure storage for transport, documentation of dispensing, administration of

drugs, and disposal of unused medications. all the local anesthesia is received and stored as per manufacturer's instructions and the supply chain is managed to ensure appropriate temperature is maintained. From the main storage of RAKCODS the cartridges are provided to the clinics through the nursing stations as per the weekly inventory raised by the in-charge nurses to the head nurses through SPI.

5.3. Checking drugs before administration

Before injecting any drug, it is critical to read the label on the dental cartridge. It is necessary to verify the drug's name, concentration, and expiry date. Within the hospital, a system is in place for regularly checking drug stock for expired drugs. To reduce medication errors and harm use the “five rights”:

1. the right patient
2. the right drug
3. the right dose
4. the right route
5. the right time

5.4. Maximum doses of Local Anesthesia

Generally, the least concentrated solution that provides effective pain relief should be used. However, there is a maximum tolerated dose that should not be exceeded in any case. In RAKCODS, the following local anesthetics are used with their maximum tolerated doses.

1. Lidocaine: without adrenaline is 4.4 mg/kg (not to exceed an absolute maximum dose of 300 mg), with adrenaline is 7mg/kg (not to exceed an absolute maximum dose of 500 mg).
2. Mepivacaine: with or without vasoconstrictor is 6.6 mg/kg (not to exceed an absolute maximum dose of 500 mg).
3. Adrenaline: The maximum tolerated dose of adrenaline in local anesthesia is 0.2 mg per appointment for healthy patients. The maximum recommended dose for patients with clinically significant cardiovascular disease (ASA Class 3 or 4) is 0.04 per appointment.

Note: The maximum volume of lidocaine administered depends on the concentration.

In cases of multiple injections of local anesthetics, the total dose of both local anesthetics should not exceed the lower of the two calculated doses.

5.5. Administration principles

A person administering local anesthetic must identify each client clearly and explicitly before administering any medication. Before administering the local anesthetics, the client should be asked explicitly about their drug history and their allergies, and other adverse reactions. Alternatively, the client's medical records should be reviewed. Before administering a local anesthetic, a "Time Out" (or equivalent) process which includes client identification and verbal declaration of any known drug allergies should be performed. At RAKCODS this is practiced using the consent form for Local Anesthesia as in Appendix 1. All drugs should be administered by either a clinician or by senior dental students under the direct supervision of the clinician.

To minimize the risk of cross-infection between clients, the contents of anyone dental cartridge should be administered to only one client. The treatment area should be uncluttered, with clean trays available for each client. Care should be taken at all times to adopt best practices to mitigate the risk of transmission of micro-organisms associated with the storage and administration of local anesthetics. Do not let the dental needle contact the tray or other surfaces at all. A clinician must minimize the risk of infection by wiping the rubber stopper and diaphragm of the cartridge with 70% alcohol wipes.

The following points should be considered for a safe and efficient local anesthetic injection

Task	**Standards**
Communication with the client	- Identify client name and Date of Birth - Review the medical, allergies, and medication history - Evaluate the principal contraindications - Discuss the procedure with the client and allow asking questions - Observes the client’s reactions and talk to the client throughout the procedure
Selection of the right anesthetic solution that fits the medical status of the client	- Know the maximum dose of local anesthetic with vasoconstrictors in the normal client and in case of the presence of medical problems like diabetes and a history of angina - Know when to use the plain local anesthetics - Know the properties of each local anesthetics
Applying topical anesthesia	- Wipe the injection site with a clean gauze (antisepsis of the injection site is optional)

Task	Standards
	- Applies topical anesthesia for 1-2 minutes, wipes off excess
Selection of the right diameter and length of the needle	- Select the short needle for the infiltration technique and the long needle for the block technique - Use gauge (30) for infiltration only; 27 for both infiltration and block; 25 for block only
Loading and unloading sequences	- Put cartridge, engage the harpoon of the rod with the plunger of the cartridge (in case of doing aspiration), screw the needle, and check the flow of the solution from the needle before injection - Unload the needle first then the cartridge
Position of client and student and grip of the syringe	- Grip the dental syringe correctly by palm up and figure support or just palm up - Avoid palm-down grip - Put the client fully supine to aid cranial blood flow and prevent fainting (ideal). Some clients may be uncomfortable or feel vulnerable in this position. A compromise is to tilt the chair back at least thirty degrees to the vertical - Stand or sit at 7 O'clock position to the client for right-handed students and 5 O'clock position to the client for the left-handed student
Finger and or hand support	- Place the thumb of the non-dominant hand palpating the coronoid notch while the rest fingers are palpating the posterior aspect of the ramus externally - Use the 2 fingers (preferred in the anterior area) or the mirror or retractor (preferred in the posterior area) to reflect the tissue in case of buccal injection (block or infiltration) - Obtain good illumination and visibility of the injection site
Speed of the injection	- Deposit anesthetic solution at a proper speed. (Not too slow or too fast). It is about 1 minute for a full cartridge
Aspiration (regional block)	- Aspirate and proceed if a negative aspiration is observed or addresses a positive aspiration
The pace of the injection	- Identify and apply the point of entry and anatomical landmarks of the used technique - Obtains correct depth of needle penetration - Keep syringe out of client's site - Use standard precautions throughout the procedure

Task	Standards
Subjective and objective evaluations of the anesthetic Function	- Properly investigate the successfulness of anesthesia both by asking the client feedback subjectively and by applying the exact test objectively

5.6. Disposal of medications

Once local anesthetic utilization has been reconciled at the conclusion of the anesthetic and the anesthetic record completed, all partially used dental cartridges containing drugs should be safely discarded. No recapping of dental needles, but direct disposal in the sharps bin using artery forceps or any suitable manner as per the IPC training to reduce the possibility of occupational needle stick injury. The principles of effective hand hygiene should also be adopted in handling and administering medications. If a needle stick injury occurs, the student or staff is requested to go to the nursing stations and follow the protocol laid down and finally an OVR must be raised to record the happening.

5.7. Maintenance of accurate records

An accurate record of every local anesthetic injection is recorded by the nursing station as seen in Appendix 2. Also on HIMS details of LA are recorded as and when used. in a template note available on HIMS as applicable. This includes the drug name written in full, dosage, technique, time of administration, volume as seen in Appendix 3.

5.8. Reporting Adverse Events

Clinicians shall monitor clients for adverse drug reactions, side effects and complications, take appropriate clinical action, immediately inform the supervising faculty, document the event in the client's medical record, and raise an OVR for review by the Quality and Patient Safety Chairperson/in-charge.

The Quality and Patient Safety Chairperson/in-charge, in coordination with relevant personnel, shall ensure that adverse drug reaction alerts are promptly reviewed, communicated and acted upon. Actions taken shall be documented and followed up to confirm implementation.

5.9. Local Anesthesia audits

A monthly audit is done by the QPS office to ensure the local anesthesia records are maintained meticulously.

6. References

6.1. Malamed, Stanley F. Handbook of Local Anesthesia. 7 ed. St Louis: Mosby Elsevier, 2019. Text.

6.2. Bataineh M, Ali A, editors. *Local Anesthesia in Dentistry: A Locoregional Approach.* 1st ed. Wiley; 2024.

6.3. Mathison M, Pepper T. Local anesthesia techniques in dentistry and oral surgery. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK580480

6.4. Australian Commission on Safety and Quality in Health Care. *National standard for user-applied labelling of injectable medicines, fluids and lines* [Internet]. Sydney: ACSQHC; 2022 [cited 2026 Jan 5]. Available from: https://www.safetyandquality.gov.audos Santos HCG, de Sousa ITC, Pestana AM, et al. Clinical studies on topical anesthesia in dentistry: a bibliometric analysis. *Pharmaceuticals*. 2025;18(11):1611.

7. Tools/Appendices

7.1. Appendix MM.06-1 Consent Form

7.2. Appendix MM.06-2 - LIDOCAINE ANESTHESIA LOGBOOK

7.3. Appendix MM.06-3 - LIDOCAINE ANESTHESIA ON HIMS

7.4. Appendix MM.06-4 – LA Audit form used by the QPS office

Appendix MM.06-1 Consent Form

RAK College of Dental Sciences

Consent Form for PROCEDURES with Local Anesthesia for PEDIATRIC PATIENTS

Note: Nurses are requested not to issue LA if any field is wrong or missing.

Name of child: _____ **Age/Sex:** _____

Date: _____ **MR No.:** _____

Make sure the patient had food or ate before the treatment

1. I hereby offer consent for my child to be screened by the staff/students student of RAKCODS under the supervision of qualified faculty and clinical staff.
2. I authorize them to also give instructions in the form of presentations, demonstrations and also understand that my child can be a participant in the same.
3. I understand that my and/ or my child's record can be used for research or teaching purpose without any reference to my or my child's name or identity.
4. I offer consent for the extraction/restoration/pulp therapy/ any other treatment procedure that my child will be subjected to in this clinics under the supervision of licensed doctors.

Tooth #: _____

_____ Name & Signature of the student

_____ Signature of the parent (guardian)

	For any additional LA needed, this line must be filled up again (Nurses will confirm with faculty if more than 3 cartridges are needed to ensure patient safety)					
No. of Cartridge/s:	1		+1		+1	
Type of Anesthesia	w/ Epi	non-Epi	w/ Epi	non-Epi	w/ Epi	non-Epi
Name & Signature of Supervisor						
Name & Signature of Nurse						
Remarks						

كلية رأس الخيمة لعلوم الأسنان

استمارة الموافقة بالنيابه عن الطفل

Note: Nurses are requested not to issue LA if any field is wrong or missing.

Name of child: _____ **Age/Sex:** _____

Date: _____ **MR No.:** _____

Make sure the patient had food or ate before the treatment

1. أقدم بموجبه الموافقة على فحص طفلي من قبل طاقم / طلاب كليه راس الخيمة لطب الأسنان تحت إشراف أعضاء هيئة التدريس وطاقم العيادات المؤهلين.
2. أفوضهم أيضًا بإعطاء التعليمات في شكل عروض تقديمية وعروض توضيحية ، كما أفهم أيضًا أن طفلي يمكن أن يكون مشاركًا في نفس الشيء.
3. أدرك أنه يمكن استخدام سجلي / أو سجل طفلي لأغراض البحث أو التدريس دون أي إشارة إلى اسمي أو اسم طفلي أو هويته
4. أوافق على الاستخراج / الترميم / علاج اللثه/ أوأي إجراء علاجي آخر سيخضع له طفلي في هذه العيادات تحت إشراف أطباء مرخصين.

_____ **Tooth #:**

_____ Name & Signature of the student

_____ Signature of the parent (guardian)

	For any additional LA needed, this line must be filled up again (Nurses will confirm with faculty if more than 3 cartridges are needed to ensure patient safety)					
No. of Cartridge/s:	1		+1		+1	
Type of Anesthesia	w/ Epi	non-Epi	w/ Epi	non-Epi	w/ Epi	non-Epi
Name & Signature of Supervisor						
Name & Signature of Nurse						
Remarks						

RAK College of Dental Sciences

Consent Form for PROCEDURES with Local Anesthesia

Note: Nurses are requested not to issue LA if any field is wrong or missing.

Name: _____ **Age/Sex:** _____

Date: _____ **MR No.:** _____ **BP:** _____

Make sure the patient had food or ate before the treatment

1. I hereby consent Dr. _____RAKCODS to perform _____ on tooth #: _____ for clinical training and demonstration.
2. I declare that a complete explanation of all treatments, procedures and possible complications were provided to me.
3. I authorize my treating surgeon to perform additional or different procedures than those planned which they may discover during surgery and are advisable in their professional judgment.
4. I understand that my record could be used for research or teaching purpose without any reference to my name or identity.

_____ _____

Name & Signature of the student Name & Signature of the Patient

	For any additional LA needed, this line must be filled up again (Nurses will confirm with faculty if more than 5 cartridges are needed to ensure patient safety)									
No. of Cartridge/s:	1		+1		+1		+1		+1	
Type of Anesthesia	w/ Epi	non-Epi	w/ Epi	non-Epi	w/ Epi	non-Epi	w/ Epi	non-Epi	w/ Epi	non-Epi
Name & Signature of Supervisor										
Name & Signature of Nurse										
Remarks										

كلية رأس الخيمة لعلوم الأسنان

Consent Form for PROCEDURES with Local Anesthesia

Note: Nurses are requested not to issue LA if any field is wrong or missing.

Name: _____ **Age/Sex:** _____

Date: _____ **MR No.:** _____ **BP:** _____

Make sure the patient had food or ate before the treatment

1- أنا أدرك وأوافق أن يقوم الطبيب..... بكلية رأس الخيمة لطب الأسنان بعمل ..... بجراحة الفم والأسنان وذلك لغرض التدريب الإكلينيكي .

2- أقر بأنه قد قدم إلي شرحا كاملا لجميع العلاجات والإجراءات والمضاعفات المحتملة بالنسبة لي .

3- أنا أعطي الإذن للطبيب الجراح لتقديم عمليات اضافية (مختلفة) عن تلك المخطط لها أو قد تم الشرح عنها والتي قد تكتشف خلال فترة العلاج وينصح بها من خلال حكمهم المهني .

4- إني أعلم بأنه قد تستخدم قراءات سجلي (المرضي) لغرض البحث أو التدريس دون الاشارة الى هويتي أو اسمي .

_____ Name & Signature of the student

_____ Name & Signature of the Patient

	For any additional LA needed, this line must be filled up again (Nurses will confirm with faculty if more than 5 cartridges are needed to ensure patient safety)									
No. of Cartridge/s:	1		+1		+1		+1		+1	
Type of Anesthesia	w/ Epi	non-Epi	w/ Epi	non-Epi	w/ Epi	non-Epi	w/ Epi	non-Epi	w/ Epi	non-Epi
Name & Signature of Supervisor										
Name & Signature of Nurse										
Remarks										

Appendix MM.06-2 - LIDOCAINE ANESTHESIA LOGBOOK

RAK COLLEGE OF DENTAL SCIENCES
LIDOCAINE ANESTHESIA LOGBOOK CLINIC: _____

LOT NO						**EXPIRY DATE**
S.NO	**DATE & CLINIC TIMINGS**	**STUDENT NAME**	**MR NO.**	**DOCTOR**	**NURSE**	**REMARKS**
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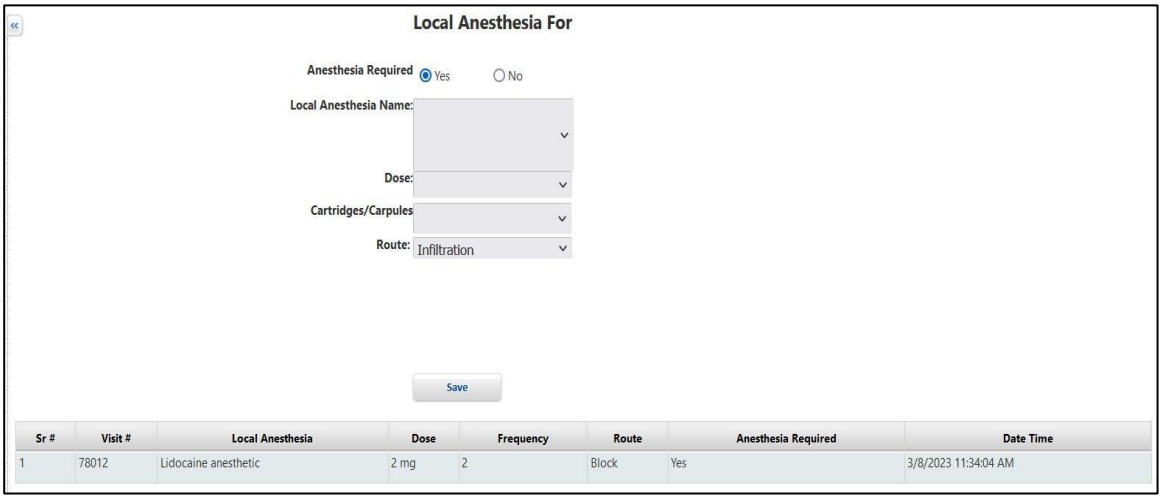
Name & Signature of Head Nurse: _____

Date:_____

Appendix MM.06-3 - LIDOCAINE ANESTHESIA ON HIMS



Appendix MM.06-4 – LA Audit form used by the QPS office

RAK COLLEGE OF DENTAL SCIENCES
LOCAL ANESTHESIA DISPENSION AUDIT FORM
REGULAR AUDIT OR FLASH AUDIT (✓ AS APPLICABLE)

Month of _____ 2026

S. No.	Check Points (If the following are mentioned or recognized)	GF		1FA		1FB		2FA		2FB		Remarks	Action Plan
		Yes	No	Yes	No	Yes	No	Yes	No	Yes	No		
1	Lot number												
2	Expiry Date												
3	Date and Clinic												
4	Location of nursing station												
5	Student name												
6	MR no. of patient												
7	Doctor's name												
8	Nurses who gave the local anesthesia												
9	Date and Signature of the Head Nurse												

AUDIT CONDUCTED BY: QPS Office
FULL NAME:
SIGNATURE:
DD/MM/YYYY:

8. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
1	05th Jan 2026		References updated Section 5.1 added within the policy
1	05th Jan 2026	New addition	Appendix MM.06-4 – LA Audit form used by the QPS office also included

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Medication Management**	**Prepared by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Title:	**Emergency Medications**	
Policy Number:	**MM.07**	**Reviewed by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Oct 2022**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**2**	
Next Review Date	**30 Sep 2028**	

1. **Purpose**

1.1. To ensure the safe use of emergency medications including high alert medications in RAKCODS.

1.2. To maintain safe, appropriate, and quick access to medications used in case of a medical emergency.

1.3. To orient new faculty and staff on the availability of emergency medications including high alert medications. This will be a continuous process.

2. **Policy**

2.1. Medications used in case of emergency in RAKCODS shall be listed as per the MOHAP rules and regulations.

2.2. The list of Emergency Medications shall be standardized in all clinics of RAKCODS (Appendix 1)

2.3. Medications listed for emergencies shall be available in crash carts or sealed box.

2.4. The crash cart will be located on each floor where it is accessible and known to all staff.

2.5. Integrity and security of emergency medications in the crash carts and sealed boxes must be maintained.

2.6. Availability, storage, quality, quantity, expiry, and accessibility of emergency

medications shall be monitored.

2.7. The head nurse shall ensure the availability of emergency medications.

2.8. Emergency medications in the crash cart shall be placed in the first drawer and access is limited.

2.9. All emergency medications in RAKCODS shall be stored securely and identified in clinics as appropriate.

2.10. Clinical areas shall be identified where medications should be available to meet clients' and students' needs in case of medical emergencies.

2.11. The head nurse shall ensure that emergency medications are monitored as part of the monthly process whenever emergency medications are available in RAKCODS. This shall include:

2.11.1. The availability of emergency medications as per the approved list in each clinic as per MOHAP guidelines.

2.11.2. Original labelling from the pharmaceutical supplier including high alert medication labels as appropriate. (High Alert Medications (HAM) should be labelled in the box)

2.11.3. Security of the medication using an appropriate box with evidence of seal.

2.11.4. Expiry as per the list of inventories of medications and their expiry date.

2.11.5. Emergency medications are replaced promptly (within 24 hrs.) after use or when expired or damaged.

2.12. Concentration and volume options for high-alert medications are limited and standardized.

3. Procedures

3.1. The head nurse and the registered nurse at RAKCODS will be responsible for implementing and monitoring this policy.

3.2. Emergency medications including the high alert medications will be used on the prescription of the oral and maxillofacial surgeon at RAKCODS.

3.3. The nurse who will administer these medications upon prescription is the one who will be responsible for the Emergency Medications, Ms. Josephine

Bumacod Velonza is the assigned nurse at RAKCODS. Ms. Sherin will replace Ms. Josephine if needed.

3.4. The assigned nurse will document the administration of all medications and then the details will be entered by the student/intern to whom the patient is assigned. The details will be recorded on HIMS.

3.5. The list of Emergency Medications is listed in the table below.

3.6. The head nurse should list and standardize emergency medications in different clinics in RAKCODS.

3.7. The head nurse shall ensure the availability of emergency medications.

3.8. The assigned nurse shall inspect the storage, security, availability, quantity, expiry, and accessibility of emergency medications after each use, for inspection or to replace the expired ones.

3.9. No other medications/items should be placed in the first drawer of crash carts/ sealed emergency box.

3.10. When Epinephrine (HAM) is used, an independent double check is required by the assigned nurse before administration.

3.11. The assigned nurse shall inform when the box seal is broken.

3.12. Expired medications should be discarded in a yellow bag with a blue seal as per Waste Management Agency (WMA) regulations of Ras Al Khaimah.

3.13. Any side effects should be reported via the OVR reporting on HIMS.

3.14. The assigned nurse shall report any incidents with regards to Emergency Medications by OVR as per the policy.

3.15. The assigned nurse is responsible for the audit of the crash cart contents including the emergency and high alert medications.

4. References

4.1 United Arab Emirates, Ministry of Health and Prevention. *National health policies and standards* [Internet]. MOHAP; 2026 [cited 2026 Jan 6]. Available from: https://mohap.gov.ae

4.2 Dubai Health Authority. *Outpatient Care Standards.* Dubai: DHA; 19 Nov 2024. Dubai Health Authority

4.3 Dubai Health Authority. *Outpatient Care Facilities Regulation* [Internet]. DHA; 2024

[cited 2026 Jan 6]. Available from: https://www.dha.gov.ae Dubai Health Authority

4.4 Scottish Dental Clinical Effectiveness Programme (SDCEP). *Drug Prescribing for Dentistry – Online Guidance* [Internet]. SDCEP; updated 2024 [cited 2026 Jan 6]. Available from: https://www.sdcepdentalprescribing.nhs.scot/

5. Tools/Appendices

5.1. Appendix MM.07-1 Emergency Medications

5.2. Appendix MM.07-2 Flash Audit for Crash Carts and Recovery Room

5.3. Appendix MM.07-3 Regular Audit for Crash Carts

5.4. Appendix MM.07-4 Regular Audit for Recovery Room

5.5. Appendix MM.07-5 Emergency Medication/HAM Administration Sheet

Appendix MM.07-1 Emergency Medications

SI no	Drug	Quantity Available	Location	Dosage	Route of Administration	Indications	Maximum Dosage per patient	Availability
1	Hydrocortisone Sodium Succinate Inj.IV	11 vials	2pc – recovery room 3pcs- ground floor, first floor and second floor crash carts	100mg powder vial	IV	Acute Hypersensitivity reactions and Anaphylaxis	100 mg, can be repeated if needed up to 300 mg.	✓
2	Water for injection-IV/IM	15pcs	3pcs – recovery room 4pcs – ground floor, first floor and second floor crash carts	5 ml	IV	Mixed with the Hydrocortisone Sodium Succinate as per manufacture guidelines		✓
3	Dexamethasone Inj. IV	9amp.	3pcs - ground floor, first floor and second floor crash carts	8 mg/2ml vial	IV	Post-operative Edema	8mg Once.	✓
4	Epi Pen (Adrenaline)-IM/Sc	3 syringes	1pc – ground floor, first floor and second floor crash carts	0.3 mg preloaded syringe	IM	Acute Anaphylaxis	0.3 mg then 0.3 mg after 5 minutes As required	✓
5	Epi Pen (Adrenaline) pediatric-IM/Sc	1 syringe	1pc – recovery room	0.15 mg preloaded syringe	IM	Acute Anaphylaxis	0.15 mg then 0.3 mg after 5 minutes As required	✓
6	Chlorpheniramine Inj.-IM/ 10mg /1ml vial	10amps.	4pcs – recovery room 2pcs each– ground floor, first floor and second floor crash carts	10mg /1ml vial	IM	Allergic reactions	Adult: 10 mg for 1 dose, to be repeated if necessary; maximum 4 doses per day	✓
7	Dextrose 5% - Infusion	8bottles	2 pcs each– recovery room, ground floor, first floor, second floor crash carts	5% - Infusion - 500 ml	IV Infusion	Supportive medication		✓
8	Diclofenac Na Inj.-IM-	2amps.	2pcs – recovery room	75 mg	IM	Acute Post-operative pain	75 mg 1-2 times a day; Maximum 150 mg per day	✓
9	Paracetamol Infusion-	2 bottles	2pcs – recovery room	1000mg /100 ml	IV Infusion	Pain, Fever	1 G every 4-6 hours does to be administered over 15 minutes; Maximum 4 G per day	✓

SI no	Drug	Quantity Available	Location	Dosage	Route of Administration	Indications	Maximum Dosage per patient	Availability
10	NS 0.9% infusion-Infusion-	4 bottles	1 each – recovery room, ground floor, first floor, second floor crash carts	0.9% infusion - Infusion - 500 ml	IV Infusion	Supportive Medication		✓
11	Glucagon-IM/Sc-	1vial	1 pc – recovery room	1mg powder-1 ml sterile water	IM	Diabetic Hypoglycemia	1mg if no response within 10 minutes IV Glucose must be given	✓
12	Salbutamol inhaler Inhalational -			0.1mg/dose	Inhalation aerosol	Asthma	1-2 Puffs up to 4 Times per day	
13	Ventolin nebules 5mg-Inhalational-nebulizer	3 pcs	1 pc each - ground floor, first floor, second floor crash carts	5mg/2.5 ml	Inhalation Nebulization	Asthma	5 mg repeated up to 4 times per day	✓
14	Phsiologica NS 5ml for neulization	9pcs.	3pcs – recovery room 2pcs - ground floor, first floor, second floor crash carts	5ml	Inhalation Nebulization	Mix with Ventolin for nebulization		✓
15	Glyceryl Trinitrate (GTN)-Sublingual	1pc	1pc recovery room	-0.4 mg/ dose spray		Angina	0.4-0.8 administered under the tongue and closed the mouth, dose can be repeated at 5 minutes intervals if needed.	✓
16	Aspirin PO(Chewable)	10tabs.	4pcs – recovery 2pcs- ground floor, first floor, second floor crash carts	300mg tablets	PO	Unstable Angina/ MI	300 mg, Once per day.	✓
17	Desloratadine Tablets “Aerius”	24tabs	7tabs – ground floor crash cart 10tabs – first floor crash cart 7tabs – second floor crash cart	5mg	PO	Mild Allergic Reaction and Nasal Congestions	5 mg once per day	✓

Appendix MM.07-2 Flash Audit for Crash Carts and Recovery Room

RAK COLLEGE OF DENTAL SCIENCES
Crash Carts and Recovery Room Audit Form
FLASH AUDIT (✓ AS APPLICABLE)

S. No.	Check Points (If the following are mentioned or recognized)	Yes	No	Comments/Remarks
1	Name of medicine			
2	Lot number			
3	Expiry Date			
4	Quantity/stocks			
5	Date and Clinic			

AUDIT CONDUCTED BY:

FULL NAME:

SIGNATURE:

DD/MM/YYYY:

Appendix MM.07-3 Regular Audit for Crash Carts

REGULAR AUDIT FOR CRASH CARTS (✓ AS APPLICABLE)

Floor:

	Month:		Month:	
ITEMS	**Quantity Available**	**Expiry Date**	**Quantity Available**	**Expiry Date**
Drawer 1:MEDICATIONS				
Hydrocortisone Sodium Succinate Inj.IV				
Water for injection-IV/IM				
Dexamethasone Inj. IV				
Epi Pen (Adrenaline)-IM/Sc				
Epi Pen (Adrenaline) pediatric-IM/Sc				
Chlorpheniramine Inj.-IM/ 10mg /1ml vial				
Dextrose 5% -Infusion				
Diclofenac Na Inj.-IM-				
Paracetamol Infusion-				
NS 0.9% infusion- Infusion-				
Glucagon-IM/Sc-				
Salbutamol inhaler Inhalational -				
Ventolin nebules 5mg-Inhalational-nebulizer				
Phsiologica NS 5ml for neulization				
Glyceryl Trinitrate (GTN)-Sublingual				
Aspirin PO(Chewable)				
Desloratadine Tablets “Aerius”				
Drawer2:				
Thermometer				
Pulse Oximeter				
Glucometer device				
Glucometer strips				
Glucometer needles				
Glucometer needle holder				
Tourniquet				
Suirgical glove				
Oxygen mask Pedia				
Oxygen mask Adult				
Drawer 3:				
Glucose D				
Blanket				
Drawer 4:				
Examination gloves small				
Examination gloves medium				
FIRST AID KIT: In the cabinet				
Betadine solution 120 ml				
Mebo ointment 15gm				
Fucidin cream 2% 30gms.				
Surgical gloves				

Appendix MM.07-4 Regular Audit for Recovery Room

REGULAR AUDIT FOR RECOVERY ROOM

(✓ AS APPLICABLE)

Floor: **Ground**

	Month:		Month:	
ITEMS	**Quantity Available**	**Expiry Date**	**Quantity Available**	**Expiry Date**
Drawer 1:MEDICATIONS				
Hydrocortisone Sodium Succinate Inj.IV				
Aspirin (effervescent)tablet				
Glucagon-IM/Sc-				
Dexamethasone Inj. IV				
Glyceryl Trinitrate (GTN)-Sublingual Spray				
Chlorpheniramine Inj.-IM/ 10mg /1ml vial				
Diclofenac Na Inj.-IM- (Voltaren inj.)				
Epi Pen (Adrenaline) pediatric-IM/Sc				
Epi Pen (Adrenaline)-adult IM/Sc				
Dextrose 5% -Infusion				
NaCl 0.9% infusion- Infusion-				
Water for injection-IV/IM				
Phsiologica NS 5ml for nebulization				
Paracetamol Infusion-				
Drawer2:				
Non-woven cannula wound dressing				
3Way stop lock w/blue handle				
IV cannula G.20,G22,G24				
IV Infusion set				
Guedal airways Sz.40,50,70,80,90,100,110,120mm				
Nebulizer mask set (pedia &adult)				
3Way with extension tube				
Oxygen nasal cannula				
Suction Catheter 14Fr.				
Drawer 3:				
Yankuer suction set 1.8m				
Facemask				
Headcap				
Gown				
Examination gloves (Medium & Small)				
Disp. tourniquet				
Spandex plain bandage				
Non-woven cannula wound dressing				
Distilled/Mineral water for oxygen humidifier bottle				
3-way stop lock				
Drawer 4:				
Thermal blanket				
Disp.pillows				

Appendix MM.07-5 Emergency Medication/HAM Administration Sheet

Emergency Medication/HAM Administration Sheet

SI No.	Date	MR No.	Name	Age	Gender	Prescribed by:	Administered by:	Time of Administration	Signature

6. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised
1	06th Jan 2026		References updated and the list of emergency medications, lot numbers, and expiry dates has been omitted, as these details are subject to frequent changes.

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Medication Management**	**Prepared by:** **Dr. Vivek Padmanabhan** **Chairperson Clinical Sciences**
Title:	**Telephonic and Verbal Order Form**	
Policy Number:	**MM.08**	**Reviewed by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Oct 2022**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**2**	
Next Review Date	**30 Sep 2028**	

1. **Purpose and Scope**

1.1. The use of telephonic and verbal orders in RAK College of Dental Sciences (RAKCODS) is used only in emergency situations where the prescribing doctor is not available in the building.

1.2. In case the verbal and telephonic orders need to be used to facilitate continued and timely care of the patients in RAKCODS.

2. **Policy Statements:**

2.1. In RAKCODS the complete verbal and telephonic order is written down by the receiver of the order.

2.2. In RAKCODS complete verbal and telephonic order is read back by the receiver of the order.

2.3. In RAKCODS order is confirmed by the individual who gave the order.

2.4. Above mentioned policy shall support consistent practice in verifying the accuracy of verbal and telephonic communication.

3. Definitions and Abbreviations:

3.1. **Telephonic orders:** An order given by an authorized dentist usually in response to a dental assistant/ dentist who initiated that telephonic call.

3.2. **Verbal Order:** An order given by an authorized dentist who is present in the clinic.

3.3. **RAKCODS:** RAK College of Dental Sciences

4. Procedures:

4.1. Verbal orders must be limited to situations where immediate written or electronic communication is not possible.

4.2. Telephonic orders are usually only accepted where the dentist is not present in the dental clinic.

4.3. Telephone and verbal orders must only be accepted by a student/intern/instructor/teaching assistant/faculty dealing with the patient directly.

4.4. Telephone and verbal orders must be clearly communicated and include two correct patient identifiers (Patient Full Name and Date of Birth).

4.5. Telephone order: The person receiving the order immediately writes it on a verbal/ telephone order form. The receiving person then "READS BACK" the order to the prescribing physician for confirmation.

4.6. Verbal order:

4.6.1. Verbal orders are only accepted in case of emergency situations.

4.6.2. Verbal orders are also required to be written down, read back and confirmed in emergency situations.

4.6.3. The receiving person writes down, "READS BACK" the order to the prescribing dentist for confirmation.

4.6.4. The ordering person verifies the accuracy of verbal communication.

4.6.5. All verbal order shall be documented in verbal order form by the order receiver and signed by the student and supervision doctor within 24 hours.

4.7. Telephone and verbal orders for medications must include:

4.7.1. Name of medication.

4.7.2. Dosage dictated in words e.g. fifty milligrams as "five zero" milligram.

4.7.3. Route and frequency without abbreviations, e.g. one tab stat as "one tablet orally stat".

4.7.4. Name of the prescribing dentist.

4.7.5. Date and time of prescription.

4.7.6. Name and signature as needed on the form.

4.7.7. Drug order must be transcribed as stated by the prescribing physician.

4.7.8. The order should be completed in the medication order form on HIMS within 24 hours from the telephonic/verbal order.

5. Performance Monitoring:

Not Applicable

6. References

JCI Accreditation Standards for Ambulatory Care, 3rd Edition

Qmentum International, 4th edition

7. Tools / Appendices

7.1. Appendix MM.08-1 Telephonic and Verbal Order Form

Appendix MM.08-1 Telephonic and Verbal Order Form

RAK College of Dental Sciences

Telephonic / Verbal Order Form

☐ **Verbal Order** ☐ **Telephonic Order**

Date and Time: **Clinic:**

Patient Name	MR no	Medicine Name	Dose	Frequency	Dental Assistant Name and Sign	Doctor Signature

Note: The order should be completed in the medication order form on HIMS within 24 hours from the telephonic/verbal order.

Student's Name and Signature: ***Supervising Doctor and Signature***

8. References

8.1. ISMP Canada. Strategies for safer telephone and other verbal medication orders [Internet]. ISMP Canada; 2020 [cited 2026 Jan 6]. Available from: https://ismpcanada.org

8.2. National Coordinating Council for Medication Error Reporting and Prevention. Recommendations to reduce medication errors associated with verbal medication orders and prescriptions [Internet]. NCCMERP; revised May 1, 2015 [cited 2026 Jan 6]. Available from: https://www.nccmerp.org

8.3. The Joint Commission. Hospital accreditation standards: verbal and telephone orders [Internet]. Oakbrook Terrace (IL): The Joint Commission; current edition [cited 2026 Jan 6].

8.4. 28 Pa. Code § 211.3. Verbal and telephone orders. Pennsylvania Code: Bureau of Professional and Occupational Affairs; current through 2026 Jan.

9. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised
1	06th Jan 2026		References updated

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

11.

CONTINUOUS QUALITY IMPROVEMENT POLICIES

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Continuous Quality Improvement**	**Prepared by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences** **Manager, Quality and Patient Safety**
Title:	**Quality Improvement Plan**	
Policy Number:	**QA.01**	**Reviewed by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Jan 2027**	

RAK College of Dental Sciences Quality Improvement Plan is designed to evaluate the quality and appropriateness of care provided to patients and to ensure a safe and compliant environment for clinical training and patient care. The plan is intended to continuously improve the quality of care provided in the undergraduate clinics while enhancing the clinical educational experience for the student.

The Goals of the Clinical Quality Improvement Plan are:

1. To ensure that quality patient care is provided in the clinics
2. To provide a safe environment for our clients (patients and students), staff, and faculty
3. To provide a satisfactory dental experience for patients
4. To ensure a legally compliant practice environment

RAKCODS believes that its success depends solely on the quality of care it provides.

1. Purposes and Scopes

The purpose of the Quality Improvement Plan at RAK College of Dental Sciences (RAKCODS) is to ensure that the quality and appropriateness of care provided to patients are continuously monitored and improved, while maintaining a safe, effective, and compliant environment for clinical education and patient care. This policy applies to all clinical services

and academic programs of RAKCODS**,** including undergraduate, internship, and postgraduate dentistry programs, and encompasses all faculty, staff, students, and interns involved in patient care and clinical operations.

2. Policy Statement

RAKCODS shall establish and maintain a Quality Improvement Plan based on recognized standards of care, evidence-based practice, and best-practice guidelines to monitor, evaluate, and improve patient care and clinical performance across all programs.

The Quality Improvement Plan supports continuous improvement in:

- Patient safety and quality of care
- Clinical education and training
- Regulatory, legal, and accreditation compliance

3. Procedures

3.1. Oversight and Responsibility

The Quality Improvement and Patient Safety (QPS) Committee**,** under the supervision of the Chairperson, Clinical Sciences**,** shall oversee the implementation, monitoring, and evaluation of the Quality Improvement Plan across all RAKCODS clinics and programs.

3.2. Standards and Performance Monitoring

The QPS Committee shall establish and periodically review criteria and standards for professional practice, clinical performance, and patient care. These standards shall be monitored and assessed in collaboration with the Chairperson, Clinical Sciences and relevant clinical committees, and updated as required.

3.3. Review Activities

The Quality Improvement Plan shall include regular and systematic review of:

- Patient clinical records
- Patient complaints, feedback, and experience surveys
- Incident and occurrence reports
- Infection control and clinical audits
- Any other documents relevant to identifying risks, deficiencies, or opportunities for improvement

3.4 Committee Meetings and Representation

The Quality Improvement and Patient Safety Committee, which includes representation from undergraduate, internship, and postgraduate programs, shall meet at regular intervals. Meetings shall be documented, and follow-up actions shall be tracked to completion.

3.5 Policy and Procedure Review

All clinical policies, procedures, and standards of care shall be reviewed at least annually and revised as necessary based on quality findings, audit outcomes, incident trends, regulatory updates, or institutional requirements.

4. Commitment to Quality Improvement

RAKCODS recognizes that institutional success is directly linked to the quality and safety of care provided to patients and the effectiveness of clinical education delivered to students and trainees. Continuous quality improvement is therefore an integral component of clinical governance across undergraduate, internship, and postgraduate dentistry programs.

5. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2	05th Jan 2026		Policy elaborated and revised to enhance clarity of scope, governance, roles, and procedures in accordance with RAKCODS operational and regulatory requirements. Review frequency updated to annual review. Edition number will be revised only upon implementation of substantive policy changes.

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences** **Manager, Quality and Patient Safety**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

12.

HOSPITAL SAFETY POLICIES

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Hospital Safety**	**Prepared by:** **Dr. Aqsa Khan** **Infection Control-in-Charge** **Ms. Puja Dipu Das** **Head Nurse**
Title:	**Infection Control**	
Policy Number:	**HS.01**	
Ownership:	**RAKCODS**	**Reviewed by:** **Dr. Riham Abdelraouf** **Assistant Professor**
Effective (Issue) Date:	**Sep 2019**	
Edition Number	**3**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. Purposes and Scope

1.1. To define the Infection Prevention and Control Program (IPC), its goals, objectives, and responsibility.

1.2. To develop and review IPC policies based on evidence-based and best practices that are consistent and up to date with the national and international regulatory guidelines and literature.

1.3. To develop IPC standard operating procedures, based on the standard precautions of patient care and risk assessment, for all dental departments.

1.4. To provide guidelines to identify and monitor infections, including outbreaks, that occur in the clinics that have the potential for disease transmission; to recommend risk reduction practices by integrating principles of IPC into all direct and indirect standards of practice.

1.5. To screen potentially infectious patients or dental healthcare workers (DHCW) which include students, interns, faculty and staff who may transmit disease to others.

1.6. To educate, train and update all DHCWs on general IPC program during orientations, or during ad hoc situations like outbreaks.

1.7. To monitor IPC practices and standards of care and distribute the surveillance summaries to all DHCWs at predefined frequency.

1.8. To recommend risk reduction practices based on surveillance data as continuous quality improvement initiatives into all standards of practice.

1.9. To select equipment and supplies for IPC practices and to provide guidelines on selection of clinical equipment as per IPC standards.

1.10. To provide IPC guidelines for cleaning and handling of equipment and supplies used in IPC practices.

1.11. To provide IPC guidelines related to maintenance of the facility

1.12. The IPC program applies to all patients, students, staff, visitors, and the entire facility.

2. Procedures

2.1. Program Leadership and Coordination

2.1.1. IPC program is run by IPC committee

2.1.2. The responsibilities of the committee include

2.1.2.1. To develop, evaluate and review policies and procedures

2.1.2.2. To implement and monitor the policies and procedures.

2.1.2.3. To carry out risk assessments to identify potential risks.

2.1.2.4. To monitor likelihood of occurrence and spread of infectious diseases, including outbreaks.

2.1.2.5. To educate, train and communicate with staff, students and patients regarding guidelines to prevent exposure to infectious diseases.

2.1.2.6. To report cases to leadership and regulatory body, MOHAP, if required.

2.1.2.7. To monitor cleanliness, disinfection and sterilization of the facilities to reduce the number of pathogenic micro-organisms.

2.1.2.8. To raise awareness amongst students and clinical staff to practice standard IPC precautions for all patients/clients regardless of known or perceived contagious state.

2.1.3. The IPC program must follow the current guidelines provided by national and international regulatory bodies and it is the responsibility of the IPC team to keep up-to-date with these guidelines.

2.1.4. The clinic administration must support the clinic IPC program through providing them with the required financial and manpower resources.

2.2. Focus of the Program

2.2.1. The focus of the Clinic IPC program includes

2.2.1.1. Patients

2.2.1.2. Students

2.2.1.3. Staff

2.2.1.4. Visitors

2.2.1.5. Surveillance

2.2.1.6. Procedures and processes associated with the risk of infection

2.2.1.7. Equipment cleaning and disinfection and sterilization

2.2.1.8. Environment care

2.2.1.9. Management of medical and sharp waste

2.2.1.10. Management of sharp injuries

2.2.1.11. Engineering control monitoring

2.2.1.12. Monitoring of any construction demolition and remodeling activity

2.3. Utilization of standard precautions must be covered in the program

2.3.1. As per CDC, Standard precautions are the minimum infection prevention practices that apply to all patient care, regardless of suspected or confirmed infection status of the patient, in any setting where health care is delivered. These practices are designed to both protect healthcare workers and prevent them from spreading infections among patients. Standard Precautions include:

1. Hand hygiene.
2. Use of personal protective equipment (e.g., gloves, masks, eyewear).
3. Respiratory hygiene / cough etiquette.
4. Sharps safety (engineering and work practice controls).
5. Safe injection practices (i.e., aseptic technique for parenteral medications).
6. Sterile instruments and devices.
7. Clean and disinfected environmental surfaces.

2.4. Surveillance process

2.4.1. The surveillance activity is done following risk based approach. The clinic uses annual data to identify the infection risk to design surveillance process.

2.5. Risk Reduction Goals in Dental Procedures

IPC committee determines the following as the risk reduction goal and will monitor and review them monthly:

2.5.1. Hand hygiene compliance rates

2.5.2. PPE compliance rates

2.5.3. Sharp injuries rates

2.5.4. Central Sterile Supply Department Complaints

2.5.5. Lost instrument rates

2.5.6. Mechanical Indicators for washer disinfector

2.5.7. Post-disinfection protein residue detection

2.5.8. Biological and mechanical indicators for autoclave

2.6. Training Program

2.6.1. Goal: To provide all hospital staff, Patient and families with the required knowledge about the implementation and adherence to IPC program in order to prevent and control infection at the hospital

2.6.2. Focus groups

2.6.2.1. IPC education program will cover students, doctors,

nurses, radiology technician, patients and significant other(s), each according to their type of information needed through orientation, education and training but it will give more efforts in educating and training health care providers who are in direct contact with the patients.

2.6.2.2. Patients/significant other(s) should be educated through posters, brochures and videos at their level of understanding of rational for isolation precautions, behaviors required of them in observing these precautions and conditions for which to notify the health team

2.6.3. Structure of the Program

IPC education program will be as follow:

2.6.3.1. Orientation program for the new hired employees.

2.6.3.1.1. IPC training program will be part of all orientation programs of the clinic designed for all newly hired employees.

2.6.3.2. A continuous IPC in-service program for all employees:

2.6.3.2.1. Training for the staff on the important IPC policies, procedures and guidelines which should be conducted

2.6.3.2.2. This may include but not limited to:

2.6.3.2.2.1. Education and training on policies and procedures to related personnel.

2.6.3.2.2.2. Education on current infection rates and trends in addition to actions taken to reduce those rates.

2.6.3.2.2.3. Education and training on any new diseases and topics related to infection issues as they arise.

2.6.3.3. Patient and families are encouraged and educated to participate in

the implementation and use of infection prevention and control practices such as hand hygiene in the clinic through booklet, poster etc.

2.6.3.4. Annual training review:

Review for the most important policies must be done annually with the target groups who should be educated at their level of understanding and includes the following:

2.6.3.4.1. Students

2.6.3.4.2. Doctors

2.6.3.4.3. Nurses

2.6.3.4.4. Housekeeping workers.

2.6.3.4.5. Maintenance workers.

2.6.3.4.6. Technician

2.6.4. Strategies to Perform the program

2.6.4.1. Lectures

2.6.4.2. Videos

2.6.4.3. Posters

2.6.4.4. Brochures

2.6.5. Program evaluation

The program will be evaluated by different evaluation tools which include:

2.6.5.1. Demonstration which is used for the evaluation of procedures such as hands hygiene, etc…

2.6.5.2. General evaluation form to evaluate the lecture by attendees

2.6.5.3. Implementation observation by the IPC team during the IPC rounds.

2.7. Performance Monitoring

2.7.1. IPC program sets different strategies to measure its performance, these strategies are:

2.7.1.1. IPC quality indicators: that are measured and reviewed on monthly basis by the Infection and Prevention Control

Committee. Significant variation requires intensive analysis and action taken report from the committee.

2.7.1.2. Hand Hygiene: Data on compliance to hands hygiene policy will be

collected for doctors, students, nurses and technicians monthly and the analysis results will be discussed in the IPC committee for recommendations. Lower compliance rates will be analyzed and methods discussed to achieve the benchmark. All the results are circulated in the organization to create awareness amongst all stakeholders including patients and visitors.

2.7.1.3. PPE: Data on compliance with PPE adherence will be collected for doctors, students, nurses working in the clinic. Compliance rates will be analyzed and any low compliance will be discussed for improvement.

2.7.2. Program Evaluation

2.7.2.1. A successful infection-control program depends on:

2.7.2.1.1. Developing standard operating procedures.

2.7.2.1.2. Evaluating practices and compliance rates

2.7.2.1.3. Routinely documenting adverse outcomes (e.g., occupational exposures to blood) and work- related illnesses in HCWs.

2.7.2.2. Strategies and tools to evaluate the infection- control program can include:

2.7.2.2.1. Periodic observational assessments

2.7.2.2.2. Checklists to document procedures.

2.7.2.2.3. Review of IPC policies every 3 years or as required owing to the dynamic nature of infections.

2.7.2.3. Evaluation offers an opportunity to improve the effectiveness of both the infection-control program and dental practice protocols.

2.7.2.4. If deficiencies or problems in the implementation of IPC procedures are identified, further evaluation is needed to eliminate the problems.

2.7.2.5. Examples of infection-control program evaluation activities are provided in the table below:

Program Element	Evaluation Activity
Appropriate immunization of HCWs.	Conduct annual review of personnel records to ensure up-to-date immunizations.
Assessment of occupational exposures to infectious agents.	Report occupational exposures to infectious agents. Document the steps that occurred around the exposure and plan how such exposure can be prevented in the future.
Comprehensive post-exposure management plan and medical follow-up program after occupational exposures to infectious agents.	Ensure the post-exposure management plan is clear, complete, and available at all times to all HCWs. All staff should understand the plan.
Adherence to hand hygiene before and after patient care.	Observe and document circumstances of appropriate or inappropriate hand-washing. Review findings in IPC committee meeting.
Proper use of personal protective equipment to prevent occupational exposures to infectious agents.	Observe and document the use of barrier precautions and careful handling of sharps. Review findings in IPC committee meeting.
Routine and appropriate sterilization of instruments verification of sterilization cycle.	Monitor physical indicator with paper log of steam cycle. Chemical indicator with temperature strip with each sterilization load and bowie-dick test for efficacy of air removal. Further verify by weekly biologic monitoring. Take appropriate action when failure of sterilization process is noted.
Evaluation and implementation of safer medical devices.	Conduct an annual review of the exposure control plan and consider new developments in safer medical devices.
Proper handling and disposal of medical waste.	Observe the safe disposal of medical and non- medical waste and take preventive measures if hazardous situations occur.
Health-care–associated infections	Assess the unscheduled return of patients after procedures and evaluate them for an infectious process. A trend might require formal evaluation

3. References

3.1. American Dental Association. *ADA Practical Guide to Effective Infection Prevention and Control, Fifth Edition*. American Dental Association, 2022.

3.2. Centers for Disease Control and Prevention. Standard precautions for all patient care [Internet]. IPC; 2024. Available from: https://www.cdc.gov/infection-control/hcp/basics/standard-precautions.html

3.3. Centers for Disease Control and Prevention. Summary of infection prevention practices in dental settings: basic expectations for safe care. U.S. Dept of Health and Human Services; 2016.

3.4. Dubai Healthcare Authority, Health Policies and Standards Department, Health Regulation Sector. Guidelines for infection control in dentistry [Internet]. 2021. Available from: stg.dha.gov.ae:8090/uploads/112021/b26c383e-bd71-4770-a96b-7a938ddb4706.pdf.

3.5. Lautenbach E, Woeltje KF, Malani PN. Practical healthcare epidemiology [Internet]. Cambridge: Cambridge University Press; 2018. Available from: https://doi.org/10.1017/9781316597170.

3.6. Miller CH. IPC and management of hazardous materials for the dental team. St. Louis: Mosby; 2022.

3.7. Ministry of Health and Prevention. Outpatient care facilities [Internet]. 2016. Available from: mohap.gov.ae/assets/download/fc99fa/Out%20Patient%20Care.%2013-07-2017.pdf.aspx.

3.8. World Health Organization. Guidelines on core components of infection prevention and control programs at the national and acute health care facility level [Internet]. 2016. Available from: https://doi.org/9789241549929.

4. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2.1	25th Mar 2025	1. Purposes and scope 1.1. To define the Infection Control Program, its goals, objectives, authority and	1. Purpose and scope 1.1.To define the Infection Prevention and Control Program (IPC), its goals, objectives, and

Edition Number	Review Date	Description of Change	
		Current	**Revised**
		responsibility.	responsibility.
		1.2. To develop and review infection control policies based on evidence-based and best practices that are consistent with the international literature and national regulatory guidelines.	1.2.To develop and review IPC policies based on evidence-based and best practices that are consistent and up-to-date with the national and international regulatory guidelines and literature.
2.1	25th Mar 2025		-New addition- 1.3. To develop IPC standard operating procedures, based on the standard precautions of patient care and risk assessment, for all dental departments
		1.4. To identify infections that occur in the clinics that have the potential for disease transmission; to recommend risk reduction practices by integrating principles of IPC into all direct and indirect standards of practice	1.4. To provide guidelines to identify and monitor infections, including outbreaks, that occur in the clinics that have the potential for disease transmission; to recommend risk reduction practices by integrating principles of IPC into all direct and indirect standards of practice.
		1.5. To identify potentially infectious patients which include students, staff who may transmit disease to others.	1.5. To screen potentially infectious patients or DHCW which include students, interns, faculty and staff who may transmit disease to others.
2.1	25th Mar 2025		-New addition- 1.6. To educate, train and update all DHCWs on general IPC program during orientations, or during ad hoc situations like outbreaks.
2.1	25th Mar 2025		-New addition- 1.7. To monitor IPC practices and standards of care and distribute the surveillance summaries to all DHCWs at predefined frequency.
2.1	25th Mar 2025	1.6. To recommend risk reduction practices by integrating IPC principles into all standards of	1.8. To recommend risk reduction practices based on surveillance data as continuous quality improvement

Edition Number	Review Date	Description of Change	
		Current	**Revised**
		practice.	initiatives.
2.1	25th Mar 2025	1.7. To provide feedback to clinicians and other healthcare providers	1.9. To select, recommend, and provide instrument processing guidelines for essential equipment and supplies for IPC practices.
2.1	25th Mar 2025		-New addition- 1.10. To provide IPC guidelines for cleaning and handling of equipment and supplies used in IPC practices.
2.1	25th Mar 2025		-New addition- 1.11. To provide IPC guidelines related to maintenance of the facility
2.1	25th Mar 2025	1.8. The infection control program will cover all patients, students, staff, visitors, and all clinic areas all the time.	1.12. The IPC program applies to all patients, students, staff, visitors, and the entire facility.
2.1	25th Mar 2025	2.5. Risk Reduction Goals in Dental Procedures IPC committee determines the following as the risk reduction goal and will review them monthly: 2.5.1. Hand hygiene 2.5.2. Sharp injuries 2.5.3. Complication/ surgical site infection rates 2.5.4. Lost instrument rates 2.5.5. Antibiotic Prescription	2.5.Risk Reduction Goals in Dental Procedures IPC committee determines the following as the risk reduction goal and will review them monthly: 2.5.1. Hand hygiene 2.5.2. Sharp injuries 2.5.3. CSSD Complaints 2.5.4. Lost instrument rates 2.5.5. Mechanical Indicators for washer disinfector 2.5.6. Post- disinfection protein residue detection 2.5.7. Biological and mechanical indicators for autoclave
2.1	30th Oct 2025	New addition	2.5.2 PPE compliance rates

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2.1	30th Oct 2025	New addition	2.7.1.3. PPE: Data on compliance with PPE adherence will be collected for doctors, students, nurses working in the clinic. Compliance rates will be analyzed and any low compliance will be discussed for improvement.

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

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Policy Type:	**Hospital Safety**	**Prepared by:** **Dr. Aqsa Khan** **Infection Control-in-Charge**
Title:	**Immunization**	
Policy Number:	**HS.02**	**Reviewed by:** **Dr. Riham Abdelraouf** **Assistant Professor**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. **Purpose and Scope**

The purpose of this policy is to outline the immunizations required or recommended for dental health-care workers (DHCW) in RAKCODS.

2. **Policy Statement**

DHCW are at risk of exposure to communicable diseases because of their contact with patients or infectious material from patients. Maintenance of immunity to vaccine-preventable diseases is therefore an essential part of prevention and infection control.

3. **Procedures**

3.1. Vaccination are mandatory or recommended requirements for DHCWs in RAKCODS.

3.2. Hepatitis B vaccination

3.2.1. Immunity against Hepatitis B virus is a mandatory prerequisite to work in clinics.

3.2.1.1. Submission of documented evidence of Hepatitis B immunity in the form of scanned soft copy of a positive/reactive Antibody titer test (10 mIU/mL or higher) is required from all DHCW.

3.2.2. Screening and Vaccination

3.2.2.1. RAKCODS holds annual Hepatitis B screening camp for all DHCW.

3.2.2.2. Serologic screening testing will be performed prior to administering Hepatitis B vaccine for the DHCW who state that they have received

prior vaccination but do not have proof. Those whose test reports indicate prior immunity will not receive the vaccine.

3.2.2.3. A vaccines series should be initiated for those who say that they are not immune or their antibody titer test report is negative/non-reactive (less than 10 IU/L).

3.2.2.4. 3-dose series of Engerix-B or Recombivax HB at 0, 1, 6 months [minimum intervals: dose 1 to dose 2: 4 weeks / dose 2 to dose 3: 8 weeks / dose 1 to dose 3: 16 weeks])

3.2.2.5. DHCW may take their vaccinations at any medical center in UAE. It is important to save the vaccination card provided by the medical center as a record of the vaccination.

3.2.2.6. On completion of 3-dose series, a new antibody titer test is required. A scanned copy of this test report must be submitted to the IPC department as evidence of Hepatitis B immunity.

3.2.2.7. Post-vaccination antibody titer report- If the report is reactive/positive; the DHCW is cleared to work in the clinics. If the report is non-reactive/negative (defined as <10mIU/mL), the DHCW has to repeat the 3-dose vaccine series. If they still do not respond after the second series of 3 dose vaccination, they will be considered as a non-responder and will be referred for evaluation and counseling to a licensed medical specialist.

3.2.2.8. Validity of antibody titer - A reactive/positive Hepatitis B antibody titer test has life-long validity as long as the DHCW is immunocompetent.

3.2.2.9. Booster dose - No booster dose is needed as long as the latest antibody titer is reactive/positive.

3.2.2.10. Right to refusal - In general, patient contact will not be allowed until documented evidence of immunity to Hepatitis B is provided. However, DHCWs have the option to decline Hepatitis B vaccination. These persons will receive appropriate counseling. A written acknowledgment of complete understanding of possible risk and refusal at person's own responsibility will be required in case of

post- counselling refusal. The staff will also be made to understand that their contract or license may not be renewed as the Ministry of Health may not allow them to work without vaccination records.

3.3. Other vaccines

3.3.1. The other vaccine recommended for healthcare workers are mentioned in the appendix **HS.02-1.**

4. References

4.1. Centers for Disease Control. Recommended adult immunization schedule for ages 19 years or older. 27 June 2024.

4.2. Dubai Healthcare Authority. Clinical guidelines for best practice in immunization [Internet]. 2022. Available from: https://services.dha.gov.ae/sheryan/wps/portal/home/circular-details?circularRefNo=CIR-2022-00000025&isPublicCircular=true&fromHome=true.

4.3. Hepatitis B Foundation. Dental settings and hepatitis B [Internet]. 26 Aug 2020. Available from: https://www.hepb.org/blog/dental-settings-hepatitis-b/.

4.4. Immunize.org. Healthcare personnel vaccination recommendations [Internet]. 2017. Available from: https://www.immunize.org.

4.5. World Health Organization. Implementation guide for vaccination of health workers. 30 June 2022.

5. Tools / Appendices

Appendix HS.02-1: RECOMMENDED VACCINES FOR HEALTHCARE WORKERS

RECOMMENDED	1- Covid-19 2- Measles (rubeola), Mumps, Rubella (MMR) 3- Tetanus- diphtheria-pertussis (Tdap) 4- Influenza 5- Varicella (chicken pox) 6- Meningococcal

6. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2.1	19th Mar 2025	1. Purpose and Scope The purpose of this policy is to outline the immunizations required or recommended for students, interns, staff and faculty in RAKCODS. This policy also provides list of immunizations recommended for patients in general.	1. Purpose and Scope The purpose of this policy is to outline the immunizations required or recommended for dental health-care workers (DHCW) in RAKCODS.
2.1	19th Mar 2025	2. Policy Statement Health-care workers (HCWs) are at risk for exposure to communicable diseases because of their contact with patients or infectious material from patients. Maintenance of immunity to vaccine-preventable diseases is therefore an essential part of prevention and infection control.	2. Policy Statement DHCW are at risk for exposure to communicable diseases because of their contact with patients or infectious material from patients. Maintenance of immunity to vaccine-preventable diseases is therefore an essential part of prevention and infection control.
		3.1. There are mandatory and recommended Pre-employment and Preadmission vaccination requirements for healthcare workers in RAKCODS.	3.1. Vaccination are mandatory or recommended requirements for DHCWs in RAKCODS.
		3.2.1. Hepatitis B vaccination is a mandatory prerequisite to work in clinics.	3.2.1. Immunity against Hepatitis B virus is a mandatory prerequisite to work in clinics.
		3.2.1.1. Submission of documented evidence of Hepatitis B immunity in the form of a	3.2.1.1. Submission of documented evidence of Hepatitis B immunity in the form of scanned soft copy of a positive/reactive Antibody titer test (10

Edition Number	Review Date	Description of Change	
		Current	**Revised**
		POSITIVE/REACTIVE Antibody titer test (10 mIU/mL or higher) is mandatory on all healthcare workers in RAKCODS including students, interns, staff and faculty.	mIU/mL or higher) is required from all DHCW.
		3.2.2. Screening and Vaccination 3.2.2.1. RAKCODS holds annual Hepatitis B screening camp for students and staff.	3.2.2. Screening and Vaccination 3.2.2.1. RAKCODS holds annual Hepatitis B screening camp for all dental health care workers
		3.2.2.2. Serologic screening testing will be performed prior to administering Hepatitis B vaccine for those who state that they have received prior vaccination but do not have proof.	3.2.2.2. Serologic screening testing will be performed prior to administering Hepatitis B vaccine for the DHCW who state that they have received prior vaccination but do not have proof. Those whose test reports indicate prior immunity will not receive the vaccine.
		3.2.2.3. A vaccines series should be initiated for those who have immunity is negative/non-reactive (less than 10 IU/L).	3.2.2.3. A vaccines series should be initiated for those who claim to not have immunity or their antibody titer test report is negative/non-reactive (less than 10 IU/L).
2.1	19th Mar 2025	3.2.3. Non-responders - Persons found to have negative antibody response (defined as <10mIU/mL) after the initial Hepatitis B vaccine series will be revaccinated with a second three - dose vaccine series. If they still do not respond after the second series of 3 dose	3.2.2.7. Post-vaccination antibody titer report- Is reactive/positive; the DHCW is cleared to work in the clinics. If the report is non-reactive/negative (defined as <10mIU/mL), the DHCW is revaccinated with a second three - dose vaccine series. If they still do not respond after the second

Edition Number	Review Date	Description of Change	
		Current	**Revised**
		vaccination, they will be considered as a non-responder and will be referred for evaluation for lack of response and counseling	series of 3 dose vaccination, they will be considered as a non-responder and will be referred for evaluation and counseling by licensed medical specialist.
		3.2.4. Validity of antibody titer - A reactive/positive Hepatitis B antibody titer test has life-long validity unless the immunity is compromised.	3.2.2.8. Validity of antibody titer - A reactive/positive Hepatitis B antibody titer test has life-long validity as long as the DHCW is immunocompetent.
2.1	19th Mar 2025	3.2.5. Booster dose - No booster dose is needed as long as the antibody titer is valid.	3.2.2.9. Booster dose - No booster dose is needed as long as the latest antibody titer is reactive/positive.

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

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Policy Type:	**Hospital Safety**	**Prepared by:** **Dr. Aqsa Khan** **Infection Control-in-Charge**
Title:	**Respiratory Hygiene**	
Policy Number:	**HS.03**	**Reviewed by:** **Dr. Riham Abdelraouf** **Assistant Professor**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

Respiratory hygiene practice helps prevent spread of respiratory pathogens. This policy applies to all dental health care workers (DHCW), patients and visitors of RAKCODS.

2. Procedure

2.1. Containment of Respiratory secretions by following measures:

2.1.1. Individuals who are ill, must ask for a face mask from the nurse at the nearest nurse station.

2.1.2. Cover mouth and nose with a tissue, mask or sleeve when coughing or sneezing.

2.1.3. Use the nearest waste bin to dispose of tissues after use.

2.1.4. Perform hand hygiene after having contact with respiratory secretions and contaminated objects or materials.

2.1.5. Encourage people with symptoms to sit as far away from others as possible.

2.2. Measures undertaken by the facility

2.2.1. Visual reminders to ask for a mask if having respiratory symptoms displayed in the facility

2.2.2. Masks, tissues, waste bins and hand sanitizers are provided in the facility.

3. References

3.1. American Dental Association (ADA**).** Respiratory hygiene/cough etiquette [Internet]. 2025. Available from: https://www.ada.org/resources/practice/legal-and-regulatory/08_respiratory-hygiene-cough-etiquette.

3.2. Calcagni N, et al. Respiratory infection prevention: perceptions, barriers, and facilitators after SARS-CoV-2. *Infect Dis Health* [Internet]. Aug 2022. Available from: https://doi.org/10.1016/j.idh.2022.08.001.

3.3. Siegel JD, Rhinehart E, Jackson M, Chiarello L, Healthcare Infection Control Practices Advisory Committee (HICPAC**).** 2007 guideline for isolation precautions: preventing transmission of infectious agents in healthcare settings [Internet]. Available from: https://www.cdc.gov/infection-control/hcp/isolation/isolation-precautions/index.html.

4. Document Change Record

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2.1	15th Mar 2025	1. Purpose and Scope This policy applies to all staff, students, patients of RAKCODS.	1. Purpose and Scope Respiratory hygiene practice helps prevent spread of respiratory pathogens. This policy applies to all dental health care workers (DHCW), patients and visitors of RAKCODS.
2.1	15th Mar 2025		2. Procedures -New Addition- 2.1.1. Individuals who are ill, must ask for a face mask from the nurse at the nearest nurse station.

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

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Policy Type:	**Hospital Safety**	**Prepared by:** **Dr. Aqsa Khan** **Infection Control-in-Charge**
Title:	**Hand Hygiene**	
Policy Number:	**HS.04**	**Reviewed by:** **Dr. Riham Abdelraouf** **Assistant Professor**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. Purposes

1.1. To establish understanding of the crucial role of hand hygiene practice in reduction of healthcare-associated infections, and enhancing patient and dental healthcare workers (DHCW) safety.

1.2. To provide DHCW, patients and visitors guidelines for correct method of hand hygiene procedures and cleaning agents.

1.3. To establish understanding of the crucial role of hand hygiene practice in reduction of healthcare-associated infections.

1.4. To provide clear guidance on the hand hygiene standards, education and surveillance expected at in RAKCODS.

1.5. To establish, maintain and continually improve the standards of hand hygiene compliance in RAKCODS.

2. Scope

2.1. To provide DHCW, patients and visitors guidelines for understanding the opportunities of hand hygiene, correct method of hand hygiene procedures and cleaning agents.

3. Policy Statement

3.1. RAK College of Dental Sciences is dedicated to safeguard the health and safety of patients, visitors and DHCWs by promoting stringent hand hygiene practices.

RAKCODS has adopted WHO Multimodal Strategy as the foundation of its hand hygiene program.

4. Definitions

4.1. **Hand Washing:** A process for the removal of soil and transient microorganisms from the hands.

4.2. **Hand Antiseptics**: A process for the removal of and destruction of transient microorganisms.

4.3. **Transient Flora**: "Contaminating or non-colonizing flora": These are microorganisms isolated from the skin but not demonstrated to be consistently present in the majority of persons.

4.4. **Resident Flora**: "Colonizing flora": These microorganisms are persistently isolated from the hands (skin) of most persons.

4.5. **Soap**: Detergent based hand cleanser in any form, used for the primary purpose of physical removal of dirt and decontaminating microorganisms, this solution will have no bactericidal action.

4.6. **Alcohol-based Hand Rub (ABHR):** A broad spectrum, fast acting, persistent and non-irritating alcohol preparation used for skin disinfection to reduce the number of microorganisms on intact skin. A procedure exists for choosing and evaluating hand hygiene products, encompassing alcohol-based hand rubs (or substitutes) and hand soaps. These decisions are taken within the IPC committee.

5. Rationale

5.1. In healthcare, the transient or resident flora on DHCWs' or other patients' hands can spread health-care-associated diseases from one patient to another.

5.2. For transmission to occur following is required:

5.2.1. Organisms present on the patient's skin, or that have been shed on objects must be transferred to the hands of dental healthcare workers or other patients.

5.2.2. These organisms must be able to survive for at least several minutes on the contaminated hands.

5.2.3. Hand hygiene performed by the healthcare worker or patient is inadequate or omitted, or the hand hygiene agent used is inappropriate.

5.2.4. The contaminated hands must come in direct contact with another patient, or with an inanimate object that will come into direct contact with the patient.

5.3. Proper hand hygiene breaks chain of infection and protects patients and dental healthcare workers. As per the WHO, Hand hygiene is the single most effective method of improving infection control.

6. Indications

6.1. The WHO defines critical moments in "My Five Moments for Hand Hygiene' (Appendix HS.04-1) when hand hygiene must be performed:

6.1.1. Before touching a patient,

6.1.2. Before clean/aseptic procedures,

6.1.3. After body fluid exposure/risk,

6.1.4. After touching a patient, and.

6.1.5. After touching patient surroundings

6.2. In addition to the critical moments there are other occasions where hand hygiene should be performed to reduce the risk to patients and healthcare workers, including but not limited to:

6.2.1. Before commencing work/after leaving work area.

6.2.2. Before preparing, handling or eating food

6.2.3. Before and after handling medicines.

6.2.4. After handling waste.

6.2.5. After visiting the toilet.

6.2.6. Before and after leaving isolation room.

6.2.7. After cleaning equipment or the environment.

6.2.8. After personal contamination e.g. blowing your nose, sneezing into your hand, after smoking

6.2.9. After removing personal protective equipment

7. Hand Hygiene Products

7.1. Liquid antiseptic soap

7.2. Alcohol Based Hand Rub

8. Procedures

8.1. Wash hands with soap and water when visibly soiled with blood or other body fluids or after using the toilet. An alcohol-based hand rub can be used for routine hand antisepsis in all clinical situations, if hands are not visibly soiled.

8.2. A minimal of 20 seconds scrubbing of hands with soap or alcohol is required for the hand wash/rub to be effective.

8.3. Prerequisites:

8.3.1. Hands and wrists need to be fully exposed to the hand hygiene product and therefore should be free from jewelry (including watches) and long sleeved clothing.

8.3.2. Artificial nails are not allowed while on duty and natural nails must be kept trim.

8.4. How to Hand wash (Appendix HS.04-2)

8.4.1. Wet hands with water;

8.4.2. Apply enough soap to cover all hand surfaces;

8.4.3. Rub hands palm to palm;

8.4.4. Right palm over left dorsum with interlaced fingers and vice versa;

8.4.5. Palm to palm with fingers interlaced;

8.4.6. Backs of fingers to opposing palms with fingers interlocked;

8.4.7. Rotational rubbing of left thumb clasped in right palm and vice versa;

8.4.8. Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;

8.4.9. Rinse hands with water;

8.4.10. Dry hands thoroughly with a single use towel;

8.4.11. Use towel to turn off faucet;

8.4.12. Your hands are now safe.

8.5. How to Hand rub (Appendix HS.04-3)

8.5.1. Apply a palm-full of the product in a cupped hand, covering all surfaces;

8.5.2. Rub hands palm to palm;

8.5.3. Right palm over left dorsum with interlaced fingers and vice versa;

8.5.4. Palm to palm with fingers interlaced;

8.5.5. Backs of fingers to opposing palms with fingers interlocked;

8.5.6. Rotational rubbing of left thumb clasped in right palm and vice versa;

8.5.7. Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;

8.5.8. Once dry, your hands are safe.

8.6. Due to frequent usage of hand hygiene products, some people develop irritation contact dermatitis. ABHR with emollients like glycerin has shown to cause less skin irritation than soap and paper towel usage. Hand lotion can be used after hand hygiene to reduce the skin dryness.

8.7. Liquid hand soap is provided at each hand washbasin in ~~all~~ the clinics. Paper towels are provided are also at each hand washbasin. No re-usable linen/cotton hand towels are provided to staff in any areas for hand drying. ABHR dispensers are provided in every clinic floor.

8.8. Care of hand hygiene products is taken care by nurses and cleaners. The wall mounted hand sanitizer has ABHR pouches which are regularly replaced. The bottles of hand soap are one-time use bottles, that must be replaced once empty. The exterior of the bottles and dispensers, including the dispensing nozzles, must be regularly cleaned.

9. Education and Training

9.1. It is important to educate staff and patients about the importance of hand hygiene, and inform them about the availability of hand hygiene facilities and their role in maintaining standards of healthcare workers hand hygiene. Patients and relatives will be provided with information about the need for hand hygiene and how to keep their own hands clean in form of posters and videos. Patients will be offered the opportunity to clean their hands using the hand sanitizer dispenser placed in all convenient places.

9.2. Hand Hygiene training is mandatory training requirements for DHCW of RAKCODS. Low compliance will be reported to the quality and patient safety chairperson.

10. Visible Reminders

To promote hand hygiene and the need for hand hygiene to, a range of visible reminders are in place across RAKCODS:

10.1.1. Hand hygiene alcohol gel dispensers with how to hand rub posters are situated at the entrance to RAKCODS and clinics and waiting areas.

10.1.2. Hand hygiene soap bottles with how to hand wash posters are available in the clinics.

10.1.3. Videos of hand hygiene steps are displayed on LED screens.

10.1.4. Hand hygiene brochures are easily accessible to patients in the waiting area.

10.1.5. Monthly hand hygiene compliance rates of the DHCW are displayed on LED screens and showcased outside clinics

10.1.6. Patient satisfaction survey report which includes hand hygiene compliance of DHCW is displayed on LED screens and stands in various areas including waiting areas.

11. Performance Monitoring

11.1. Performance indicators for monitoring hand hygiene: direct observations of before and after patient contact with a compliance benchmark of 80%. Monthly data showing the percentage of compliance of hand hygiene will be provided to all.

11.2. Annual hand hygiene self-assessment questionnaire on HIMS.

11.3. Hand hygiene product satisfaction surveys by end-users.

12. References

12.1. Centers for Disease Control and Prevention (CDC). About hand hygiene for patients in healthcare settings [Internet]. 2024. Available from: https://www.cdc.gov/Clean-Hands/About/Hand-Hygiene-for-Healthcare.html.

12.2. Dubai Healthcare Authority (DHA). Guideline - hand hygiene [Internet]. 2023. Available from: https://dhcc.ae/gallery/Hand%20Hygiene%20Guidelines.pdf.

12.3. Hand Hygiene Australia. Hand care issues [Internet]. Available from: https://hha.org.au/hand-hygiene/what-is-hand-hygiene/hand-care-issues (Accessed March 2025).

12.4. World Health Organization (WHO). WHO guidelines on hand hygiene in health care: first global patient safety challenge – clean care is safer care. Geneva: World Health Organization; 2009.

13. Tools/ Appendices

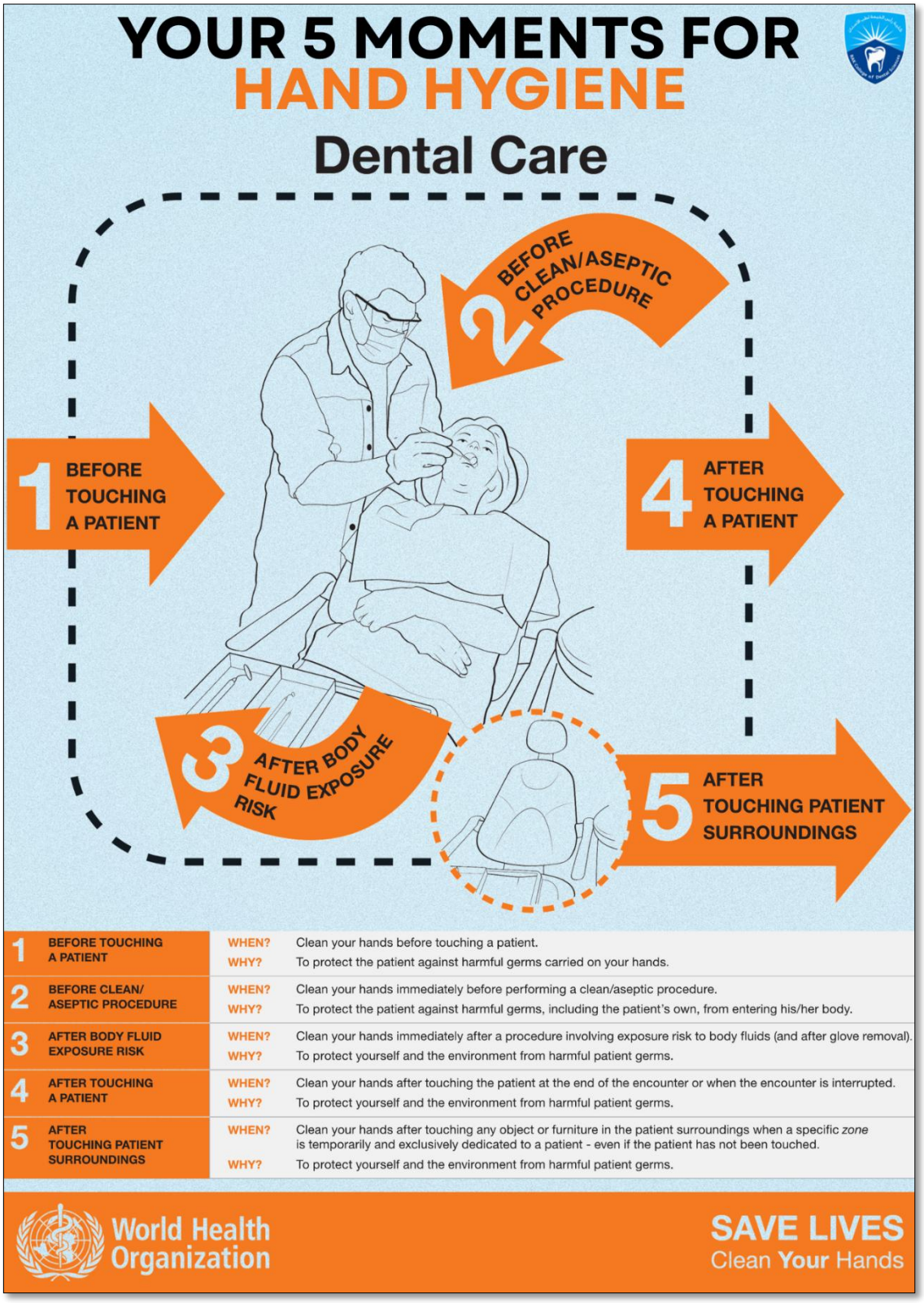
13.1. Appendix HS.04-1 - 5 Moments of Hand Hygiene.

13.2. Appendix HS.04-2 - How to Hand wash?

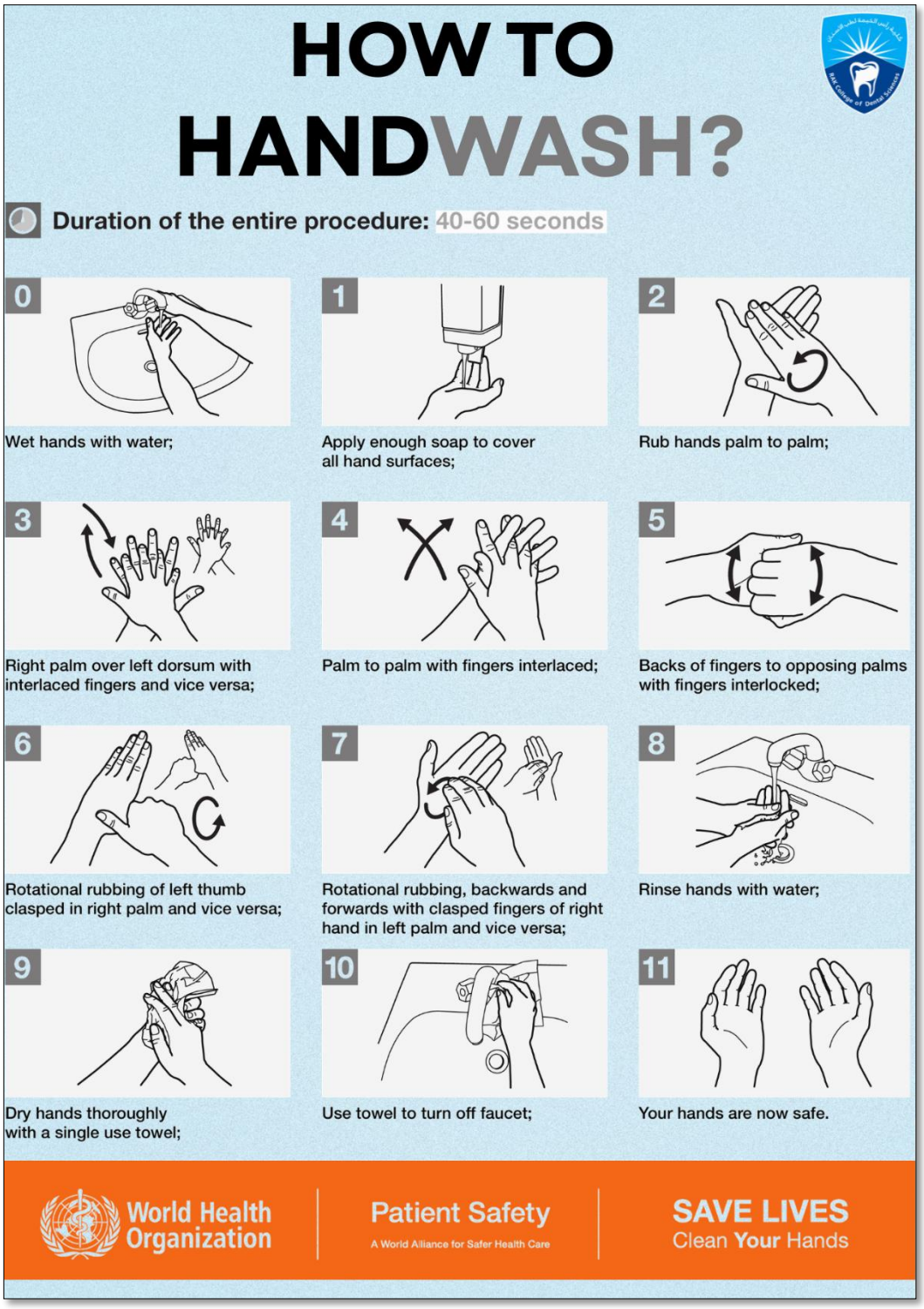
13.3. Appendix HS.04-3 - How to Hand Rub?

13.4. Appendix HS.04-4 - Hand hygiene products used in RAKCODS

Appendix HS.04-1 - 5 Moments of Hand Hygiene



Appendix HS.04-2 - How to Handwash?



Appendix HS.04-3 - How to Handrub?



Appendix HS.04-4 - Hand hygiene products used in RAKCODS

HAND HYGIENE PRODUCTS				
#	**Product**	**Product Name**	**Brand Name**	**Composition**
1.	Hand Wash	Actoman Plus	ACTO GmbH	4 % Chlorhexidine gluconate, glycerin, dexpanthenol and auxiliary substances.
2.	Hand Rub Wash	Biofresh	Biochemix	70% Ethyl alcohol, Aqua, Glycerin, Carbomer, propylene glycol, triethanolamine, fragrance.

14. Document Change Record

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2.1	15th Mar 2025	1. Purpose 1.1. To provide staff, students and patients' guidelines for correct method of hand hygiene procedures and cleaning agents. 1.2. To provide understanding on role of hand hygiene in prevention of cross-contamination. 1.3. To provide clear guidance on the hand hygiene standards expected at RAKCODS.	1. Purpose 1.1. To provide DHCWs, patients and visitors guidelines for correct method of hand hygiene procedures and cleaning agents. 1.2. To establish understanding of the crucial role of hand hygiene practice in reduction of healthcare-associated infections, and enhancing patient, dental healthcare worker safety. 1.3. To provide clear guidance on the hand hygiene standards, education and surveillance expected at in RAKCODS. 1.4. To establish, maintain and

Edition Number	Review Date	Description of Change	
		Current	**Revised**
		1.4. To improve and maintain high standards of hand hygiene compliance in RAKCODS. 1.5. To establish understanding of the crucial role of hand hygiene practice in reduction of healthcare-associated infections.	continually improve the standards of hand hygiene compliance in RAKCODS. 1.5. To establish understanding of the crucial role of hand hygiene practice in reduction of healthcare-associated infections.
2.1	15th Mar 2025		-New Addition- 2. Scope 2.1. This policy is for DHCWs, visitors and patients.
2.1	15th Mar 2025	3. Policy Statement RAK College of Dental Sciences has adopted WHO Multimodal Strategy (2009) for RAKCODS Hand hygiene program.	3. Policy Statement RAK College of Dental Sciences is dedicated to safeguard the health and safety of patients, staff and visitors by promoting stringent hand hygiene practices. RAKCODS has adopted WHO Multimodal Strategy as the foundation of its hand hygiene program.
2.1	15th Mar 2025	4. Procedures 4.1. In healthcare, transmission of health-care-associated pathogens from one person to another to can occur via the transient or resident flora on the hands of healthcare workers or other patients.	5. Rationale 5.1. In healthcare, the transient or resident flora on DHCWs' or other patients' hands can spread health-care-associated diseases from one patient to another.
2.1	15th Mar		-New addition- 5.3. Proper hand hygiene breaks

Edition Number	Review Date	Description of Change	
		Current	**Revised**
	2025		chain of infection and protects patients and dental healthcare workers. As per the WHO, Hand hygiene is the single most effective method of improving infection control.
2.1	15th Mar 2025		-New addition- 6. Indications
2.1	15th Mar 2025	5.1. Liquid antiseptic soap and dispenser. 5.2. Running water and washbasin. 5.3. Disposable paper hand towels. 5.4. Alcohol Based Hand Rub dispensers	7. Hand hygiene products 7.1. Liquid antiseptic soap 7.2. Alcohol Based Hand Ru
2.1	15th Mar 2025		-New addition- 8.6. Due to frequent usage of hand hygiene products, some people develop irritation contact dermatitis. ABHR with emollients like glycerin has shown to cause less skin irritation than soap and paper towel usage. Hand lotion can be used after hand hygiene to reduce the skin dryness.
2.1	15th Mar 2025	4.10 Liquid hand soap will be provided at all hand washbasins in all clinical areas. ABHR dispensers are provided in every	8.7. Liquid hand soap is provided at each hand washbasin in all the clinics areas. Paper towels dispensers are provided are also at each hand washbasin. No re-usable linen/cotton hand towels are to be

Edition Number	Review Date	Description of Change	
		Current	**Revised**
		clinic floor.	used by provided to staff in any areas for hand drying. ABHR dispensers are provided in every clinic floor.
2.1	15th Mar 2025	4.11. Re-usable dispensing nozzles should be thoroughly rinsed through with hot water, tops cleaned and dispenser dried before re-use.	8.8. Care of hand hygiene products is taken care by nurses and cleaners. The wall mounted hand sanitizer has ABHR pouches which are regularly replaced. The bottles of hand soap are one-time use bottles, that must be replaced once empty. The exterior of the bottles and dispensers, including the dispensing nozzles, must be regularly cleaned.
2.1	15th Mar 2025	6.2. Hand Hygiene training is mandatory training requirements for staff and students of RAKCODS. Low compliance will be reported to the quality and patient safety chairperson.	9. Education and training 9.2. Hand Hygiene training is mandatory training requirements for DHCW of RAKCODS. Low compliance will be reported to the quality and patient safety chairperson.
2.1	15th Mar 2025		10. Visible reminders -New addition- 10.1.2. Hand hygiene soap bottles with how to hand wash posters are available in the clinics.
2.1	15th Mar 2025	Other visual reminders and information leaflets are installed in key locations in order to raise awareness amongst staff, patients and visitors.	10.1.4. Hand hygiene brochures are easily accessible to patients in the waiting area.
2.1	15th Mar 2025		-New addition- 10.1.5. Monthly hand hygiene compliance reports are displayed on LEDs and showcased outside clinics

Edition Number	Review Date	Description of Change	
		Current	**Revised**
			-New addition- 10.1.6. Patient satisfaction report including hand hygiene compliance standards is displayed on LEDs.
2.1	15th Mar 2025		11. Performance Monitoring -New addition- 11.2. Annual hand hygiene self-assessment questionnaire on HIMS. 11.3. Hand hygiene product satisfaction surveys by end-users.
2.1	15th Mar 2025	Products Alcohol based hand sanitizer product- Protecta Pro-sept Gel Soap- Protecta hand scrub	Products Alcohol based hand sanitizer product- Biofresh Soap- Actoman Plus Soap

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Hospital Safety**	**Prepared by:** **Dr. Aqsa Khan** **Infection Control-in-Charge**
Title:	**Personal Protective Equipment**	
Policy Number:	**HS.05**	**Reviewed by:** **Dr. Riham Abdelraouf** **Assistant Professor**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

To provide guidelines on the role Personal Protective Equipment (PPE) play in minimizing transmission of infections amongst the dental health care workers (DHCW), patient and visitors.

2. Policy Statements

The use of PPE is essential for health and safety of DHCW, patients and visitors. This policy defines standards and processes for the use of PPE in dental setting. and is applicable to all DHCW, patients and visitors of RAKCODS.

3. Procedures

3.1. Function of Personal Protective Equipment

3.1.1. PPE such as scrubs and eyewear, face shields and disposable gloves are designed to protect the skin and mucous membranes of the eyes, nose, and mouth of dental healthcare workers. Therefore, they are worn as a physical barrier to prevent the transfer of microorganisms between patients and the dental team. Contaminated PPE should be disposed of as regulated medical waste.

3.2. Types of PPE

3.2.1. Gloves- Gloves protect the DHCW from direct contact with microorganisms present in the patient's mouth and on contaminated surfaces. They also protect patients from microorganisms on the hands of the DHCW.

3.2.1.1. Indications of Wearing Gloves

3.2.1.1.1. To provide a barrier to protect the wearer from contamination when a potential exists for contacting the patient's blood, saliva, mucous membranes, or other potentially infectious materials.

3.2.1.1.2. To reduce the risk of transmission of microbes from dentist to patient

3.2.1.1.3. Gloves should be worn for all routine dental treatment and discarded between patients

3.2.1.1.4. Preventing heavy contamination of the hands through the use of gloves is considered necessary, because hand washing or hand antisepsis may not remove all potential pathogens when hands are heavily contaminated.

3.2.1.2. Precautions to be Taken When Wearing Gloves

3.2.1.2.1. Fingernails should be short

3.2.1.2.2. Remove all jewelry or watches

3.2.1.2.3. Hands must be washed immediately before donning gloves. Never consider gloves to be an alternative to hand washing.

3.2.1.2.4. Use of petroleum-based hand lotions or creams may adversely the integrity of the gloves.

3.2.1.2.5. After a hand rub with alcohol, the hands should be thoroughly dried before gloving dried before gloving, because hands still wet with an alcohol- based hand hygiene product can increase the risk of glove perforation.

3.2.1.2.6. Never re-use single-use disposable gloves.

3.2.1.2.7. Changing gloves between patients prevent cross-infection between patients and contamination of hard surfaces in the surgery.

3.2.1.2.8. Gloves should be changed during patient care if the hands will move from a contaminated body site to a clean body site.

3.2.1.2.9. Unprotected surfaces such as patients' files, pens, telephones, computer keyboards, door or drawer handles, or face should not be touched with gloved hands.

3.2.1.2.10. Gloves that are torn, cut or punctured should be removed as soon as feasible, and hands washed before re-gloving.

3.2.1.2.11. Gloves should be changed during very long procedures, as up to 40% of gloves develop tears after prolonged use and may leak. Gloves also become porous during prolonged use due to hydration of the latex. Also, by changing gloves, excess sweating can be prevented, reducing the risk of dermal infections or inflammation.

3.2.1.2.12. Gloves must only be worn whilst treating the patient and removed at the end of the procedure and should be disposed of as hazardous waste.

3.2.1.2.13. Gloves should not be washed, and no attempts should be made to disinfect or sterilize gloves.

3.2.1.2.14. Hands should not be considered clean because gloves have been worn.

a) Gloves do not provide complete protection against hand contamination. Bacterial flora colonizing patients may be recovered from the hands of < 30% of DHCP s who wear gloves during patient contact.

b) When removing gloves, the patient's microorganisms can be transmitted from the

external surface of the glove to the dentist's hands and need to be removed by hand hygiene.

3.2.1.2.15. Gloves do not prevent sharps injuries.

3.2.1.3. Types of Gloves:

3.2.1.4. Different glove types and their indication are listed in Table given below:

Glove	Indication	Comment	Material
Patient Examination Gloves	Patient examinations, Radiograph taking, and laboratory procedures. Double gloves should be used when clearing or handling contaminated sharp items.	Medical device regulated by the Food and Drug Administration (FDA). Non-sterile and sterile single-use disposable. Use for one patient and discard appropriately.	• Natural-rubber latex (NRL) • Nitrile -Nitrile and Chloroprene (neoprene) blends -Nitrile and NRL blends - Butadiene methyl methacrylate -Polyvinyl chloride -Polyurethane -Styrene-based copolymer -Powder-less gloves -Flavored gloves -Low-protein gloves
Surgeon Gloves	Surgical procedures (all dental procedures performed by the dentist or hygienist, other than the patient examination and radiograph taking)	Medical device regulated by the Food and Drug Administration (FDA). Sterile and single-use disposable. Use for one patient and discard appropriately.	-NRL -Nitrile -Chloroprene (neoprene) -NRL and nitrile or chloroprene blends -Synthetic polyisoprene -Styrene-based copolymer -Polyurethane

Glove	Indication	Comment	Material
Non-medical gloves	Clearing and Disinfection. Handling contaminated sharps or chemicals.	Commonly referred to as a utility, industrial or general purpose gloves. Should be puncture or chemical-resistant, depending on the task. Latex gloves do not provide adequate chemical protection. Sanitize hands after use.	-NRL and nitrile or chloroprene blends -Chloroprene (neoprene) -Nitrile -Butyl rubber -Floro-elastomer -Polyethylene and ethylene vinyl alcohol copolymer

3.2.2. Face Masks

Face masks protect the face and oral and nasal mucous membranes during procedures likely to generate splashing or spattering of blood or other body fluids. Masks also prevent particles (respiratory droplets) expelled into the environment by the wearer from contaminating the operatory field. Most masks produce a poor facial seal and are not designed to filter the air as it is breathed into the lungs. So they do not protect the wearer from aerosol inhalation.

3.2.2.1. Requirements of an Ideal Face Mask

3.2.2.1.1. Does not come into contact with nostrils or lips.

3.2.2.1.2. Has a high bacterial filtration efficiency rate.

3.2.2.1.3. Fits snugly around the entire periphery of the mask.

3.2.2.1.4. Does not cause fogging of eyewear.

3.2.2.1.5. Easy to put on and remove.

3.2.2.1.6. Is made of fabric that does not irritate the skin or induce allergic reactions.

3.2.2.1.7. Made of fabric that does not collapse during wear or when wet.

3.2.2.2. Types of Face Masks

3.2.2.2.1. Standard surgical facemasks.

a) Provide no, or only partial, protection of the wearer from respiratory pathogens such as Mycobacteria tuberculosis or influenza.

b) Maybe dome-shaped, or pliable.

c) May be secured with elastic bands, ear loops, or ties

d) Ties enhance stabilization during lengthy procedures.

3.2.2.2.2. Respirator type masks.

a) Provide high filtration of aerosols, and thus offer a higher degree of personal respiratory protection compared to a standard facemask.

b) Recommended for DDHCP s for use whilst treating patients with infections that are spread via aerosols, e.g. tuberculosis and influenza.

c) Since patients with serious airborne diseases should be treated in special facilities, and not in the dental college, respirators are not part of the standard PPE used routinely in the college.

3.2.2.3. Indications for Wearing Face Masks

3.2.2.3.1. It is essential for DDHCP s to wear a mask when:

a) Coming in close proximity to the patient's oral cavity.

b) Using hand piece, air/water syringe, or ultrasonic scaler.

c) Washing contaminated instruments.

d) Emptying a suction trap.

e) Disinfecting surfaces.

f) Taking radiographs.

g) Polishing with a lathe or a hand piece.

h) If DDHCP is suffering from a respiratory infection.

3.2.2.3.2. Masks should be worn correctly and before gloving.

3.2.2.3.3. Masks should be changed between patients.

3.2.2.3.4. During patient treatment, masks should be changed at least once every hour, and more often if the mask becomes damp or wet, or if heavy spatter/ aerosol is generated during treatment.

3.2.2.3.5. Clinical instructors who work in the clinical hall for long hours should change the mask every hour.

3.2.2.3.6. Masks should not be touched or adjusted during procedures.

3.2.2.3.7. When removing masks, only the elastic bands or ties around the head or ears should be touched. The body of the used mask should not be touched with unprotected hands.

3.2.3. Protective Eyewear, Face Shields

A variety of disease agents, such as the herpes simplex virus and hepatitis B virus, may cause harmful infections of the eye or may pass through ophthalmic mucous membranes and cause systemic infections. Protective eyewear may provide protection against infectious disease agents, splashes of chemicals during use of disinfectants and radiograph processing chemicals, as well as against physical damage to the eye by propelled objects, such as tooth fragments and restorative materials.

3.2.3.1. Types of Eye Protection Devices

Comparison of Eye Protection Devices are presented in below table to compares different types of eye protection. Due to the inadequate protection provided by glasses, they are unacceptable as eye protection devices for DDHCPs. Either goggles or face shields should be used for protection of the eye and face.

Type	Front Splash Protection	Side Splash Protection	Front Impact Protection	Side Impact Protection	Neck and Face Protections
Goggles Glasses (no shields)	Excellent Good	Excellent Poor	Excellent Excellent	Excellent Poor	Poor Poor
Glasses (with shields)	Good	Good	Excellent	Fair	Poor
Face Shield	Excellent	Good to Excellent	Variable (depends on thickness)	Variable (depends on thickness)	Variable (depends on type/length)

Source: (Miller, C.H. & Palenik, C.H., 2018)

3.2.3.2. Indications for Wearing Eye Protection Devices

a) Whenever contamination of the eyes with aerosols sprays or splashes of body fluids is possible.

b) Whenever projectiles may be generated during any grinding, polishing or buffering procedure with rotary instruments or equipment.

c) Whenever handling chemicals, such as during disinfection procedures for patient care items or surfaces, or when handling radiography processing solutions.

d) When skin protection, is needed or desired, for example when irrigating a wound or suctioning copious secretions, a face shield should be used as a substitute to wearing a mask and goggles. The face shield should cover the forehead, extend below the chin, and wrap around the side of the face.

e) A face shield does not substitute for a surgical mask.

f) Reusable eye/facial protective equipment should be cleaned with soap and water, or if visibly soiled, cleaned and disinfected between patients.

g) Contaminated protective eyewear or face shield should not be touched with unprotected hands.

3.2.4. Protective Clothing

Protective clothing, i.e., gowns and head covers, should be worn to prevent contamination of street clothing and to protect the personal body parts of the dental team which are likely to be soiled with chemicals or blood, saliva or body substances during the performance of their duties.

3.2.4.1. Requirements of Protective Clothing

3.2.4.1.1. Should cover personal clothing and skin including the head, forearms, and chest area.

3.2.4.1.2. Veils are worn by females outside the work area and ghutras worn by males are not appropriate protective clothing and must be removed and replaced with proper well-fitting head covers.

3.2.4.1.3. Gowns and head covers may be reusable or disposable.

3.2.4.1.4. Disposable gowns and head covers must be discarded daily.

3.2.4.2. Indications for Wearing Protective Clothing

3.2.4.2.1. Whenever a chance exists for contamination of skin or clothing with spray or splashes of saliva, blood or other potentially infectious materials.

3.2.4.2.2. Whenever a chance exists for contamination of skin or clothing with spray or splashes of chemicals.

3.2.4.2.3. Female dental workers must wear a separate head cover for the working area and must change this head cover before leaving the clinic.

3.2.4.2.4. Change protective clothing at the end of each clinical session or when it becomes visibly soiled or is penetrated by body fluids.

3.2.4.2.5. All protective clothing (gowns and head covers) should be removed before leaving the work area.

3.3. Donning and doffing sequence

3.3.1. The sequence of Wearing PPE

3.3.1.1. Gown and head cover first.

3.3.1.2. Mask

- The peripheries of the mask should be appropriately adjusted to fit.
- The mask should not contact the nostrils or lips.

3.3.1.3. Goggles or face shield.

3.3.1.4. Gloves

- Hand hygiene should be performed immediately before donning gloves.
- If an alcohol rub was used for antisepsis, hands must be completely dry before donning gloves because hands wet with the alcohol-based product may increase the risk of glove perforation.
- Gloves should be extended over protective clothing cuffs

3.3.2. The sequence of Removing PPE

The sequence for removing PPE is intended to limit opportunities for self-contamination. The gloves are considered the most contaminated pieces of PPE and are therefore removed first. The face shield or goggles are next because they are more cumbersome and would interfere with the removal of other PPE.

Disposable PPE should be discarded appropriately upon removal, and not allowed to contact unprotected surfaces. Reusable PPE should be set aside in an appropriate place pending decontamination, in order to avoid contaminating unprotected surfaces.

3.3.2.1. Gloves

3.3.2.2. Face shield or goggles

3.3.2.3. Gown

3.3.2.4. Mask

3.3.2.5. Head cover

3.3.3. Donning and doffing areas

3.3.3.1. There are designated areas for wearing and removing PPE provided in the clinics. Wearing or removing PPE should be done in a sequence that limits further spread of microorganisms. The combination of PPE used, and therefore the sequence, will be determined by the task to be performed.

3.3.3.2. After being used on a single patient, disposable PPE such as masks and gloves should be thrown away. Disposable gowns may only be used for one day if they are not obviously dirty. Face shields can be used repeatedly until they cause physical distortion or impair vision.

3.4. Usage and availability

3.4.1. PPE includes scrubs, disposable gowns, gloves, eye protection and face mask/shields. Sterile PPE is to be used for surgeries.

3.4.2. The choice of PPE is based on transmission-based precautions.

3.4.3. PPE is available in the clinics and is accessible depending on the level and type of precaution needed.

3.5. Storage and maintenance

3.5.1. PPE is to be stored to protect against environmental conditions and its shelf-life must be periodically checked to ensure its maximum effectiveness.

3.5.2. PPE is to be maintained in sanitary conditions and as per manufacturer's instructions.

3.5.3. Reusable PPE is to be cleaned and disinfected by the last individual to use it and before being handed back to the nurse station.

3.6. Education and training

3.6.1. Education and training on proper use and care of PPE will be provided to all staff and students during orientation and throughout the year as deemed necessary.

4. References

4.1. Abu Dhabi Public Health Centre. *Abu Dhabi Occupational Safety and Health System Framework (ADOSH-SF) Code of Practice CoP 2.0 – Personal Protective Equipment*. 2024.

4.2. CDC (2024) *Best practices for personal protective equipment*, *Centers for Disease Control and Prevention*. Available at: https://www.cdc.gov/dental-infection-control/hcp/dental-ipc-faqs/personal-protective-equipment.html

4.3. Miller, Chris H. *Infection Control and Management of Hazardous Materials for the Dental Team*. St. Louis, Missouri, Elsevier, 2018.

4.4. World Health Organization. "Personal Protective Equipment (PPE)." *World Health Organization*, 2022, www.who.int/teams/health-product-policy-and-standards/assistive-and-medical-technology/medical-devices/ppe.

5. Tools / Appendices

5.1. Appendix HS.05-1 – SEQUENCE OF PUTTING ON PPE

5.2. Appendix HS.05-2 - SEQUENCE OF REMOVING PPE

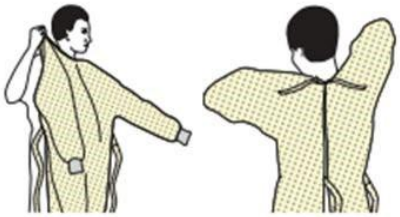
Appendix HS.05-1 – SEQUENCE OF PUTTING ON PPE

SEQUENCE FOR PUTTING ON PERSONAL PROTECTIVE EQUIPMENT (PPE)

The type of PPE used will vary based on the level of precautions required, such as standard and contact, droplet or airborne infection isolation precautions. The procedure for putting on and removing PPE should be tailored to the specific type of PPE.

1. GOWN

- Fully cover torso from neck to knees, arms to end of wrists, and wrap around the back
- Fasten in back of neck and waist



2. MASK OR RESPIRATOR

- Secure ties or elastic bands at middle of head and neck
- Fit flexible band to nose bridge
- Fit snug to face and below chin
- Fit-check respirator



3. GOGGLES OR FACE SHIELD

- Place over face and eyes and adjust to fit



4. GLOVES

- Extend to cover wrist of isolation gown



USE SAFE WORK PRACTICES TO PROTECT YOURSELF AND LIMIT THE SPREAD OF CONTAMINATION

- Keep hands away from face
- Limit surfaces touched
- Change gloves when torn or heavily contaminated
- Perform hand hygiene

CDC

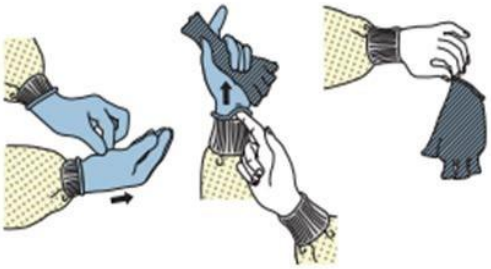
Appendix HS.05-2 - SEQUENCE OF REMOVING PPE

HOW TO SAFELY REMOVE PERSONAL PROTECTIVE EQUIPMENT (PPE) EXAMPLE 1

There are a variety of ways to safely remove PPE without contaminating your clothing, skin, or mucous membranes with potentially infectious materials. Here is one example. **Remove all PPE before exiting the patient room** except a respirator, if worn. Remove the respirator **after** leaving the patient room and closing the door. Remove PPE in the following sequence:

1. GLOVES

- Outside of gloves are contaminated!
- If your hands get contaminated during glove removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Using a gloved hand, grasp the palm area of the other gloved hand and peel off first glove
- Hold removed glove in gloved hand
- Slide fingers of ungloved hand under remaining glove at wrist and peel off second glove over first glove
- Discard gloves in a waste container



2. GOGGLES OR FACE SHIELD

- Outside of goggles or face shield are contaminated!
- If your hands get contaminated during goggle or face shield removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Remove goggles or face shield from the back by lifting head band or ear pieces
- If the item is reusable, place in designated receptacle for reprocessing. Otherwise, discard in a waste container



3. GOWN

- Gown front and sleeves are contaminated!
- If your hands get contaminated during gown removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Unfasten gown ties, taking care that sleeves don't contact your body when reaching for ties
- Pull gown away from neck and shoulders, touching inside of gown only
- Turn gown inside out
- Fold or roll into a bundle and discard in a waste container

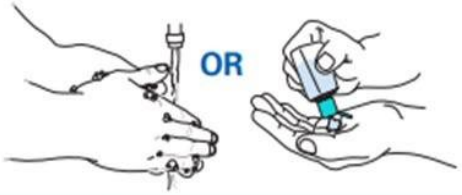


4. MASK OR RESPIRATOR

- Front of mask/respirator is contaminated — DO NOT TOUCH!
- If your hands get contaminated during mask/respirator removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Grasp bottom ties or elastics of the mask/respirator, then the ones at the top, and remove without touching the front
- Discard in a waste container



5. WASH HANDS OR USE AN ALCOHOL-BASED HAND SANITIZER IMMEDIATELY AFTER REMOVING ALL PPE



PERFORM HAND HYGIENE BETWEEN STEPS IF HANDS BECOME CONTAMINATED AND IMMEDIATELY AFTER REMOVING ALL PPE

CDC

6. Document Change Record

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2.1	25th Mar 2025	1. Purpose and Scope To provide an understanding of Personal Protective Equipment (PPE) standards and their role in preventing the transmission of infections	1. Purpose and Scope To provide guidelines on the role Personal Protective Equipment (PPE) plays in minimizing transmission of infections amongst the dental health care workers (DHCW), patient and visitors.
		2. Policy Statements The use of personal protective equipment (PPE) is essential for health and safety of healthcare workers and patients. This policy defines standards and processes for the use of protective equipment and is applicable to all staff, students, patients and visitors of RAKCODS.	2. Policy Statements The use of personal protective equipment is essential for health and safety of DHCW, patients and visitors. This policy defines standards and processes for the use of protective equipment in dental setting.
2.1	25th Mar 2025	3. Procedures 3.1.1 Personal protective equipment (PPE) such as scrubs and eyewear, face shields and disposable gloves are designed to protect the skin and mucous membranes of the eyes, nose, and mouth of dental healthcare practitioners. Therefore, they are worn as a barrier to prevent the transfer of microorganisms between patients and the dental team. Gloves also reduce the	3. Procedures 3.1.1. PPE such as scrubs and eyewear, face shields and disposable gloves are designed to protect the skin and mucous membranes of the eyes, nose, and mouth of dental healthcare workers. Therefore, they are worn as a physical barrier to prevent the transfer of microorganisms between patients and the dental team. Contaminated PPE should be disposed of as regulated medical waste.

Edition Number	Review Date	Description of Change	
		Current	**Revised**
		likelihood that microbes will be transmitted to patients during surgery or patient-care procedures. Contaminated PPE should be disposed of as regulated medical waste.	
2.1	25th Mar 2025	3.2.1 Gloves- Gloves protect from direct contact with microorganisms present in the patient's mouth and on contaminated surfaces. Also, they protect patients from microorganisms on the hands of the dental team.	3.2.1. Gloves protect from direct contact with microorganisms present in the patient's mouth and on contaminated surfaces. Also, they protect patients from microorganisms on the hands of the DHCW.
			-New addition- 3.2.1.2.2. Remove all jewelry or watches
			-New addition- 3.3.3. Donning and doffing areas There are designated areas for wearing and removing PPE provided in the clinics.
		3.4.3. PPE is available at the nurse station and is accessible to staff and patients-depending on the level and type of precaution needed.	3.4.3.PPE is available in the clinics and is accessible depending on the level and type of precaution needed.

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2.1	25th Mar 2025	3.3.4. Students are required to bring their own PPE. PPE for staff and patients is available at nurse station.	3.3.3.2. After being used on a single patient, disposable PPE such as masks and gloves should be thrown away. Disposable gowns may only be used for one day if they are not obviously dirty. Face shields can be used repeatedly until they cause physical distortion or impair vision.

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Hospital Safety**	**Prepared by:** **Dr. Aqsa Khan** **Infection Control-in-Charge**
Title:	**Instrument Care**	
Policy Number:	**HS.06**	**Reviewed by:** **Dr. Riham Abdelraouf** **Assistant Professor**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. **Purposes and Scope**

1.1. To establish standards for assuring that best practice infection control and sterilization steps of equipment and devices are undertaken by the concerned staff.

1.2. This policy applies to all clinics, Initial Dental Assessment (IDA), Initial Nursing Assessment (INA) and CSSD department.

1.3. The aims of this policy is to ensure:

1.3.1. There are clear specifications for taking care of medical equipment and devices.

1.3.2. All staff are correctly educated and trained and have easy access to methods of cleaning for their review

1.3.3. Proper transportation and storage of these equipment

2. **Policy Statement**

The cleanliness of equipment and devices is important as it plays a crucial role in minimizing hospital acquired infections. This policy provides guidelines for reprocessing equipment and devices as well as their storage, transport and distribution.

3. **Definitions/ Abbreviations**

3.1. Sterilization: a process that destroys or eliminates all forms of microbial life. When chemicals are used to eradicate all kinds of microbiologic life, they can be called chemical sterilants.

3.2. Disinfection: a process that eliminates many or all pathogenic microorganisms, except bacterial spores, on inanimate objects.

3.3. Decontamination: removal of pathogenic microorganisms on a surface or item so that they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or disposal.

3.4. Sanitation: reduction of the numbers of bacterial contaminants to safe levels as judged by public health requirements.

3.5. Cleaning: the removal of visible soil (e.g., organic from objects and surfaces

3.6. Aseptic technique: The aseptic technique is performing all tasks while maintaining the "aseptic to aseptic" relationship of contact, thus reducing or eliminating the spread of microbes.

4. Procedures

4.1. Spaulding Classification.

All equipment and devices used are given a cleaning level designation based on the Spaulding classification.

4.1.1. **Non-critical Instruments** – These instruments pose the least risk of transmission of infection, contacting the only intact skin. These items may be immersed in or sprayed and wiped with a high- level disinfector. If cleaning is difficult or will damage the instrument, then the use of disposable barrier protection may be considered as an alternative.

4.1.2. **Semi-critical Instruments** – These instruments touch mucous membranes or non-intact skin, and have a lower risk of transmitting micro-organism. They should also be sterilized by using heat.

4.1.3. **Critical Instruments** – These are instruments used to penetrate soft tissue or bone, or have the greatest risk of transmitting infection. These should be sterilized by heat.

4.2. When handling patients, patient materials, or instruments and devices used during patient treatment, sterile, disinfected, and clean (aseptic) materials should not contact contaminated materials and vice versa. If such contact

occurs, the barrier of infection control is broken, and the possibility of cross contamination exists.

4.3. Care of equipment

4.3.1. Non-Critical Devices

All non-critical instruments are wiped with an approved disinfectant after each use and when visibly soiled. The equipment is stored in the nurse station after decontamination.

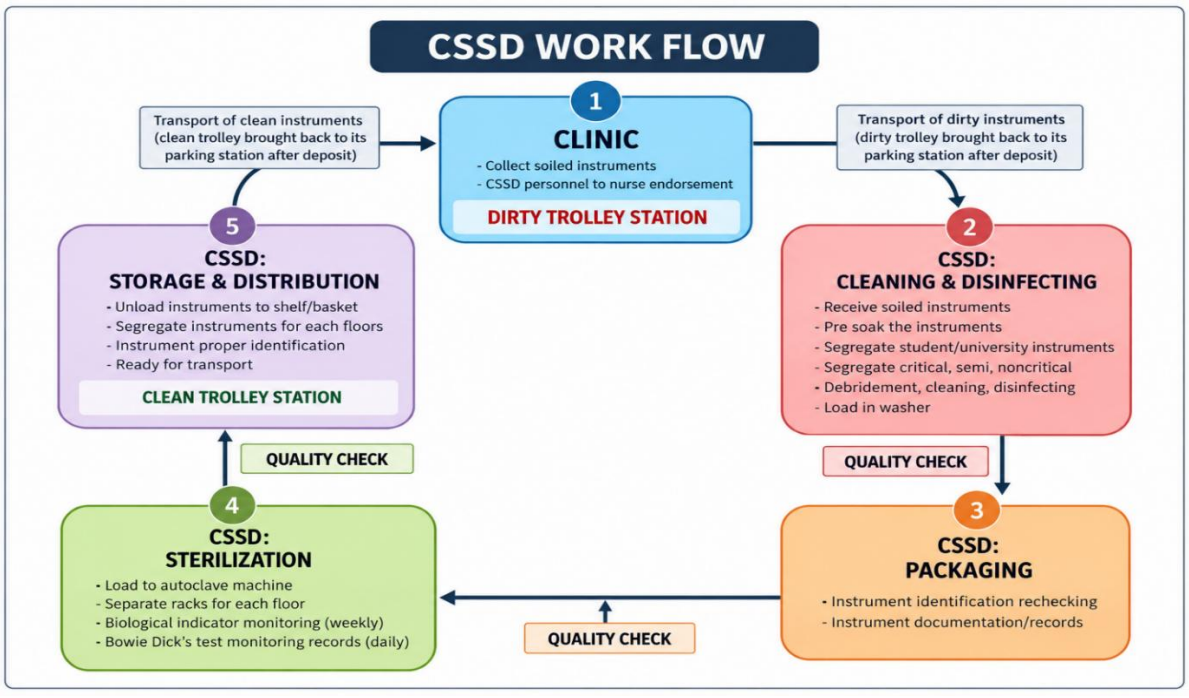
4.3.2. Semi-Critical and Critical Devices

Both semi-critical and critical devices are to be sterilized in RAKCODS.

4.3.3. Single-Use Devices (SUDs)

Single-Use Devices are not to be reused in RAKCODS and must be discarded immediately after use in a safe manner. The exception are plastic impression trays that are reused after appropriate disinfection.

4.4. Workflow:



4.5. The following Standard Operating Procedures (SOPs) are care of these devices:

4.5.1. Dress Code and Hygiene

4.5.1.1. General Hygiene

4.5.1.1.1. Cleanliness and good hygiene are mandatory. Hair, body, and nails should be clean at all times.

4.5.1.1.2. Hair must be tied beforehand. Grooming is prohibited inside the CSSD areas.

4.5.1.1.3. Jewelry should not be worn.

4.5.1.1.4. Clean scrubs must be worn with closed shoes.

4.5.1.1.5. Hand hygiene must be maintained. All personnel working in central sterilization processing instruments must wear appropriate attire. These include nurses responsible for collection and transportation of instruments.

4.5.1.2. Work Attire for nurses responsible for transportation of instruments. All nurses must wear a disposable gown, face mask/shield and gloves during collection and transportation of instruments. A new disposable gown is to be used each day unless it becomes visibly soiled. If soiled, a new gown must be used.

4.5.1.3. Work Attire for nurses responsible for CSSD Personnel

4.5.1.3.1. All CSSD personnel are to wear disposable gowns, shoe covers, facemasks, and goggles when entering the dirty or clean area of CSSD. This PPE is to be worn at all times inside the CSSD and must be removed before exiting the room.

4.5.1.3.2. Hands must be washed before and after donning of utility gloves.

4.5.1.3.3. If any disposable gown becomes wet due to a splash of liquid, the garment should be changed.

4.5.1.3.4. Any visitors to the department must be instructed to wear a gown, head cover, and shoe covers before being allowed to enter the department

4.6. Transportation of Dirty Instruments to CSSD

4.6.1. Procedures

4.6.1.1. Students are to separate their instruments and college instruments into the two transfer trays provided at each station.

4.6.1.2. The transfer tray with student instruments must have the transfer label added to it. The label contains Student name, student I.D., BDS year and floor number.

4.6.1.3. CSSD personnel will perform hand hygiene, wear proper PPE, collect, transport the trays using the dirty trolley and deliver it to the CSSD Dirty Area.

4.6.1.4. CSSD personnel will unload the trolley and wipe the trolley clean with wet wipes or disinfectant spray and tissue.

4.6.1.5. CSSD personnel will place new set of closed trays in the trolley.

4.6.1.6. CSSD personnel will bring trolley back to the clinics.

4.6.1.7. New trays will be placed in the tray area and trolley will be parked in its designated area.

4.7. Sorting, Cleaning and Disinfection of Instruments

4.7.1. Procedures

4.7.1.1. All the instruments, equipment and disinfectants are used based upon the manufacturer's instructions.

4.7.1.2. All contaminated instruments shall be received in the CSSD dirty area.

4.7.1.3. All instruments and equipment received in the CSSD dirty area are considered contaminated and standard precaution standards must be observed.

4.7.1.4. The CSSD Personnel must inspect for protruding instruments from the trays and sterilization pouches.

4.7.1.5. All instruments shall be sorted by the set, lose or student or intern owner. Components of sets will be processed together.

4.7.1.6. Hinged instruments shall be opened and separated to ensure proper cleaning.

4.7.1.7. Cleaning of instruments follow three different processes depending on the nature of the instrument.

4.7.1.8. All instruments should be inspected for debris, organic matter, cements. All such soiling must be removed.

4.7.1.9. Surgical, small, and loose instruments are manually or using ultrasonic cleaner washed using heavy duty gloves and proper instrument disinfectant solution.

4.7.1.10. Hand pieces must be cleaned with soap and water, lubricated with hand piece oil and dried properly with paper towels. All hand pieces must be sterilized.

4.7.1.11. Tray must place in instrument washer disinfector using appropriate detergent and lubricant.

4.7.1.12. Washer disinfector cleans instruments by combining impingement, high water temperature, and mild enzymatic detergent action. All detergents and disinfectants used in CSSD are mentioned in Appendix HS.06-1.

4.7.1.13. Instruments that cannot be placed inside the autoclave for sterilization like intraoral mirrors, cheek retractors, and bib holders shall be cleaned properly by using soap, water, and disinfectant spray.

4.7.1.14. All instruments must be checked properly for cleanliness.

4.7.1.15. The effectiveness of disinfection is checked by the protein residue detector. If any protein is detected, the instruments are recleaned and disinfected again.

4.7.1.16. Instruments must be counted properly before being put inside the trays.

4.8. Verification of washer-disinfector cycle function

The washer-disinfector function is monitored by the post-wash output report generated by the washer (Appendix HS.06-2). If any error is found, the cycle is repeated.

4.9. Packaging and Sterilization

4.9.1. Procedures

4.9.1.1. All the instruments shall be inspected for proper function and cleanliness.

4.9.1.2. All college instruments are categorized according to use.

4.9.1.3. All instruments are thoroughly dried.

4.9.1.4. All hinged instruments must be in an open position to ensure proper sterilization.

4.9.1.5. Place the trays and other instruments to be sterilized in the pouches.

4.9.1.6. The pouches should have chemical indicators on them. If not a chemical indicator strip is placed inside the pouches.

4.9.1.7. The pouch must be labelled, dated, and sealed before transferring to the CSSD Clean Area for sterilization. If the instruments belong to a student, then student details must also be mentioned.

4.9.2. Verification of Sterilization Cycle

4.9.2.1. Mechanical or Physical Indicator

The sterilization function is monitored by the post-wash output report generated by the autoclave (Appendix HS.06-3). If any error is found, the cycle is repeated.

4.9.2.2. Biological Monitoring: Spore Testing

Biological indicators (Geobacillus stearothermophilus spores) are used on weekly basis for the steam sterilizers to document the efficacy

of steam sterilization cycles underused conditions (Appendix HS.06-4).

4.9.2.2.1. Procedures

4.9.2.2.1.1. Identify the indicator by writing the sterilizer, load number, and the processing date on the vial label (Appendix HS.06-5).

4.9.2.2.1.2. The indicator is placed in a pouch and this pouch is placed on the bottom shelf of the cart near the door.

4.9.2.2.1.3. After the cycle run, the test pack is allowed to cool for a sufficient amount of time in order to cool the indicator.

4.9.2.2.1.4. The indicator is placed on the incubator machine weekly within 2 hours. If these instructions are not followed, the spores will die off at room temperature and sterilization process failure may go undetected.

4.9.2.2.1.5. Incubation of biological indicator is processed within 24 hours to be able to read the result.

4.9.2.2.1.6. All biological results for sterilization will be recorded. The documentation will record the date of sterilization and result.

4.9.2.3. Chemical Monitoring: Chemical Indicators

4.9.2.3.1. Procedures

4.9.2.3.1.1. A chemical sterilization process indicator strip will be included with each sterilized item or pouches containing the chemical indicator will be used (Appendix HS.06-6).

4.9.2.3.1.2. A color change in the chemical sterilization process indicator shows that the package has been exposed to the conditions for sterilization,

they do not guarantee sterility. Color change is from pink to brown or green depending on the type of pouch. A monthly record is maintained (Appendix HS.06-7).

4.9.2.4. Chemical Monitoring: Bowie-Dick Test Pack

This test is used to establish a method of function testing for pre-vacuum sterilizers.

4.9.2.4.1. Procedures

The Bowie-Dick test shall be conducted on each pre- vacuum sterilizer first thing in the morning on a daily basis.

4.9.2.4.1.1. Place a pre-assembled, disposable test pack in a horizontal position on the lowest shelf on the empty autoclave. The Bowie- Dick protocol requires that the only test pack may be in the autoclave during the test.

4.9.2.4.1.2. Run a sterilization cycle that is set to Bowie-Dick test. The exposure time is 20- 30 minutes of 132-134 degree Celsius.

4.9.2.4.1.3. After the test, remove the pack from the autoclave.

4.9.2.4.1.4. Open the pack. Remove the Bowie-Dick test sheet from the center and interpret the result.

4.9.2.4.1.5. A uniformly black color of the concentric lines is an indication of a pass.

4.9.2.4.1.6. Overexposure caused by excessive temperature time or both will cause the block end point color to shift to an overall gray tone. Since the test requires the appropriate exposure conditions, a test resulting in an overexposed test sheet is not valid and the test must be repeated with the correct exposure condition.

4.9.2.4.1.7. The date, the sterilizer number, and the operators initial must be entered on the Bowie-dick sheet following the test. File the sheet with the appropriate records for that sterilize (Appendix HS.06-8).

4.9.2.4.1.8. Any result other than a pass must immediately be brought to the attention of the biomedical engineer who will determine whether or not the sterilizer can be used on that day or if it must be shut down until repaired.

4.9.3. Water Quality Testing

4.9.3.1. Water quality testing is done quarterly to count the total viable count and presence of Legionella bacteria. (For further details, please refer to the Water Quality Testing Policy).

4.10. Storage and Transportation of Sterile Instruments from CSSD to Clinics

4.10.1. Procedures

4.10.1.1. All pouched sterile instruments are segregated to student and college instruments and loaded in clean- trolley.

4.10.1.2. The trolley is taken to clinics and instruments are deposited in the nurse station.

4.10.1.3. The trolley is brought back to CSSD and parked in its designated area.

4.11. Recall of Instruments in Case of Autoclave Function Failure

4.11.1. Procedures

4.11.1.1. All instruments pouched for sterilization shall be dated with the date of sterilization.

4.11.1.2. All instruments pouched for sterilization shall be marked with the corresponding autoclave used for sterilization.

4.11.1.3. Spore testing is done on a weekly basis. Bowie-Dick Test is run daily.

4.11.1.4. In the event of a positive spore test, all instruments are sterilized from the date of the last negative spore test through the last cycle shall be recalled.

4.11.1.5. All instruments that fit into the above category shall be re-sterilized in another autoclave or once two successive spore tests are negative.

4.11.1.6. Biomedical engineer is called and a report is to be sent to Infection control committee.

4.12. General cleaning and maintenance of CSSD rooms

4.12.1. All cabinets, and CSSD equipment must be cleaned and maintained by the CSSD team.

4.12.2. All environmental surfaces including walls, doors etc will be cleaned by the cleaners.

4.13. CSSD Records

4.13.1. The following records are maintained in CSSD:

4.13.1.1. Sharp instruments left behind in transfer trays

4.13.1.2. Disinfection indicator- Mechanical and protein residue test

4.13.1.3. Autoclave Indicators- mechanical, chemical (pouch strips and Bowie-Dick) and biological

4.13.1.4. Lost and found instrument list

4.13.1.5. General cleaning of CSSD

5. References

5.1. Centers for Disease Control and Prevention (CDC). Recommendations for disinfection and sterilization in healthcare facilities [Internet]. Infection Control; 7 May 2024. Available from: https://www.cdc.gov/infection-control/hcp/disinfection-sterilization/summary-recommendations.html.

5.2. Centers for Disease Control and Prevention (CDC). Cleaning [Internet]. Infection Control; 11 Mar 2024. Available from: https://www.cdc.gov/infection-control/hcp/disinfection-sterilization/cleaning.html.

5.3. Dubai Healthcare Authority, Health Policies and Standards Department, Health Regulation Sector. Guidelines for infection control in dentistry [Internet]. 2021.

Available from: https://stg.dha.gov.ae:8090/uploads/112021/b26c383e-bd71-4770-a96b-7a938ddb4706.pdf.

6. Tools / Appendices

6.1. Appendix HS.06-1 - Cleaning and disinfecting Products Used

6.2. Appendix HS.06-2 - Washer Disinfector Report Printout

6.3. Appendix HS.06-3 – Mechanical/Physical Indicator

6.4. Appendix HS.06-4 – Biological Indicator Vial

6.5. Appendix HS.08-5 – Autoclave Mechanical/Physical Indicator

6.6. Appendix HS.06-6 - Biological Indicator Monitoring Form

6.7. Appendix HS.06-7 - Chemical Indicator Color Change in Pouch

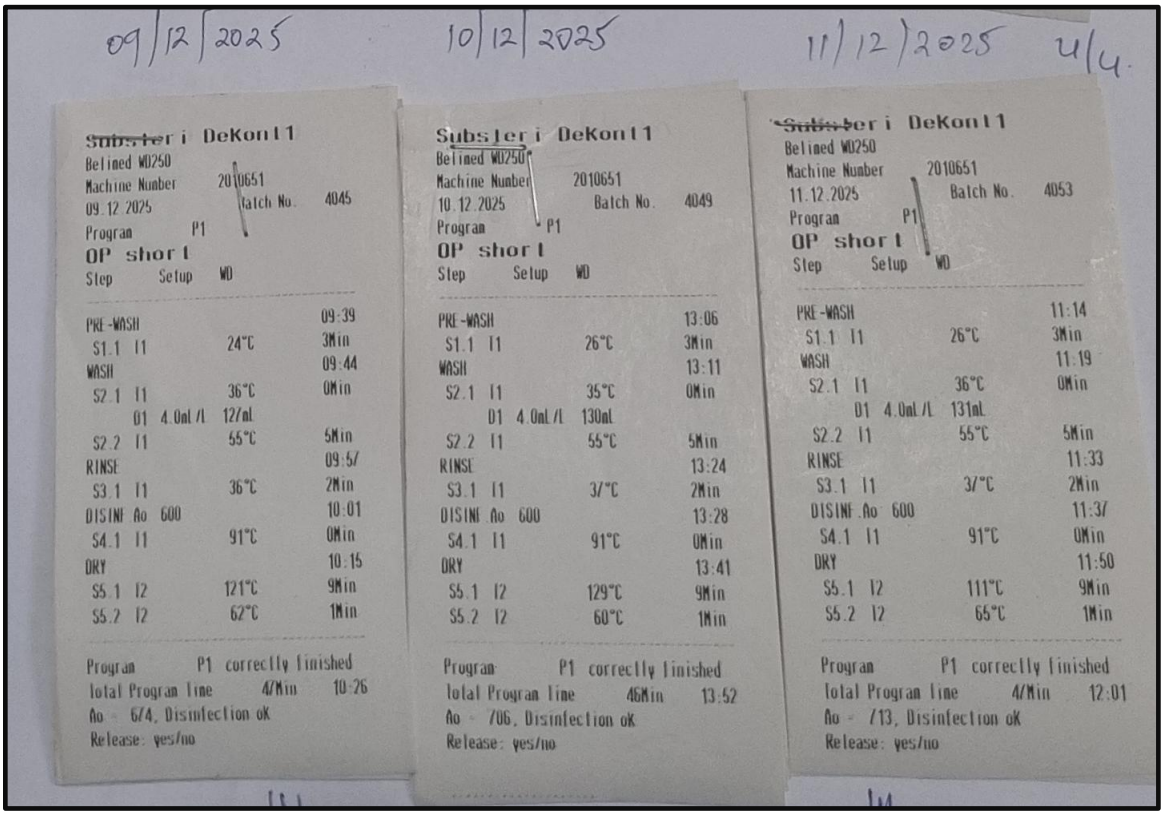
6.8. Appendix HS.06-8 - Chemical Indicator Monitoring Form

6.9. Appendix HS.06-9 – Chemical indicator- Bowie-Dick Test and Output Report

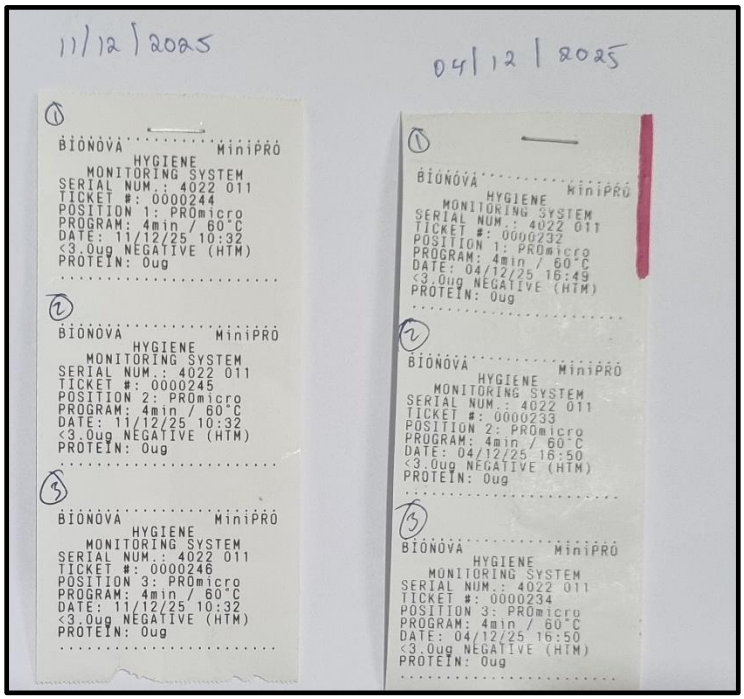
Appendix HS.06-1 - Cleaning Products Used

RAKCODS INSTRUMENT CLEANING AND DISINFECTING PRODUCTS				
Sr. #.	Product	Product name	Brand Name	Composition
1	Hand Rub Alcohol based hand sanitizer	Biofresh	Biochemix	70% Ethyl alcohol, Aqua, Glycerin, Carbomer, propylene glycol, triethanolamine, fragrance.
2	Hand Wash Soap	Actoman Plus	ACTO GmbH	4 % Chlorhexidine gluconate, glycerin, dexpanthenol and auxiliary substances.
3	Wet Wipes	Protecta Alcohol Free Wet Wipes	Protecta	80% Benzalkonium chloride Aqua, Polyoxyl ethylene sorbitan monostrate, sodium laureth sulphate, castor oil, EDTA, Citric acid, perfume.
4	Surface Disinfectant 1	Pro-Surf AF	Protecta	0.23g Dailkyl dimethyl ammonium chloride,0.48g Alkyl dimethyl ammonium chloride
5	Surface Disinfectant 2	Pro-Surf Rapid	Protecta	35.0g ethanol, 0.066g Quaternary ammonium compounds
6	Instrument Disinfectant	Pro Instruments	Protecta	2.6% Gluteraldehyde, 0.6% Bimethyl benzyl ammonium chloride, 0.6% Benzyl ammonium chloride, 96.25% inert ingredients
7	Washer Disinfector Cleaner	Natural Enzyme Cleaner	Belimed	5% anionic surfactants, 5% non-ionic surfectants, 5% polycarboxylates, 5% phosphonates, enzymes, corrosion inhibitors, preservatives, excipients

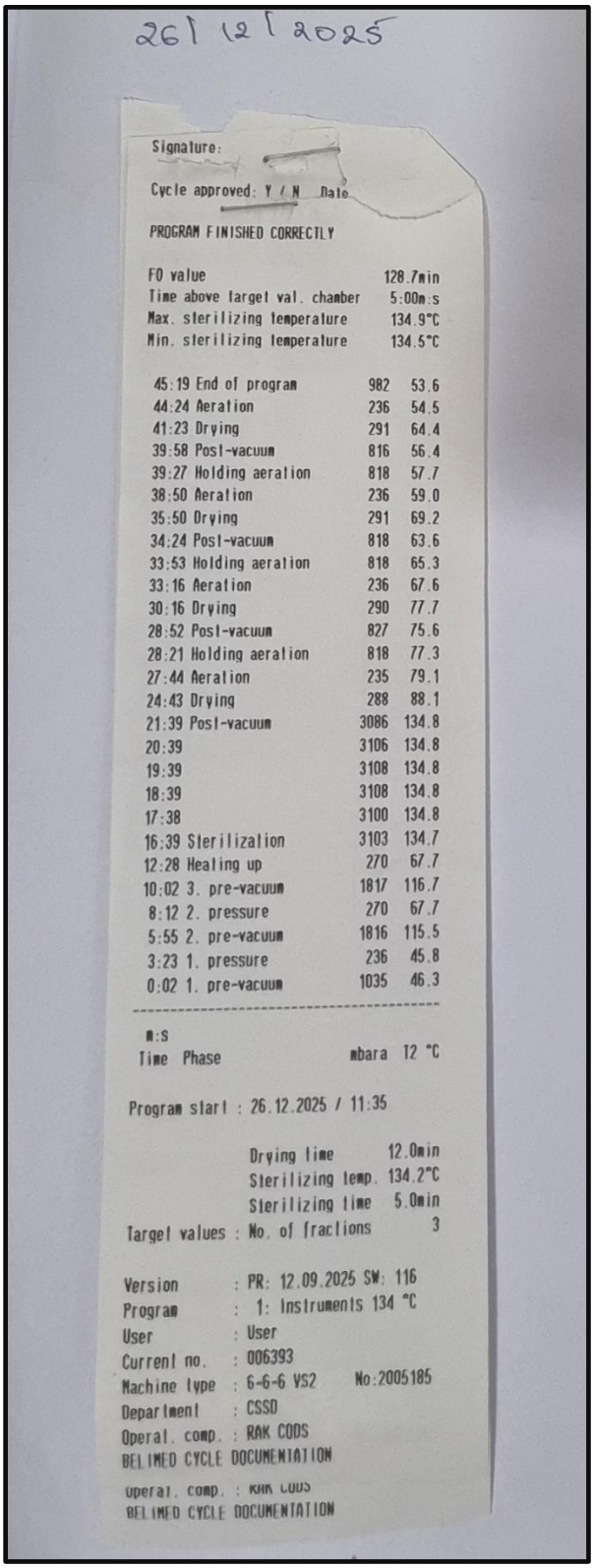
Appendix HS.06-2 – Washer Disinfector Printout



Appendix HS.06-3 – Mechanical/Physical Indicator



Appendix HS.08-4 – Autoclave Mechanical/Physical Indicator



26/12/2025

Signature:

Cycle approved: Y / N Date

PROGRAM FINISHED CORRECTLY

F0 value	128.7min
Time above target val. chamber	5:00m:s
Max. sterilizing temperature	134.9°C
Min. sterilizing temperature	134.5°C

45:19 End of program	982	53.6
44:24 Aeration	236	54.5
41:23 Drying	291	64.4
39:58 Post-vacuum	816	56.4
39:27 Holding aeration	818	57.7
38:50 Aeration	236	59.0
35:50 Drying	291	69.2
34:24 Post-vacuum	818	63.6
33:53 Holding aeration	818	65.3
33:16 Aeration	236	67.6
30:16 Drying	290	77.7
28:52 Post-vacuum	827	75.6
28:21 Holding aeration	818	77.3
27:44 Aeration	235	79.1
24:43 Drying	288	88.1
21:39 Post-vacuum	3086	134.8
20:39	3106	134.8
19:39	3108	134.8
18:39	3108	134.8
17:38	3100	134.8
16:39 Sterilization	3103	134.7
12:28 Heating up	270	67.7
10:02 3. pre-vacuum	1817	116.7
8:12 2. pressure	270	67.7
5:55 2. pre-vacuum	1816	115.5
3:23 1. pressure	236	45.8
0:02 1. pre-vacuum	1035	46.3

Time m:s	Phase	mbara	12 °C

Program start : 26.12.2025 / 11:35

	Drying time	12.0min
	Sterilizing temp.	134.2°C
	Sterilizing time	5.0min
Target values :	No. of fractions	3

Version	: PR: 12.09.2025 SW: 116
Program	: 1: Instruments 134 °C
User	: User
Current no.	: 006393
Machine type	: 6-6-6 VS2 No:2005185
Department	: CSSD
Operat. comp.	: RAK CODS

BELIMED CYCLE DOCUMENTATION

Operat. comp. : RAK CODS

BELIMED CYCLE DOCUMENTATION

Appendix HS.06-5 Biological Indicator Vial



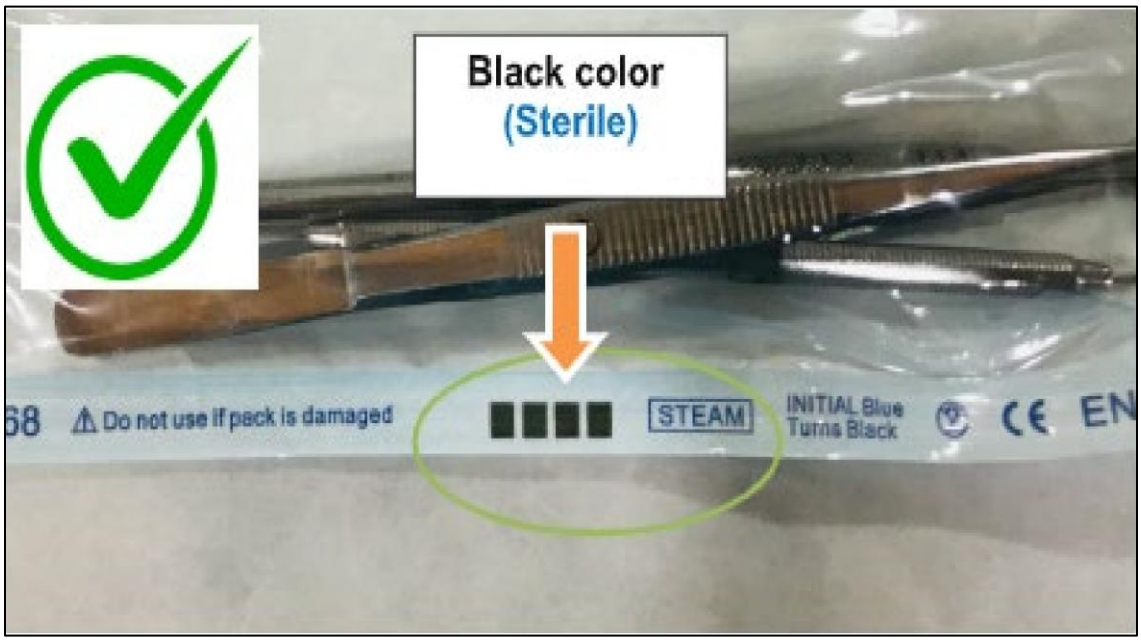
Appendix HS.06-6 - Biological Indicator Monitoring Form

RAK COLLEGE OF DENTAL SCIENCES

BIOLOGICAL INDICATOR MONITORING SHEET

DATE	INCUBATION START TIME	INTERVAL MONITORING TIME	INCUBATION END TIME	RESULT	ICO SIGNATURE

Appendix HS.06-7 - Chemical Indicator Color Change in Pouch



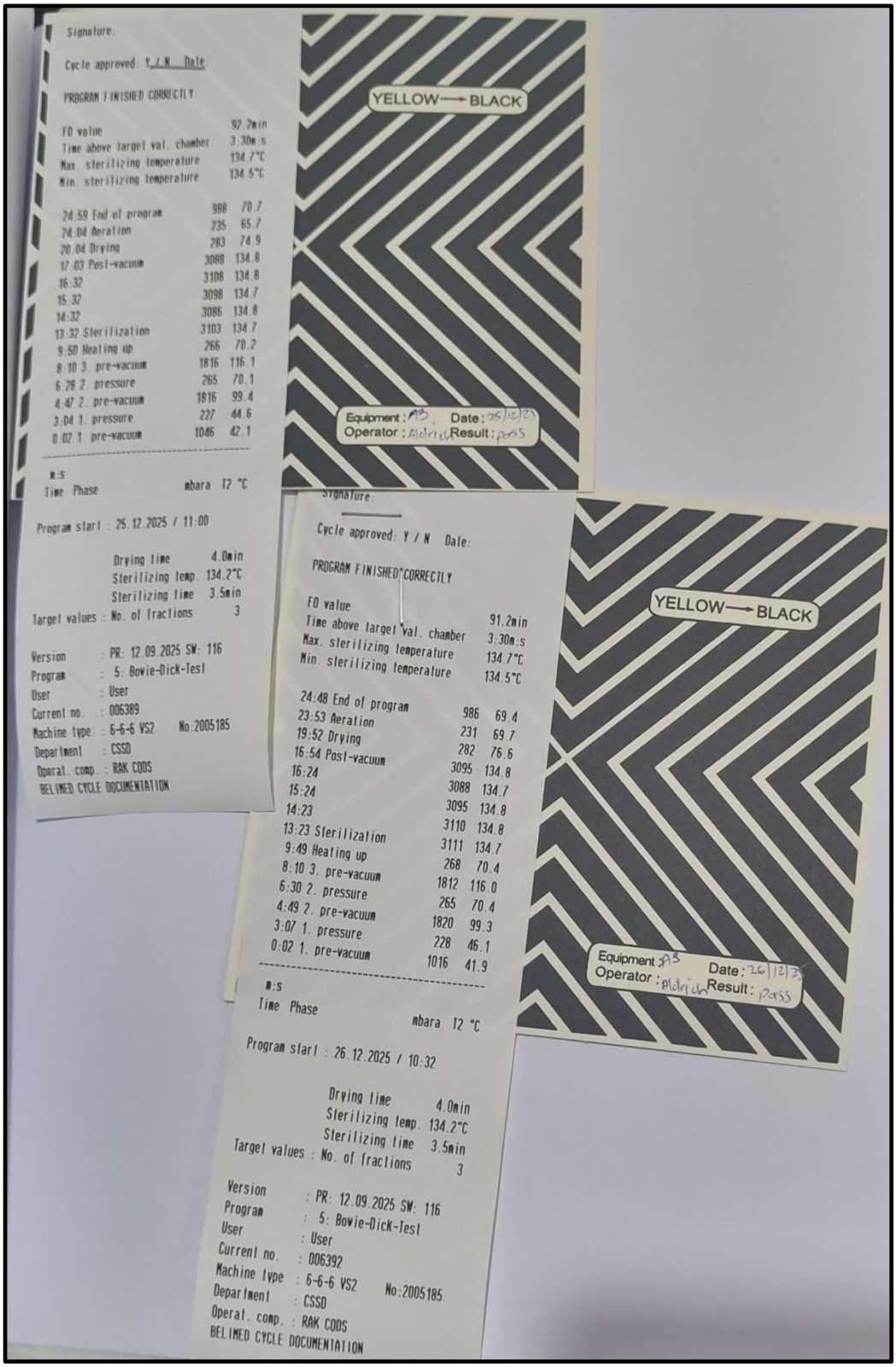
Appendix HS.06-8 - Chemical Indicator Monitoring Form

44 **RAK College of Dental Sciences**

Chemical Indicator Monitoring Checklist

DATE	TIME	CYCLE	RESULT	
			BROWN OR GREENISH BLACK (*adequate sterilization)	OTHERS/NO COLOR CHANGE (*inadequate, Please indicate actions taken)

Appendix HS.06-9 Chemical indicator- Bowie-Dick Test and Output Report



7. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2.1	25th Mar 2025	-New addition-	4.Procedures 4.7.1.15. The effectiveness of disinfection is checked by the protein residue detector. If any protein is detected, the instruments are recleaned and disinfected again.
2.1	25th Mar 2025	-New addition-	4.12.1 The following records are maintained in CSSD: 4.12.1 Sharp instruments left behind in transfer trays 4.12.2 Disinfection indicator-Mechanical and protein residue test
2.1	25th Mar 2025	4.12.1.1. Indicators-mechanical, chemical and biological	4.12.3 Autoclave Indicators-mechanical, chemical (pouch strips and Bowie-Dick) and biological
2.1	25th Mar 2025	-New addition-	4.12.4 Lost and found instrument list 4.12.5 General cleaning of CSSD
2.1	30th Oct 2025	4.8.2 Verification of washer-disinfector cycle function The washer-disinfector function is monitored by the post-wash output report generated by the washer (Appendix HS.06-2). If any error is found, the cycle is repeated.	It became 4.8.
2.1	16th Jan 2026		Appendices are updated.

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Hospital Safety**	**Prepared by:** **Dr. Aqsa Khan** **Infection Control-in-Charge**
Title:	**IPC Protocols in Radiology room**	
Policy Number:	**HS.07**	**Reviewed by:** **Dr. Riham Abdelraouf** **Assistant Professor** **Dr. Krishna Chytanya Nallan** **Assistant Professor**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Oct 2022**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**2**	
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

To provide guidelines regarding infection control precautions to be undertaken while taking radiographs to prevent cross-contamination. This policy is for all dental healthcare workers and patients.

2. Procedures

2.1. Steps to take Infection control precautions for extra-oral radiograph

2.1.1. If they are not detachable and non-sterilizable, non-critical items used to stabilize and position the head such as ear rods, head positioners, and chin rests (i.e., items that contact intact skin) should be covered with a barrier or disinfected between patients.

2.1.2. Bite-blocks and any item placed inside the oral cavity should be covered with a barrier or sterilized between patients.

2.1.3. During extra-oral radiography, the operator's hands do not routinely contact the oral cavity, and, hence, do not become contaminated. Therefore, the film, the control panel, the buttons, and the door handle

do not need to be covered with barriers. However, if any area becomes contaminated, then the area must be cleaned and disinfected after usage.

2.2. Steps to take an intra-oral radiograph comprising of infection control precautions

2.2.1. To take an intra-oral radiograph, 4-handed dentistry is important.

2.2.2. Duties of doctor-

2.2.2.1. Discard old gloves and sanitize hands. Keep other PPE items including masks, gowns etc. on.

2.2.2.2. Wear new gloves available in the radiology room.

2.2.2.3. Take the patient to the radiology room.

2.2.2.4. Place sleeves and barriers on all high-touch surfaces.

2.2.2.5. Place the lead apron on the patient.

2.2.2.6. Take the radiograph.

2.2.2.7. Remove the lead apron and place it on the dental chair.

2.2.2.8. Discard gloves and sanitize hands.

2.2.2.9. Take the patient back to the station.

2.2.3. Duties of assistant-

2.2.3.1. Send the request for a radiograph.

2.2.3.2. Discard old gloves.

2.2.3.3. Bring the radiograph film from the nurse station. Ensure that the film is in a disposable, sealed cover.

2.2.3.4. Wear new gloves available in the radiology room.

2.2.3.5. Once the radiograph is taken, return the radiograph film to the nurse.

2.2.3.6. Disinfect the lead apron thoroughly and hang it in place.

2.2.3.7. Remove all sleeves and barriers and disinfect all surfaces.

2.2.3.8. Discard gloves and sanitize hands.

2.2.3.9. All infection control steps required to be taken in an intra-oral radiology room and shown in Appendix 1.

2.3. Cleaning and disinfection of radiology equipment and room

2.3.1. The radiology room area is equipped with hand sanitizer, gloves, barriers, disinfectant spray or wet wipes and tissues.

2.3.2. Posters detailing infection control protocols are posted in all radiology rooms.

2.3.3. Each student doctor and assistant taking an intraoral x-ray is responsible for cleaning and disinfecting the radiographic equipment after usage.

2.3.4. Daily cleaning of the extra-oral and intraoral equipment is the responsibility of the radiology technician or nurse.

2.3.5. The room cleaning responsibility is of the cleaner.

3. References

3.1 Amer F. Infection prevention and control in the radiology department/service - guide to infection control [Internet]. ISID; Sept 2021. Available from: https://isid.org/guide/hospital/infection-prevention-and-control-in-the-radiology-department-service/.

3.2 Garland KV. Best practices for disinfection and asepsis in radiographic procedures [Internet]. *Dimensions of Dental Hygiene*; 18 Oct 2024. Available from: https://dimensionsofdentalhygiene.com/article/best-practices-for-disinfection-and-asepsis-in-radiographic-procedures/.

3.3 Mallya SM, Lam EWN. White and Pharoah's oral radiology: principles and interpretation. St. Louis: Mosby; 2019.

3.4 Santos RC, et al. Assessment of infection control in oral radiology during the COVID-19 outbreak: an international collaborative study. *Imaging Sci Dent* [Internet]. 2023;53(4):365. Available from: https://doi.org/10.5624/isd.20230141.

4. Tools/Appendices

4.1. Appendix HS.07-1


1
Wear Over-gloves before taking the film from the nurse station.
2
PLASTIC SYRINGE SLEEVES
Cover the X-ray activation button using the plastic sleeve.
3
Cover the X-ray cone with the plastic sleeve.
4
Instruct the patient to wear the lead apron and sit on the chair. Place the film in the patient's mouth.
5
6
Remove the plastic sleeve from the cone and activation button.
7
Collect the plastic covers into a ball using a piece of barrier.
8
9
Disinfecting Towelettes
• TUBERCULOCIDAL
• BACTERICIDAL
• VIRUCIDAL*
• FUNGICIDAL
Disinfect the cone using wet wipes.
10
11
Disinfect the Chair using wet wipes.
12
Disinfect the lead apron using wet wipes.
RADIOLOGY ROOM
INFECTION CONTROL
PROTOCOL

5. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
1.1	15th Mar 2025	Introduction	Removed
1.1	15th Mar 2025	2. Purpose and Scope To provide guidelines regarding infection control precautions to be undertaken while taking radiographs. This policy is for all healthcare workers involved in taking radiographs.	1. Purpose and Scope To provide guidelines regarding infection control precautions to be undertaken while taking radiographs to prevent cross-contamination. This policy is for all dental healthcare workers and patients.
1.1	15th Mar 2025	3. Procedures 3.1.3. During extra-oral radiography, the operator's hands do not routinely contact the oral cavity, and, hence, do not become contaminated. Therefore, the film, the control panel, the buttons, and the door handle do not need to be covered with barriers. However, if the operator's gloves do become any area becomes contaminated, then precautions must be taken as with intra-oral radiography.	2. Procedures 2.1.3. During extra-oral radiography, the operator's hands do not routinely contact the oral cavity, and, hence, do not become contaminated. Therefore, the film, the control panel, the buttons, and the door handle do not need to be covered with barriers. However, if any area becomes contaminated, then the area must be cleaned and disinfected after usage.
1.1	15th Mar 2025	3.2. Steps to take an intra-oral radiograph 3.2.2.1 Discard old	2.2 Steps to take an intra-oral radiograph comprising of infection control precautions 2.2.2.1 Discard old gloves and

Edition Number	Review Date	Description of Change	
		Current	**Revised**
		gloves and sanitize hands.	sanitize hands. Keep other PPE items including masks, gowns etc. on.
1.1	15th Mar 2025	3.2.2.3. Bring the radiograph film from the nurse station.	2.2.2.3. Bring the radiograph film from the nurse station. Ensure that the film is in a disposable, sealed cover.
1.1	15th Mar 2025	-New Addition-	2.3. Cleaning and disinfection of radiology equipment and room 2.3.1. The radiology room area is equipped with hand sanitizer, gloves, barriers, disinfectant spray or wet wipes and tissues. 2.3.2. Posters detailing infection control protocols are posted in all radiology rooms. 2.3.3. Each student doctor and assistant taking an intraoral x-ray is responsible for cleaning and disinfecting the radiographic equipment after usage. 2.3.4. Daily cleaning of the extra-oral and intraoral equipment is the responsibility of the radiology technician or nurse. 2.3.5. The room cleaning responsibility is of the cleaner.

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Hospital Safety**	**Prepared by:** **Dr. Aqsa Khan** **Infection Control-in-Charge**
Title:	**Oral Surgery Asepsis**	
Policy Number:	**HS.08**	**Reviewed by:** **Dr. Riham Abdelraouf** **Assistant Professor**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Oct 2022**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**2**	
Next Review Date	**30 Sep 2028**	

1. Purposes and Scope

To provide guidelines on surgical aseptic techniques needed to be undertaken during all oral surgical procedures. This program is intended for all dental healthcare workers (DHCW) in general and specifically for licensed general practitioners and specialists who perform oral surgical procedures in the clinics.

2. Policy Statements

Oral surgical procedures raise the risk of surgical site infections, local or systemic. This is because microorganisms from inside or outside the mouth can enter the sterile areas of the oral cavity. This policy provides guidelines to prevent or reduce chances of post-surgical infections.

3. Definitions

3.1. Oral surgical procedures: These include the incision, excision, or reflection of tissue that exposes the normally sterile areas of the oral cavity. Examples include biopsy, periodontal surgery, apical surgery, implant surgery, and surgical extractions of teeth (e.g., removal of an erupted or non-erupted tooth requiring elevation of mucoperiosteal flap, removal of bone or section of tooth, and suturing if needed).

3.2. Surgical hand antisepsis: Antiseptic hand wash or antiseptic hand rub performed preoperatively by surgical personnel to eliminate transient and reduce resident hand flora. Antiseptic detergent preparations often have persistent antimicrobial activity.

3.3. Surgical hand scrub: An antiseptic-containing preparation that substantially reduces the number of microorganisms on intact skin; it is broad-spectrum, fast-acting, and persistent.

4. Procedures

4.1. Oral surgery procedures require infection control measures in addition to the standard precautions. These additional procedures are-

4.1.1. Attire- Hair and beards must be covered with a disposable cap

4.1.2. Working zone- a defined working area within which the procedure takes place. This area is restricted to concerned personnel only. Those interested in observing must follow the IPC measures mentioned in this policy.

4.1.3. Surgical hand hygiene- the appropriate and preferred method is the application of a hand alcohol gel with sustained use that is formulated specifically for surgical hand hygiene and uses an extended rubbing time of 90 seconds. Alternatively, a surgical hand scrub can be used following the manufacturer's instructions.

4.1.4. Personal protective equipment- Sterile gowns and gloves minimize transmission of microorganisms from the healthcare worker to the patient. Practicing 4-handed dentistry, one person wears surgical gloves the other wears regular gloves.

4.1.5. Pre-operative skin preparation- Extra-oral skin preparation with povidone-iodine reduces the risk of surgical site infections. Intra-oral preparation is done with saline or 0.12-0.2% chlorhexidine.

4.1.6. Sterile surgical drapes- are used during surgery to isolate the surgical site, prevent contact with unprepared surfaces, and to maintain the sterility of environmental surfaces, equipment, and the

patient's surroundings. A sterile field is created with drapes. A drape is spread on a table and on the patient using only plastic tape edges.

4.1.7. Instruments- All instruments and equipment used must be sterile and should be opened only at the point of use. The person wearing regular gloves will open pouches and drop instruments on the table, careful not to touch instruments, connect the handpiece, suction tube, etc. The person wearing the sterile gloves will only touch sterile items, they will organize the instruments.

4.1.8. Sterile irrigating solutions- Irrigating solutions and the devices used to deliver these solutions must be sterile. Single-use syringes with irrigation needles are preferred devices.

4.2. Biopsy

4.2.1. All specimens are collected, labeled, and transported safely to prevent the risk of contamination or infection.

4.2.2. Specimens must be well secured and placed in a re-sealable clear plastic bag with a biohazard label.

4.2.3. Specimens must be clearly labeled, on both the specimen container and the accompanying test requisition form.

4.2.4. Specimens should be stored in a separate designated area while awaiting collection.

4.2.5. Specimens should be transferred to the laboratory, under controlled circumstances.

5. References

5.1. Centers for Disease Control and Prevention (CDC). Best practices for oral surgical procedures [Internet]. *Dental Infection Prevention and Control*; 23 May 2024. Available from: https://www.cdc.gov/dental-infection-control/hcp/dental-ipc-faqs/oral-surgical-procedures.html.

5.2. Centers for Disease Control and Prevention (CDC). About hand hygiene for patients in healthcare settings [Internet]. *Clean Hands*; 27 Feb 2024. Available from: https://www.cdc.gov/Clean-Hands/About/Hand-Hygiene-for-Healthcare.html.

5.3. Humphreys H, et al. Minor surgical procedures in general practice. 2018.

5.4. Royal Australian College of General Practitioners (RACGP). Standard aseptic technique [Internet]. 2018. Available from: https://www.racgp.org.au/running-a-practice/practice-standards/racgp-infection-prevention-and-control-guidelines/4-aseptic-technique/standard-aseptic-technique.

6. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
1.1	15th Mar 2025	1. Purposes and Scope This program is intended for all staff and students in general and specifically for licensed general practitioners and specialists who perform oral surgical procedures in the clinics.	1. Purposes and Scope This program is intended for all dental healthcare workers (DHCW) in general and specifically for licensed general practitioners and specialists who perform oral surgical procedures in the clinics

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Hospital Safety**	**Prepared by:** **Dr. Aqsa Khan** **Infection Control-in-Charge**
Title:	**Sharp Safety**	
Policy Number:	**HS.09**	**Reviewed by:** **Dr. Riham Abdelraouf** **Assistant Professor**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. Purposes and Scope

1.1. This policy aims to prevent/minimize the risk of exposure to blood-borne pathogens.

1.2. To promote awareness of each healthcare worker's responsibility in the safe management of sharps devices to avoid occupational exposure.

1.3. To provide a framework for the education of healthcare workers in the safe handling of sharps

1.4. This policy applies to all RAKCODS dental healthcare workers (DHCW). This policy should be used in conjunction with the Occupational Exposure Policy. Adherence to the recommendations will also protect from communicable infections to patients and other persons present in RAKCODS.

2. Procedures

2.1. Sharp Safety Practices

2.1.1. Engineering Controls

2.1.1.1. Endo irrigation needles are available to avoid injury during

irrigation. They are blunt-ended tips with side vent.

2.1.1.2. Sharps container

2.1.1.3. The IPC committee searches for and reviews new safety engineering device annually.

2.2. Work Practice Controls

2.2.1. Precautions while treating known blood borne patients

2.2.1. 1.Clearance for dental treatment is from patient physician.

2.2.2. Precautions While Using Sharp Objects

2.2.1.1. Organize equipment. Trying to find an instrument from a mess can cause sharps injury

2.2.1.2. Ensure adequate lighting.

2.2.1.3. Keep sharps pointed away from user.

2.2.1.4. Do not uncover or unwrap the sharp object until it is time to use it.

Do not pass a syringe with an unsheathed needle.

2.2.1.5. Needles should not be manually re-capped/re- sheathed. If re-sheathing is unavoidable this must be performed using a single handed scoop method, i.e. the dental healthcare personnel holds the barrel of the syringe and scoops the needle cap from a hard flat surface onto the end of the needle.

2.2.1.6. Remove burs before disassembling the handpiece from the dental unit.

2.2.1.7. Use instruments in place of fingers for tissue retraction or palpation.

2.2.1.8. Keep your fingers away from the tip of the sharp object.

2.2.1.9. If the object is reusable, put it in a secure, closed container after you

use it.

2.2.3. Precautions While Cleanup and Disposal

2.2.3.1. Remove all sharps before starting unit clean up. Dispose them in
sharps container promptly.

2.2.3.2. Never clean up broken sharps by hand.

2.2.3.3. If a needle is sticking out of the container, do not push it in with
your hands. Use tweezer to push the needle back into the container

2.2.3.4. Make sure sharps are not left behind in napkins.

2.2.3.5. Do not throw sharps in medical or non-medical waste

2.2.3.6. Never put hands or fingers into sharps containers.

2.2.3.7. Visually inspect sharps containers for overfilling.

2.2.3.8. Replace containers before they become overfilled.

3. References

3.1 Centers for Disease Control. *Morbidity and Mortality Weekly Report Department. Guidelines for Infection Control in Dental Health-Care Settings*. 2003.

3.2 Dubai Healthcare Authority, Health Policies and Standards Department Health Regulation Sector. *GUIDELINES for INFECTION CONTROL in DENTISTRY*. 2021, stg.dha.gov.ae: 8090/uploads/112021/b26c383e-bd71-4770-a96b-7a938ddb4706.pdf

3.3 Marji, Tamara, and Mohamed Ahmed Syed. "Primary Care Dental Professionals' Experiences of Sharp Injuries in Qatar: A Cross-Sectional Study." *Frontiers in Oral Health*, vol. 3, 2 Dec. 2022, https://doi.org/10.3389/froh.2022.1014004.

3.4 Centers for Disease Control and Prevention. *Best Practices in Dental Infection Prevention and Control* [Internet]. Atlanta (GA): CDC; May 15, 2024 [cited 2026 Jan 6]. Available from: https://www.cdc.gov/dental-infection-control/hcp/dental-ipc-faqs/index.html

4. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2.1	25th Mar 2025	1. Purposes and Scopes This policy applies to all RAKCODS staff and students. This policy should be used in conjunction with Occupational Exposure Policy. Adherence to the recommendations will also provide protection from communicable infections to patients and other persons present in RAKCODS.	1. Purposes and Scopes 1.1. This policy applies to all RAKCODS dental healthcare workers (DHCW). This policy should be used in conjunction with Occupational Exposure Policy. Adherence to the recommendations will also provide protection from communicable infections to patients and other persons present in RAKCODS. References updated

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Hospital Safety**	**Prepared by:** **Dr. Aqsa Khan** **Infection Control-in-Charge**
Title:	**Occupational Exposure**	
Policy Number:	**HS.10**	**Reviewed by:** **Dr. Riham Abdelraouf** **Assistant Professor**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. **Purpose and Scope**

   To provide a general protocol for occupational exposures to all dental healthcare workers (DHCW) patients and visitors in RAKCODS.

2. **Policy Statement**

   Management of individuals exposed to blood or body fluids from needle stick, sharp injuries, or other exposures. Management will include appropriate medical care, serologic testing for HBV, HCV, and HIV and/or molecular testing, as well as counseling and further referral to appropriate specialist medical practitioners if required.

3. **Definitions**

   3.1. Occupational Exposure: A Percutaneous injury (e.g., needle stick or cut with a sharp object) or contact of mucous membrane or non-intact skin (e.g., exposed skin that is chapped, abraded, or with dermatitis) or eye with blood, saliva, tissue, or other body fluids that are potentially infectious.

4. **Procedures**

   4.1. Management of occupational exposure-

   4.1.1. In case of an occupational exposure with sharp/needle stick injury, provide immediate wound care, which includes washing site with soap and running water and putting band aid on wound. In case of an

eye splash thoroughly rinsed with water at eye wash provided in clinics.

4.1.2. Report to nursing station. An OVR will be raised by the nurse station.

4.1.3. If the exposure is non-contaminated object, no further action is required.

4.1.4. If the exposure is from a contaminated object, the following further actions are required:

4.1.4.1. Conclude the treatment in progress as soon as it is reasonable without compromising patient care, or arrange another appointment.

4.1.4.2. Obtain consent from the source patient for testing of serologic evidence of HBV, HCV and HIV infection.

4.1.4.3. The nurse will provide lab test requisition forms (See appendix) for the source patient and injured person.

4.1.4.4. The injured person and source patient will go to the external contracted lab.

4.1.4.5. The lab will send the result to the IPC department which will further guide the injured person.

4.1.4.6. Baseline serologic screening for HIV antibody; Hepatitis C antibody; and Hepatitis B surface antigen (HBsAg).

4.1.4.7. Based on interpretation counseling will be provided to the injured person and/or source patient.

4.1.4.8. Counselling of injured person by IPC committee member. It includes an explanation of the test procedure, window period, and implication of possible results.

4.1.4.9. Patient's test results are confidential.

4.2. Test report interpretation

<table>
<tr><th>Disease</th><th>Source negative</th><th>Source positive</th></tr>
<tr><td>Hepatitis B</td><td rowspan="3">No further follow-up of the exposed staff member is necessary if blood tests show the source patient is negative for HBV, HCV or HIV.</td><td>If the injured person is IMMUNE to HBV (antiHBs antibodies > 10 IU/mL) they are protected. No further action is required.
If the injured person is NOT IMMUNE (e.g., has never been immunized, did not seroconvert to the vaccine (a non-responder), or has antibody levels to HBsAg less than 10 IU/mL), the correct treatment is to:
1. Give a single dose of hepatitis B immunoglobulin (HBIG) within 48-72 hours;
2. Start a course of HBV immunization. HBV vaccine should be given within seven days of exposure, and then repeated at after one month and again at six months after the first dose. Following the final vaccine dose, the antibody titer should be checked two to four weeks later.</td></tr>
<tr><td>Hepatitis C</td><td>If the source is positive for antibodies to HCV, there is no effective post-exposure prophylaxis (PEP) for HCV. The injured staff member should be re-tested for HCV antibodies at three weeks and six months, in addition to their baseline test.</td></tr>
<tr><td>HIV</td><td>If the source is positive for antibodies to HIV (or is at high risk of seroconverting) PEP is only indicated if there has been a significant exposure, and a proper risk assessment has been undertaken by a medical practitioner experienced in HIV management. HIV PEP is typically two or three orally administered anti-retroviral drugs and should be administered to the recipient within 24 to 36 hours after exposure (and preferably within two hours). This therapy should be continued for four weeks, on the advice of an infectious diseases physician.</td></tr>
</table>

4.3. Refusal for testing

If the source patient refuses to screen, this refusal for testing should be documented in OVR. The situation should be treated same as the 'positive patient' scenario, and postexposure prophylaxis and appropriate long-term follow-up should be by a specialist medical practitioner.

5. References

5.1. Australian Dental Association. *Guidelines for Infection Prevention and Control Fifth Edition*. 2021.

5.2. Centers for Disease Control. "Best Practices for Occupational Exposure to Blood." *Dental Infection Prevention and Control*, 13 May 2024, www.cdc.gov/dental-infection-control/hcp/dental-ipc-faqs/occupational-exposure.html.

6. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2.1	25th Mar 2025	1. Purpose and Scope To provide general protocol for occupational exposures to all students, interns, staff, faculty and patients in RAKCODS.	1. Purpose and Scope To provide general protocol for occupational exposures to all dental healthcare workers (DHCW) faculty and patients and visitors in RAKCODS.
2.1	25th Mar 2025	4. Procedure 4.1.4.7. Based on interpretation counseling will be provided to student and/or source patient.	4. Procedure 4.1.4.7. Based on interpretation counseling will be provided to injured person and/or source patient.

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Hospital Safety**	**Prepared by:** **Dr. Aqsa Khan** **Infection Control-in-Charge** **Mr. Muhammad Zahid Khan** **Assistant Manager, Admin**
Title:	**Environmental Cleaning**	
Policy Number:	**HS.11**	
Ownership:	**RAKCODS**	**Reviewed by:** **Dr. Riham Abdelraouf** **Assistant Professor**
Effective (Issue) Date:	**Sep 2019**	
Edition Number	**3**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

Guidelines for cleaners to reach and maintain standards of cleaning and disinfection required for an optimal physical environment.

2. Policy Statement

A disinfected physical environment is provided to minimize risk of hospital-acquired infections and by thereby increasing patient safety.

3. Roles and Responsibilities

3.1 Administration Responsibilities

3.1.1 The administration department holds responsibility for the implementation of this policy.

3.1.2 Manage cleaning company contracts. Contract must mention clause on proper infection prevention and control implementation.

3.1.3 Regular monitoring of compliance to all standards by cleaners, including infection control standards.

3.1.4 Maintaining various cleaning checklists

3.1.5 Ensuring the cleaners adhere to and implement the guidelines.

3.2 Infection Control Department Responsibilities

3.2.1 The cleaners will be educated and trained biannually by the Infection Control Head.

3.2.2 Carry out environmental audits once a month and provide their finding and recommendations to the cleaner supervisor.

3.2.3 Carry out performance measures of cleaners and provide report to admin department.

3.3 Nurses' Responsibilities

3.3.1 Check and sign all daily environmental checklists related to clinics including waste management checklist.

3.3.2 Observe cleaners working standards and provide feedback to IPC Committee.

3.3.3 Implementation

4. Procedures

4.1 General cleaning techniques

4.1.1 Perform visual preliminary site assessment to determine if:

4.1.1.1 Patient health status is safe

4.1.1.2 Check if there is a need of additional PPE or supplies

4.1.1.3 Any obstacles or issues that need to be removed before cleaning. Clean any spill first. Any damaged or broken furniture or surfaces to be reported to management

4.1.2 Start from cleaner to dirtier areas to avoid spreading dirt and microorganisms.

4.1.3 Start from high to low areas to ensure that all dirt from top falls on and is cleaned when lower areas are being cleaned.

4.1.4 Start systematically to ensure all areas are included, e.g., in a clockwise direction

4.2 Environmental surfaces can be divided into clinical surfaces and housekeeping surfaces. Clinical surfaces can be directly contaminated from patient materials either by direct spray or spatter generated during dental procedures or by contact with gloved hands of healthcare worker. These surfaces can subsequently contaminate other instruments, devices,

hands, or gloves. Housekeeping surfaces (e.g., walls, floors, sinks) are not directly touched during dental treatment and carry the lowest risk of disease transmission.

4.3 Physical areas are also divided based on risk assessment of infection distribution and are identified as high- (clinical surfaces and high-touch housekeeping surfaces) and low-risk areas (low-touch housekeeping surfaces).

4.4 High risk areas are at a risk being contaminated with aerosols and splatter or touched with contaminated gloves during operation. Such surfaces include, but are not limited to, the dental chair, light handles, switches, dental radiograph equipment, dental chairside computers, reusable containers of dental materials, drawer handles, sinks and faucet handles used for processing contaminated items, countertops, pens, telephones, and doorknobs.

4.5 Such surfaces, if contacted with contaminated gloves, can be potential reservoirs of microbial contamination. Healthcare worker's hands are the primary vehicle for the spread of microorganisms from these surfaces to the nose, mouth, or eyes of patients and workers, as well as to instruments and other surfaces. This spread can be minimized by:

a) Frequent washing of hands
b) Using impervious barriers to cover the surfaces during treatment, and
c) Cleaning and disinfecting such surfaces after patient treatment.

4.6 When barriers are used to prevent cross-contamination, they must be removed between patients. A new set of barriers should be placed with each patient. Barriers should never be used for more than one patient. After removal of the barrier, the surface should be examined. If the surface is found to have been inadvertently soiled, then it should be cleaned and disinfected before placement of clean barriers for the next patient. Suitable materials for use as barriers include clear plastic wrap, bags, sheets,

tubing, and plastic-backed paper or other materials impervious to moisture.

4.7 High-risk areas require daily cleaning whereas low-risk areas are cleaned according to set schedule.

4.8 High traffic areas are crowded areas. They must be cleaned and monitored daily. High traffic areas include:

4.8.1 Clinics

4.8.2 Waiting Areas

4.8.3 Elevators

4.9 Housekeeping surfaces (e.g., floors, walls, and sinks) are cleaned with a detergent and water or hospital disinfectant / detergent on a routine basis, depending on the nature of the surface and type and degree of contamination, and as appropriate, based on the location in the facility, and when visibly soiled.

4.10 Mops and cloths should be washed after each use and allowed to dry before reuse; or use single-use, disposable mop heads or cloths. Mops should be replaced when visible signs of wear appear on the fibers.

4.11 Prepare fresh cleaning disinfecting solutions daily as instructed by the manufacturer. It is recommended to change the soiled disinfectant solution on a routine basis, usually every three to four rooms. Exceptions to this rule would include isolation cases, discharges, cleaning in surgery or delivery, and cleaning of blood spills.

4.12 Clean walls, blinds, and window curtains in patient-care areas when they are visibly dusty or soiled.

4.13 To minimize contamination mops, buckets and solution containers are color coded i.e.:

4.13.1 Blue for clinical areas

4.13.2 Red for toilets

4.13.3 Yellow for offices and passages

4.14 The housekeeping personnel should wear masks, gloves, a plastic apron, and a uniform.

4.15 Fresh, cleaning solutions are to be prepared each day and then discarded as soon as cleaning has finished in each area. At the end of the day, containers are emptied allowing them to dry.

4.16 A hospital cleaning and disinfecting agent designed for housekeeping purposes should be used.

4.17 Floors should be cleaned regularly and any spills cleaned up immediately

4.18 Monitoring by the infection control and facility management and safety teams of the housekeeping personnel, including training on how to deal with spills ex: blood, saliva, and vomit, and medical and non-medical waste collection from clinics and public areas.

4.19 Environmental cleaning effectiveness is checked by environmental microbiological testing using swabs. It is done on quarterly schedule (See Appendix HS.11-2).

5. References

5.1 Centers for Disease Control and Prevention (CDC). Environmental cleaning in healthcare facilities [Internet]. 26 Mar 2020. Available from: https://www.cdc.gov/hai/prevent/resource-limited/index.html.

5.2 Dubai Healthcare Authority, Health Policies and Standards Department, Health Regulation Sector. Guidelines for infection control in dentistry [Internet]. 2021. Available from: https://stg.dha.gov.ae:8090/uploads/112021/b26c383e-bd71-4770-a96b-7a938ddb4706.pdf.

6. Tools/ Appendices

6.1 Appendix HS.11-1 – RISK ASSESSMENT

6.2 Appendix HS.11-2 – ENVIRONMENTAL SCHEDULE

Appendix HS.11-1 – RISK ASSESSMENT

ENVIRONMENTAL CLEANING RISK ASSESSMENT

Location	Probability of Contamination Light = 1 Moderate = 2 Heavy = 3	Potential for Exposure High-touch = 3 Low-touch = 1	Total Score	Interpretation
Dental clinics	3	3	6	Clean at least thrice daily. Clean additionally if required
Diagnostic Imaging rooms	3	3	6	Clean at least thrice daily. Clean additionally if required
CSSD	3	3	6	Clean at least thrice daily. Clean additionally if required
Nurse station	2	1	3	Clean at least once daily. Clean additionally if required
Storage room	1	1	2	Clean according to a fixed schedule. Clean additionally if required
Dirty utility room	2	3	5	Clean at least once daily. Clean additionally if required.

Laboratory	2	2	4	Clean at least once daily. Clean additionally if required
Dining Room/Cafeteria and Food Preparation Areas	1	3	4	Clean at least once daily Clean additionally if required
Offices	1	1	2	Clean according to a fixed schedule. Faculty offices need to be cleaned once per day. Clean additionally if required
Other Areas: Corridors, Stairwells, Lobbies, Libraries, Meeting rooms, Locker rooms	1	1	2	Clean according to a fixed schedule Clean additionally if required
Public Areas: Elevators and waiting areas	3	3	6	Clean completely at least once daily. Buttons are high touch areas and need to be cleaned thrice daily at least. Clean additionally if required
Bathrooms	3	3	6	Clean at least thrice per day. Clean additionally if required
High touch areas (door knobs, handles, light switches, buttons, taps, commodes)	3	3	6	Clean at least thrice per day.

Appendix HS.11-2 – ENVIRONMENTAL SCHEDULE

RAK MEDICAL & HEALTH SCIENCES UNIVERSITY

RAK College Of Dental Sciences

Ras Al Khaimah, United Arab Emirates

RAKCODS Environmental Testing Schedule and Report

Year

MONTH	NUMBER OF SAMPLE	SWAB AREA
JANUARY	1 per Area	G Floor Clinics- Nurse station
		G Floor RAKCODSMC Reception table
		1st Floor Clinics- Nurse station
		2nd Floor Clinics- Nurse station
		CSSD- Decontamination room
APRIL	1 per Area	G Floor Clinics- Dental chair no. 5
		G Floor RAKCODSMC Clinics no. 1
		1st Floor Clinics-Block B- Dental chair no. 11
		2nd Floor Clinics- Dental chair no. 5
		CSSD- Packaging and sterilization
JULY	1 per Area	G Floor Clinics- Radiology room
		G Floor RAKCODSMC Clinics No. 2
		1st Floor Clinics- Radiology room
		2nd Floor Clinics- Radiology room
		CSSD- Storage
OCTOBER	1 per Area	G Floor Clinics- Dental chair no.16
		G Floor RAKCODSMC Clinics No. 4
		1st Floor Clinics- Dental chair no.10
		2nd Floor Clinics- Block B- Dental chair no.17
		CSSD- Changing room

7. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2.1	15th Mar 2025		4. Procedures -New addition- 4.19 Environmental cleaning effectiveness is checked by environmental microbiological testing using swabs. It is done on quarterly schedule (See Appendix HS.11-2).
2.1	15th Mar 2025		6. Appendix -New addition- 6.2. Appendix HS.11-2 – ENVIRONMENTAL SCHEDULE added

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Hospital Safety**	**Prepared by:** **Dr. Aqsa Khan** **Infection Control-in-Charge** **Mr. Muhammad Zahid Khan** **Assistant Manager, Admin**
Title:	**Waste Management**	
Policy Number:	**HS.12**	**Reviewed by:** **Dr. Riham Abdelraouf** **Assistant Professor**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. **Purposes and Scope**
   - **1.1.** To minimize the potential for the spread of disease from the Clinic to the general public
   - **1.2.** To reduce the amount of waste generated from the clinic, which helps to protect the environment.
   - **1.3.** To reduce the expenditures of the clinic for waste treatment.
   - **1.4.** Compliance with Federal Government Guidelines.
   - **1.5.** This policy is applicable clinic wide.
2. **Definitions/ Abbreviations**
   - **2.1.** Medical Wastes: medical waste includes all waste items that are contaminated with or suspected of being contaminated with blood and body fluids, it includes:
     - **2.1.1.** Blood and blood products:
       - **2.1.1.1.** Blood and blood products in a free flowing, unabsorbed state.
       - **2.1.1.2.** Contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state.

2.1.1.3. Items that are caked with dried blood or other potentially infectious materials.

2.1.1.4. All tubing with any visible blood.

2.1.1.5. Wastes consist of recognizable body parts e.g. teeth

2.2. Non-Medical Waste (general waste) are:

2.2.1. Used personal hygiene products such as:

2.2.1.1. Tissues.

2.2.1.2. Tubing and devices that are certified as not having been contaminated with blood and infectious body fluids.

2.2.1.3. Other examples Non-medical waste includes**:** paper, boxes, packaging materials, bottles, plastic containers, hand towels, tissues, and similar materials that are not contaminated with body fluids.

2.3. Liquid Medical Waste

2.3.1. Blood, blood products and infectious body fluids in a free flowing state

2.3.2. Body fluids that are considered as infectious are:

2.3.2.1. Anybody fluid with visible blood

2.4. Sharp waste

2.4.1. All sharp disposable products such as

2.4.1.1. Needles

2.4.1.2. L.A. Cartridges

2.4.1.3. Metal wires

2.4.1.4. Burs

3. Procedures

3.1. General Guidelines

3.1.1. Waste management is correct and safe – segregation, transportation and disposal of General Waste, medical waste throughout the clinic.

3.1.2. General Waste shall be collected in Black waste bin liners and disposed of into the supplied outside skip.

3.1.3. Medical Waste shall be collected in Yellow Bio hazard bags.

3.1.4. Segregation of Waste must be at the time of generation according to color code.

3.1.5. When medical waste and general solid waste are mixed together, we are not permitted to separate them, once combined; the entire contents are considered medical waste.

3.2. Collection

3.2.1. Wastes shall be collected in a lined reusable container.

3.2.2. Once the box or container reach 2/3, the bag lining it must be sealed and disposed in the large container and new bag must be replaced.

3.2.3. The Bags must be appropriately placed in the Medical Waste Room.

3.3. Storage

3.3.1. Waste must be stored in a separate area away from clinical and patient's care areas.

3.3.2. Waste mustn't be stored at the clinic more than 24 hours.

3.3.3. Storage area must be easy to clean, with smooth liners, good ventilation and lightening.

3.4. Transportation

3.4.1. From the consultation to medical waste room

3.4.1.1. Waste from the clinics must be transported to waste room once the medical waste bin is 3/4 full.

3.4.1.2. Waste mustn't contain liquid.

3.4.1.3. By moving trolleys to Waste room by Housekeeping staff.

3.4.1.4. Medical waste vehicle transports medical waste to the incinerator on every Wednesday as per the agreement.

3.4.2. Precautions must be done to prevent spills.

3.5. Responsibilities

3.5.1. Infection control Nurse (Dental Assistant) is the designated RAKCODS staff responsible:

3.5.1.1. To provide training for housekeeping staff on the removal of General Waste and medical waste.

3.5.1.2. To provide an adequate supply of safety equipment and disposable garments in accordance with the infection control guidelines.

3.5.1.3. To provide cleaning materials.

3.5.2. Infection control Nurse (Dental Assistant) are responsible for:

3.5.2.1. Ensuring the correct procedure is followed by the housekeepers at all times.

3.5.2.2. Reporting any malfunctions of the medical waste storage room.

3.5.2.3. Availability of cleaning materials, equipment and safety garments.

3.5.2.4. Reporting any unusual situations to the clinic manager immediately.

3.5.2.5. Ensuring the segregation of waste at the point origin.

3.5.2.6. Housekeepers are responsible for collection and disposal of General Waste and medical waste following the approved procedures.

3.6. Housekeeping staff are responsible for using personal protective equipment like apron, gloves etc. before handling any type of waste.

3.7. Disposal of Medical Waste:

3.7.1. Medical waste shall always be sealed and labeled before being transported
out of the area.

3.7.2. Always wear safety garments as required along with disposable gloves and apron.

3.7.3. Start collecting and transporting medical waste bags from the clinic.

3.7.4. Transport medical waste bags to the outside medical waste storage room.

3.7.5. Never overload medical trolleys.

3.7.6. Medical waste trolley lid covers should be securely sealed when removing medical waste.

3.7.7. Never run with the medical waste trolleys.

3.7.8. Do not park the bio-hazardous waste collection trolleys in front of entrances, fire extinguishers, fire alarm and emergency exits.

3.7.9. Waste transporting trolleys should be cleaned and disinfected daily after use.

3.7.10. Any maintenance defects should be reported to the Infection and Prevention Control Team immediately.

3.7.11. When the task is completed remove apron and gloves, wash hands with germicidal hand-soap.

3.8. Disposal of General Waste:

3.8.1. Put on disposable gloves and apron.

3.8.2. Start collecting the waste from the clinic area in Housekeeping trolley.

3.8.3. Never over load general waster trolleys.

3.8.4. General waste trolley lid covers should be securely sealed for transportation.

3.8.5. Never run with the general waste trolleys.

3.8.6. Do not park the general waste collection trolleys in front of entrances, fire extinguishers, fire alarms and emergency exits.

3.8.7. Empty the general waste into the contractor supplied skip.

3.8.8. Clean and disinfect waste trolley daily after use.

3.8.9. Any maintenance defects should be reported to the housekeeping supervisors immediately.

3.8.10. When task completed remove apron and gloves and wash hands with antimicrobial hand-soap.

4. References

4.1. American Dental Association**.** ADA practical guide to effective infection prevention and control. 5th ed. Chicago: American Dental Association; 2022.

4.2. Centers for Disease Control and Prevention (CDC). Regulated medical waste [Internet]. *Infection Control*; 3 May 2024. Available from: https://www.cdc.gov/infection-control/hcp/environmental-control/regulated-medical-waste.html.

4.3. Dubai Healthcare Authority. DHCR HSE waste policy, procedure & guideline [Internet]. 2020. Available from: https://www.dhcc.ae/gallery/DHCR%20Waste%20Guideline.pdf.

4.4. Pankhurst CL, Coulter WA. Basic guide to infection prevention and control in dentistry. 2nd ed. Chichester: John Wiley & Sons; 2017.

5. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Hospital Safety**	**Prepared by:** **Dr. Aqsa Khan** **Infection Control-in-Charge**
Title:	**Water Quality Testing**	
Policy Number:	**HS.13**	**Reviewed by:** **Dr. Riham Abdelraouf** **Assistant Professor**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

The purpose of this policy is to establish standard operating procedures for the proper management of water in dental clinics. Water source disinfection, waterlines flushing and /or shocking and monitoring of biofilm present in dental unit water lines are the mandatory prerequisite for improved water quality.

2. Policy Statement

This policy is established to ensure that quality water is used in dental clinics to protect patient health through disease control measures.

3. Procedures

3.1. Water source

Water plant is to be supplied with municipality approved membrane cleaning disinfectant which is a solution of sodium chloride and hydrogen peroxide.

3.2. Water lines

Biofilm formation in the water lines is controlled by:

3.2.1. As per manufacturer's instructions for Belmont Clesta eII and eIII dental chair, waterlines are to be flushed daily for 4o seconds at start and end of

clinics and between patients of all water lines at the same time (Handpieces turbine and air motors, scalers, triple syringe).

3.2.2. In case a dental unit with water bottle system is used, manufacturer's instructions are to be followed. These waterlines require shocking with 6% hydrogen peroxide in addition to regular flushing.

3.2.3. Water in tubing is flowed at high flow rate to prevent biofilm initiation.

3.2.4. Quarterly tubing inspection and maintenance to be done by the biomedical engineer. Tubing is to be changed yearly.

3.3. Water quality testing

3.3.1. Water quality testing will be done monthly. Samples will be taken from handpiece line and cuspidor line from 6 different student dental units each month to ensure every unit is tested at least once annually. All interns chair will be tested monthly (See Appendix HS.13-1)

3.3.2. Public water standards require <500 bacterial colony forming units (CFU)/ml of total bacteria count (TBC) of heterotrophic in non-potable water and <200 CFU/mL in potable water, according to MOHAP/DHA.

3.3.3. Regular testing for detection of Legionella bacteria is mandatory.

3.3.4. In case test reports show non-potable water having TBC of 500 CFU/ml or higher, main water supply must be checked. Consult with municipality, consider inserting additional filters and maintenance of water temperature in summers.

3.3.5. Potable water having TBC of 200 or higher or presence of legionella is detected in the waterlines, flush water lines thoroughly for the recommended 40 seconds and/or shock waterlines with 6% hydrogen peroxide as per the manufacturer's instructions and retest.

3.3.6. Monthly water quality testing report containing the date of test, initials of tester and results test will be provided by FMS department to the IPC department.

3.3.7. Any unit found to be contaminated in report on retest will be treated as per have its waterline tubes replaced and reflushed and / or shocked.

3.3.8. Until the retesting results are not received the unit will remain quarantined.

3.3.9. Water usage during surgical procedures. Sterile saline or water will be used as a coolant/ irrigant.

4. References

4.1. Australian Dental Association. Guidelines for infection prevention and control. 5th ed. 2021.

4.2. Centers for Disease Control and Prevention (CDC). Best practices for dental unit water quality [Internet]. *Dental Infection Prevention and Control*; 23 May 2024. Available from: https://www.cdc.gov/dental-infection-control/hcp/dental-ipc-faqs/best-practices-dental-unit-water-quality.html.

4.3. Dubai Healthcare Authority, Health Policies and Standards Department, Health Regulation Sector. Guidelines for infection control in dentistry [Internet]. 2021. Available from: https://stg.dha.gov.ae:8090/uploads/112021/b26c383e-bd71-4770-a96b-7a938ddb4706.pdf.

5. Tools / Appendices

5.1. Appendix HS.13-1 Water Quality Testing Schedule

Appendix HS.13-1 Water Quality Testing Schedule

RAK MEDICAL & HEALTH SCIENCES UNIVERSITY
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WATER QUALITY TESTING SCHEDULE

MONTH	QUATERLY		BIANNUALLY		QUATERLY	BIANNUALLY
	POTABLE					NON-POTABLE
	INTERNS CLINIC		STUDENTS CLINICS		RAKCODSMC	RAKCODS
	FLOOR AND BLOCK	CHAIR NUMBER	FLOOR AND BLOCK	CHAIR NUMBER	CHAIR NUMBER	
JANUARY	2nd - A	1 to 15	Ground	1 to 6	All chairs in use	Main reservoir and Roof top
FEBRUARY	2nd- B	16 to 22		7 to 12		
MARCH	1st- A	7,10,17		13 to 19		
	1st- B	All 5 chairs				
APRIL	2nd - A	1 to 15	1st	1 to 5	All chairs in use	
MAY	2nd- B	16 to 22		6,8,9,11,12		
JUNE	1st- A	7,10,17		13 to 16 & Endo Microscope Room Chair		
	1st- B	All 5 chairs				
JULY	2nd - A	1 to 15	Ground	1 to 6	All chairs in use	Main reservoir and Roof top
AUGUST	2nd- B	16 to 22		7 to 12		
SEPTEMBER	1st- A	7,10,17		13 to 19		
	1st- B	All 5 chairs				
OCTOBER	2nd - A	1 to 15	1st	1 to 5	All chairs in use	
NOVEMBER	2nd- B	16 to 22		6,8,9,11,12		
DECEMBER	1st- A	7,10,17		13-16 & Endo Microscope Room Chair		
	1st- B	All 5 chairs				

6. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Hospital Safety**	**Prepared by:** **Dr. Aqsa Khan** **Infection Control-in-Charge** **Mr. Muhammad Zahid Khan** **Assistant Manager, Admin**
Title:	**Food Safety**	
Policy Number:	**HS.14**	
Ownership:	**RAKCODS**	**Reviewed by:** **Dr. Riham Abdelraouf** **Assistant Professor**
Effective (Issue) Date:	**Sep 2019**	
Edition Number	**3**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. **Purposes and Scope**
   - **1.1.** Specify the roles and responsibilities for ensuring food safety for each concerned department.
   - **1.2.** Provide clear guidelines to be followed by all food handlers.
   - **1.3.** Make a guideline for reporting and action taken
   - **1.4.** Catering and food retail services in RAKCODS are contracted to external providers. This policy provides guidelines to our management and external food suppliers for preparing and handling food with the required high standard of infection control.
   - **1.5.** This policy does not apply to food brought in by staff for their own consumption. However, all staff must follow staff kitchens/dining room standards**.**
2. **Roles and Responsibilities**
   - **2.1.** Administration Responsibilities
     - **2.1.1.** The administration department holds responsibility for the implementation of this policy.

2.1.2. Manage catering and food retail contracts and other required documents. The contract must mention a clause on proper infection prevention and control implementation.

2.1.3. Monitoring food hygiene issues and concerns about catering contract

2.1.4. Reporting food safety matters to the Infection Prevention and Control (IPC) Committee.

2.1.5. Providing pest control services according to recommended guidelines by the Ministry of Health and Prevention.

2.1.6. Ensuring the caterers implement the guidelines provided.

2.2. Contracted Caterers Responsibilities

2.2.1. Caterers must provide a food license.

2.2.2. Contracted caterers and food retailers are responsible for–systems to ensure food is prepared, transferred, stored, and handled following best practice food safety standards provided in this policy.

2.2.3. Ensure clear production and expiry date on all food items.

2.2.4. Provide safety training and instructions to their employees from within the standards provided in this policy.

2.2.5. Ensure high standards of environmental cleaning are followed as per policy.

2.2.6. Maintain appliance and room temperature, humidity, cleaning and staff fitness records.

2.2.7. If an employee is sick with an infectious disease, they should not be allowed to work in the kitchens, and the caterer must bring in an appropriate replacement.

2.2.8. Ensure that any deficiencies that lead to compromise on infection control standards are reported to RAKCODS administration in a timely manner, e.g. Pests control related issues.

2.2.9. Inform RAKCODS administration of any recurring food complaints or allegations of food poisoning.

2.3. Infection Prevention and Control Department Responsibilities

2.3.1. Carry out food safety audits as required and provide their finding and recommendations to the caterers and the administration.

2.3.2. Provide IPC food safety reports to leadership and feedback to the catering company through the Facility Management Services (FMS) team.

2.3.3. Handle any food poisoning complaints arising from food and drinks.

3. Standards

3.1. Infection Prevention Precautions

3.1.1. Hand hygiene must be performed whenever handling food.

3.1.2. Avoid touching face and hair

3.1.3. Hand hygiene and Personal Protective Equipment (PPE) supplies must be available in the kitchen.

3.1.4. Protective clothing including plastic apron, caps, mask and gloves should be used when handling food.

3.1.5. Food must be prepared and served under high standards of infection control.

3.2. Food Transfer

3.2.1. Hand hygiene and proper PPE must be used when transferring food

3.2.2. Food must be transferred in closed containers and through the storage elevator. Food trolleys used to transfer food must be regularly cleaned and stored in safe place, away from source of contamination.

3.3. Food Storage

3.3.1. Food must be stored in an appropriate area and must be covered with lidded containers and kept away from sources of contamination.

3.3.2. All food must be within expiry date. All expired food must be immediately disposed.

3.3.3. Refrigerators must be at 5ºC or below. Freezer should be at -18ºC or below.

3.3.4. Dry goods must be stored in cupboards or storage containers. Storage containers must be cleaned routinely. Manufacturer's guidelines to be followed.

3.3.5. Scheduled cleaning of storage areas and devices must be done.

3.4. Food Services

3.4.1. Proper hand hygiene and PPE must be worn during cooking and serving food.

3.4.2. All food should be immediately consumed and if not consumed immediately must be stored covered in the refrigerator, Food should be reheated only once.

3.4.3. Left-over food or waste left on tables must be immediately disposed of.

3.4.4. No food utensils must be left open. All food utensils must be cleaned after each use with an appropriate dishwasher.

3.5. Food Disposal

3.5.1. All cooked food must be disposed of daily.

3.5.2. All uncooked food must be disposed of on the expiry date.

3.6. Environmental Cleaning

3.6.1. General cleaning methods mentioned in the environmental policy must be followed

3.6.2. Daily and scheduled cleaning must be set and checklists made.

3.6.3. All cleaning items must be stored in a separate area.

3.6.4. Proper mixing of detergent as per manufacturer's instructions must be followed.

3.7. Waste Management

3.7.1. All food waste must be disposed in general waste which should be sealed before being carried for disposal.

3.7.2. Once the garbage is 3/4 full, it should be discarded.

3.7.3. Garbage should be sealed while wearing PPE.

3.7.4. Leakages must be checked before the transfer of garbage.

3.7.5. Any leakage found should be controlled before transfer.

3.7.6. Garbage bins must be cleaned inside out.

3.7.7. Hand hygiene policy must be strictly followed after waste disposal.

4. Related RAKCODS Policies

4.1. Hand Hygiene Policy

4.2. Standard Precaution Policy

4.3. Environmental Cleaning Policy

4.4. Outbreak Preparedness Policy

5. References

5.1. Centers for Disease Control and Prevention. About four steps to food safety [Internet]. Food Safety, CDC; 2024 Apr 29. Available from: www.cdc.gov/food-safety/prevention/index.html

5.2. Dubai Healthcare Authority. DHCR HSE food safety procedure [Internet]. 2018. Available from: dhcc.ae/gallery/DHCR%20HSE%20Food%20Safety%20Policy.pdf

5.3. The United Arab Emirates' Government portal. Food safety and health tips [Internet]. 2021. Available from: u.ae/en/information-and-services/health-and-fitness/food-safety-and-health-tip

6. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2.1	25th Mar 2025	2. Roles and Responsibilities 2.2. Contracted Caterers Responsibilities 2.2.2. Contracted caterers and food retailers are responsible to ensure that they have systems to ensure food is prepared, transferred, stored and handled following best practice food safety standards provided in this policy.	2. Roles and Responsibilities 2.2. Contracted Caterers Responsibilities 2.2.2. Contracted caterers and food retailers are responsible for systems to ensure food is prepared, transferred, stored, and handled following best practice food safety standards provided in this policy.
2.1	25th Mar 2025		-New addition- 2.2.3. Ensure clear production

Edition Number	Review Date	Description of Change	
		Current	**Revised**
			and expiry date on all food items.
2.1	25th Mar 2025	2.2.6. Maintain appliance and room temperature, humidity, cleaning and staff fitness records.	2.2.6. Maintain appliance and room temperature, humidity, cleaning and staff fitness records.
2.1	25th Mar 2025		-New addition- 2.3.2. Provide IPC food safety reports to leadership and feedback to the catering company through the Facility Management Services (FMS) team
2.1	25th Mar 2025	2.3.2. Handle any food poisoning complaints arising from food and drinks presented by staff or students.	**2.3.3.** Handle any food poisoning complaints arising from food and drinks.
2.1	25th Mar 2025		**3.1.2.** Avoid touching face and hair
2.1	25th Mar 2025	3.1.3 Hand hygiene and supplies must be provided available in the kitchen.	3.1.3. Hand hygiene and Personal Protective Equipment (PPE) supplies must be available in the kitchen.
2.1	25th Mar 2025	3.1.5. Food must be prepared high standards of infection control.	3.1.4. Food must be prepared and served under high standards of infection control.
2.1	30th Oct 2025	2.3.1 Carry out food safety audits once a month or as required and provide their finding and recommendations to the caterers and the administration.	2.3.1 Carry out food safety audits as required and provide their finding and recommendations to the caterers and the administration.

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
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Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

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Policy Type:	**Hospital Safety**	**Prepared by:** **Dr. Aqsa Khan** **Infection Control-in-Charge**
Title:	**Outbreak Preparedness**	
Policy Number:	**HS.15**	**Reviewed by:** **Dr. Riham Abdelraouf** **Assistant Professor**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

To provide a preparedness plan for identifying, managing, reporting, and communicating an outbreak to all dental healthcare workers (DHCW), other non-clinical staff, patients and visitors in RAKCODS. This plan will depend on the extent to which the infectious disease affects the community and the guidelines provided by the UAE regulatory organizations like the Ministry of Health & Prevention (MOHAP).

2. Policy Statement

This policy provides a list of comprehensive, preplanned activities designed for the management of potential outbreaks of communicable diseases within the RAKCODS. This preparedness policy will serve as a baseline framework for the management of possible epidemics and pandemics.

3. Definitions

Outbreak: An outbreak of infection occurs when multiple individuals become infected with the same organism within a healthcare setting.

Triage: the process of sorting and prioritizing patients based on the urgency of their needs

4. Procedures

4.1. Identification of resources – Resources include disease summary guidelines from UAE regulatory authorities and other organizations like the Centers for Disease Control (CDC) and the World Health Organization (WHO).

4.2. Task force development

4.2.1. Rapid response team

This team will be made up of IPC committee members who will be directly responsible for all outbreak-related issues.

4.2.2. Triage team

Individuals who will be responsible for screening all people entering the organization.

4.2.3. Contact tracing person(s)

Person(s) responsible for investigating cases. Through contact tracing, they will identify close contacts.

4.2.4. Designated person for communication and record keeping A person will be designated and be responsible for all communication with DHCW and other staff, including positive cases and close contacts. This person will keep a record and report these cases to the IPC committee.

4.2.5. Communication with regulatory authorities and

A designated person from the HR office, usually the HR manager will be responsible for communicating with the UAE regulatory authorities to comprehend the updated guidelines and regulations as applicable.

4.3. Education and training - Target audience identification and training General education and training for all employees and students and specific education and training session(s) will be provided for the rapid response team, triage, and initial nursing assessment. Simulation exercises and drills, if required, will be planned accordingly.

4.4. Capacity

4.4.1. Operational clinics designation

Clinics where all procedures will be carried out will be allocated. The ground-floor clinics will be utilized to minimize the spread of infection throughout the organization.

4.4.2. Isolation rooms designation

The recovery room on the ground floor will be utilized as the isolation room for cases identified in the organization until their transfer to the hospital is arranged.

4.5. Supply and inventory

Budget allocation, procurement, and management of supplies like hand hygiene products, personal protective equipment, and any other items will be done in collaboration with the leadership, procurement committee, and nursing department.

4.6. Rapid identification of cases

4.6.1. All persons entering RAKCODS will be triaged for early identification and separation of suspected and confirmed cases in order to prevent transmission of the disease in the facility.

4.6.2. Assessment of patients- Initial Nursing Assessment (INA) will assess all patients. Suspected or confirmed cases will be reported to the IPC response team immediately. IPC team will confirm the case as per the guidelines provided by the UAE regulatory authorities. Case(s) will be handled as per MOHAP guidelines.

4.7. Management of confirmed and suspected cases

4.7.1. Confirmed cases- Isolation of confirmed cases will be as per the guidelines provided and referred to the health and prevention department in Federal hospitals.

4.7.2. Close contacts- In case a employee or student is potentially exposed, contact tracing will be done by the IPC response team. The close contacts quarantine process will be followed as per guidelines.

4.8. Management of DHCW with special considerations

4.8.1. DHCW with any co-morbidity, pregnancy or those who are immuno-compromised will be reported to the IPC department by the HR department for special consideration due to their medical status.

4.9. Scope of services provided

4.9.1. Provision of dental care - Treatments, elective and/or urgent will be based on the extent of the outbreak, the spread of it through the community, and the guidelines provided.

4.9.1.1. All treatments will be performed while adhering to the standard and transmission-based precautions.

4.9.2. Cafeteria services

The provision of services during an outbreak depends on the type and mode of transmission.

4.10. Specimen sample collection

If applicable, depending on the type of sample, doctors or nurses will be delegated the task of sample collection. The IPC committee will arrange sample testing by an external laboratory. Test reports will be provided to case-handling doctors by the committee via email.

4.11. Environmental cleaning - Following the dismissal of suspected or confirmed cases, thorough cleaning and disinfection protocols will be followed.

4.12. Surveillance, reporting, and communication

4.12.1. Infection rates monitoring

Infection rate monitoring within the organization will be carried out as required. A focal person will be nominated by the committee and will be responsible for identifying and receiving information regarding cases. This person will provide daily or weekly reports to the committee.

4.12.2. Reporting cases within the organization and to regulatory authorities A person will be nominated by the leadership responsible for communicating and reporting the infection rate to the UAE regulatory authorities.

4.12.3. Telehealth

If the patients' visits to the organization are temporarily halted, they will receive consultation through calls.

4.13. Vaccination strategy

If applicable, vaccination of employees and students will be arranged.

4.14. Assess preparedness plan

4.14.1. Strategy to evaluate plan through audits

The plan will be assessed through feedback and surveys. These will be utilized to improve the plan further.

The current outbreak policy and practices will be reviewed on a regular basis, in collaboration with partners and after every outbreak enhancement are implemented as required.

4.15. Regular update

Outbreaks are dynamic in nature and guidelines will be regularly updated and distributed throughout the organization.

5. References

5.1. Centers for Disease Control and Prevention (CDC). About outbreak investigations in healthcare settings [Internet]. *Healthcare-Associated Infections (HAIs)*; 9 May 2024. Available from: https://www.cdc.gov/healthcare-associated-infections/about/outbreak-investigations-in-healthcare.html.

5.2. Agency for Healthcare Research and Quality (AHRQ). Incorporating infection prevention and control into an emergency preparedness plan [Internet]. 2022. Available from: https://www.ahrq.gov/nursing-home/materials/prevention/emergency-preparedness-plans.html.

6. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2.1	15th Mar 2025	1. Purpose and Scope- To provide a preparedness plan for identifying, managing, reporting, and communicating an outbreak to all staff and students in RAKCODS. This	1. Purpose and Scope- To provide a preparedness plan for identifying, managing, reporting, and communicating an outbreak to all dental healthcare workers (DHCW), other non-clinical staff, patients and

Edition Number	Review Date	Description of Change	
		Current	**Revised**
		plan will depend on the extent to which the infectious disease affects the community and the guidelines provided by the UAE regulatory organizations like the Ministry of Health & Prevention (MOHAP).	visitors in RAKCODS. This plan will depend on the extent to which the infectious disease affects the community and the guidelines provided by the UAE regulatory organizations like the Ministry of Health & Prevention (MOHAP).
2.1	15th Mar 2025	4. Procedures 4.2.4. Designated person for communication and record keeping A person will be designated and be responsible for all communication with students, interns, faculty and staff, including positive cases and close contacts. This person will keep a record and report these cases to the IPC committee.	4. Procedures 4.2.4. Designated person for communication and record keeping- A person will be designated and be responsible for all communication with DHCW and other staff, including positive cases and close contacts. This person will keep a record and report these cases to the IPC committee.
2.1	30th Oct 2025	New addition	1.1. Management of DHCW with special considerations 1.1.1. DHCW with any co-morbidity, pregnancy or those who are immuno-compromised will be reported to the IPC department by the HR department for special consideration due to their medical status.

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Hospital Safety**	**Prepared by:** **Dr. Aqsa Khan** **Infection Control-in-Charge**
Title:	**Work Restriction**	
Policy Number:	**HS.16**	**Reviewed by:** **Mr. Atiq Ur Rehman** **Head, Admin and Marketing**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

To provide clear guidelines for dental healthcare workers (DHCW) of regulations related to when they contract infectious disease.

2. Policy Statement

All DHCW may contract infectious diseases. To maintain safety of patients and other employees, those with infectious disease may be restricted from certain work functions or be excluded from duty.

3. Procedure

At RAKCODS, safety is the highest priority, therefore any DHCW who falls sick must visit their physician. Restriction decision will be made by their physician based on the type of disease, mode of transmission, and period of infectivity. A document clearly stating the diagnosis and restriction period (clear dates of period start and end) must be provided by the physician.

4. References

4.1 Dubai Healthcare Authority, Health Policies and Standards Department, Health Regulation Sector. Guidelines for infection control in dentistry [Internet]. 2021. Available from: https://stg.dha.gov.ae:8090/uploads/112021/b26c383e-bd71-4770-a96b-7a938ddb4706.pdf.

4.2 Centers for Disease Control and Prevention (CDC). Management of potentially infectious exposures and illnesses from the infection control in healthcare personnel: infrastructure and routine practices for occupational infection prevention and control services guideline. 2019.

5. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2.1	15th Mar 2025	1. Purpose and Scope To provide clear guidelines for staff and students of regulations related to when they contract infectious disease	1. Purpose and Scope To provide clear guidelines for dental healthcare workers (DHCW) of regulations related to when they contract infectious disease.
2.1	15th Mar 2025	3. Procedure At RAKCODS, safety is the highest priority, therefore any employee or student who falls sick must visit their physician. Restriction decision will be made by their physician based on the type of disease, mode of transmission, and period of infectivity. A document clearly stating the diagnosis and restriction period (clear dates of period start and end) must be provided by the physician.	3. Procedure At RAKCODS, safety is the highest priority, therefore any DHCW who falls sick must visit their physician. Restriction decision will be made by their physician based on the type of disease, mode of transmission, and period of infectivity. A document clearly stating the diagnosis and restriction period (clear dates of period start and end) must be provided by the physician.

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

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Policy Type:	**Hospital Safety**	**Prepared by:** **Dr. Aqsa Khan** **Infection Control-in-Charge** **Mr. Muhammad Zahid Khan** **Assistant Manager, Admin**
Title:	**Construction, Renovation and Demolition**	
Policy Number:	**HS.17**	**Reviewed by:** **Dr. Riham Abdelraouf** **Assistant Professor**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

To provide Infection Control guidelines that will ensure that all construction, renovation, demolition, installation, and maintenance activities within RAKCODS do not increase the risk of infections or compromise in patient and dental healthcare workers' (DHCW) health.

2. Policy Statement

This policy mandates strict adherence to Infection Prevention and Control (IPC) protocols during any construction work to establish a safe work environment with minimal disruption to healthcare operations.

3. Procedures

3.1. Construction process elements

3.1.1. The IPC committee must be notified by the Facility Management Systems (FMS) team at least 7 days before the onset of any planned construction, renovation, or maintenance work.

3.1.2. Most major constructions, renovations etc. should be carried out during the summer break**.**

3.1.3. The FMS team must ensure that the contracted workers are educated about and follow all the IPC guidelines.

3.1.4. The IPC committee may carry out flash walk through at any time.

3.1.5. Any breaches in IPC protocols must be reported to the committee by FMS team

3.2. Risk assessment

3.2.1. Type of construction project will decide the type of precaution required.

3.2.2. An infection control risk assessment (ICRA) to patients, visitors, and the DHCWs must be done before planning for any major renovation, construction, or demolition project in RAKCODS.

3.2.3. Based on risk assessment, designs of measures to protect patients, healthcare workers, and the public from infections related to construction/renovation must be made and access to the area near the construction site will be based on risk assessment.

3.2.4. Construction workers should be educated about infectious hazards they may encounter during the renovation/construction before the start of a project.

3.2.5. Each risk assessment shall include a review of the following:

3.2.5.1. Location of the project and susceptibility of patients, visitors, and the DHCWs.

3.2.5.2. Planning for air handling and water systems/plumbing.

3.2.5.3. Traffic patterns for patients, healthcare workers, and visitors.

3.2.5.4. Transport and disposal of waste materials.

3.2.6. Education of construction workers on containment of dust within the construction/renovation area.

3.2.7. Documentation of the findings of the risk assessment shall become part of the project file.

3.3. Design of measures to protect patients, healthcare workers, and the public from infections related to construction/renovation.

3.3.1. Barriers will be used to isolate all construction/renovation projects from other areas in the hospitals/ clinics.

3.3.1.1. Minimal dust generation Non-combustible or limited combustible

3.3.1.1.1. Barriers will be provided using fire rated plastic sheeting.

3.3.1.1.2. The portal of entry through the plastic sheeting will have overlapping flaps that are at least 2feet in width.

3.3.1.1.3. Plastic sheeting will extend from the floor to the deck above and will be sealed to prevent dust from escaping from the worksite.

3.3.1.1.4. HEPA filtration will be used as needed.

3.3.1.2. Moderate to heavy dust generation

3.3.1.2.1. Barriers will be dust-proof; smoke-barrier walls with caulked seams.

3.3.1.2.2. Walls will extend from the floor to the deck above.

3.3.1.2.3. Entry ways will have doors with casketed door frames and doors with tight seals when closed.

3.3.1.2.4. Non-combustible or limited combustible plastic barriers will be installed prior to construction and removal of dust barrier walls.

3.4. Ventilation systems

3.4.1. All ventilation systems outside the construction area will be isolated from the construction area.

3.4.2. All windows in the construction area will be sealed and seals checked periodically and repaired as needed.

3.5. Elevator Usage

3.5.1. Elevator usage will be limited to utility elevator

3.5.2. When elevators are used for removal of debris, they must be used at the period of lowest activity by patients and healthcare workers.

3.6. Construction workers

3.6.1. Construction workers must wear protective apparel.

3.6.2. Workers' clothing must be free of loose soil and debris before they leave the construction area.

3.7. Work site cleanliness

3.7.1. The worksite must be swept and mopped daily to remove dust.

3.7.2. Areas adjacent to the construction area must be damp mopped one or more times per day.

3.7.3. Only authorized persons will be allowed to enter the construction zone

3.7.4. When there are alterations in the water distribution system within an area under construction/renovation, no "dead legs" will be created, and any "dead legs" will be removed.

3.7.5. After completion of renovation/construction, all water pipes in the areas of renovation/construction will be adequately flushed.

4. References

4.1. Association for Professionals in Infection Control and Epidemiology (APIC). Infection prevention manual for construction & renovation. Arlington (VA): APIC; 2019.

4.2. Australian Commission on Safety and Quality in Health Care. National Safety and Quality Health Service Standards. 2nd ed. Sydney (NSW): ACSQHC; 2021. Available from: https://www.safetyandquality.gov.au/standards/nsqhs-standards

4.3. Facility Guidelines Institute. FGI facility code: guidelines for design and construction of outpatient facilities. 2026 ed. St. Louis (MO): FGI; 2026. Available from: https://fgiguidelines.org/codes/editions/

4.4. Joint Commission Resources. Planning, design, and construction of health care facilities. 5th ed. Oak Brook (IL): Joint Commission Resources; 2024.

4.5. Centers for Disease Control and Prevention. Guidelines for environmental infection control in health-care facilities: Recommendations of CDC and the Healthcare Infection Control Practices Advisory Committee (HICPAC). Atlanta (GA): CDC; 2003 (Updated July 2019). Available from: https://www.cdc.gov/infection-control/hcp/environmental-control/index.html

5. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2.1	25th Mar 2025	1. Purpose and Scope To provide Infection Control guidelines that will ensure that all construction, renovation, installation and maintenance activities in healthcare and all other floors of RAKCODS are undertaken in a safe and appropriate manner to reduce the risk of infection to patients.	1. Purpose and Scope To provide Infection Control guidelines that will ensure that all construction, renovation, demolition, installation, and maintenance activities within RAKCODS do not increase the risk of infections or compromise in a patient, visitors, and dental healthcare workers' health.
2.1	25th Mar 2025	2. Policy Statements Most major constructions, renovations etc. will be done during summer break. 2.2. Type of construction project will decide the type of precaution required. 2.3. An assessment of risks to patients, students, staff, and the visitors will be done prior to planning for any major renovation, construction or demolition project in RAKCODS. 2.4. Based on risk assessment, designs of measures to protect patients, healthcare workers, and the public from infections related to construction/renovation will be made and access to area near construction	2. Policy Statement This policy mandates strict adherence to Infection Prevention and Control (IPC) protocols during any construction work to establish safe work environment with minimal disruption to healthcare operations. 3. Procedures 3.1.Construction process elements 3.1.1. The IPC committee must be notified by the Facility Management Systems (FMS) team at least 7 days before onset of any planned construction, renovation or maintenance work. 3.1.2. Most major constructions, renovations etc.

Edition Number	Review Date	Description of Change	
		Current	**Revised**
		site will be based on risk assessment. 2.5. Construction workers should be educated about infectious hazards they may encounter during the renovation/construction before start of project.	should be carried out during the summer break**.** 3.1.3. The FMS team must ensure that the contracted workers are educated about and follow all the IPC guidelines. 3.1.4. The IPC committee may carry out flash walk through at any time. 3.1.5. Any breaches in IPC protocols must be reported to the committee by FMS team
2.1	25th Mar 2025	3.1.1. Location of the project and susceptibility of patients, students, staff, visitors.	3.2. Risk assessment 3.2.5.1. Location of the project and susceptibility of patients, visitors, and the DHCWs.
2.1	16th Jan 2025		References updated.

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Hospital Safety**	**Prepared by:** **Dr. Aqsa Khan** **Infection Control-in-Charge**
Title:	**Handling of Extracted Teeth**	
Policy Number:	**HS.18**	**Reviewed by:** **Mr. Atiq Ur Rehman** **Head, Admin and Marketing**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. **Purpose and Scope**

   Extracted teeth are collected and frequently used in dental education settings. The purpose of this policy is to provide guidance on the safe handling and the decontamination process.

2. **Policy Statement**

   Individuals handling extracted teeth for pre-clinical training or clinical assignments must be aware of the potential exposure to blood borne pathogens. Therefore, individuals who collect extracted teeth must sterilize and handle teeth according to standards set by the Center for Disease Control (CDC) and RAKCODS.

3. **Procedures**

   3.1. General Handling - At all times, even after the sterilization protocol, extracted teeth should always be considered as contaminated and should be managed using appropriate PPE (scrubs/lab coat, gloves, masks) during all pre-clinical sessions in the lab/clinic. This procedure is not for teeth with amalgam restorations.

   3.2. Disinfection - Use appropriate PPE. Rinse the teeth in tap water to remove all the visible blood, gross debris, soft tissue attachment, etc. Rinse the container; add a solution of hydrogen peroxide and saline. Put the teeth in it and let them soak for 1 day or until ready for sterilization. In case the solution gets murky, replace it. The container should be marked with a biohazard label.

3.3. Sterilization - Hand over the container to the CSSD personnel for sterilization. CSSD personnel will open the container, drain the solution, and rinse the teeth. They will cover the teeth with wet gauze (to maintain moisture). Put the covered teeth in a labeled pouch (with student name and ID), seal it, and hand it in for autoclaving.

3.4. Storage - Open the pouch and put the teeth in a container of sodium hypochlorite and saline solution to remain hydrated until used in the lab. Store teeth in the solution at all times so that they don't dry out and crack.

3.5. Extracted teeth containing amalgam restorations should not be heat sterilized because of the potential health hazard associated with possible mercury vaporization and exposure.

3.6. Amalgam extracted teeth - Extracted teeth with amalgam are not used in RAKCODS for educational purposes. Any extracted tooth containing amalgam will have amalgam removed from it with hand piece, and discarded in amalgam container provided by the Stericycle Dental Amalgam Service. The tooth should then be discarded in the medical waste.

4. References

4.1. Centers for Disease Control and Prevention (CDC). Best practices for handling extracted teeth [Internet]. *Dental Infection Prevention and Control*; 2024. Available from: https://www.cdc.gov/dental-infection-control/hcp/dental-ipc-faqs/extracted-teeth.html.

4.2. Dubai Health Authority. Guidelines for infection control in dentistry. Version 1. 2021.

5. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

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Policy Type:	**Hospital Safety**	**Prepared by:** **Dr. Md. Sofiqul Islam** **Associate Professor**
Title:	**Amalgam Waste Management**	
Policy Number:	**HS.19**	**Reviewed by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. Purposes and Scopes

1.1 To standardize the disposal process of amalgam waste in dental clinic.

1.2 To provide guidance on safe/proper disposal of amalgam waste.

1.3 To protect the community from associated risks of amalgam waste and prevent amalgam sedimentation in sewage sludge, landfills and the atmosphere.

1.4 This policy applies to all Dental Health Care Providers who handle amalgam used in dental procedures.

2. Policy Statements

2.1 All Dental Health Care Provider (DHCP should be educated and trained on safe disposal of amalgam.

2.2 Amalgam waste shall be disposed safely and shall not be disposed through general/medical waste.

2.3 In RAKCODS amalgam fillings are not done as per list of procedure policy, hence only contact amalgam removed from old fillings come as amalgam waste.

2.4 This work should be done in well-ventilated area in block "B" of 1st & 2nd floor clinic (with window open facility).

2.5 Protective gowns and covers including protective eye wear for the dentist, dental personnel, and the patient should be in place.

2.6 The use of rubber dam, high volume evacuator, extra-oral aerosol suction device and cooling the filling with water and air during removal is mandatory.

2.7 The amalgam filling should be sectioned into chunks and removed in as large pieces as possible using small diameter carbide drill.

2.8 The collected amalgam should transfer to amalgam waste container provided by Stericycle Dental Amalgam Service.

2.9 The container would be taken for disposal annually or as required according to the medical waste management policy.

3. Definitions/ Abbreviations

3.1 DHCP: Dental Health Care Provider

3.2 BMPs: Best Management Practices for Amalgam waste

3.3 Amalgam: it is an alloy that contains mercury, silver, zinc and other materials. It is used in dentistry as a filling material.

3.4 BMPs: practices carried out to assist dental clinics to reduce the amount of contaminants (such as mercury and silver) discharged to the environment, to comply with regulations, and to improve overall waste management operation

3.5 Contact Amalgam: is the amount of amalgam that has been in contact with a patient such as the amalgam found in the trap/filter, extracted tooth contains amalgam and amalgam sludge.

3.6 Non-contact Amalgam: it is the leftover amalgam after dental procedure. Such as:

3.6.1. Unused capsules

3.6.2. Broken/ expired capsules

3.6.3. Excess amalgam not used during restoration procedure

4. Procedures and Responsibilities

4.1	Educate all DHCP on safe amalgam disposal	Clinic management
4.2	Collect contact amalgam in a special container labeled with hazardous waste (amalgam waste)	Dental Assistant / DHCP
4.3	Transport amalgam containers to disposal room safely when they are ¾ filled and label the container of the date and type of the amalgam.	Dental Assistant
4.4	Maintenance of records includes: Disposal records the Amalgam Container shall be separated and identified till final disposal from the center	Dental Assistant / DHCP

5. References

5.1 International Organization for Standardization. Dentistry — Pre-capsulated dental amalgam. International Organization for Standardization ISO. Document number: 20749:2017 Available from: https://www.iso.org/standard/68977.html

5.2 International Organization for Standardization. *Dentistry — Vocabulary.* ISO 1942:2020. Geneva: ISO; 2020. Available from: https://www.iso.org/standard/72249.html

5.3 Australian Dental Association (ADA) Australia. *Policy Statement 6.11: Dental Amalgam Waste Management and Guidelines for Dental Mercury Hygiene* [Internet]. ADA Australia; 2023 [cited 2025 Mar]. Available from: https://ada.org.au/policy-statement-6-11-dental-amalgam-waste-management (Accessed March 2025).

6. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised
2	25th Mar 2025		References updated

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Hospital Safety**	**Prepared by:** **Dr. Krishna Chytanya Nallan** **Assistant Professor** **Mr. Thomas Puthuppallil Joseph** **Radiology Technician**
Title:	**Radiation Safety**	
Policy Number:	**HS.20**	
Ownership:	**RAKCODS**	**Reviewed by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Effective (Issue) Date:	**Sep 2019**	
Edition Number	**3**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. Introduction

1.1 Any organization having radiation producing equipment bears the moral responsibility to ensure that it follows all the universal safety regulations that are in accordance with the rules set up by the official government bodies and are suitable to the organizational set up.

1.2 This program aims to provide a definitive reference for the various policies, procedures and general information concerning the safe use of radiation producing equipment within the building.

2. Radiation Protection

2.1 Radiation protection is broadly classified into two sections:

2.1.1 Protection of those individuals (patients) undergoing medical exposure

2.1.2 Protection of staff, radiation workers and general public

2.2 The basic principles are given by the following two guidelines

2.2.1 ALARA – As low as reasonably achievable

2.2.2 Justification, Optimization and Limitation (International Commission on Radiological Protection – ICRP)

These guidelines are further elaborated in the consequent sections.

3. Definitions

3.1 ***Referrer***: A person who refers the patients for medical exposure with regards to the medical history.

3.2 ***Operator***: Any person who carries out the said procedure practically for e.g. technicians who carry out X-ray (intra oral, Panoramic and Cephalogram)

3.3 ***Employer***: A person who is employing the practitioners and operators for the purpose of medical imaging in hospital services.

3.4 ***AMC***: Agent from manufacturing company

4. Regulations

4.1 To establish written policies and operating procedures framework under which the professionals can work. This includes:

4.1.1 The patients are identified at the Radiology Centre using minimum 2 identifiers and they are the **Patient's full name and Date of Birth.**

4.1.2 All operators are duly qualified and licensed by MOH.

4.2 Duties and responsibilities of RPO, dentist, nurse and radiographer

4.2.1 The operator must comply with the procedure protocols of RAKCODS related to his /her scope of practice. For a dental hospital or dental radiology, the main regulatory reference is FANR-REG-24 – Basic Safety Standards for Facilities and Activities Involving Ionizing Radiation Other Than in Nuclear Facilities, supported by FANR-RG-007 – Radiation Safety.

The responsibilities below are organized for inclusion in a hospital's Radiation Protection Programme (RPP).

4.2.1. **The Radiation Protection Officer (RPO)** is responsible for overseeing the implementation of the hospital's Radiation Protection Programme and ensuring compliance with FANR regulations, licence conditions, and applicable radiation safety requirements. The RPO supervises radiation safety practices in dental and diagnostic radiology departments, ensuring that occupational workers receive appropriate initial and refresher training and that personal dosimeters are properly distributed, used, collected, and

monitored. Responsibilities include reviewing occupational exposure reports, investigating abnormal radiation doses, conducting regular radiation safety inspections, and ensuring controlled and supervised areas are appropriately designated. The RPO also verifies the availability and proper use of radiation protective equipment, including lead aprons and thyroid collars, and ensures that radiation warning signs and safety notices are displayed. Additionally, the RPO monitors radiation equipment quality assurance and safety testing while maintaining accurate radiation protection documentation and records to ensure continuous regulatory compliance and a safe working environment. **Report radiation incidents** and other reportable events to the licensee and FANR, as applicable. Recommend corrective actions and stop unsafe work when necessary, within delegated authority.

4.2.2. **Dentist**. The dentist is responsible for ensuring that all dental radiographic examinations are clinically justified and performed safely in compliance with FANR requirements. Ensure correct patient identification, proper positioning, appropriate exposure parameters, and the use of necessary radiation protection measures. Confirm pregnancy status when relevant and avoid unnecessary repeat radiographs. Review radiographic images for diagnostic quality and ensure equipment is operated only by trained and authorized personnel. Report equipment malfunctions, accidental exposures, and radiation incidents to the RPO while following departmental radiation safety procedures.

4.2.3. **Nurse**. The nurse must follow radiation protection procedures when assisting with radiographic examinations, including patient identification, preparation, and positioning. Follow the dentist's instructions and departmental radiation safety protocols. Avoid unnecessary presence in the X-ray room during exposure and, when required, maintain maximum distance and use appropriate

protective equipment. Wear and properly use a personal dosimeter when designated as an occupationally exposed worker, ensuring it is never shared. Assist with pregnancy screening when assigned and ensure patients are safely supported while minimizing radiation exposure. Report incidents, equipment malfunctions, and unsafe practices to the RPO, and attend mandatory radiation safety training and refresher courses.

4.2.4. **Radiographer.** The radiographer is responsible for the safe operation of diagnostic radiology equipment and optimization of radiation exposure in accordance with ALARA principles. Verify patient identity, radiographic requests, and ensure examinations are justified and authorized. Select appropriate exposure factors based on patient size and examination requirements, ensuring correct positioning and collimation to avoid unnecessary repeat exposures. Ensure the X-ray room is adequately shielded, warning indicators are functional, doors are closed during exposure, and remain behind the protective barrier. Use personal dosimeters correctly and ensure appropriate radiation protection for patients and other individuals. Conduct routine equipment checks, report defects, participate in quality assurance and quality control programmes, and maintain required exposure records. Promptly report radiation incidents and abnormal exposures to the RPO and attend mandatory radiation protection training and competency assessments.

4.3 Justification of Individual Medical Exposures

4.3.1 It deals with the justification and authorization of individual medical exposures

4.3.2 Proper authorization for the medical exposure is obligatory. This can be done by the said referrer who may also be a qualified health professional, he requisition should include a brief clinical history with the signature/ stamp of the referrer this can be identified through the electronic request as well. The referrer should also supply any relevant previous study that has been done. The requisition is an important legal document and is preserved.

4.3.3 Following the basic principle of radiation protection, it is important that the referrer is well aware of the radiation hazards and that he/ she should consider the optimal number of views and the optimal protection for the particular condition.

4.4 Optimization

4.4.1 The process of optimization requires a fair amount of professional competence and skills. Besides the employer provided guidelines, the healthcare professionals and operators are responsible to optimize the exposure Patient identification and appropriate markers, collimation and exposure factors are to be set to the optimal levels so as to avoid repeats by the operator. This involves a chain of checkpoints which are regularly evaluated so that the entire chain functions optimally with no breakdowns. The following are the important checkpoints:

4.4.1.1 Regular equipment servicing, calibration and maintenance including periodic quality assessment and testing by the agent from manufacturing company or contracted company.

4.4.1.2 Proper and accurate patient identification and numbering by the operator.

4.4.1.2.1 The patient identification procedure must specify how a patient has been identified before exposure. It should be both active and positive, 2 patient identifiers to be verified which includes patient's full name and date of birth.

4.4.1.2.2 The patient should be identified by the operator carrying out the exposure. This person is responsible for the correct patient identification.

4.4.1.3 Use of immobilization devices to maintain patient positioning.

4.4.1.4 Periodic checking of the Digital Radiography (DR) machine for cleanliness and proper calibration and function.

4.4.2 Adequate shielding and collimation should be used by the technician. The technician should ensure that exposure to the testes and ovaries are avoided by shielding. The eyes and neck should be kept away from the primary beam if

possible and alternative projections may be done. The tube should never point directly to the console booth.

4.4.3 The doses are kept as low as possible by using adequate filtration and collimation. Special care is taken in imaging methods including low doses, non-grid techniques with proper shielding by the operator.

4.4.4 These are some dose saving techniques:

4.4.4.1 Use of smallest possible field size and field collimation.

4.4.4.2 Collimate to exclude radiosensitive organs (gonads, breasts, eyes and others). Dose to the ovary can be halved and that to the testes can be reduced by a factor of 20 by the operator.

4.4.4.3 Position the patient carefully and use compression where possible.

4.5 Head of Administration:

4.5.1 Expert advice is always sought from the Biomedical Engineer. This is especially true in cases of introduction of new equipment.

4.5.2 Head of Administration will address issues with regards to the equipment and the periodic safety and quality assessment of all this equipment by the contracting company. This responsibility will be taken by the Head of Administration of the Clinic.

4.5.3 Prior examination of all equipment is done at installation and in relation to the engineering controls, design and safety features by the contracting company.

4.5.4 Periodic testing of all engineering controls including the power mains to the protective devices should be performed by the contracting company.

4.5.5 The equipment inventory must be updated at all times by the Radiographer and it should contain all the specifications of the equipment. It is made available on requests, to employers and officials acting on behalf of the appropriate authority, normal inspectors appointed by the Ministry of Health (MOH)/ Federal Authority for Nuclear Regulation (FANR).

4.6 Training:

4.6.1 Clinic Manager should ensure that any operator or practitioner is prohibited to carry out a medical exposure unless they are adequately trained for the purpose.

They should be licensed by the Ministry of Health (MOH). The licenses of all individuals must be renewed annually or when required.

4.6.2 Training will be provided to all staff of the clinic on radiation safety. The person responsible for the training is the radiology technician and in his/her absence any other Radiology staff member would train. This training shall be conducted either as part of the employee Orientation Program or as a separate training session, in accordance with RAKCODS Radiation Center policies. The HR Department shall ensure that records are properly maintained in each employee's personnel file for documentation and compliance purposes.

4.6.3 Standard Procedure for retraining of an occupationally exposed worker: a worker involved in activities with ionising radiation receives adequate radiation protection training, periodic refresher training and retraining when necessary to maintain the required level of competence.

4.6.4 RAKCODS Radiation Center shall ensure that any worker who experiences an unusual occupational radiation exposure or whose personal dosimeter reading exceeds the established investigation level undergoes appropriate assessment, investigation, and radiation protection retraining, as necessary. The purpose of this procedure is to identify the cause of exposure, address any gaps in knowledge or working practices, reinforce radiation protection principles, and prevent recurrence.

The following procedure shall be implemented:

1. **Identification of Exposed Workers**. The Radiation Protection Officer (RPO) shall identify any worker who has received an unusual occupational radiation exposure or whose personal dosimeter reading has exceeded the established investigation level, based on the available dosimetry records and exposure monitoring results.
2. **Immediate Assessment and Notification** The worker's personal dosimeter readings, previous dose records, and occupational exposure history shall be reviewed to assess the exposure and determine the need for further investigation and corrective action as outlined below.
3. **Investigation of Exposure** The investigation shall include:

- Compliance with established radiation protection procedures and safe working practices. Proper functioning and performance of radiation equipment.
- Adequacy of structural and personal shielding.
- Distance maintained from the radiation source.
- Exposure time and working conditions.
- Appropriate use of personal protective equipment and dosimeters.

4. **Temporary Restriction from Radiation-Related Duties**. Where necessary, the affected worker may be temporarily restricted from performing radiation-related duties until the exposure has been adequately assessed, the necessary corrective measures have been implemented, and appropriate clearance for return to duty has been obtained.
5. **Radiation Protection Refresher Training** The affected worker shall undergo targeted radiation protection refresher training based on the findings of the investigation and any identified deficiencies in knowledge, competency, or working practices. The training shall aim to reinforce safe radiation practices and ensure compliance with the Center's radiation protection requirements.
6. **Competency Assessment** Following completion of the refresher training, the worker shall undergo a competency assessment consisting of a written knowledge test and, where applicable, a practical assessment. The assessment shall verify the worker's understanding of radiation protection principles and ability to demonstrate safe working practices.
7. **Authorization to Resume Radiation-Related Duties** The RPO shall and provide a recommendation regarding the resumption of radiation-related duties. Return to duty shall be considered only after the worker has demonstrated the required competency and fulfilled any applicable medical fitness requirements.

8. **Follow-up and Monitoring** Following the worker's return to radiation-related duties, the RPO shall monitor subsequent personal dosimeter readings and review the effectiveness of the corrective and preventive actions implemented.
9. **Training Assessment and Record Maintenance** The following records shall be maintained: The following records must be maintained as evidence of radiation safety training and competency: training attendance records, syllabi and materials, written knowledge assessment results, and practical competency assessment results, where applicable. Documentation must also include identified deficiencies, corrective actions taken, the RPO's assessment and recommendations, and formal authorization to resume radiation-related duties.
   The HR Department shall maintain the relevant training and assessment records in the worker's personnel file, while the RPO shall ensure that radiation exposure investigation reports, dosimetry records, competency assessments, and related radiation protection documentation are maintained in accordance with the Center's document control and record retention procedures. All records shall be made available for internal review and regulatory inspection, as required.

4.7 Limitation: These regulations are mainly in relation to doses to the staff and the members of the public.

4.7.1 The technicians should ensure that the legal dose limits for the workers and the members of the general public are based on the fact that no deterministic effects are produced and that the probability of the stochastic effects is kept to a minimum.

4.7.2 Any member of the staff who is likely to exceed 30% of the annual dose limit is designated as classified, and their records are to be maintained. They must be monitored by the approved dosimetry services. In practice however, most of our imaging staff members do not exceed this limit.

4.7.2.1 Controlled areas: These are the areas around the source of radiation such as the equipment along with its shielding. The controlled area must have physical boundaries such as an X-ray room with walls designed to protect to the necessary level to prevent any public

exposure. The area is controlled by restricting entry only to the staff and patients with well-marked signs and warnings.

4.7.2.2 Staff should be protected by lead aprons, thyroid shields, lead glasses and other such protective devices with a lead equivalence of 0.25 to 0.50 mm.

4.7.2.3 The local rules include details about lead protection, distance and short exposure times for safety of staff. Local rules are legal document and ignoring them is tantamount to breaking the law. These rules are policed by the Radiographer.

4.7.2.3.1 A radius of at least 2 meters from the source should be free of any individual other than the patient during exposure.

4.7.2.3.2 The operator must make the exposure from behind a protective lead shield.

4.7.2.3.3 Adequate protective devices are to be used during the procedures.

4.7.2.4 The amount of lead equivalent required for protective shielding devices is at least 2 mm in case of protection from the primary beam and about 0.25 – 0.50 mm in case of indirect or scattered radiation.

4.7.2.5 There is a liability which exists on part of the employer and each said employee – Duty of Care. This is in relation to any weaknesses in the policies which need to be altered or protocol and non-compliance must be immediately brought to the notice of the Administration committee. A meeting may be called whenever necessary.

4.7.3 Establishing procedure for radiation protection of female patient, assuring her status pregnancy or breastfeeding is known before any radio-diagnostic procedure- The Radiation Protection Officer (RPO) shall ensure that appropriate radiation protection measures are established, implemented, and maintained at RAKCODS to safeguard female patients who are pregnant or breast-feeding. All relevant procedures shall comply with applicable FANR regulatory requirements and radiation protection guidelines.

4.7.4 Patient Notification and Awareness The RPO ensures that adequate information is made available to patients through prominently displayed notices in reception areas, waiting rooms, changing cubicles, and other appropriate locations within the Center.

These notices usually emphasize the importance of informing the attending medical personnel if a patient is pregnant, suspects pregnancy before undergoing any radiological examination.

All notices and patient information materials shall be provided in languages appropriate to the population served by RAKCODS Radiation Center to facilitate effective communication and understanding.

4.7.5 Pregnancy Assessment The RPO shall ensure that an enquiry into pregnancy history for all relevant female patients before any radiological examination that could result in a significant radiation exposure to the developing embryo or fetus.

The information obtained is considered during the clinical justification and optimization of the proposed examination. If a patient is identified as pregnant or pregnancy is suspected, the proposed examination shall be carefully evaluated to ensure that the expected clinical benefit justifies the potential radiation risk. Appropriate measures shall be taken such as usage of lead shields, lead aprons and thyroid collars to minimize radiation exposure to the embryo or foetus while maintaining the diagnostic or therapeutic quality required for patient care. Only patients on their 2nd trimester of pregnancy are allowed for radiological examination.

4.7.6 Breast-Feeding Screening and Assessment The RPO shall ensure that the breast-feeding status of the patient shall be communicated to the responsible medical practitioner and taken into consideration when evaluating the justification and optimization of the proposed procedure. The patient shall receive appropriate counselling and clear instructions regarding radiation safety measures, including any necessary temporary interruption of breast-feeding. The screening outcome, clinical assessment, patient counselling,

and any instructions provided shall be appropriately recorded in the patient's medical records to ensure continuity of care and traceability.

4.7.7 Protection of the Patients: These regulations deal with the appropriate use of radiation on patients by staff who have been properly trained and the aspects of physical and clinical responsibilities. It outlines the theoretical knowledge known as the core of knowledge that the staff should have. **The equivalent dose to the embryo or fetus is kept as low as reasonably achievable, not exceeding 1 mSv for the remainder of the pregnancy.**

Core of Knowledge:

4.7.7.1 Nature of ionizing radiation and the interactions with the tissues.

4.7.7.2 Genetic and somatic effects and the assessment of their risk.

4.7.8 Equipment for radio diagnosis – Including ancillary equipment such as film, laser printer, CR machine, cassettes, etc. These should be checked periodically under the quality assurance program and a log should be maintained for every fault that occurs and the measures taken to rectify it.

4.7.9 Patient overexposures: Any patient exposed to a dose more than the dose that was intended, the following actions are necessary:

4.7.9.1 The Radiographer and clinic Manager should be informed.

4.7.9.2 Equipment should be temporarily withdrawn from use, until the fault has been identified and rectified completely. The equipment should be reused only after adequate quality assurance testing.

4.7.9.3 Details of malfunction are properly recorded including the circumstances, equipment settings and patient details. Also the name of the operator and the others present at the time.

4.7.9.4 They will then decide on the further action as appropriate to the circumstances. The Administration Committee will decide if the patient needs to be informed about the incident so as to arrange for any dosimetry for future procedures.

4.8 Practical Reduction of those to Staff and Visitors: Most measures dealing with the reduction of patient dose also effectively reduce dose incurred to the staff and others.

4.8.1 Leakage Radiation: In spite of the tube housing and shielding, there is some radiation leakage around the tube. This leakage of radiation should be checked by the manufacturing agent and he should authorize the machine for use.

4.8.2 Scattered Radiation: When rays strike any object there is scatter, the most important source is the patient. The operator should be as far away from the source, protected by an apron.

4.8.3 Reduction of Exposure: This is achieved in the following ways:

4.8.3.1 Distance – Using the Inverse square law, appropriate precautions should be taken. In wards a distance of 2 meters is advisable.

4.8.3.2 Speed and Time – The use of fast recording techniques and short screening times for patients can reduce the dose significantly to the patient and the staff.

4.8.3.3 Shielding – protective barriers and clothing are mandatory. The barriers need to be protective with a lead equivalent of 2 mm. The clothing has lead equivalent of 0.25 – 0.50 mm and is not protective against the primary beam. Aprons should always be draped on a thick rail or a hanger; it should never be folded in order to avoid cracking. All these barriers and clothing for Radiation Protection should be assessed every year by fluoroscopy or whenever new material is purchased. Any defective shielding devices must be replaced.

4.8.4 Warning lights and signs: Warning lights are found on the control panel and the entrance to an X-ray room (controlled area) and are illuminated at times when the tube is energized for exposure. The door of the X-ray, and other rooms using ionizing radiation should have warning lights to show radiation is on in the room at a particular time.

4.8.5 Protection of Public: X-ray rooms are to be shielded properly so as to keep the radiation to the surrounding areas and the general public less than 0.1mSv per week under normal workloads. Protection should be greater where the direct primary beam falls such as the walls, floors and doors and windows. These should have shielding of 2 mm lead equivalent.

4.9 Quality Control and Assurance: It broadly consists of two important aspects; Imaging Quality and Equipment Quality.

4.9.1 Equipment Care and Maintenance: This has to be regularly supervised and executed by the agent from manufacturing company along with the coordinator who is usually the Chief Radiographer.

4.9.1.1 Timely manufacturing company servicing for all equipment for optimal functioning is mandatory.

4.9.1.2 Maintenance of a log for all breakdowns and faults with details about rectification. All equipment is checked properly after any breakdown rectification and the machine is brought back into use only after appropriate quality testing. All the manufacturing company visits should be recorded in detail.

4.9.1.3 Periodic checking of radiation levels and leakage around the source in the controlled areas and the supervised areas. This has to be performed annually and may be performed by an external agency.

4.9.1.4 The equipment calibration is to be done regularly. The tube output kVp are measured annually with the Penetrameter method. Focal spot size and filtration also change with time and are to be checked annually. Field definition and uniformity are also checked at that time. The actual measured kVp must be within +/- 5% of the set value.

4.9.1.5 The contracting company personnel should check the output of the mains and watch for any surges to prevent equipment damage. Extension cords are not to be used without approval from the clinic Manager.

4.9.2 Image quality: The benefits of close quality control are as follows:

4.9.2.1 A reduction in number of repeats.

4.9.2.2 A reduction in the radiation dose to the patient and the public.

4.9.2.3 Improvement in rate of patient flow through the department.

4.9.2.4 Consistency of quality.

4.9.2.5 Standardization of radiographic results and reliability.

4.9.2.6 Standardization of radiological service protocols.

4.9.2.7 An accurate dispatch system for all films (if films are being utilized) and results.

4.9.2.8 A more informed selection for future equipment can be made on the basis of the existing apparatus.

4.9.3 The elements of image quality need to be monitored.

5. <u>Performance Monitoring</u>

Total Number of oral x-ray performed with unnecessary repeat exposure, this will be evaluated after updating of HIMS

6. Establish Procedure for preserving dose records during worker's working life, and until worker is 75 years of age, or for not less than 30 years after termination: RAKCODS Radiation Center maintains occupational radiation exposure records for all relevant radiation workers to ensure proper monitoring, assessment, documentation, and long-term preservation of individual radiation doses. The Radiation Protection Officer (RPO) is responsible for overseeing the occupational dose monitoring programme and ensuring that all relevant records are maintained in accordance with the Center's radiation protection policy and applicable FANR requirements.

6.1. Maintenance of Occupational Radiation Dose Records: Individual radiation exposure records must be established and maintained for all workers involved in occupational exposure to ionizing radiation. The following information must be included in each worker's radiation protection file.

6.1.1. Employment Details and Nature of Work: To Record the employee's date of commencement and termination of employment at RAKCODS Radiation Center. To Document the nature of occupational duties and responsibilities involving exposure to ionizing radiation. To Update the records whenever there is a change in the employee's designation, department, or radiation-related responsibilities.

6.1.2. Occupational Dosimetry and Exposure Monitoring: Record all occupational radiation dose measurements and assessment results. Preserve the original dosimetry data and supporting information used for dose assessment. Ensure that personal thermoluminescent dosimeter (TLD) badges are monitored and assessed every three months. Record

any abnormal dose readings and arrange further assessment or investigation when required. Maintain and archive all dosimetry reports and relevant correspondence.

6.1.3. Records of Abnormal and Accidental Exposures: Maintain separate records of occupational radiation exposure arising from: Emergency radiation exposures. Accidental or unintended occupational exposures. Equipment malfunction or failure resulting in abnormal exposure. Any exposure requiring investigation or additional dose assessment. Document all such events in the relevant incident reports and occupational radiation exposure files in both electronic and physical formats.

6.2. Preservation, Archiving and Confidentiality of Records

6.2.1. Electronic and Physical Record Storage: The electronic records are stored in an authorized, access-controlled digital system with secure backup arrangements with security, accessibility, and long-term preservation. A secure cloud-based backup facility is necessary. The records will be stored physical records in designated, lockable, fire-resistant filing cabinets within the HR Department's record storage facility properly indexed, labelled, and organized for easy retrieval. The completeness and availability of archived records will be checked periodically.

6.2.2. FANR National Dose Registry: All the available data will be maintained and submitted occupational radiation dose information to the FANR National Dose Registry (NDR) in accordance with applicable regulatory requirements. Before submission the clinic manager will verify the accuracy and completeness of individual dose records before submission. Encouraged to use the applicable national unique identification details to ensure correct worker identification.

6.2.3. Confidentiality and Access to Records: It is imperative to treat all occupational radiation dose records as confidential personnel and radiation protection documents and restrict access to only authorized individuals such as Radiation Protection Officer (RPO) and the

individual employee concerned, FANR inspectors and other authorized regulatory representatives.

6.3. Closure and Archiving of Radiation Records

6.3.1. Upon Termination of employment: Upon termination of employment, the final review, documentation, and archiving of the employee's occupational radiation exposure records would be completed and reviewed. All the records and documents would review the employee's complete occupational radiation exposure history during employment at RAKCODS Radiation Center and also would verify the available dosimeter records and cumulative recorded dose. The RPO will calculate or arrange verification of the cumulative occupational dose received during the period of employment at the Center and will prepare an official final occupational radiation dose report. All the documents would properly document Include the relevant dose history and final assessment in the employee's radiation protection file.

6.3.2. Provision of Final Dose Report: Provide the departing employee with a physical or secure electronic copy of the final occupational radiation dose report for personal record-keeping. Document the issuance of the report and retain a corresponding copy in the Center's records.

6.3.3. Archiving of Inactive Personnel Records: A designated archive category entitled Inactive Personnel Radiation Files will ensure the files of the employers who were working with the facility is maintained accordingly. The archived file will have employment details and dates, occupational radiation dosimetry records abnormal exposures, relevant training and protection document.

6.3.4. Retention and Disposal of Records: Management of Occupational Radiation Exposure Records

6.3.4.1. Purpose: To define the mandatory retention and disposal criteria for personnel monitoring and exposure data.

6.3.4.2. RPO Responsibility: The Radiation Protection Officer (RPO) shall maintain all occupational radiation exposure records in a

secure, audited retrieval system for the duration of the regulatory lifecycle.

6.3.4.3. Retention Criteria: The RPO must ensure the record retention system flags based on the later of the following two milestones:

- The year the employee reaches 75 years of age. 30 years from the exact date of employment termination.

6.3.4.4. Enforcement: No record shall be destroyed or modified prior to this calculated date.

7. Procedure for reporting incidents and accidents

7.1. STATEMENT: RAKCODS is committed to maintaining the highest standards of radiation protection and safety. All radiation incidents, unintended exposures, equipment malfunctions and abnormal radiation events must be reported promptly to the Radiation Protection Officer (RPO) No radiation incident shall be concealed, ignored or managed without appropriate documentation and investigation. The RPO shall coordinate the investigation and recommend corrective and preventive actions. The licensee and authorized institutional management shall ensure that all applicable regulatory reporting requirements are fulfilled. All radiation exposures must be justified and optimized in accordance with the ALARA principle (As Low As Reasonably Achievable).

7.2. DEFINITIONS Radiation incident: Any unintended event, error, equipment malfunction or abnormal circumstance that has caused or had the potential to cause unnecessary radiation exposure. **Accidental medical exposure:** An unintended or accidental exposure of a patient during a dental radiological procedure. **Unintended exposure:** Radiation exposure that differs from the exposure intended or prescribed for the patient.

7.3. STEP 1: IMMEDIATE ACTION AND PROTECTION

7.3.1. **The Radiation technician identifying a radiation incident shall immediately:**

1. Stop the procedure as soon as safely possible and ensure that the patient, staff and public are protected from further unnecessary exposure.

2. Inform the Department In-Charge and RPO immediately.
3. Arrange medical assessment of any potentially affected individual when clinically indicated. Preserve the X-ray equipment status, exposure parameters, dosimeter readings, images and other relevant records. Prevent further use of faulty or potentially unsafe equipment until it has been inspected and cleared by an appropriately qualified person.

7.3.2. **STEP 2: INTERNAL INCIDENT REPORTING** The member involved or identifying the incident must complete the RAKCODS Radiation Incident Report Form and submit it to the RPO as soon as possible. The RPO shall ensure that the following information is recorded:

7.3.2.1. The incident report shall include the date, time and location of the incident, patient identification details (where applicable), names and designations of individuals involved, type of equipment and radiological procedure, and a description of the circumstances leading to the incident. It shall document the nature of the unintended exposure, immediate protective measures taken, and available exposure parameters, radiographic images and dosimeter readings. The report shall also include an initial assessment of potential radiation exposure and confirmation that the Department In-Charge and authorized management representative have been notified.

7.3.3. **STEP 3: INVESTIGATION BY THE RPO** The RPO shall conduct an appropriate investigation. The RPO shall investigate the incident by reviewing the sequence of events, interviewing the individuals involved, and examining equipment performance, exposure parameters, radiographic images and relevant clinical records. The investigation shall assess the potential radiation dose, identify the immediate and root causes, and determine any contributing factors related to equipment, procedures, staff training or supervision. The RPO shall document the findings, recommend appropriate corrective and preventive actions, and submit the investigation

report to the Department In-Charge and authorized management for review and follow-up. The investigation shall be proportionate to the nature and potential consequences of the incident.

7.3.4. STEP 4: NOTIFICATION AND REPORTING TO FANR The licensee, through the authorized institutional representative, shall ensure that FANR is notified in accordance with the applicable provisions of FANR-REG-24, as amended. The RPO shall promptly bring any potentially reportable incident to the attention of the licensee and assist in determining the applicable reporting category. The following regulatory reporting categories shall be observed: Radiation incidents shall be reported within the applicable timeframe: immediately, within 24 hours, 7 days or 30 days, depending on the nature and reporting requirements of the incident. Not all dental X-ray errors require immediate or 24-hour external reporting; however, wrong-patient exposures, unintended foetal exposures, repeated exposures and significantly higher-than-intended exposures shall be promptly assessed and investigated. Where the reporting classification is unclear, the RPO shall consult the authorized licensee representative for clarification from FANR. All regulatory notifications and correspondence shall be documented and retained by RAKCODS.

7.3.5. STEP 5: CORRECTIVE AND PREVENTIVE ACTION Following the investigation, the RPO and relevant Department In-Charge shall coordinate appropriate corrective and preventive actions. The RPO, in coordination with the Department In-Charge, shall implement appropriate corrective and preventive measures, including improving clinical and radiographic practices, inspecting and repairing equipment, reviewing exposure protocols, and providing additional staff and student training where required. Equipment shall remain out of service until confirmed safe, while patient identification, authorization and supervision procedures shall be reviewed and strengthened. The effectiveness of implemented actions shall be monitored, and relevant lessons learned shall be communicated to staff

to prevent recurrence. The RPO shall maintain a CAPA record and monitor implementation until all actions are completed and verified.

7.3.6. **STEP 6: DOCUMENTATION AND RECORD KEEPING** The RPO shall ensure that complete records of each radiation incident are maintained in accordance with RAKCODS document control and applicable FANR record-retention requirements. The RPO shall maintain all radiation incident records, including investigation reports, patient and occupational dose assessments, equipment inspection records, radiographic images and exposure parameters. Documentation shall also include root cause analysis, corrective and preventive actions, and staff training and competency records. A final incident closure report shall be prepared and submitted for management review and approval. All records shall be maintained securely, with appropriate confidentiality and access controls.

7.3.7. TRAINING AND AWARENESS RAKCODS shall ensure that all personnel involved in radiological procedures receive appropriate radiation safety training. The training shall cover radiation protection principles, including ALARA, and the safe operation of dental X-ray equipment. Staff shall be trained in patient identification, exposure authorization and prevention of unintended radiation exposure. Training shall also include incident identification, immediate response procedures, internal reporting requirements and the responsibilities of the RPO and clinical personnel. Lessons learned from previous incidents shall be shared to strengthen staff awareness and promote continuous improvement in radiation safety practices. New employees and students shall receive appropriate radiation safety orientation before participating in radiographic procedures.

7.3.8. **MONITORING AND POLICY COMPLIANCE** The RPO shall periodically review radiation incident and near-miss reports to identify recurring trends and areas for improvement. Policy effectiveness shall be monitored through incident investigations, CAPA implementation, equipment maintenance, staff training records and internal radiation safety audits. Significant incidents and audit findings shall be reviewed by

management to ensure appropriate corrective actions and continuous improvement. Failure to comply with this policy shall be addressed through the applicable RAKCODS administrative and institutional procedures.

8. Radiation Incident Investigation Procedure

8.1. Types of Incidents Requiring Investigation: All radiation incidents shall be reported and investigated according to their nature and potential impact. These include unintended patient or pregnancy-related exposures, wrong-patient examinations, repeated exposures and excessive occupational exposure. Equipment malfunction, unauthorized operation and failure of radiation protection measures shall also be investigated.

8.2. Initial Response and Preservation of Evidence: The staff member identifying the incident shall immediately inform the RPO and take necessary steps to prevent further radiation exposure. The RPO shall secure affected equipment and preserve relevant exposure records, radiographic images, maintenance documents and dosimeter readings. Medical assessment shall be arranged for affected individuals where clinically indicated.

8.3. Formation of the Investigation Team: RAKCODS management shall appoint an investigation team according to the seriousness of the incident. The team may include the RPO, Department In-Charge, dentist or radiologist, radiology technician, management representative and qualified expert where necessary. The RPO shall coordinate the investigation and communicate the findings to management.

8.4. Collection of Relevant Information: The investigation team shall collect details regarding the incident date, time, location, equipment, individuals involved and radiographic procedure performed. Exposure parameters, number of exposures, patient positioning and protective measures shall also be reviewed. Relevant dosimeter readings, equipment maintenance records and quality assurance documents shall be examined.

8.5. Establishment of the Incident Timeline: The RPO shall establish a chronological account of the events leading to and following the incident. Information from staff interviews, equipment records and clinical documentation shall be reviewed to

determine how the incident occurred. The sequence of events and immediate actions taken shall be documented in the investigation report.

8.6. Radiation Dose Assessment: The RPO shall assess or estimate the radiation dose received by the affected patient or staff member, with assistance from a qualified expert where necessary. The assessment shall consider exposure parameters, equipment performance, radiographic records and dosimeter readings. The findings and any recommended medical follow-up shall be documented.

8.7. Root Cause Analysis: The RPO and investigation team shall identify the immediate causes, contributing factors and underlying reasons for the incident. The review shall consider equipment performance, staff competency, procedural compliance and clinical supervision. Identified deficiencies shall be documented, with recommendations developed to prevent recurrence.

8.8. Corrective and Preventive Actions (CAPA): The RPO and Department In-Charge shall implement appropriate corrective and preventive measures based on the investigation findings. Actions may include equipment inspection, revision of radiographic procedures, staff retraining and improved patient identification and supervision practices. The RPO shall monitor the effectiveness of these measures and communicate relevant lessons learned.

8.9. Preparation of the Investigation Report: The RPO shall prepare an investigation report detailing the incident, sequence of events, findings, dose assessment and identified causes. The report shall include recommended corrective actions and be submitted to the Department In-Charge and authorized management for review. All reports and related correspondence shall be maintained in institutional records.

8.10. Follow-up and Closure of the Investigation: The RPO shall verify that all corrective and preventive actions have been completed and are effective. Affected equipment shall be inspected and confirmed safe before reuse, and additional staff training shall be provided where necessary. The incident shall be formally closed following documentation of all actions and management approval.

9. References

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9.3 American Dental Association Council on Scientific Affairs. *ADA practical guide to dental radiography and radiation protection.* Chicago (IL): ADA; 2024.

7. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised
2	06th Jan 2026		References updated

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
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RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Hospital Safety**	**Prepared by:** **Dr. Krishna Chytanya Nallan** **Assistant Professor**
Title:	**Quality Assurance in Radiology Centre**	
Policy Number:	**HS.21**	**Reviewed by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

These guidelines are issued to ensure the safety and quality of all resources utilized in the X-ray clinics of RAKCODS.

2. Policy Statement

RAKCODS ensures that the radiology center within the building follows all requirements laid by the local governing body (FANR) of the country.

3. Scope and Procedures

3.1. Scope:

3.1.1. Oral Radiology clinics must follow the guidelines which are recommended in this document in order to maintain X-ray machines and other related accessories in an ultimate working condition and to prevent staff and patients against the risk of exposure to ionizing radiation and the potential risks from radiation exposure.

3.1.2. Medical physics Department issues the approval reports of X-ray machines which were inspected by them.

3.1.3. Oral Radiology Staff should comply with the regulations and instructions of the Medical Physics Department.

3.2. Resources Required:

3.2.1. Dose monitoring badges issued to staff (where applicable).

3.2.2. Quality Assurance testing and monitoring of equipment

3.2.3. The comprehensive maintenance schedule for equipment

3.2.4. Radiographic equipment and the entire armamentarium that is used in all intra and extraoral techniques.

3.2.5. The assistance of concerned Medical Physics staff and equipment in monitoring X-ray machines.

3.3. Procedures:

3.3.1. New Equipment and Working Practices

3.3.1.1. The Radiation Safety Committee (Medical Physics) should be notified in writing of any new x-ray producing equipment planned for installation in the hospital or clinics.

3.3.1.2. New equipment (including replacement tubes) must be tested by the Medical Physics Department before being put into clinical use on patients.

3.3.1.3. The Radiation Safety Committee (Medical Physics) should be notified of any significant change in working practices with regard to ionizing radiation.

3.3.2. Checks and Maintenance of Safety Features

3.3.2.1. Equipment:

3.3.2.1.1. All new equipment must have an acceptance test performed by the Medical Physics department prior to being put into clinical use.

3.3.2.1.2. A quality assurance program designed to minimize patient, personnel, and public risks and maximize the quality of diagnostic information.

3.3.2.1.3. A qualified Medical Physicist at least once per year must carry out a full radiation survey of all X-ray generating machines.

3.3.2.1.4. Quantitative dose measurements for each type of procedure must be made by the Medical Physics department.

3.3.2.1.5. A Medical Physicist must check any equipment having had major repairs or alterations that may affect the radiation output prior to being returned to service.

3.3.2.1.6. After the new equipment is installed, environmental monitoring of the surrounding area will be carried out for at least three months and at intervals thereafter for two years.

3.3.2.1.7. Any malfunction/breakdown of an X-ray machine will be noted in a logbook kept at all times by the machine.

3.3.2.1.8. A technique chart should be posted near each control panel. The technique chart indicates what X-ray machine settings to use for various X-ray examinations.

3.3.2.1.9. The technique chart should include:

3.3.2.1.9.1. The patient's body part and stature (or age, for pediatric patients),

3.3.2.1.9.2. Technique factors (kVp, mA, and seconds) to be utilized.

3.3.2.1.9.3. The type and size of film or film-screen combination.

3.3.2.2. Lead Aprons:

3.3.2.2.1. Visual defects in lead protective clothing must be reported to The Radiation Safety Committee (Medical Physics)

3.3.2.2.2. Lead aprons must never be folded. They must be stored using appropriate wall-mounted units.

3.3.2.2.3. Lead protective clothing should be inspected radiographically every 12 months as required.

3.3.2.2.4. Any lead protective clothing found to be defective must be withdrawn from service and replacements provided.

3.3.2.3. Monitoring devices:

3.3.2.3.1. Monitoring devices will be provided by the Medical Physics.

3.3.2.3.2. Personnel monitoring devices shall be used when they are required.

3.3.2.3.3. Monitoring devices shall be monthly checked by the Medical Physics

3.3.2.3.4. Readings of the monitoring devices shall be provided by the Medical Physics

3.3.2.3.5. The departments of Medical Physics and Diagnostic Radiology will review all radiation protection surveys and quality assurance reports, monitoring devices readings and take appropriate action when necessary.

3.3.2.4. X-ray films / digital imaging quality:

3.3.2.4.1. All (rejected) films / digital images will be kept and reviewed at regular interval

3.3.2.4.2. The Oral Radiologist should analyze the reasons for the rejection and undertake action to prevent their recurrence.

3.3.2.5. Continuous Exposure:

3.3.2.5.1. If the X-ray unit fails to terminate an exposure by normal or automatic means resulting in a continuous exposure, the unit is to be isolated from the mains immediately

3.3.2.5.2. Any fault must be reported immediately to the Radiation Safety Committee (Medical Physics)

3.3.2.5.3. No further exposures should be attempted using the equipment until a service engineer and a medical physicist have checked it.

3.3.2.6. Establish Procedure for transfer of the radiation sources and the equipment only for user

3.3.2.6.1. Initiation of Transfer: The Department Head or authorized management representative shall inform the RPO before any proposed transfer, disposal or relocation of radiation equipment. The RPO will review the proposed activity and identify the applicable institutional and regulatory requirements. No equipment or source shall be released or relocated without the necessary authorization.

3.3.2.6.2. Verification of the Receiving Organization: The RPO shall verify the identity and authorization of the receiving organization before proceeding with the transfer. The RPO shall ensure that the recipient is authorized to possess and use the specific equipment.

3.3.2.6.3. Obtaining Necessary Approvals: The RPO shall coordinate the required regulatory approvals and ensure that the receiving organization holds the appropriate authorization. After FANR approval, the relevant application and supporting documents shall be submitted through the approved process. The transfer shall proceed only after the required written approvals have been obtained.

3.3.2.6.4. Safe Transportation and Physical Handover: The RPO shall ensure that the equipment is properly secured, identified and prepared for safe transportation. Transportation and handover arrangements shall comply with applicable safety requirements, with relevant technical and safety documents provided to the receiving organization. Both parties shall verify the condition and receipt of the item and complete the necessary handover documentation.

3.3.2.6.5. **Updating Inventory and Records:** Following completion of the transfer, the RPO shall update the RAKCODS radiation equipment inventory with the transfer date, recipient details and custody status. Any required updates to regulatory records or licensing information shall also be completed. Copies of approvals, transportation documents and signed handover records shall be retained in the institutional files.

3.3.2.6.6. **Final Verification and Closure:** The RPO shall verify that all required institutional and regulatory approvals have been obtained and that the transfer or relocation has been completed safely. The updated inventory, handover documents and supporting records shall be reviewed for completeness. The transfer process shall be formally closed following verification and approval by the authorized management representative.

4. References

4.1. IAEA. Quality assurance programme for dental radiography and digital imaging. Vienna: International Atomic Energy Agency; 2021

4.2. European Commission. Radiation Protection No. 172: Evidence-based guidelines on cone beam CT for dental and maxillofacial radiology. Luxembourg: Publications Office of the European Union; 2012 (updated 2024).

4.3. World Health Organization; International Labour Organization. Quality management systems for radiation protection in health care. Geneva: WHO & ILO; 2024.

5. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Hospital Safety**	**Prepared by:** **Dr. Krishna Chytanya Nallan** **Assistant Professor**
Title:	**Quality Control in Radiology Centre**	
Policy Number:	**HS.22**	**Reviewed by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

These guidelines are issued to ensure the safety and quality of all resources utilized in the X-ray clinics of RAKCODS

1.1 To provide a guideline for Oral Radiology services as an operational standard

1.2 To provide high-quality radiographs

1.3 To ensure the safe use of the radiographic machines

1.4 To provide adequate policy for prescribing radiographs

2. Policy Statement

This is to ensure that there are guidelines within RAKCODS for quality control in the radiology center.

3. Procedures

3.1. Quality Control in the Oral Radiology Division

3.1.1. General Notes: before doing an X-ray examination

3.1.1.1. Exclude pregnancy

3.1.1.2. Remove dentures and removable orthodontic appliances from the oral cavity during exposure

3.1.1.3. Remove Eyeglasses, earrings, nose rings, necklaces, hair pins, headbands

3.1.1.4. Always use sterilized/disposable film holders (parallel technique)

3.1.1.5. Apply infection control measures

3.1.1.6. Apply lead aprons

3.1.1.7. Follow ALARA (As Low As Reasonably Achievable)

3.1.2. Exposure Factors: Follow the exposure time settings of the radiographic machine according to:

3.1.2.1. Type of the radiographic technique.

3.1.2.2. Tooth number.

3.1.2.3. Age/stature of the patient.

3.1.3. Quality of Radiographs:

3.1.3.1. General

3.1.3.1.1. The radiograph should have a proper density (blackness).

3.1.3.1.2. The radiograph should show sharp borders of the object.

3.1.3.1.3. The radiograph should show proper contrast.

3.1.3.2. Periapical Radiographs

3.1.3.2.1. The whole length of the tooth should be shown (crown plus root).

3.1.3.2.2. Should show at least 2mm of the periapical area of the requested tooth/teeth.

3.1.3.2.3. Open contact points of the requested teeth (unless naturally overlapped)

3.1.3.2.4. Full coverage of the area requested

3.1.3.2.5. The image of the structures should neither be elongated nor shortened.

3.1.3.2.6. Image of the structures should not be distorted.

3.1.3.3. Bite-wing Radiographs

3.1.3.3.1. Not taken for edentulous areas

3.1.3.3.2. The radiograph should show the whole crowns of teeth requested (upper and lower teeth).

3.1.3.3.3. The radiograph should show the alveolar crest of the area requested (upper and lower teeth).

3.1.3.3.4. Open contact points of the requested teeth (unless naturally overlapped).

3.1.3.3.5. Full coverage of the area requested.

3.1.3.4. Occlusal Radiographs

3.1.3.4.1. Full coverage of the area requested.

3.1.3.5. Orthopantomography

3.1.3.5.1. Full coverage of the mandible and maxilla including the condyle and the coronoid process.

3.1.3.5.2. The sinuses and floor of the nose should also be clearly depicted in the radiograph.

3.1.3.5.3. The image of the structures should not be distorted.

3.1.3.6. Lateral Cephalometric Radiographs

3.1.3.6.1. The entire skull, at least the first two cervical vertebrae

3.1.3.6.2. Soft tissues of the nose and lip should be depicted in the radiograph.

3.1.3.6.3. The radiograph should be clear enough to enable accurate selection of hard and soft tissue points necessary for cephalometric analysis.

3.1.3.6.4. The structures should not be double contoured.

4. References

4.1. White SC, Pharoah MJ. Oral Radiology: Principles and Interpretation. 8th ed. Philadelphia: Elsevier; 2024.

4.2. International Commission on Radiological Protection. *The 2007 recommendations of the International Commission on Radiological Protection.* ICRP Publication 103. Ann ICRP. 2007;37(2-4).

4.3. International Commission on Radiological Protection. *Diagnostic Reference Levels in Medical Imaging.* ICRP Publication 135. Ann ICRP. 2017;46(1):1-144.

4.4. International Commission on Radiological Protection. *Radiological Protection in Cone Beam CT.* ICRP Publication 147. Ann ICRP. 2019;48(1):1-55.

5. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised
2	06th Jan 2026		References updated

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Hospital Safety**	**Prepared by:** **Engr. Tarig Mohammed Alfadle Ebrahim** **Maintenance Supervisor**
Title:	**Medical Equipment Management, Training and Maintenance**	
Policy Number:	**HS.23**	**Reviewed by:** **Mr. Muhammad Zahid Khan** **Admin. Officer**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

Policy defines the processes for inspecting, testing, maintaining and training of Medical Equipment used in RAKCODS and documenting the details.

2. Policy Statement

2.1 This policy is designed to protect students, interns, patients, staff and equipment, by providing training and promoting safe and reliable operation of Medical equipment. The primary objectives of this policy to ensure that Medical Equipment is available for use and functioning properly and appropriate training and retraining provided as necessary. RAKCODS establishes and implements a Medical Equipment program that includes performing and documenting as follows:

2.1.1 An inventory of Medical Equipment.

2.1.2 Regular inspections of Medical Equipment.

2.1.3 Testing of Medical Equipment according to its age, use, and manufacturer's recommendation.

2.1.4 Carry out regular preventive maintenance.

2.1.5 Appropriate training as required to all

2.2 To select and procure safe medical equipment including diagnostic imaging equipment, autoclaves, sterilizers, dental chairs which will reduce the risks associated with equipment failures; and ensure the function and reliability of these equipment. These goals are consistent with the patient safety practices in providing quality healthcare to all.

3. Procedures

3.1 The Bio Medical Engineer along with the leadership is responsible for implementing this policy. The Bio Medical Engineer is responsible for training new students, interns, staff and faculty members to the capabilities, limitations, special applications of equipment, basic operating and safety procedures, emergency procedures if failure occurs, maintaining responsibilities, if applicable, and the reporting procedures for equipment problems, failures and user errors.

3.2 The selection and procurement of medical equipment:

3.2.1 This is taken care by the procurement committee in association with the finance department

3.2.2 A purchase request will be completed by user to the leadership and procurement committee for replacement of old or purchase of new equipment. It will be reviewed and approved by the dean and forwarded to the procurement personnel. Before the procurement of equipment, the Bio Medical Engineer will evaluate if the equipment meets appropriate space requirements, load and phase requirements, minimum safety standards of 3 wire AC line cord with Dental clinic grade plug, appropriate warranties and manufacturer's reliability prior to purchase. If the equipment does not meet the above specifications and other as required, it may not be ordered and an alternate choice may be submitted for approval.

3.3 Inventory Management

3.3.1 All Bio-Medical equipment will be evaluated based on function, physical risks associated with use to patients and operators and maintenance requirement.

3.3.2 All new equipment shall be inventoried and inspected prior to first use. Equipment that fails testing and commissioning shall not be approved for use

until the deficiencies have been corrected. There is a current inventory of all equipment included in the equipment management program.

3.4 Reporting of Medical device incidents:

3.4.1 The floor in-charge nurse will be informed about the incident usually by the students/faculty/staff.

3.4.2 The floor in-charge nurse will visit the location and inspect the equipment which caused the problem.

3.4.3 An assessment of the incident will be carried out with proper documentation before informing the Bio-med Engineer.

3.4.4 The Bio-med Engineer visits the site and provides timely resolutions.

3.4.5 Occurrence Variance Report (OVR) shall be completed and sent to the quality and patient safety as per the policy.

3.5 Reporting of equipment problems, failures and user errors:

3.5.1 All Equipment failures and user errors will be reported to the floor in-charge nurse.

3.5.2 The floor in-charge nurse will inform or contact the Bio-Medical Engineering Department and generate a work order.

3.5.3 After receiving the work order Bio Medical Engineering Department will attend, rectify and document the results.

3.5.4 In case of any Medical equipment failure which may not be used for a while, needs to be quarantined properly by isolating it and marking the entrance to the place as “NOT IN USE” until the repair or maintenance can be finished.

3.5.5 In case if the repair or maintenance cannot be done at RAKCODS then it will be sent to the supplier or dealer until the deficiencies are rectified.

3.6 Planned Preventive Maintenance Program (PPMP)

3.6.1 All the equipment present in the inventory of RAKCODS also goes through a scheduled routine planned preventive maintenance program.

3.6.2 The maintenance of all equipment is done as per the manufacturer’s instructions

3.7 The Medical Equipment Orientation and Training Program

3.7.1 All students, interns, staff and faculty are oriented regarding the use and care of Medical equipment.

3.7.2 The initial training of any equipment procured at RAKCODS is provided by the supplier to the bio medical engineer and rest of the core team who were involved in the procurement of the equipment

3.7.3 If there is any specialized equipment procured for RAKCODS then it is ensured that the user (students, interns, staff or faculty) are provided with appropriate training and thereby are authorized to use this equipment and also can train the rest as needed

3.7.4 The bio medical engineer is then responsible for training the rest of the students, interns, staff and faculty

3.7.5 There is a provision for retraining that is provided as needed to all

3.7.6 Students, interns, faculty and staff will be educated on the reporting process for equipment related problems, failures and user errors.

4. Annual Review of the Medical Equipment Policy

4.1. The Medical Equipment Policy shall be reviewed annually to ensure its scope remains aligned with the current operational environment and complies with applicable local and regional standards. If no revisions are required following the annual review, the existing review date shall remain unchanged and will be updated during the triennial review.

4.2. If there are any concerns or issues it will be discussed with the leadership and appropriate action will be taken with a timeline.

5. References

5.1. World Health Organization. Management and Safe Use of Medical Devices [Internet]. Geneva: WHO; updated 2025 [cited 2026 Jan 9]. Available from: https://www.who.int/teams/health-product-policy-and-standards/assistive-and-medical-technology/medical-devices/management-use

5.2. International Organization for Standardization. ISO/TS 5137 — Medical device maintenance management programme for healthcare delivery organizations (HDO). Geneva: ISO; 2026 (in development).

6. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2	06th Jan 2026		References are updated

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Hospital Safety**	**Prepared by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Title:	**Emergency Preparedness Plan**	
Policy Number:	**HS.24**	**Reviewed by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. Purpose

Emergency Codes are used at RAK College of Dental Sciences to denote to staff various kinds of emergency situations. The use of codes is intended to convey essential information quickly to appropriate staff, while minimizing stress and preventing panic among patients and visitors. The Emergency Preparedness Plan will be revised earlier than the schedule date if needed.

2. Policy Statement

2.1. To ensure the standard use of Emergency color codes within RAK College of Dental Sciences (RAKCODS).

RAKCODS will use the following color codes, where applicable:

2.1.1. **Code Red**: Fire

2.1.2. **Code Blue**: Medical Emergency

2.1.3. **Code Brown**: Hazardous Material Spill

2.1.4. **Code Grey**: Combative / Aggressive person or Assault

2.1.5. **Code Black:** Bomb Threat

2.1.6. **Code Pink**: Infant Abduction

2.1.8. **Code Green**: Evacuation/Internal Disaster

3. Responsibilities

It is the responsibility of all RAKCODS staff to comply with this policy.

4. Procedures

4.1. To announce emergency codes staff has to dial RAKCODS Emergency number "**190"**

4.2. Color of Emergency Codes

4.2.1. **CODE RED:** This code is developed to provide an emergency response plan in the event of a fire.

4.2.1.1. In case of fire remember RACE and PASS.

4.2.1.2. If a fire or smoke condition is discovered: Follow "RACE".

R = RESCUE

A = ALARM

C = CONTAIN/CLOSE

E = EXTINGUISH OR EVACUATE

4.2.1.3. To operate fire extinguisher: Follow "PASS".

P = Pull the Safety Pin located at the top of the fire extinguisher

A= Aim the nozzle at the base of the fire

S = Squeeze the handle or trigger

S = Sweep the nozzle from side to side

4.2.2. **CODE BLUE:** This code is developed to act in a medical emergency. A medical emergency is an event requiring the rapid assessment and intervention of trained medical personnel which may include but is not limited to serious injury, unconsciousness, serious respiratory symptoms, symptoms of cardiac crisis.

4.2.3. **CODE BROWN:** This code can be used in the event of a hazardous chemical spill.

4.2.3.1. Chemical spill above 500ml is considered a major spill

4.2.3.2. Isolate the area.

4.2.3.3. Remove ignition sources and unplug nearby electrical equipment.

4.2.3.4. Obtain the MSDS (material safety data sheets) and Spill Kits.

4.2.3.5. Clean up the area as per the MSDS instructions.

4.2.4. **CODE GREY:** This Code is developed to ensure staff and other persons in RAKCODS are protected from harm due to assaultive behavior incidents and to train staff accordingly.

4.2.4.1. When **Code Grey** is activated the security staffs have to reach the spot immediately.

4.2.4.2. Try to speak calmly and make the combative person under control.

4.2.4.3. If the situation becomes worse seek the help of police.

4.2.5. **CODE BLACK:** This Code is to provide instruction to all personnel for the handling of bomb threats in order to ensure the safety of employees, patients, and visitors; to reduce the disruption of necessary medical functions, and to prevent the possibility of panic.

4.2.5.1. In the event a bomb threat is received, the telephone operator, with the knowledge of the dean, shall call the Police and Civil Defense via the emergency number and then they shall be responsible for contacting other agencies as needed e.g. Bomb Squad.

4.2.5.2. The bomb squad shall be in total command upon arrival at the hospital. The decision to search and/or evacuate is left to the bomb squad commander/Police.

4.2.5.3. The Dean/ Emergency Preparedness Committee chairperson will announce evacuation depending on the information by Police.

4.2.6. **CODE PINK:** This code is activated in the event of an infant/ child abduction, to ensure that all hospital personnel and outside agencies are notified appropriately, with a goal being to locate and reunite the infant/ child and family as quickly as possible.

4.2.6.1. Keep an eye on all patients, visitors, and staffs.

4.2.6.2. Security staffs will cover all the exits in the ground floor and make sure that no one is carrying an infant/child. If anyone discovered stop them and seek the help of police calling the security supervisor.

4.2.7. **CODE GREEN:** This code is activated in an event that results in loss of resources used for regular activities. E.g.: fire, smoke, fumes, utility system failures, worker strikes, the release of chemicals or radiation, hostage situations.

4.3. As soon as the emergency situation has been resolved, "Code All Clear", must be announced three times.

4.4. An Occurrence Variance Report (OVR) must be written for all the codes.

4.5. The role of RAKCODS in External Disaster is limited but ready to comply with the MOH or MOHAP requirements as applicable.

5. Related Documents

5.1. **Code Red Policy**

5.2. **Code Black Policy**

5.3. **Code Brown Policy**

5.4. **Code Grey Policy**

5.5. **Code Pink Policy**

5.6. **Code Blue Policy**

5.7. **Code Green Policy**

RAK COLLEGE OF DENTAL SCIENCES

EMERGENCY CODES

CODE GREY	Workplace Violence Prevention
CODE BLUE	Medical Emergencies in Dental Practice
CODE RED	Fire Response Plan
CODE BLACK	Bomb Threat
CODE BROWN	Hazardous Spills
CODE PINK	Infant/ Child Abduction
CODE GREEN	Evacuation

DIAL 190 & INFORM

NAME OF THE CODE, ROOM NUMBER, LOCATION, FLOOR

(Three times repeat the call)

6. References

6.1. World Health Organization. Emergency Response Framework. 3rd ed. Geneva: WHO; 2020.

6.2. World Health Organization. International Health Regulations (2005) — Monitoring Framework for Emergency Preparedness. Geneva: WHO; 2024.

6.3. U.S. Department of Health and Human Services. Healthcare Preparedness Capabilities: National Guidance for Healthcare System Preparedness. Washington (DC): HHS ASPR; 2022.

7. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2	06th Jan 2026		References added and updated

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Hospital Safety**	**Prepared by:** **Mr. Muhammad Zahid Khan** **Assistant Manager, Admin**
Title:	**Utility Management Plan**	
Policy Number:	**HS.25**	**Reviewed by:** **Mr. Atiq Ur Rehman** **Head, Admin. and Marketing**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

The Utility Management Plan monitors and evaluates the utility system in use at the Facility according to applicable laws and regulations:

1.1 To provide a reliable electric power system.

1.2 To provide safe and reliable water system.

1.3 To provide uninterrupted and safe water supply.

1.4 To provide reliable fire safety system.

1.5 To provide safe Air Conditioning system.

1.6 To provide reliable communication system.

2. Goals

2.1 To provide a Utility Management Plan designed to assure the operational reliability, assess the risk, and respond to failures of utility systems that support the consumer care environment.

2.1.1 Identifies the equipment, systems, and locations that pose the highest risk to patients and staff

2.1.2 Assesses and minimizes the risks of utility system failures.

2.1.3 Plans emergency power and clean water sources.

2.1.4 Tests the availability and reliability of emergency sources of power and water;

2.1.5 Documents the results of tests.

2.2 The following systems are included in the Utility Management Plan:

2.2.1 Electrical supply and distribution system.

2.2.2 Vertical transport (elevators).

2.2.3 Air Conditioning Systems.

2.2.4 Water Delivery systems.

2.2.5 Communication Systems.

2.2.6 Fire protection system

3. Responsibility

The building maintenance supervisor is responsible for maintaining the Utility Management Plan

3.1 Emergency power system

3.1.1 The Main Distribution Boards are also having back up of two generators with a capacity of 200 KVA, 350 KVA and 500 KVA and it is connected to the synchronization panel with load shedding arrangement.

3.1.2 The synchronization panel and the Main Distribution Boards breakers are motorized. The load shedding arrangements are made through PLC system.

3.1.3 The generators are on a schedule to receive preventive maintenance on a regular basis.

3.2 Air Conditioning Systems

3.2.1 All A/C have annual maintenance contract and has a testing and maintenance documentation system for record.

3.2.2 There are very less chances of temperature of humidity increase.

However, for controlling these elements the College is equipped with the Temperature and Humidity Meters in the Nursing Stations. These temperature readings are noted on daily basis by the Nurse on Duty and is presented to Admin Officer for Cross signing on monthly basis.

If the Temperature or Humidity is increased. Following actions are taken:

3.2.2.1 Temperature of main AC is reduced and lowered to make the temperature in the normal range of 22 to 24 degrees Celsius.

3.2.2.2 Portable Dehumidifiers are brought to the floor where the humidity is increased and on reaching the percentage of less than 60% are switched off.

3.3 Plumbing and water delivery system

3.3.1 Supply of water to the facility premises is accomplished by employing the following system

3.3.1.1 Water storage tank.

3.3.1.2 Water transfer pump set.

3.3.1.3 Domestic water storage tank.

3.3.2 Four water tanks are on a scheduled cleaning system. Water is monitored for tests (External) every month. In case of any disaster we have a tie up with an external agency for the alternative source.

3.4 Fire Protection System

3.4.1 The building is fully protected by fire alarms and firefighting system. Wet risers and dry risers are employed as part of firefighting system.

3.4.2 Wet riser system is comprised of:

3.4.2.1 Water fire pump.

3.4.2.2 Water sprinklers.

3.4.2.3 Fire Hose reel.

3.5 Communication System

3.5.1 The facility communication systems are:

3.5.1.1 Public address system.

3.5.1.2 Fire alarm system.

3.5.1.3 PABX telephone system.

3.6 Vertical Transport Elevators

3.6.1 The facility is providing 4 elevators of different capacity.

3.6.2 In case of fire, lift will open and stay on the same floor.

3.6.3 In case of any breakdown, the company representatives are contacted on a toll free number available with the building maintenance department.

Regular inspection is done and the records are maintained in maintenance department.

4. **Utility Management Plan Includes in Education Program**

4.1 Employees' orientation to the utility systems safety is the responsibility of the Head of Administration. All employees will be trained during general orientation and annually thereafter on the process for reporting problems, location of emergency shut of controls and the procedures to follow if they alarm, procedures to follow in the event of an elevator failure and communication equipment protocols. The training is documented and kept in the employee's department personnel file.

5. **The performance and effectiveness of the Utility Management Plan shall be reviewed by the Administration Committee.**

6. **Measurable Elements**

6.1 Utility systems are regularly inspected.

6.2 Utility systems are regularly tested under circumstances that simulate actual use/load requirements.

6.3 Utility systems are regularly maintained.

6.4 Utility systems are improved as appropriate

7. **Document Change Record:**

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Hospital Safety**	**Prepared by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Title:	**Fall Risk Prevention**	
Policy Number:	**HS.26**	**Reviewed by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. Purposes and Scopes

To ensure RAKCODS adopts and implements an appropriate Falls Risk prevention and management strategy aimed at reducing frequency and falls related injuries, and enhancing the:

1.1 Ability to identify patients/populations at risk for falls;

1.2 Ability to address the specific needs of the patients/populations identified at risk for falls;

1.3 Ability to collect and analyze falls related data; and

1.4 Ability to use falls related data to make improvements to the falls risk management strategy.

2. Policy Statements

2.1 The Falls Risk Management policy reinforces RAKCODS philosophy and commitment to improve **patient** safety.

3. RAKCODS acknowledges that despite best efforts to provide safe, quality care, patients may fall resulting in injury.

4. Definitions

4.1 A fall is defined as a sudden, uncontrolled, unintentional, downward displacement of the body to the ground or other object, excluding falls resulting from violent blows or other purposeful actions.

4.2 An un-witnessed fall occurs when a patient is found on the floor and neither the patient nor anyone else knows how he or she got there.

5. Procedures

5.1 Prevention

Appropriate training should be provided to all staff especially at the reception and triage areas to analyze the possibility of fall and help is offered if any. Patients are also encouraged with the help of signage's to report if they have difficulties.

5.2 Screening and Assessment (Appendices HS.26-1 and HS.26-2)

The patients are screened for possible fall risk by using appropriate tools:

5.2.1 Appendix HS.26-1 - Adults: Morse Fall Risk Assessment Tool

5.2.2 Appendix HS.26-2 - Children: Humpty Dumpty Scale

5.3 Intervention

Level of interventions will depend on the patient/population's assessed risk level, identified risk factors and individual needs. Multifactorial interventions (falls prevention and falls risk management) will be used to address risk factors and needs.

5.3.1 If a fall occurs the following must be completed**:**

5.3.1.1 Assess for level of consciousness, any injuries and changes in range of motion and provide appropriate aid.

5.3.1.2 Inform the clinic supervisor, who in turn either can solve the concerns or raise it to the emergency team on call for the session.

5.3.1.3 Note the date, time and location of the fall.

5.3.1.4 Notify family as appropriate.

5.3.1.5 Continue to monitor patient as condition warrants and perform the reassessment if the patient stays more than two hours in the clinic away from the dental chair.

5.3.1.6 Document circumstances in medical record.

5.3.1.7 Complete Occurrence Variance Report (OVR) according to the

Occurrence Variance Reporting policy of RAKCODS

5.4 Evaluation

Standardized definitions, collection, reporting, analysis, and trending of falls event data allow for continuous examination of falls risk management strategies. Evaluation and learning will be shared across RAKCODS.

5.5 Practice Improvement

4.5.1 Data related to falls will be evaluated and the evaluation information will be used to make improvements to falls risk prevention and management strategies.

4.5.2 Practice improvement strategies, including but not limited to education, may be developed to support practice changes.

4.5.3 Of importance is the development of processes, an understanding of roles and responsibilities, and communication appropriately.

6. References

6.1.1 Morse, J. Enhancing the Safety of Hospitalization by Reducing Patient Falls. American Journal of Infection Control, Vol. 30 (6), October, 2002, pg. 376-380.

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6.1.3 Hempel S, Newberry S, Wang Z, et al. Hospital fall prevention: a systematic review of implementation, adherence, and costs. *Jt Comm J Qual Patient Saf.* 2020;46(8):416–430.

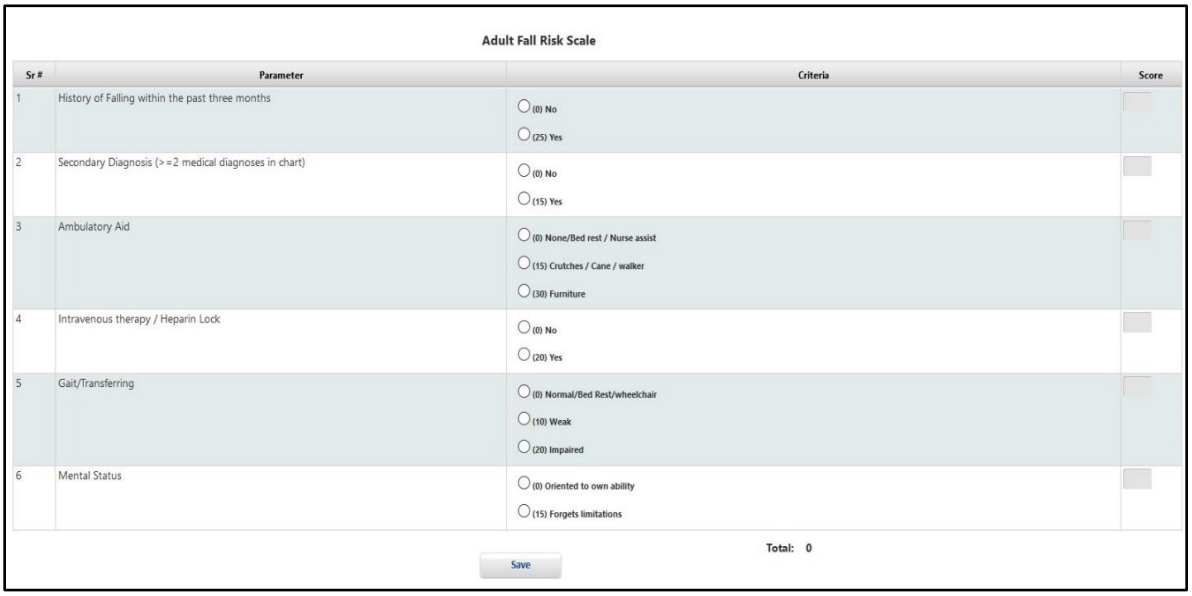
6.1.4 Tzeng H-M, Yin C-Y, Howard J, et al. Evidence-based fall prevention strategies for adult patients in acute care settings: a systematic review and meta-analysis. *Worldviews Evid Based Nurs.* 2022;19(1):47–58.

7. Tools/Appendices

5.1 Appendix HS.26-1 - Adults: Morse Fall Risk Assessment Tool

5.2 Appendix HS.26-2 - Children: Humpty Dumpty Scale

Appendix HS.26-1 - Adults: Morse Fall Risk Assessment Tool



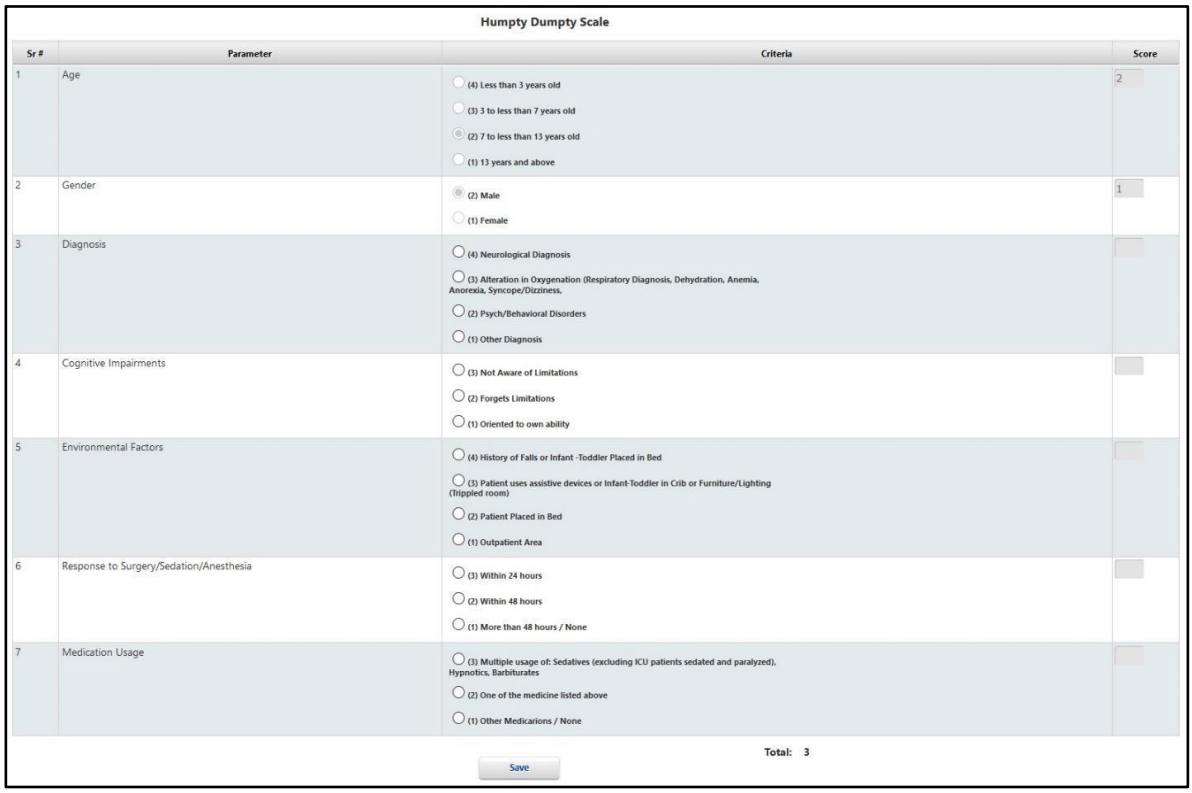
Adult Fall Risk Scale

Sr #	Parameter	Criteria	Score
1	History of Falling within the past three months	○ (0) No ○ (25) Yes	
2	Secondary Diagnosis (> =2 medical diagnoses in chart)	○ (0) No ○ (15) Yes	
3	Ambulatory Aid	○ (0) None/Bed rest / Nurse assist ○ (15) Crutches / Cane / walker ○ (30) Furniture	
4	Intravenous therapy / Heparin Lock	○ (0) No ○ (20) Yes	
5	Gait/Transferring	○ (0) Normal/Bed Rest/wheelchair ○ (10) Weak ○ (20) Impaired	
6	Mental Status	○ (0) Oriented to own ability ○ (15) Forgets limitations	

Total: 0

Save

Appendix HS.26-2 - Children: Humpty Dumpty Scale



Humpty Dumpty Scale

Sr #	Parameter	Criteria	Score
1	Age	○ (4) Less than 3 years old ○ (3) 3 to less than 7 years old ◉ (2) 7 to less than 13 years old ○ (1) 13 years and above	2
2	Gender	◉ (2) Male ○ (1) Female	1
3	Diagnosis	○ (4) Neurological Diagnosis ○ (3) Alteration in Oxygenation (Respiratory Diagnosis, Dehydration, Anemia, Anorexia, Syncope/Dizziness, ○ (2) Psych/Behavioral Disorders ○ (1) Other Diagnosis	
4	Cognitive Impairments	○ (3) Not Aware of Limitations ○ (2) Forgets Limitations ○ (1) Oriented to own ability	
5	Environmental Factors	○ (4) History of Falls or Infant -Toddler Placed in Bed ○ (3) Patient uses assistive devices or Infant-Toddler in Crib or Furniture/Lighting (Trippled room) ○ (2) Patient Placed in Bed ○ (1) Outpatient Area	
6	Response to Surgery/Sedation/Anesthesia	○ (3) Within 24 hours ○ (2) Within 48 hours ○ (1) More than 48 hours / None	
7	Medication Usage	○ (3) Multiple usage of: Sedatives (excluding ICU patients sedated and paralyzed), Hypnotics, Barbiturates ○ (2) One of the medicine listed above ○ (1) Other Medicarions / None	

Total: 3

Save

8. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2	06th Jan 2026		References updated and new ones added

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Hospital Safety**	**Prepared by:** **Dr. Riham Abdelraouf** **Assistant Professor**
Title:	**Dental Management of Medically Compromised Patients**	**Reviewed by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Policy Number:	**HS.27**	
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2025**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**1**	
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

This policy provides clear clinical guidance for the management of patients with common medical conditions seeking dental treatment at RAKCODS within its scope. It aims to ensure patient safety, appropriate case selection, medical consultation when necessary, and standard precautions based on evidence-based practices.

Medical Conditions and Dental Management Guidelines

General Guidelines: Students, interns, faculty, and staff are responsible for thoroughly and accurately documenting each patient's medical history before initiating any treatment. If a medical condition is identified, the patient should be referred for medical clearance at the discretion of the supervising faculty. In all cases, such patients must be managed under the strict supervision of faculty members.

Medical Conditions and their Management

1. Pregnancy

- Avoid elective dental treatments during 1st and 3rd trimesters

- Dental treatment preferred to be carried out in 2nd trimester, however advanced restorative procedures is better to carried out after delivery when the periodontal status improve and the patient can tolerate long sessions.
- Avoid drugs especially during the 1st trimester, and restrict the prescription for category A and B eg. paracetamol for pain, penicillin/amoxicillin for infections, only when necessary.
- Avoid radiography especially in the 1st trimester, though dental radiography is less likely to be significant risk however the exposure should be minimal and the use lead apron is recommended especially when the beam is directed toward the fetus.
- Avoid supine position and tilt patient to one side to avoid supine hypotensive syndrome especially during the 3rd trimester.

2. Hypertension

- Best treated in late morning appointments with minimal waiting time.
- Apply stress reduction protocol
- Consider other co-morbidities.
- The use of LA/epinephrine is not contraindicated and it should be restricted when systolic BP ≥ 160 mmHg and the diastolic BP ≥ 95 and will be contraindicated when systolic BP ≥ 200 mmHg and the diastolic BP ≥ 115
- LA/Epinephrine should not be given with a large doses n patient taking B-Blockers
- If BP <140/90 mmHg proceed with the routine dental care
- If BP 140–159/90–95 mmHg; Recheck the BP before starting routine dental care
- If BP ≥160/95 mmHg defer the routine dental treatment, refer the patient for further medical management and advice.
- In patient taking antihypertensive medications avoid sudden rising of the patient from supine to upright in position as it may precipitate postural hypotension.

3. Diabetes Mellitus

- Measure blood glucose level at the day of the procedure
- Proceed if fasting glucose: 70–125mg/dL. Random glucose <200 mg/dL.
- Schedule morning appointments after food intake.
- Avoid long procedures; monitor blood sugar if needed.

- Paracetamol is the analgesic of choice and NSAIDs should be used with caution to avoid renal damage.
- Avoid drugs that disturb the diabetic control, example steroid.
- Treat the odontogenic aggressively and consider the need for antibiotics.

4. Thyroid Disorders

- Consult with endocrinologist and check TFT
- Proceed with the treatment if the patient if the patient is controlled hypo/hyperthyroidism and compliance with the medication.
- In case of hyperthyroidism recheck the BP.
- In cases of uncontrolled Thyrotoxicosis with sympathetic over flow, avoid elective procedure and restrict the use epinephrine-containing anesthetics.
- Avoid use of sedatives and opioid analgesics in hypothyroidism.

5. Bleeding Disorders / Anticoagulants/ Antiplatelet

- Consult physician for anticoagulant discontinuation, adjusting or bridging
- Request bleeding profile
- If patient on Warfarin Proceed if INR ≤3.5 for minor oral surgery.
- If patient on Aspirin: Proceed if patient taking less than 100 mg and bleeding time within normal, if more than 100 mg or prolonged bleeding time refer back to physician.
- For congenital hematological disorders consult with the hematologist for the appropriate factor level correction before the procedure.
- Avoid block anesthesia and use infiltration and PDL techniques
- Avoid NSAIDs, metronidazole, fluconazole which might enhance the anticoagulant effect.
- Use local hemostatics and anti-fibrinolytic agents as needed.

6. Asthma

- Elective dental procedures should be deferred in severe asthmatics
- Proceed only if asthma is controlled.
- Patient should encourage to bring their own medications or ensure rescue inhaler is available.

- LA with epinephrine is relatively contraindicated in patient with theophylline as it may precipitate adverse cardiovascular events
- Avoid NSAIDs and stress triggers.

7. Chronic Kidney Disease (CKD)

- Coordinate with nephrologist for advanced CKD.
- Avoid nephrotoxic drugs (e.g., NSAIDs) and adjust the dose of the drugs based on the GFR.
- Schedule dental procedures on the day after dialysis.
- Consider the possibility of blood born viral infections and take the standard precautions.
- Consider possible anemia and bleeding tendencies and ensure haemostasis after surgical procedures.
- In case of emergency and need for an IV access never put a cannula into the arteriovenous fistula arm.

8. Patient with Hepatitis B/C Viruses

- Consult with hepatologist and defer elective care for patients with active disease and high viral load.
- Use standard precautions to prevent cross infection.
- Request liver function test and avoid hepatotoxic drugs eg; high-dose paracetamol.
- Consider bleeding tendencies, assess platelet count and bleeding profile. Proceed with the dental treatment if the platelet number and INR within normal range.

9. Patient with HIV/ AIDS

- Defer elective care for patients with high viral load.
- Use standard precautions to prevent cross infection and pay extra attention to avoid needle stick injury.
- Consider possibility of different orofacial manifestation of HIV/AIDS
- Possibility of drug interaction between LA and protease inhibitors
- Consider pre/post-operative antibiotic prophylaxis following surgical procedures in patient with profound immunodeficiency – neutropenia and/or CD 4 count < $200X10^{6}$/ L-.

10. Seizure Disorders

- Proceed if seizure-free for 6 months or more.
- Avoid light or emotional triggers.
- Ensure padded support and reduce stress.

11. Psychiatric Conditions / Anxiety

- Monitor for drug interactions (e.g., SSRIs, tricyclics).
- Use behavior management and sedation if needed.
- Proceed with stable patients.

12. Infective Endocarditis / Cardiac Valve Replacement

- Antibiotic prophylaxis as per AHA guidelines for high-risk patients.
- If patient not allergic to penicillin use amoxicillin 2 g PO, 1 hour before the procedure.
- If patient allergic to penicillin use clindamycin 600 mg PO, 1 hour before invasive procedures.

13. Adrenal Disorders / Long-term Steroid Use

- In case of Adrenocortical hypofunction / long term of steroid use consider pre-operative steroid coverage.
- Double the oral steroid dose in the morning or give hydrocortisone 25-50 mg IV preoperatively.
- Schedule morning appointments and monitor vitals.
- Reduce stress; consult endocrinologist if needed.

2. References

2.1. American Dental Association (ADA). Guidelines for the Management of Patients with Systemic Diseases in Dental Practice.ADA Clinical Practice Guidelines. 2021. https://www.ada.org. American Heart Association (AHA). 2020 AHA Guidelines for CPR and Emergency Cardiovascular Care. Circulation. 2020;142(16_suppl_2): S337–S357. DOI: 10.1161/CIR.0000000000000916

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2.8. Resuscitation Council UK. Standards for Clinical Practice and Training in Resuscitation (Adults). 2021. https://www.resus.org.uk

2.9. Scully, Crispian. Scully's Medical Problems in Dentistry. 7th ed. Edinburgh: Churchill Livingstone/Elsevier, 2014. Print.

3. Tools / Appendices

3.1. Appendix HS.27-1– Safe Ranges and Action Guidelines

Appendix HS.27-1– Safe Ranges and Action Guidelines

Parameter	Acceptable Range for Dental Treatment	Action if Outside Range
Blood Pressure	≤ 140/90 mmHg	Monitor if 140–159/90–99. Defer if ≥160/100.
Random Blood Glucose	< 200 mg/dL	Defer if >200 mg/dL. Ensure meal intake.
Fasting Glucose	70–130 mg/dL	Defer if <70 or >130 without control.
HbA1c	≤ 7%	Caution if >8%. Defer surgery if poorly controlled.
TSH	0.4–4.0 mIU/L	Avoid stressors and epi if out of range.
INR	≤ 3.5	Defer invasive care if >3.5. Consult physician.
Trimester (Pregnancy)	2nd trimester (weeks 14–28)	Avoid elective care in 1st or 3rd trimester.

4. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
1	16th Sep 2025		-New Addition-

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Hospital Safety**	**Prepared by:** **Dr. Riham Abdelraouf** **Assistant Professor**
Title:	**Rapid Response Team (RRT) – Early Medical Emergency Intervention**	
Policy Number:	**HS.28**	**Reviewed by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2025**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**1**	
Next Review Date	**30 Sep 2028**	

1. Purposes and Scopes

RAKCODS ensures the early identification and response to medical deterioration in any person within its premises, through a structured Rapid Response Team (RRT). This system is designed to prevent escalation to life-threatening emergencies (Code Blue).

All faculty, staff, and nurses involved in direct patient care must be trained in Basic Life Support (BLS) and receive annual training in medical emergencies. The Human Resources office will maintain up-to-date certification records. Annual review of emergency procedures is mandatory for all personnel involved in patient care.

2. Procedures

The following procedures will be followed for Rapid Response Team (RRT) activation:

1. Any staff, student, intern or faculty identifying a deteriorating patient will immediately inform the nearest faculty.
2. The faculty or nurse will evaluate and, if needed, activate RRT by dialing the hotline "190."
3. The reception/operator will announce: "RRT – [Location]" three times over the public address system.

4. The RRT will respond as soon as possible with emergency equipment and medications.
5. Assess and reassess the patient following a structured ABCDE approach and check the bedside blood glucose level.
6. Establish emergency actions like changing position, oxygen and drugs administration, to stabilize the patient and monitor vital signs.
7. Assess and decide the need for further management including the need for hospital transfer. If the condition worsens, and patient becomes unresponsive, no breathing and no pulse a Code Blue will be initiated.
8. Documentation will be completed using the RRT Response Log and submitted to the Quality and Patient Safety Committee.

3. Guidelines and Procedures

Available Equipment

- Oxygen delivery system
- Automated External Defibrillator (AED)
- Pulse oximeter
- Sphygmomanometer
- Blood glucose monitor
- Emergency medications

3.1. Management of Vasodepressor or Syncope

3.1.1. Assess level of consciousness

3.1.2. ABC's

3.1.3. Supine or Trendelburg position

3.1.4. Monitor vital signs

3.1.5. Calm the patient

3.1.6. Remove drape/bib

3.1.7. Loosen uncomfortable clothing

3.1.8. Administer oxygen

3.1.9. If unconsciousness persists, call the ambulance **CODE BLUE**.

3.2. Management Seizure Disorders

3.2.1. Supine position

3.2.2. Protect the patient

3.2.3. Do not put any object in the mouth

3.2.4. Monitor vital signs

3.2.5. Administer oxygen

3.2.6. Basic life supports as needed

3.2.7. Call **CODE BLUE**

3.2.8. For seizure lasting over 5 minutes or longer, call an ambulance

3.3 Management of Hypoglycemia in the Conscious Patient

3.3.1 Assess the patient

3.3.2 Comfortable position

3.3.3 ABC's

3.3.4 Check blood glucose level

3.3.5 Give oral glucose

3.3.6 Administer oxygen

3.3.7 Monitor vital signs

3.4 Management of Hypoglycemia in the Unconscious Patient

3.4.1 Supine position

3.4.2 ABC's

3.4.3 Check blood glucose level

3.4.4 Administer oxygen

3.4.5 Monitor vital signs

3.4.6 BLS, as needed

3.4.7 Call the ambulance and **CODE BLUE**

3.5 Management of Asthmatic Attack

3.5.1 Place patient in a comfortable position (usually sitting position)

3.5.2 Calm the patient

3.5.3 Administer bronchodilator via inhaler

3.5.4 Monitor vital signs

3.5.5 Administer Oxygen

3.5.6 Basic Life Support, as needed

3.5.7 Call **CODE BLUE**

3.6 Management of Local Anesthetic Overdose

3.6.1 Comfortable position: Supine, if unconscious

3.6.2 ABC's

3.6.3 Monitor vital signs

3.6.4 Administer Oxygen – Hyperventilate

3.6.5 BLS, as needed

3.6.6 Call the ambulance and **CODE BLUE**

3.7 Management of Mild Allergic Reactions

3.7.1 Comfortable position

3.7.2 Monitor vital signs

3.7.3 BLS, as needed

If condition worsens, call an ambulance

RRT Team Roles

- **Team Member 1 - Team Leader (Senior Faculty):** Assesses patient and directs actions.
- **Team Member 2 - Floor Nurse in charge:** Brings emergency kit and equipment, assists with monitoring.
- **Team Member 3 – Rotating Nurse:** Supports ABCs, takes notes.
- **Team Member 4 – Faculty or GP available:** Ensures ambulance coordination and crowd control.

4. References

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5. Tools / Appendices

5.1. Appendix HS.28-1 – RRT Response Log Sheet

Appendix HS.28-1 – RRT Response Log Sheet

RAK COLLEGE OF DENTAL SCIENCES

RRT Response CHECKLIST

Team Member 1 (Team Leader/Senior faculty) : _____ Yes ☐ No ☐

Location of Emergency: _____

Date & Time: _____

Team Member 2: _____ Yes ☐ No ☐

Team Member 3: _____ Yes ☐ No ☐

Team Member 4: _____ Yes ☐ No ☐

Patient MR No./Person Name: _____

Brief Description of Incident:

Assessment

- Is the patient conscious? Yes ☐ No ☐
- Is the patient responsive? Yes ☐ No ☐

Vital Signs (Initial)

- Blood Pressure: _____
- Heart Rate: _____
- Respiratory Rate: _____
- Temperature: _____
- Glucose Level: _____
- Oxygen Saturation: _____

Immediate Actions Taken:

- Was the case escalated to Code Blue? Yes ☐ No ☐
- Was ambulance called? Yes ☐ No ☐

Additional Notes:

5. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
1	16th Sep 2025		-New Addition-

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Hospital Safety**	**Prepared by:** **Dr. Md. Sofiqul Islam** **Associate Professor**
Title:	**Abuse and Violence Prevention**	
Policy Number:	**HS.29**	**Reviewed by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	
Edition Number	**3**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

This policy is applicable to all stakeholders inclusive of patients, students, interns, staff and faculty. This policy is committed to respect, maintain and advocate the personal integrity, dignity and safety of all people within the facility.

2. Policy Statement

RAK College of Dental Sciences (RAKCODS) believes in harboring an environment which is committed to creating and maintaining abuse and violence free culture. RAKCODS will not tolerate any physical or psychological, verbal, financial or sexual abuse and violence of any person within the building premises.

3. Definitions

Abuse or Violence may be:

3.1. Physical - inflicting, or threatening to inflict, physical pain, injury, or discomfort on any person.

3.2. **Sexual** - Any form of sexual activity, contact, comment or exposure involving a person without the consent of that person or involving a person unable to give consent.

3.3. **Emotional / Psychological** - Inflicting mental pain, anguish or distress on any person through verbal or non-verbal acts, including humiliation, intimidation, threats, isolation and repeated belittling.

3.4. **Verbal-** Shouting, swearing, insults, slurs or threats directed at any person.

3.5. **Financial or material-** The improper or unauthorized use of the funds, property, benefits or resources of another person, including of a patient, a child or a vulnerable adult.

3.6. **Violation of patient's rights and responsibilities-** Any breach of the rights set out in the institutional bill of patient rights and responsibilities.

3.7. **Neglect-** Failure to provide care, supervision or attention that a person is entitled to receive. Dental neglect includes the persistent failure to meet a patient's basic oral health needs, and, in the case of a child, the persistent failure of a parent or carer to secure treatment necessary to ensure the child's oral health after the need has been explained to them. Avoidable institutional delays in appointments or refusal to treat without clinical or policy justification is also treated as neglect.

3.8. **Treatment without consent-** Providing treatment or undertaking a procedure without the valid informed consent required by section 6.3 of the Ethics Framework.

3.9. **Discriminatory abuse-** Abuse or harassment based on any characteristic listed in section 6.1 of the Ethics Framework.

4. Procedures

4.1. RAKCODS maintains a strict zero-tolerance stance towards workplace abuse, violence or any associated threats.

4.2. RAKCODS leadership is committed to ensure that there is always an appropriate number of staff, reduced work stress as much as possible, a just culture and a procedure to report any incident. All these will result in reduced number of abuses which can take place within the building.

4.3. All students, interns, staff and faculty of RAKCODS have a responsibility to ensure that patients are treated with respect and dignity, live free from harm, and do not experience abuse.

4.4. All students, interns, staff and faculty of RAKCODS who suspect or witness abuse or violence, must report it to the chairperson Ethics Committee for immediate response.

4.5. RAKCODS is committed to ensuring that all allegations of abuse or violence will be properly and carefully investigated. All interviews and information obtained or recorded shall be dealt with as confidentially as is possible. Investigations and decisions will be made in as timely a manner as possible.

4.6. All abuses or violence inclusive of the one with immediate response then should be reported appropriately as per the Occurrence Variance Reporting system of RAKCODS.

4.7. To proactively prevent workplace, abuse or violence, RAKCODS will undertake various measures, including:

Delivering training sessions to employees to enhance their ability to recognize and report potential instances of abuse or violence.

Conducting thorough risk assessments aimed at identifying and addressing potential sources of abuse or violence.

Implementing necessary security measures, such as access control systems, to fortify the workplace against potential threats.

5. References

5.1 World Health Organization. World report on violence and health: policy and practice recommendations [Internet]. Geneva: WHO; 2022 [cited 2026 Jan 11]. Available from: https://www.who.int/teams/social-determinants-of-health/violence-injury-prevention/violence-prevention-overview

5.2 World Health Organization. Violence against health workers: a global priority policy brief. Geneva: WHO; 2020.

5.3 The Joint Commission. Workplace Violence Prevention. In: Comprehensive Accreditation Manual for Hospitals (CAMH). Oakbrook Terrace (IL): The Joint Commission; 2025.

5.4 Accreditation Canada. Workplace Violence Prevention: Required Safety Practices under Qmentum Global™. Ottawa: Accreditation Canada; 2025.

6. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2	06th Jan 2026		New references added
3	30th Aug 2026		New definitions added 3.3-3.9 3.1-3.3- revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Hospital Safety**	**Prepared by:** **Dr. Md. Sofiqul Islam** **Associate Professor**
Title:	**Code Grey - Workplace Violence Prevention**	
Policy Number:	**HS.30**	**Reviewed by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. Purposes and Scope

1.1. This policy establishes the process which will be followed for patients and patient's family members or staff in the event of a physical assault occurring in RAKCODS facility.

1.2. It is the policy of RAK College of Dental Sciences (RAKCODS) to ensure the safety of all the students, interns, staff, faculty, patients and visitors.

1.2.1. To understand the possible places or risks within RAKCODS where assaults and violence can occur

1.2.2. To establish a process to protect students, interns, staff, faculty, patient's, visitors, and contractors from assault in RAKCODS.

1.2.3. To establish standardized guidelines and procedures in the event of an assault which occurred in RAKCODS.

1.2.4. This policy is made after consultation with team members and reviewed annually or as necessary or immediately after any event.

2. Definitions

Abuse or Violence may be:

2.1. Physical - inflicting, or threatening to inflict, physical pain, injury, or discomfort on any person.

2.2. Sexual - Any form of sexual activity, contact, comment or exposure involving a person without the consent of that person or involving a person unable to give consent.

2.3. Emotional / Psychological - Inflicting mental pain, anguish or distress on any person through verbal or non-verbal acts, including humiliation, intimidation, threats, isolation and repeated belittling.

2.4. Verbal- Shouting, swearing, insults, slurs or threats directed at any person.

2.5. Financial or material- The improper or unauthorized use of the funds, property, benefits or resources of another person, including of a patient, a child or a vulnerable adult.

2.6. Violation of patient's rights and responsibilities- Any breach of the rights set out in the institutional bill of patient rights and responsibilities.

2.7. Neglect- Failure to provide care, supervision or attention that a person is entitled to receive. Dental neglect includes the persistent failure to meet a patient's basic oral health needs, and, in the case of a child, the persistent failure of a parent or care taker to secure treatment necessary to ensure the child's oral health after the need has been explained to them. Avoidable institutional delays in appointments or refusal to treat without clinical or policy justification is also treated as neglect.

2.8. Treatment without consent- Providing treatment or undertaking a procedure without the valid informed consent required by section 6.3 of the Ethics Framework.

2.9. Discriminatory abuse- Abuse or harassment based on any characteristic listed in section 6.1 of the Ethics Framework.

3. Responsibility

It is the responsibility of the Ethics Committee of RAKCODS to monitor the implementation of this policy.

4. Procedures

4.1. To prevent an assault from happening in RAKCODS, the following measures shall be taken:

4.1.1. Risk Assessment- An assessment of possible hazards within the building and surrounding premises will be carried out on an annual basis, this will be done with the leadership walk. Once the risks are assessed it will be prioritized. Based upon the assessment an action plan will be decided with timeline. Once the action is put into place then there will be evaluation. The risk assessment though will be conducted usually on an annual basis but in case there is any incident then immediately it needs to be assessed and thereby reduce the recurrence of similar events. Risks for violence places or violent people at RAKCODS will be done at three levels (Appendix HS.30-1)

4.1.1.1 Students, Interns, Staff and Faculty

4.1.1.2 Patients and visitors

4.1.1.3 Point of care delivery (within clinics)

4.1.2. Confidential Reporting of Workplace Violence- anyone within the organization if faced with a threat or violent behavior which he/she wants to report privately, can be done by meeting the chairperson of Ethics committee. The entire briefing will be kept confidential and dealt with accordingly. The individual can also use the Occurrence Variance Report (OVR) form and file the same confidentially.

4.2. In the event of any combative person or an assault occurs, the following procedures are to be followed:

4.2.1. The operator should be informed who will call for security and announce CODE **GREY** using the public address system of RAKCODS. The operator will inform the security and the chairperson of Ethics committee.

4.2.2. The operator shall announce the CODE **GREY** and location information three times over the public address system.

4.2.3. Upon hearing CODE **GREY** announcement, Security will respond immediately to the incident area if not already when he was informed first.

4.2.4. On-duty Security Personnel must take the necessary actions, precautions, and procedures from a legal perspective in their approach with the violent individual.

4.2.5. The on-duty security personnel must consider allowing a family member to stay with the patient to soothe him/her when necessary.

4.2.6. The security personnel have the authority to remove all personal accessories that could be used as weapons such as; pocketknives belt's, pens, scissors or anything sharp that can be used as a weapon.

4.2.7. The security personnel must avoid harsh contact or aggressive behavior of handling by anyone who is violent inclusive of students, interns, staff, faculty, patients and visitors.

4.2.8. The security personnel/staff may limit the visitors in the area and maintain adequate space for healthcare providers to perform their duties safely.

4.2.9. Security shall assume control of the incident scene and notify police if appropriate, after consulting with the Administration on call.

4.2.10. Security shall question the patient, patient's family and/or staff about any details concerning the assault.

4.2.11. Only the Security along with the Chairperson Ethics shall notify the reception to call "CODE **GREY** – All clear" when the situation has been resolved

4.2.12. The reception shall announce "CODE **GREY** – All clear" three times.

4.2.13. If the patient is violent due to a medico-legal case, the security must inform the police upon the instruction of the Dean's Office/ Chairperson-Clinical Sciences.

4.2.14. The Security On-Duty must note the details of vehicle number, accompanying person's driving license/ passport/ national ID/ or labor card (a copy of one of these documents must be retained).

4.2.15. The Security On-Duty and Chairperson Ethics Committee will immediately inform and given a concise report of the case.

4.2.16. The Occurrence Variance Report (OVR) should be completed and forwarded in accordance with the policy and if needed this report by the team members should be kept confidential.

4.3. Investigation Process:

4.3.1. Patient/team member confidentiality remains a key factor.

4.3.2. During the early stages of the CODE **GREY** event, information about the assault should not be given to anyone that does not have a valid reason to know.

4.3.3. Ethic committee chairperson and security shall conduct an interview of everyone including employees, patients, and visitors that were on the unit at the time of the incident. Staff shall not be allowed to leave the unit or area until the investigation is completed and cleared up by security.

4.4. All the procedures of the investigation will follow the ethical framework flowchart of RAKCODS (Refer to RAKCODS Ethical Framework).

4.5. Training of students, interns, staff and faculty will take place every academic year during the orientation and periodically along with other scheduled workshops.

4.6. Quarterly reports are provided along with the Quality and Patient Safety reports.

5. Tools / Appendices

5.1. Appendix HS.30-1 – Risk Assessment for Violence Prevention at RAKCODS

Appendix HS.30-1 – Risk Assessment for Violence Prevention at RAKCODS

RISK ASSESSMENT FOR VIOLENCE PREVENTION AT RAKCODS

1. **Students, Interns, Staff and Faculty risks associated with workplace violence should include an assessment of:**

Assessment	**Please place a check mark (✓) in the boxes below:**
● Internal documents such as:	
▪ Feedback from "suggestion boxes/ PES"	
▪ Reports about emergencies, incidents and accidents	
▪ Workplace inspection	
▪ Grievances	
▪ The organization's physical environment	
▪ The work setting and clients	
● Point-of-care work practices	
● Staff perceptions	

2. **Patient and Visitor associated risks for workplace violence can be evaluated by ensuring that the following are avoided when dealing with all patients and visitors:**

Assessment	**Please place a check mark (✓) in the boxes below:**
● Language/cultural barriers	
● Racist or Sexist behaviors	
● Foul smell or ambience at RAKCODS	
● Staff behavior towards patients	
● Information on	
▪ General consent/informed consent	
▪ Patient rights and Responsibilities	
▪ How to raise complaints/concerns/suggestion or feedbacks	
▪ Information about whom to contact in case of issues	
● Crowded lobbies	

● Maintenance of temperature	
● Maintenance of washrooms	
● Guidance to the prayer area	

3. Point of care delivery factors (Clinics) associated risk factors for violence – The following should be ensured:

Assessment	**Please place a check mark (✓) in the boxes below:**
● Predictable work load	
● Adequate training	
● Appropriate assistance/assistants available	
● Cleanliness of clinics maintained	
● Adequate staff hiring	
● Adequate training of staff, students to identify possible violent behavior and how to react	
● Avoid Racism/Sexism	
● Appropriate Body language	
● Avoid hurried approach in providing treatment	
● Appropriate Infection and Prevention Control Practices	
● Confidentiality and privacy of patient and the treatment maintained	
● Client's wishes taken into consideration while planning his treatment	
● Appropriate information to be provided to patients as they get re-assigned	
● Appropriate information to be provided to patients when they are discharged or referred	
● Appropriate follow up of patients done	

6. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2	06th Jan 2026		New references added
3	30th Aug 2026		New definitions added 3.3-3.9 3.1-3.3- revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Hospital Safety**	**Prepared by:** **Dr. Riham Abdelraouf** **Assistant Professor**
Title:	**Code Blue - Medical Emergencies in Dental Practice**	**Reviewed by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Policy Number:	**HS.31**	
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	
Edition Number	**3**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. Purposes and Scopes

RAKCODS ensures that there is a Medical Emergency team that is available on call.

1.1 All faculty, staff and nurses involved in the direct provision of patient care must be trained and certified in Healthcare Provider Basic Life Support (BLS), including cardiopulmonary resuscitation, and are able to manage common medical emergencies. The Human Resources office is responsible to maintain current records of certification.

1.2 All faculty, staff, nurses and support staff involved in direct patient care are required to annually review procedures for the management of common medical emergencies.

1.3 RAKCODS contains appropriate resuscitation equipment, including emergency oxygen with a bag-valve-mask system.

1.4 Automated External defibrillators are available on all clinical floors.

1.5 All the equipment used are checked periodically and a check list is maintained.

2. Procedures

2.1 The student must notify the nearest faculty member of the emergent situation, relating the events that precipitated the emergency and the current status of the patient's medical

condition and assist the faculty member in any manner that (s)he directs.

2.2 The faculty will make the decision regarding the clinical situation.

2.3 The faculty or nurse may call for further help through **CODE BLUE** announcement.

2.4 This is done by alerting the operator (by dialing "190") at the reception.

2.5 **CODE BLUE** announcement "**CODE BLUE** and LOCATION" will be made by the operator through the address system three times, an announcement is heard through the whole hospital building.

2.6 The faculty shall assess the condition of the patient and decide whether a referral to a General Hospital is needed. The nurse shall call for the ambulance to transport the patient to the General Hospital.

2.7 Students/ staff must not leave the individual patient unattended. If the person is found on the floor, and there were no witnesses to the fall, the patient is not to be moved.

2.8 The supervising faculty will be primarily responsible for management of the patient, until the patient recover or until the Medical Emergency Response Team ambulance arrives.

2.9 The faculty should be prepared to tell the Emergency Response Team or ambulance crew regarding the events leading to the emergency and the current status of the patient. The faculty should provide the patient's medical history and known allergies and medications if this is a patient of RAKCODS.

2.10 After the emergency is resolved, an OVR form is filled out and sent to the Quality and Patient Safety Committee.

2.11 The medical intervention expected from the faculty and staff for patient resuscitation at RAKCODS is limited to Basic Life Support only.

3. Guidelines and Procedures

3.1. Equipment

3.1.1. Ambu-bag/Mask device (adult & pediatric size masks)

3.1.2. Oxygen delivery system

3.1.3. Sphygmomanometer

3.1.4. Pulse oximeter

3.1.5. Automated External Defibrillator

3.1.6. Blood glucose monitor machine

3.2. Treatment of Aspirated Object

3.2.1. Place patient on the lateral recovery position

3.2.2. Encourage coughing

3.2.3. Retrieval of an object by the use of suction –or have patient put head down

3.2.4. Radiologic examination

3.2.5. Refer to General Hospital if failed to retrieve a foreign object or bleeding in airway or patient unwell.

3.3. Emergency duties of a four-member dental team at the time of emergencies

3.3.1. TEAM MEMBER 1: LEADER

Directs team members

3.3.1.1. Positions the patient and stays with him or her

3.3.1.2. Performs "ABCs" of cardiopulmonary resuscitation (CPR)

3.3.1.3. Takes command and appears calm

3.3.1.4. States instructions directly and clearly

3.3.1.5. Requests acknowledgment from team members that instructions are understood.

3.3.1.6. Fosters open exchange among team members

3.3.1.7. Concentrates on what is right for the patient, not who is right

3.3.2. TEAM MEMBER 2

3.3.2.1. Brings emergency kit

3.3.2.2. Brings oxygen tank and attaches appropriate delivery system

3.3.2.3. Brings automated external defibrillator

3.3.2.4. Assists with ABCs of CPR, including monitoring vital signs

3.3.2.5. Checks oxygen tank regularly

3.3.2.6. Checks emergency kit regularly

3.3.3. TEAM MEMBER 3

3.3.3.1. Telephones emergency medical services (**998**)

3.3.3.2. Meets paramedics at building entrance

3.3.3.3. Keeps chronological log of events

3.3.3.4. Assists with ABCs of CPR

3.3.4. TEAM MEMBER 4

3.3.4.1. Assists with ABCs of CPR

3.3.4.2. Assists with other duties as needed

4. References

4.1. Blewer AL, et al. Association of bystander and first-responder characteristics with out-of-hospital cardiac arrest survival. JAMA Cardiol. 2018;3(9):802–811.

4.2. European Resuscitation Council Guidelines 2021. Resuscitation. 2021; 161:1–76.

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4.4. Resuscitation Council UK. Resuscitation Council UK Guidelines (2023) Adult Basic and Advanced Life Support / Infection Control Considerations. London: Resuscitation Council UK; 2023.

4.5. Resuscitation Council UK. Advanced Life Support (ALS) Guidelines, 2023. London: Resuscitation Council UK; 2023.

5. Tools / Appendices

5.1 Appendix HS.31-1 – Code Blue Emergency Checklist

Appendix HS.31-1 – Code Blue Emergency Checklist

RAK COLLEGE OF DENTAL SCIENCES

CODE BLUE EMERGENCY CHECKLIST

Team Member 1 Leader: _____ ☐ Yes ☐ No Location of Emergency: _____
Team Member 2: _____ ☐ Yes ☐ No Date & Time: _____
Team Member 3: _____ ☐ Yes ☐ No
Team Member 4: _____ ☐ Yes ☐ No

Patient Name: _____ M.R #: _____
Brief Medical History:
_____
_____

ASSESSMENT	REMARKS	
Is Patient Conscious?	☐ Yes ☐ No	
Is Patient Responsive?	☐ Yes ☐ No	
Is there a Pulse?	☐ Yes ☐ No	
Is the Patient breathing?	☐ Yes ☐ No	
CPR Done?	☐ Yes ☐ No	
AED Done?	☐ Yes ☐ No	
Blood Pressure:		
Pulse Rate:		
Respiratory Rate:		
Temperature:		
Glucose Level:		
Oxygen Saturation Level:		
Other Procedure/ Treatment Done: _____ _____		
If Patient sent to Hospital thru ambulance, Name & Signature of the Ambulance Personnel: _____ _____ _____		

6. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2	06th Jan 2026		References updated

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Hospital Safety**	**Prepared by:** **Mr. Muhammad Zahid Khan** **Assistant Manager, Admin**
Title:	**Code Red - Fire Response Plan**	
Policy Number:	**HS.32**	**Reviewed by:** **Mr. Atiq Ur Rehman** **Head, Admin. and Marketing**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

To provide an environment of care that is safe from fire, smoke and other non-smoke emergencies as well as facilitating the process of safe exit from the building in case of fire, smoke and non-smoke emergencies.

2. Policy Statements

To design a process for the prevention, early detection, suppression, abatement, and safe exit from the facility in response to fires and non-fire emergencies.

1.1 The goals of Fire Safety & Evacuation Policy include the following:

1.1.1 The prevention of fires through the reduction of risks, such as safe storage and handling of potentially flammable materials.

1.1.2 Limitation of hazards related to any construction in or adjacent to the patient-occupied areas.

1.1.3 A safe and unobstructed means of exit in the event of a fire

1.1.4 Early warning, early detection systems such as fire patrols, smoke detectors, or fire alarms.

1.1.5 Suppression mechanisms such as water hoses, chemical suppressants, or sprinkler systems.

1.1.6 Inspecting, testing, and maintaining fire protection and safety systems, consistent with requirements.

1.1.7 The process for testing all parts and components of Fire, smoke & safety plan at least once per year.

3. Procedures

3.1 RAKCODS is responsible for the Fire Safety & Evacuation Plan and maintaining compliance with the Fire Safety Code. Each department head is responsible for orienting new faculty & staff members to the department and job specific fire safety procedures. All students, interns, faculty and staff are responsible for learning the fire safety protocols.

3.2 The protection of students, interns, faculty, staff, patients, visitors and property from fire smoke and other products of combustion:

3.2.1 It is the responsibility of RAKCODS to manage the Fire Safety & Evacuation Policy that protects its students, interns, faculty, staff, patients, visitors and property by providing employee training and interim Fire Safety Measures.

3.2.2 The Facility is equipped with general-purpose portable fire extinguishers (Carbon dioxide and Dry Powder). The fire extinguishers are located throughout the Facility.

3.2.3 Fire Emergency Pre-Policy:

3.2.3.1 Know the location of the nearest fire alarm.

3.2.3.2 Know the emergency number to dial. Dial "190".

3.2.3.3 Know the location of fire extinguishers and how to use them.

3.2.3.4 Know the location of all fire exits.

3.2.3.5 Know proper evacuation procedures and routes.

3.2.3.6 Know the location of the fire assembly point which belongs to the facility at the time of evacuation.

3.3 Emergency Procedures

3.3.1 The following emergency procedures will be implemented in the event of a fire.

3.3.1.1 **R:** Rescue Patients immediately from fire or smoke area.

3.3.1.2 **A**: trigger the fire alarm and call extension 190 from the nearest landline, give exact location and announce **Code Red**.

3.3.1.3 **C:** Contain the smoke or fire by closing all doors of rooms and corridors.

3.3.1.4 **E**: Extinguish the fire (when safe to do so) (by using PASS technique)

3.3.1.4.1 **P**: Pull

3.3.1.4.2 **A**: Aim at the base of fire

3.3.1.4.3 **S**: Squeeze

3.3.1.4.4 **S:** Sweep side by side

Inspecting, testing and maintaining fire protection and fire safety systems:

3.3.2 The following firefighting and detection equipment is tested:

3.3.2.1 Sprinklers system

3.3.2.2 Fire hose reels.

3.3.2.3 All heat detectors, manual fire alarm boxes and smoke detectors.

3.3.2.4 Fire pumps

3.3.2.5 Portable fire extinguishers

3.4 Reporting and investigating fire safety code and fire protection deficiencies, failures and user errors.

3.4.1 A comprehensive plan to correct any Fire Safety deficiencies which occur or are identified will be developed immediately in writing and will address:

3.4.1.1 All fire Safety Code deficiencies.

3.4.1.2 Corrective actions (Policy for improvement)

3.4.1.3 A reasonable schedule for completion

3.4.1.4 To be co-ordinates with available funding

3.4.1.5 All interim Fire Safety measures have been implemented and are currently enforced.

3.4.2 All fire protection equipment failures or user errors shall be reported immediately and appropriate action taken. When a user error occurs, retained will be conducted.

3.5 Fire Response Team

3.5.1 Members

3.5.1.1 Supervisor of the area for the shift.

3.5.1.2 Operator /reception staff

3.5.1.3 Security Supervisor.

3.5.1.4 Building Maintenance Supervisor (On-Call).

3.5.2 Role of Operators:

3.5.2.1 To announce **Code Red** through public address system clearly three times. Mention: "**Attention, Attention, Code Red, plus exact location**".

3.5.2.2 Call civil defense **(Dial 997)** and police if required.

3.5.2.3 Immediately inform all members of the fire response team through telephone.

3.5.2.4 Evacuation refers in the event that the fire is not extinguished, to move all students, interns, faculty, staff, patients and visitors towards Assembly Point area.

3.5.2.5 When the Shift Supervisor gives instruction to operator that **Code Red** is terminated, this has to be announced through the public speaker system; **Attention, Attention: Code Red Terminated, plus exact location**".

3.5.3 Role of Security Supervisor.

3.5.3.1 Report to the site of fire immediately.

3.5.3.2 Ensure all patients/ occupants are safe and moved from the risk area.

3.5.3.3 Check the area of the disaster and ensure all occupants are moved to safer area.

3.5.3.4 Ensure effective triaging of clients and assure timely evacuation of the high risk patients, students and staff.

3.5.3.5 Brief and guide the civil defense when they arrive at the scene.

3.5.4 Role of Building Maintenance Supervisor:

3.5.4.1 Report to the site of fire immediately.

3.5.4.2 Coordinate with Shift Supervisor for shutting of electrical/ water supply.

3.5.5 General instructions for all Students, Interns, Faculty & Staff:

3.5.5.1 Know the closest fire exit, guide patients and colleagues.

3.5.5.2 Do not use elevators.

3.5.5.3 Make sure all fire, corridor and room doors are closed.

3.5.5.4 Clear all corridors and exits from unnecessary traffic and obstructions.

3.5.5.5 Assures patients, if any are aware of the fire, inform them that the alarm has been turned on, the emergency plan is in effect, and there is an abundance of help to assist as needed.

3.5.5.6 Know the evacuation routes (Fire Evacuation Plans are placed all over the Facility).

3.5.5.7 Report to the Assembly Point.

4. Management of Fire Safety Risks During Construction

4.1 Persons included in the construction process will be oriented & trained how to prevent & act in case of fire.

4.2 The contractors will be monitored during construction process.

4.3 Fire preventive & control systems will be added in case of any modification within the facility.

4.4 The Head of Administration is responsible for monitoring the effectiveness of the implementation of the fire safety during construction.

4.5 When deficiencies are identified, the Head of Administration will take appropriate action to resolve the deficiencies.

4.6 All monitoring and actions to resolve deficiencies related to a construction are documented.

5. Orientation and education to fire Safety Program

5.1 All students, interns, faculty & staff will have knowledge of the specific fire protocols in addition to their specific roles and responsibilities at the point of origin of a fire and away from the point of origin. Specific personnel will be trained in their specific roles and responsibilities to handle fire, smoke & non-smoke emergencies. All new students & employees will receive general fire safety information at the Facility wide orientation program. In addition to the initial Facility orientation, all employees will be oriented by their department Heads on job specific responsibilities and process including: location

of fire alarms and extinguishers, evacuation routes, department specific fire hazards, measures to avoid fires, etc.

5.2 Fire drills shall be conducted once a year at RAKCODS

5.3 Performance standards:

5.3.1 Percentage of periodical preventive maintenance for fire detective system as per the schedule.

5.3.2 One fire drill to be conducted per a year.

5.3.3 Periodic maintenance of the fire extinguishers as required

5.4 Annual evaluation of the fire safety Policy:

5.4.1 The annual evaluation of fire & smoke safety Policy will include a review of the scope according to the standards to evaluate the degree in which the policy meets current international standards and the current risk assessment of the facility. A comparison of the expectations and actual results of the policy will be evaluated to determine if the goals and objectives of the policy were met. The overall performance improvement outcomes and overall effectiveness of the policy will be evaluated by determining the degree that expectations were met. Included in this evaluation will be an evaluation of the effectiveness of personnel training related to the Fire & Smoke Safety Policy and its components.

5.4.2 The performance and effectiveness of the Fire & Smoke Safety Policy shall be reviewed by RAKCODS.

6. No Smoking

6.1 All students, interns, faculty, staff, patients and their families and visitors must not smoke anywhere in the premises including clinics, waiting areas, washrooms and areas adjacent to the facility.

7. References

7.1 Directorate General of Civil Defence. UAE Fire and Life Safety Code of Practice. UAE: Civil Defence; **2018** (latest official code edition)

7.2 The Supreme Legislation Committee in the Emirate of Dubai. Law No. (4) of 2025 Establishing the Dubai Civil Defence General Command. Dubai: Supreme Legislation Committee; 2025

7.3 Federal Law No. 23 of 2006 Concerning the Civil Defense. UAE: Ministry of Interior; 2006.

8. Tools / Appendices

8.1 Appendix HS.32-1 - Fire Safety & Evacuation Plan – Area Leaders

Appendix HS.32-1 - Fire Safety & Evacuation Plan – Area Leaders

Area Leaders		Location
1.	Mr. Tarig Alfadl	Basement Floor
2.	Mr. Muhammad Zahid Khan	Ground Floor
3.	Mr. Khadim Hussain	First Floor
4.	Mr. Uzair Faqir	Second Floor
5.	Mr. Aldrich Reolo	Third Floor
6.	Mr. Muhammad Amir	Fourth Floor
7.	Ms. Jenefer Diez	Fifth Floor
8.	Mr. Atiq-ur-Rehman	Sixth Floor
9.	Mr. Tanveer Akhtar	Seventh Floor

9. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2.1	23rd Oct 2025		Appendix HS.30-1 has been updated with new staff details References updated

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Hospital Safety**	**Prepared by:** **Mr. Muhammad Zahid Khan** **Assistant Manager, Admin**
Title:	**Code Black - Bomb Threat**	
Policy Number:	**HS.33**	**Reviewed by:** **Mr. Atiq Ur Rehman** **Head, Admin. and Marketing**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

This policy is intended to provide both information and an organized plan of action, to ensure the safety of students, interns, staff, faculty, client/patients, visitors and RAKCODS in the event of a bomb threat.

This policy applies to all of RAKCODS.

2. Policy Statement

Code Black will be implemented in the event of any type of bomb threat or discovery of a suspicious object or package to ensure that immediate actions taken are appropriate and minimize the risk of injury to RAKCODS staff, client/patients, visitors, and facilities.

All bomb threats will be considered genuine until proven otherwise.

3. Definitions

3.1. **Bomb**: an explosive weapon detonated by impact, proximity to an object, a timing mechanism, or other means Bombs/explosive devices can be concealed in common objects of various sizes, shapes, and colour, including envelopes, pipes, pop cans, and boxes.

3.2. **Code Black:** The emergency "code designed to address a bomb threat or discovery of or search for a suspicious object"

3.3. **EPC:** Emergency Preparedness Committee which will be responsible in handling the situation

4. Responsibilities

The EPC team and Quality and Patient Safety Committee will be responsible for the annual review of this policy and associated procedures and completion of Code Black drills. In the event of a **Code Black**, all staff is responsible for compliance with the policy and procedures, including participating in searches and cooperating with police in bomb threat investigation.

Incident Manager: Upon notification of a Bomb Threat, the most senior administrative person (Dean of RAKCODS) in RAKCODS along with the Chairperson Clinical Sciences is designated as the Incident Manager. Upon the arrival of an individual with more expertise, this role is transferred to him/her (refer to Incident Management System).

4.1. ROLES AND RESPONSIBILITIES OF THE STAFF MEMBER RECEIVING THE BOMB THREAT BY PHONE

4.1.1. The staff member that receives notification of a bomb threat by telephone will:

4.1.1.1. Remain calm

4.1.1.2. Treat the call seriously

4.1.1.3. Speak in a normal voice

4.1.1.4. Not interrupt the caller

4.1.1.5. Take notes, if possible on the Bomb Threat Information Checklist Form **(Appendix HS.33-1)**

4.1.1.6. Observe the telephone display (if available) and note the number calling you or any other information on the display

4.1.1.7. Attempt to ask questions and prolong the conversation. Try to get information about whom or what the threat is directed against

4.1.1.8. Whenever possible, alert a co-worker to contact Security STAT to respond to your location

4.1.2. On completion of the phone call, the person who received the call will:

4.1.2.1. Remain calm

4.1.2.2. Call RAK City Police and inform them before informing the security on site and the operator of RAKCODS. When the person

is calling the police- State the name, department, that they have received a Bomb Threat and any significant details

4.1.2.3. Document all information relating to the phone call on the Bomb Threat Information Checklist Form **(Appendix HS.33-1)** and take the completed Checklist in person to the Incident Manager in the Emergency Operation Centre

4.1.2.4. Not leave the facility until authorized to do so

NOTE: If the threat is on voicemail– do not delete the message and respond as per #2 above.

4.2. ROLES AND RESPONSIBILITIES OF THE STAFF MEMBER WHO FINDS A SUSPICIOUS OBJECT OR PACKAGE

The staff member who finds a suspicious object/package will:

4.2.1. Not touch the item

4.2.2. Isolate the item

4.2.3. Call RAK City Police and inform them before informing the security on site and the operator of RAKCODS. When the person is calling the police- State the name, department, that they have received a Bomb Threat and any significant details

4.3. ROLES AND RESPONSIBILITIES OF THE STAFF MEMBER WHO RECEIVES A BOMB THREAT BY MAIL/FAX OR EMAIL

4.3.1. The staff member who receives notification of a bomb threat by letter/parcel/fax will:

4.3.1.1. If letter or parcel, handle the item as little as possible. Do not allow anyone else to touch it in order to preserve fingerprints or other evidence

4.3.1.2. Call RAK City Police and inform them before informing the security on site and the operator of RAKCODS. When the person is calling the police- State the name, department, that they have received a Bomb Threat and any significant details.

4.3.1.3. Isolate the area and prevent anyone from entering the area

4.3.2. The staff member who receives notification of a bomb threat by email will:

4.3.2.1. Not delete the email

4.3.2.2. Call RAK City Police and inform them before informing the security on site and the operator of RAKCODS. When the person is calling the police- State the name, department, that they have received a Bomb Threat and any significant details

4.4. ROLES AND RESPONSIBILITIES OF THE STAFF MEMBER WHO RECEIVES A BOMB THREAT BY PERSONAL CONTACT

The staff member that receives notification of a bomb threat by someone in person will:

4.4.1. Remain calm

4.4.2. Note characteristics of informant

4.4.3. Take the threat seriously and conduct self in a manner.

4.4.4. Gather as much information as possible about the individual and the nature of the bomb

4.4.5. Call RAK City Police and inform them before informing the security on site and the operator of RAKCODS. When the person is calling the police- State the name, department, that they have received a Bomb Threat and any significant details

4.4.6. When possible, document all information on the Bomb Threat Information Checklist Form **(Appendix HS.33-1)** and take the completed checklist in person to the Incident Manager in the Emergency Operation Centre

4.4.7. Not leave the facility until authorized to do so

4.5. ROLES AND RESPONSIBILITIES OF OPERATOR

Upon notification by the incident manager announce the **CODE BLACK** with location three times and this should be continued every 15 minutes until the threat is cleared.

4.6. ROLES AND RESPONSIBILITIES OF SECURITY

4.6.1. Upon notification that a bomb threat has been received, proceed immediately to the location of the person reporting the threat.

4.6.2. Obtain all information and report with the individual who received the threat to the Emergency Operation Centre.

4.6.3. If a suspicious item is found, isolate the item and restrict the immediate area

4.6.4. Ensure that there is no further contact with the letter/package/fax and advise the Incident Manager of the contents

4.6.5. Commence Search using the appropriate Area Specific Floor Plan

4.7. ROLES AND RESPONSIBILITIES OF THE INCIDENT MANAGER

4.7.1. To announce **CODE BLACK** as necessary and let all be informed.

4.7.2. Ensure that the Command Centre has been searched prior to being set up

4.7.3. Restrict entry to the hospital where possible

4.7.4. In consultation with the Police and Fire Commander direct a limited/ hospital wide evacuation (Refer to Code Green.)

4.7.5. Upon completion of the Bomb Threat Search and after consultation with the Police, instruct the Telecommunications Operator to page, "**Code Black** All Clear" three (3) times

4.8. POST EVENT DEBRIEFING

The team will have an informal debrief amongst themselves as organized by the Team Leader/Incident Manager. The Manager will review and assess:

4.8.1. The effectiveness of the response

4.8.2. Requirement for additional documentation

4.8.3. Opportunities for improvement

5. References

5.1. U.S. Department of Homeland Security. Bomb Threat Checklist and Response Tips for Businesses and Organizations [Internet]. Washington (DC): DHS; updated 2024 [cited 2026 Jan 12]. Available from: https://www.dhs.gov/bomb-threat-checklist

5.2. International Association of Healthcare Security and Safety. Workplace Violence and Security Incident Response: A Comprehensive Guide for Healthcare Settings. IAHSS; 2023.

5.3. Federal Emergency Management Agency. Emergency Response Plan Guide for Healthcare Organizations. Washington (DC): FEMA; 2022.

5.4. The Joint Commission. Environment of Care (EC) Standards: Safety and Security Management. In: Comprehensive Accreditation Manual for Hospitals (CAMH). Oakbrook Terrace (IL): The Joint Commission; 2025.

5.5. World Health Organization. Emergency Response Framework. 3rd ed. Geneva: WHO; 2020.

5.6. Directorate General of Civil Defence. UAE Fire and Life Safety Code of Practice. UAE: Civil Defence; 2018.

5.7. Federal Law No. 23 of 2006 Concerning the Civil Defence. UAE: Ministry of Interior; 2006.

5.8. International Organization for Standardization. ISO 22320:2018 — Security and resilience — Emergency management — Guidelines for incident response. Geneva: ISO; 2018.

6. Tools / Appendices

6.1. Appendix HS.33-1 - Bomb Threat Information Checklist Form

Appendix HS.33-1 - BOMB THREAT INFORMATION CHECKLIST FORM

RAKCODS Site: _____ **Date:** _____ **Time:** _____

Your Name: _____ **Ext.** _____

Origin of Threat	**Suspicious Item**	Yes NO	Location: _____ Description: _____
	In Person	Yes NO	Location: _____ Time Arrived: _____ Time Departed: _____
	Letter/ Parcel or Email/ Fax	Yes NO	Location: _____ Time Arrived: _____ Tel. #/ Faxed from: _____
	Telephone Call Exact Wording of Caller and Threat, if by phone or in person.	Yes NO	Name and/ or phone number on Telephone display: _____ Time Call Received: _____ Time Call Terminated: _____ _____ _____ _____

QUESTIONS TO ASK CALLER:

1. When is bomb going to explode? _____
2. Where is bomb located? _____
3. What kind of bomb is it? _____
4. What does it look like (size, shape) _____
5. Why did you place the bomb? _____
6. What will cause it to explode? _____
7. What is your name and address? _____
8. Where are you calling from? _____
9. How do you know so much about the bomb? _____

Person's Identity: □ Male □ Female □ Juvenile □ Adult □ Approx. Age _____

Height _____Weight _____ Hair Colour/ Length _____ Glasses _____

Complexion _____ Scars _____ Tattoos _____

Clothing _____

Caller's Voice: □ Loud □ Soft □ High-Pitched □ Deep □ Raspy □ Calm □ Pleasant
□ Intoxicated □ Excited □ Nervous □ Crying □ Laughing □ Disguised
□ Heavy breathing

Accent: □ No □ Yes Specify: _____

Speech: □ Fast □ Slow □ Distinct □ Distorted □ Normal □ Lisp □ Stutter □ Nasal □ Slurred
□ Incoherent

Language/Grammar: □ Excellent □ Good □ Fair □ Poor □ Foul

Background Noises: □ Clear □ House noises □ Music □ Aircraft □ Train/Subway □ Traffic □ Animal noises □ PA system □ Factory Machinery □ Street noises □ Horns □ Party atmosphere □ Office machinery □ Other: _____

Was the caller's voice familiar? □ No □ Yes -Who does it remind you of? _____

Does caller seem familiar with hospital? □ No □ Yes – Explain: _____

7. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2	06th Jan 2026		References are updated and revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Hospital Safety**	**Prepared by:** **Dr. Aqsa Khan** **Infection Control-in-Charge** **Mr. Muhammad Zahid Khan** **Assistant Manager, Admin**
Title:	**Code Brown - Hazardous Spills**	
Policy Number:	**HS.34**	
Ownership:	**RAKCODS**	**Reviewed by:** **Mr. Atiq Ur Rehman** **Head, Admin. and Marketing**
Effective (Issue) Date:	**Sep 2019**	
Edition Number	**3**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

Most materials found in the dental laboratory, chemical storage, waste storage, and clinical areas are hazardous to some degree and all have the potential to be spilled. The purpose of this policy and its associated procedures is to outline the expected response to Internal Hazardous Materials Spills at RAKCODS. This policy applies to all dental healthcare workers (DHCW) and affiliates of RAKCODS;

2. Policy Statement

RAKCODS is committed to protecting DHCW and patients and property from hazardous spills. Employees using hazardous chemicals are required to be trained in safe handling, storage and disposal of these materials.

3. Definitions

3.1. Code Brown: The term used to alert staff to an unmanageable accidental release of a hazardous or potentially hazardous substance or gas.

3.2. Code Brown Response Team: The team consists of site nurses and housekeeping. After regular work hours, responsibilities are assumed by Security, Housekeeping and/or Building Maintenance staff and may be delegated to other trained individuals on site.

3.3. Material Safety Data Sheet (MSDS): Detailed information about the hazards and safe use of products that suppliers of those products are obligated to provide. Details provided include information on health effects, fire hazards, handling, storage, and personal protection MSDS sheets are available through Materials Management.

3.4. Spill: A discharge of material to air, land or water or a chemical that has escaped its means of containment that could have an adverse effect on safety, health and/or the environment. Hazardous material spills are categorized as either major or minor.

3.5. Major Spill: A major chemical spill in excess of 1 L or 1 kg OR small amounts that could pose a danger to the safety and health of people in the vicinity of the spill OR spills where the hazardous potential of the spill is unknown. This type of spill requires external assistance from the Civil Defense.

3.6. Personal Protective Equipment (PPE): Protective equipment provided for personnel to wear while handling hazardous materials.

4. Responsibilities

4.1. All Staff

4.1.1. Complete an annual review of the Code Brown Policy

4.1.2. Complete the mandatory Code Brown training/e-learning annually

4.1.3. Complete training for spill kits as required for work area

4.1.4. Avoid the area of the spill

4.1.5. Follow public address (PA) system directions

4.2. Managers/Principal Investigators (After Hours Manager)

4.2.1. Assess the hazardous spill potential of substances used in the respective work area

4.2.2. Procure chemical/biological spill kits as needed for the area and ensure that they remain stocked

4.2.3. Provide staff with access to appropriate spill kits, protective equipment, and staff training

4.3. Security

4.3.1. Participate in the Spill Response Team

4.3.2. Attend the code location

4.3.3. Seal off the area and restrict personnel from entering the area of danger

4.3.4. Direct/escort the Fire Department staff and/or Police to the code location

4.3.5. Assist with the evacuation/Code Green if necessary

4.4. Spill Response Team

4.4.1. Determine the severity of the spill

4.4.2. Complete work according to procedures outlined in the MSDS

4.5. Emergency Preparedness Committee

4.5.1. Announce Code Brown and location of the spill three times in the event of a major spill

4.5.2. Repeat the Code Brown announcement every 15 minutes until the code is cleared or canceled

4.5.3. Call 190 on the instruction of the incident Manager/Staff on Duty

4.5.4. Notify key staff outlined in procedures

4.6. Categorizing Hazardous Spills

4.6.1. Categorizing the spill will help to inform whether it is a minor or major spill and the need to call a Code Brown. Consider the following when categorizing a spill:

4.6.2. Ability to identify spilled material (NB: it is important to have and use the Material Safety Data Sheet (MSDS)):

4.6.2.1. The extent of the spill;

4.6.2.2. The degree of hazard present;

4.6.2.3. Toxicity of the material;

4.6.2.4. Property of the material (e.g. displaces oxygen);

4.6.2.5. Volatility and reactivity;

4.6.2.6. Flammability/explosive properties;

4.6.2.7. Infectious properties;

4.6.2.8. The volume of the spill; and

4.6.2.9. Location of the spill (enclosed area, proximity to ignition source).

4.7. Responding to Specific Hazards

4.7.1. Flammable or Combustible Materials Hazard

4.7.1.1. If a hazard or explosion could result from a spill (see MSDS), evacuate the area or building immediately.

4.7.1.2. Ensure that any flammable spill of any size is reported to the Fire Department (997) immediately via the EPC.

4.7.1.3. Notify:

4.7.1.3.1. Security on Duty

4.7.1.3.2. FMS

4.7.1.3.3. Quality Improvement and Patient Safety chairperson

4.7.1.3.4. Turn off burners and sources of electrical sparks.

4.7.1.3.5. Stop all Hot Work.

4.7.1.3.6. Turn off the sources of the spill (e.g., gas cylinder) or contain the spill as much as possible.

4.7.1.3.7. Absorb flammable liquids with an absorbent specially designed for the purpose of containing the vapors as well as liquid, and then transfer it to fume hoods or a fire resistant disposal container.

4.7.1.3.8. While flammable material is being cleaned up, have a person stand by with an appropriate fire extinguisher.

4.7.2. Toxic Materials

4.7.2.1. Consult the product MSDS for information to assist with the evaluation of all toxic spills prior to any emergency response.

4.7.2.2. Use an external response group, if it is determined toxic materials are extremely hazardous.

4.7.2.3. Mop, towel or sponge up materials and transfer them to a labeled disposal container.

4.7.2.4. Immediately clean up mercury spills, even small ones.

4.7.2.5. Do not use a vacuum cleaner, as it will promote the vaporization of mercury, increasing air contamination and the risk of inhalation. React mercury that has escaped into inaccessible places with material specially formulated for this purpose (see MSDS). Never put mercury into the ordinary garbage where it may react with organic material and form biologically toxic products.

4.7.3. Air Quality Deterioration

4.7.3.1. If there is no obvious source of a spill but an unusual odor persists, there may be a danger of harmful outside contaminants entering the facility.

4.7.3.2. Immediately notify:

4.7.3.2.1. Quality Improvement and Patient Safety chairperson

4.7.3.2.2. Facility management and Planning Department

4.7.3.2.3. Evacuate to a safe location if required

5. Procedures

5.1. Chemical Inventory

A Master inventory of all chemicals used in the hospital will be with Quality Improvement and Safety Committee, and it will be updated at least quarterly or when required. Changes will be informed to the units by the Quality Improvement and Safety Committee chairman for the timely updating of their documents. For all the hazardous chemicals, MSDS (Material Safety Data Sheet) will be kept for the reference. Wherever it is applicable to the unit, a list of chemicals and its MSDS will be available and updated as required.

The chemical inventory includes the following:

5.1.1. Chemical name

5.1.2. Location

5.1.3. GHS Hazardous symbol

5.1.4. Quantity

5.2. Handling, Storage and Use

5.2.1. All the chemicals should be handled with extra care, especially hazardous chemicals. It will be according to the Material Safety Data Sheet (MSDS) details.

5.2.2. Chemicals shall be stored only in approved containers in work areas and the quantity should be as less as possible. If secondary containers are used proper labeling should be done.

5.2.3. Flammable Chemicals in bulk quantities should be stored in a safety cabinet and the cabinets must be marked as "Hazardous Chemicals" in a visible format.

5.2.4. Precautions/care should be taken according to the hazardous warnings on the

containers. If required, MSDS also can be referred.

5.3. Identification of hazard and labeling of chemicals

The Hazard Materials Program requires that all containers of hazardous materials be labeled with the Globally Harmonized System (GHS) hazardous symbols and (National Fire Protection Association) NFPA.

5.4. Reporting and investigating spills, exposures and other incidents

5.4.1. Reporting all the incidents related to the hazardous materials and waste such as spills, exposure or other related incidents should be done as per RAKCODS OVR Policy.

5.4.2. The Quality Improvement and Safety Committee will investigate all the incidents related to the hazardous materials.

5.4.3. In the event of a spill of hazardous material of more than one litre (Major Spill), the following actions should be taken:

5.4.3.1. Seal off the area and all unwanted personnel must evacuate the area.

5.4.3.2. Report the spill in hospital's standard announcement format (e.g. Code Brown, Code Brown, Code Brown)

5.4.3.3. If possible and safe, under the supervision of housekeeping supervisor, housekeeping staff will clean the area with the help of required PPE's and suitable spill kit. They can use the

MSDS details also for reference. Collect the waste and dispose of it properly.

5.4.3.4. If required, the Quality Improvement and Safety Committee Chairman will be called or consulted.

5.4.3.5. If the cleaning is not possible in a safe manner, housekeeping supervisor/ Quality Improvement and Safety Committee chairman will inform EPC leader to seek help from an external agency such as Civil Defense.

5.4.4. In the event of an accidental release of a hazardous substance of one litre or less (Minor Spill), the Unit staff should:

5.4.4.1. Seal off the area and all unwanted personnel must be sent out.

5.4.4.2. Inform housekeeping supervisor/staff for cleaning.

5.4.4.3. If possible and safe, under the supervision of housekeeping supervisor, housekeeping staff will clean the area with the help of required PPE's and suitable spill kit. They can use the MSDS details also for reference. Collect the waste and dispose of it properly.

5.4.4.4. If cleaning is not possible in a safe manner, housekeeping supervisor will inform Quality Improvement and Safety Committee chairman /designee to seek help from an external agency such as Civil Defense.

5.4.5. Emergency Spill Clean-up & Basic Staff Response

5.4.5.1. Cleaning Procedure:

Appropriate Personal Protective equipment, spill kit, and waste collection items are used for emergency spill clean-up. For chemicals, the cleaning will be as per MSDS of that particular material.

The procurement committee member shall ensure availability of spill kits and shall maintain and update an inventory.

5.4.5.2. Action by Quality Improvement and Safety Committee

chairman/designee

5.4.5.2.1. Reach the spot as soon as possible after getting the intimation.

5.4.5.2.2. Refer the MSDS of the spilled chemical.

5.4.5.2.3. Coordinate the cleaning up operation.

5.4.5.2.4. Ensure that the waste generated during cleaning up the spill is properly disposed of.

5.4.5.2.5. Investigate the Occurrence Variance Report (OVR) in conjunction with unit In-charge and determine the cause of the spill.

5.4.5.2.6. Take necessary decisions to prevent the recurrence.

5.4.5.3. Action by Housekeeping staff

5.4.5.3.1. Reach the spot as soon as possible.

5.4.5.3.2. Get information regarding the chemical and its cleaning procedure from unit in-charge/ Quality Improvement and Safety Committee chairperson/ House Keeping Supervisor/infection control member.

5.4.5.3.3. Get the suitable Spill Kit for the spill and use it to clean the spill. Collect the waste and dispose of it properly.

5.5. Collection and disposal of hazardous materials and wastes

All the wastes are collected from the hospital premises as per the categories of waste and the types of color-coded bags/containers as mentioned in the table.

5.6. Enforcement and responsibility:

5.6.1. The unit in-charge is responsible for the safe collection and disposal of any kind of waste generated from there.

5.6.2. The Quality Improvement and Safety Committee is responsible for

establishing priorities for the investigation or resolution of identified problems with hazardous materials and wastes and also for evaluating the effectiveness of the program at least annually.

5.6.3. All persons required to handle infectious wastes or materials shall be provided with appropriate orientation, job training, PPEs, and equipment.

5.6.4. An approved agency is doing the disposal of all medical waste generated in the hospital and housekeeping department is responsible for the collection of all waste categories from different departments.

5.6.5. Housekeeping supervisor has an important role and responsibility to ensure compliance with this policy.

5.7. Education and training

The individual Head of departments – FMS, IPC, and House Keeping are responsible for arranging, training, and orientation for their staff that has contact with hazardous materials and waste. The training will address - Precautions for safe handling of hazardous materials, Emergency cleaning procedures, reporting of spills or exposures.

6. References

6.1. Centers for Disease Control and Prevention (CDC). Environmental services [Internet]. *Infection Control*; 1 May 2024. Available from: https://www.cdc.gov/infection-control/hcp/environmental-control/environmental-services.html.

6.2. Dubai Healthcare Authority. DHCR biological spill policy and procedure [Internet]. 2018. Available from: https://dhcc.ae/gallery/DHCR%20Biological%20Spill%20Policy%20and%20Procedure.pdf.

6.3. OSHA Review. Managing chemical spills in a dental office – OSHA compliance [Internet]. 2 July 2019. Available from: https://oshareview.com/2019/07/managing-chemical-spills-in-a-dental-office-osha-compliance/.

7. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Hospital Safety**	**Prepared by:** **Mr. Muhammad Zahid Khan** **Assistant Manager, Admin**
Title:	**Code Pink – Infant/Child Abduction**	
Policy Number:	**HS.35**	**Reviewed by:** **Mr. Atiq Ur Rehman** **Head, Admin. and Marketing**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

The purpose of this policy is to promote the safety of infants and children and prevent abduction during their treatment or their parents' treatment at RAKCODS.

This policy applies to the procedures to be followed by RAKCODS Staff and Security Personnel for the prevention of infant/child abduction and procedures for responding to infant/child abduction in the hospital.

2. Policy Statements

2.1. Infants/Childs should never be left unsupervised.

2.2. Other than parents of Infants/child visitors should not be allowed inside the clinics.

2.3. Infants/Childs information should not be discussed aloud by health care providers.

2.4. All pediatric patients must have an escort with them throughout their time at RAKCODS.

2.5. All parents should be educated as a part of their orientation program at RAKCODS not to leave their child unattended.

2.6. All employees are educated on the prevention of abduction of Infants/children and abduction response plan, through mandatory yearly training sessions

2.7. Too many visitors crowding in the clinics are discouraged.

2.8. **Code Pink** drills shall be done every year and all concerned staffs are required to participate.

2.9. Infants/Child drills are conducted to practice and assess response, process, and procedures in the event of an actual infant abduction. The **Emergency Preparedness Committee** evaluates these drills.

3. Responsibilities

It is the responsibility of all RAKCODS staff and Security personnel to comply with this policy.

4. Procedures

4.1. Response to Infant/Child Abduction

4.1.1. When an infant is suspected or confirmed to be missing the employee notifies the operator by calling 190.

4.1.2. If unable to locate the infant/child in the clinics the nurse will initiate a **Code Pink** (infant abduction).

4.1.3. The operator announces **CODE PINK** with location three times.

4.1.4. The EPC team is notified by the operator

4.1.5. The security team will close all exit doors of the hospital.

4.1.6. Entering and leaving the hospital –whilst conducting a search of the entire hospital and parking lot, the nursing team will continue with a thorough search of the immediate areas located to the unit, paying particular attention to small, unlikely spaces (cupboards etc…) offices, under chairs.

4.1.7. The nurse and the assigned doctor assess parents and provide psychological support, moving them away from the unit if requested and the nurse assigned to baby must stay with parents at all times.

4.1.8. The Unit nurse ensures all other infant/children are accounted for and ensure all with mothers.

4.1.9. The administration continues with the investigation liaising with Police Authorities

4.2. Responders on Hospital Ground Floor Lobby

4.2.1. Immediately upon hearing "**Code Pink**" designated responders go to assigned exit areas and check outside exits also checks inside of stairwells.

4.2.2. Remains in exit location until relieved by another staff; security personnel or **Code Pink** clear is announced

4.2.3. The responder to the exit should tell people that this is an emergency situation and it will be necessary to wait a moment while every adult with an infant is cleared.

4.2.4. The responder will ask the adult with the infant to wait momentarily until the **Code Pink** is over or the adult is cleared by security.

4.3. Security office

4.3.1. Immediately notifies security on duty to conduct a search.

4.3.2. Ensures no one leaves the building without proper check

4.3.3. Completes written report.

4.4. Process upon Recovery

When an Infant/Child is located /returned the following events occur:

4.4.1. The Security on - duty shall notify the police and operator to call "**CODE PINK – All clear**", when the situation has been resolved;

4.4.2. The operator shall announce "**CODE PINK – All clear**" three times.

4.4.3. The operator informs the EPC team

4.4.4. The team facilitates the reunion of the infant/child with a family

4.5. The policy will be reviewed annually

5. References

5.1. The Joint Commission. Environment of Care (EC) Standards: Safety, Security, and Code Pink / Infant Abduction Prevention. In: Comprehensive Accreditation Manual for Hospitals (CAMH). Oakbrook Terrace (IL): The Joint Commission; 2025.

5.2. American Academy of Pediatrics, Committee on Pediatric Emergency Medicine. Guidelines for hospital security and child protection: Infant/Child abduction prevention. Pediatrics. 2022;150(4):e202205678.

5.3. National Center for Missing & Exploited Children. Hospital Code Pink: Best Practices for Infant/Child Abduction Prevention and Response. Alexandria (VA): NCMEC; 2023.

5.4. World Health Organization. Safe hospital and healthcare facility management: Child protection and security measures. Geneva: WHO; 2024.

5.5. International Organization for Standardization. ISO 22320:2018 — Security and resilience — Emergency management — Guidelines for incident response. Geneva: ISO; 2018.

5.6. Federal Law No. 23 of 2006 Concerning the Civil Defence. UAE: Ministry of Interior; 2006.

5.7. UAE Government. Fire Safety and Emergency Preparedness. Official Portal [Internet]. 2025 [cited 2026 Jan 12]; Available from: https://u.ae/en/information-and-services/justice-safety-and-the-law/fire-safety

6. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2	06th Jan 2026		References are updated and revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Hospital Safety**	**Prepared by:** **Mr. Muhammad Zahid Khan** **Assistant Manager, Admin**
Title:	**Code Green – Evacuation**	
Policy Number:	**HS.36**	**Reviewed by:** **Mr. Atiq Ur Rehman** **Head, Admin. and Marketing**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

Code Green is intended to facilitate the evacuation of patients. It refers to the evacuation of a specific area or the entire building on the announcement of **CODE GREEN** over the public address system (PAS). **Code Green** Stat is only initiated in a crisis and involves the immediate partial or complete evacuation of the facility. **Code Green** Stat is usually a last resort, and ordered only after horizontal (across) and vertical (down) evacuations do not ensure safety.

The evacuation plan is intended to be a simple and flexible guide. All of the circumstances which might necessitate an evacuation cannot be anticipated. Knowledge of the contents of this plan must be supplemented with common sense, initiative and a cooperative attitude.

2. Policy Statements

RAKCODS is committed to providing an efficient and swift evacuation of students, interns, staff, faculty, patients and visitors safely to another side of the building or to the outside in the event of an emergency. Healthcare workers responding to a code will take care to assess the environment during the response to protect their own health and safety.

3. Definitions

3.1. Code Green: Refers to the evacuation of a specific area or the entire building on the announcement of **CODE GREEN** three times over the public address system (PAS). No immediate danger exists but evacuation of the building is necessary. Designated exits may be indicated.

3.2. **Code Green (Area Specific):** No immediate danger but requires evacuation of part of the building to a designated area either internally or externally.

3.3. **Code Green Non-Urgent: Code Green**, Non Urgent is a planned evacuation and is initiated when the building has been given advance notice of the need for partial or complete evacuation of all.

A **Code Green** non-urgent evacuation would allow us to:

3.3.1. Ensure every individuals comfort during the evacuation process as much as possible.

3.3.2. Ensure evacuation of all patients and match with their records of entry.

3.3.3. Reduce the number of people by canceling elective procedures and discharging patients as soon as possible

3.4. **Code Green Stat (Area Specific):** Immediate danger exists in part of the building. Everyone must be evacuated immediately to a designated area either internally or externally. (i.e. there is an event that compromises the safety of the occupants and the integrity of the building in a contained area).

3.5. **Health Care Worker (HCW):** is defined as students, interns, staff and faculty of RAKCODS.

3.6. **Incident Manager:** Person responsible for directing and coordinating all activities related to the incident. Upon the arrival of an individual with more expertise, this role may be transferred to him/her.

3.7. **Total Evacuation:** All people within a building(s) must evacuate the building.

3.8. **Horizontal Evacuation:** Patients, visitors and staff need to evacuate an area beyond the doors on the same side or floor.

3.9. **Vertical Evacuation:** A complete evacuation of all people on a floor in a vertical downward direction.

4. Responsibilities

The EPC chairperson is authorized to declare a "**Code Green**". If needed at times this decision of declaration is based upon consultation with the civil defense authorities of RAK. In the event that an immediate decision must be made to evacuate an area, the person in charge of the area shall order the evacuation past the closed exit doors to a safe area.

4.1. Roles and Responsibilities for the Incident Manager (IM)

4.1.1. Response

4.1.1.1. Upon being authorized as the incident manager by the EPC Chair or is the incident manager as he is responsible for managing the incident then the IM determines the need for **Code Green** or **Code Green** Stat: horizontal, vertical, total evacuation or code green non-urgent evacuation in consultation with the Police and Civil Defense if required.

4.1.1.2. Notify operator to initiate **Code Green** or **Code Green** Stat providing further specific instruction.

4.1.1.3. Depending on location of **Code Green** or **Code Green** Stat, maintain contact with the person in charge of the area impacted and Security to verify details and obtain latest information.

4.1.1.4. Establish Emergency Operations Centre (EOC)

4.1.1.5. Advise Communications

4.1.2. Recovery

4.1.2.1. Determine when to call all clear, notify operator to announce all clear

4.2. Roles and Responsibilities of Operator

4.2.1. Response

Upon notification of **Code Green**, inform:

4.2.1.1. Security

4.2.1.2. Building Services

4.2.1.3. Announce over the Public Address system "Attention! Attention! **Code Green** (or **Code Green** Stat) is in effect." Page three times (3X). If able, give any obstructed routes

4.2.1.4. The evacuation alarms will only be activated for **Code Green** Stat.

4.2.2. Recovery

4.2.2.1. Notify the following individuals that **the Code Green/ Code Green** Stat has been resolved:

4.2.2.2. Security

4.2.2.3. Building Services

4.3. Roles and Responsibilities of Security

4.3.1. Response

4.3.1.1. Assist in traffic control in the impacted area or entire building if total evacuation

4.3.1.2. Monitor traffic on roads within the building

4.3.1.3. Once everyone is evacuated, secure all doors

4.3.1.4. Ensure that only authorized personnel and Community Agencies such as Ambulance, Fire, Police enter the building

4.3.2. Recovery

4.3.2.1. Assist with traffic control.

4.4. Roles and responsibilities of Building Services

4.4.1. Response

4.4.1.1. Ensure the status of the physical supports needed for an evacuation, e.g., operational elevators, etc.

4.5. Roles and Responsibilities of Floor Leader

4.5.1. Response

4.5.1.1. Wear appropriate vest

4.5.1.2. Supervise evacuation procedures

4.5.1.3. Assign staff to check room and place indicators on the doors following evacuation, safety permitting

4.5.1.4. Direct all visitors and vendors to the appropriate exit

4.6. Roles and Responsibilities of Floor Leaders on Clinical Floors

4.6.1. Response

4.6.1.1. Evacuate patients to the designated areas depending on their priority

4.6.1.2. Remove patients in immediate danger

4.6.1.3. Remove wheelchair patients

4.6.1.4. Evacuate rest of the occupants

5. Post Event Debriefing

The team will have an informal debrief amongst themselves within the shift that the **Code Green** occurred as organized by the Incident Manager. A report will be provided to the EPC committee.

The committee will Review and Assess the following based upon the report:

5.1. The effectiveness of the response

5.2. Requirement for additional documentation

5.3. Opportunities for improvement

6. Post Event Documentation

The incident manager will use the Occurrence Variance Report (OVR) form and submit the report within 48hrs as per the Occurrence Variance Reporting policy of RAKCODS.

7. References

7.1. Directorate General of Civil Defence. *UAE Fire and Life Safety Code of Practice.* UAE: Civil Defence; 2018.

7.2. Federal Law No. 23 of 2006 Concerning the Civil Defence. UAE: Ministry of Interior; 2006.

7.3. UAE Government. *Fire Safety and Emergency Preparedness.* Official Portal of the UAE Government [Internet]. 2025 [cited 2026 Feb 3]. Available from: https://u.ae/en/information-and-services/justice-safety-and-the-law/fire-safety

7.4. The Supreme Legislation Committee in the Emirate of Dubai. *Law No. (4) of 2025 Establishing the Dubai Civil Defence General Command.* Dubai: Supreme Legislation Committee; 2025.

7.5. National Fire Protection Association. *NFPA 101: Life Safety Code.* Quincy (MA): NFPA; 2025.

7.6. International Organization for Standardization. *ISO 22320:2018 — Security and resilience — Emergency management — Guidelines for incident response.* Geneva: ISO; 2018.

7.7. World Health Organization. *Emergency Response Framework.* 3rd ed. Geneva: WHO; 2020.

7.8. The Joint Commission. *Emergency Management (EM) Standards.* In: *Comprehensive Accreditation Manual for Hospitals (CAMH).* Oakbrook Terrace (IL): The Joint Commission; 2025.

7.9. Federal Emergency Management Agency. *Hospital Evacuation Planning Guide.* Washington (DC): FEMA; 2018.

8. Tools / Appendices

8.1. Appendix HS.36-1 – Evacuation – Area Leader

Appendix HS.34-1 – Evacuation – Area Leader

Area Leaders		Location
1.	Mr. Tarig Alfadl	Basement Floor
2.	Mr. Muhammad Zahid Khan	Ground Floor
3.	Mr. Khadim Hussain	First Floor
4.	Mr. Uzair Faqir	Second Floor
5.	Mr. Aldrich Reolo	Third Floor
6.	Mr. Muhammad Amir	Fourth Floor
7.	Ms. Jenefer Diez	Fifth Floor
8.	Mr. Atiq-ur-Rehman	Sixth Floor
9.	Mr. Tanveer Akhtar	Seventh Floor

9. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2	16th Jan 2026		Revised the Appendix HS.34-1 – Evacuation – Area Leader

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Hospital Safety**	**Prepared by:** **Mr. Muhammad Zahid Khan** **Assistant Manager, Admin**
Title:	**Elevator Rescue Procedure**	
Policy Number:	**HS.37**	**Reviewed by:** **Mr. Atiq Ur Rehman** **Head, Admin. and Marketing**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

This procedure is to ensure safe, effective rescue of trapped personnel from elevator in RAKCODS.

2. Policy Statement

This policy applies to people who get stuck within the elevators of RAK College of Dental Sciences (RAKCODS)

3. Procedure for Elevator Entrapment

When an elevator malfunctions and passengers are trapped inside an elevator car, the following procedure will be followed:

3.1 Upon hearing the elevator emergency buzzer, the personnel available at the nearby reception will immediately inform the Security Officer.

3.2 The Security Officer will immediately report it to Facility Management (Admin Officer/Head of Administration).

3.3 Facility Management will immediately contact the elevator maintenance service company for rescue. Facilities Management will obtain an estimated time of arrival (ETA) from the elevator service company. This information will be passed on to entrapped personnel.

3.4 Only qualified personnel from the elevator maintenance service company are authorized to open the elevator doors and help rescue the trapped passenger(s). RAKCODS employees are not authorized to rescue the trapped passenger(s).

3.5 Facilities Management/Security Officer will maintain communication with the passenger(s) during the entrapment and inform the passenger(s) of the procedure that is being followed.

3.6 The officer/Facilities Management personnel at the scene will inform the passenger(s) not to attempt to open the elevator doors or the overhead hatch and stand back away from the doors.

3.7 The officer/Facilities Management personnel on the scene will assess the situation and determine physical and emotional stress. The officer/Facilities Management personnel will also assure the passenger(s) are not in any danger and that help is on the way.

3.8 The responding Security Officer will remain at the scene until all passengers are rescued safely.

3.9 Facilities Management maintenance personnel will remain at the scene unless another priority/emergency situation arises that would require immediate response. If Facilities Management personnel leave the scene, continual contact should be made available with the responding Security Officer.

3.10 After the passenger rescue Facility Management will contact RAKCODS Medical Emergency Team for First Aid.

3.11 If required Facility Management will call the national ambulance for proper medical care.

4. Occurrence Variance Reporting

Facility Management (Head of Administration/Admin Officer) will initiate the Occurrence Variance Report (OVR) as per the Occurrence Variance Reporting policy of RAKCODS.

5. References

5.1 Directorate General of Civil Defence. *UAE Fire and Life Safety Code of Practice.* UAE: Civil Defence; 2018.

5.2 Federal Law No. 23 of 2006 Concerning the Civil Defence. UAE: Ministry of Interior; 2006.

5.3 The Supreme Legislation Committee in the Emirate of Dubai. *Law No. (4) of 2025 Establishing the Dubai Civil Defence General Command.* Dubai: Supreme Legislation Committee; 2025.

5.4 UAE Government. *Fire Safety and Emergency Preparedness.* Official Portal of the UAE Government [Internet]. 2025 [cited 2026 Feb 3]. Available from: https://u.ae/en/information-and-services/justice-safety-and-the-law/fire-safety

5.5 National Fire Protection Association. *NFPA 101: Life Safety Code.* Quincy (MA): NFPA; 2025.

6. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2	06th Jan 2026		References are revised and updated

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Hospital Safety**	**Prepared by:** **Mr. Muhammad Zahid Khan** **Assistant Manager, Admin**
Title:	**Handicapped Personnel Rescue**	
Policy Number:	**HS.38**	**Reviewed by:** **Mr. Atiq Ur Rehman** **Head, Admin. and Marketing**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**3**	
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

This procedure is to ensure safe, effective rescue of handicap personnel from handicap toilets in RAKCODS.

2. Policy Statement

This policy applies to people who get stuck within the toilets of RAK College of Dental Sciences (RAKCODS).

3. Procedures

3.1. Emergency Bell

An emergency bell is installed in handicap toilets on ground and first floor in male & female toilets. These bells are placed at the following locations to immediate attention and rescue:

Facility	Location	Bell Placement
Male Toilet	Ground Floor	RAKCODS Reception
Female Toilet	Ground Floor	RAKDC Reception
Male Toilet	Frist Floor	On Toilet Entrance Door
Female Toilet	First Floor	Nursing Station – B Side

3.2. Procedures for Rescue

In an occurrence where handicap personnel seek help to get him/her rescued from the toilet, the following procedure will be followed:

3.2.1. The reception & nursing staff will immediately inform the security officer after listening the emergency bell.

3.2.2. The Security Officer will immediately report it to Facility Management (Admin Officer/ Head of Administration).

3.2.3. The officer/ Facilities Management personnel on the scene will assess the situation and determine physical and emotional stress. The officer/Facilities Management personnel will also assure the handicap personnel is not in any danger and that help is on the way.

3.2.4. Facility Management will contact the Medical Emergency Team at RAKCODS for safe & effective rescue.

3.2.5. Facilities Management/Security Officer will maintain communication with the handicap personnel during the entrapment and inform him/her of the procedure that is being followed.

3.2.6. The responding Security Officer will remain at the scene until the safe rescue is done.

3.2.7. After the rescue RAKCODS Medical Emergency Team will ascertain the physical wellbeing of the personnel and will provide the First Aid.

3.2.8. If required Facility Management will call the national ambulance for proper medical care.

3.3. Occurrence Variance Reporting

3.3.1. Facility Management (Head of Administration/Admin Officer) will initiate the Occurrence Variance Report (OVR) as per the Occurrence Variance Reporting policy of RAKCODS.

4. References

4.1. National Fire Protection Association. *NFPA 72: National Fire Alarm and Signaling Code.* Quincy (MA): NFPA; 2025.

4.2. International Organization for Standardization. *ISO 21542:2021 — Building construction — Accessibility and usability of the built environment.* Geneva: ISO; 2021.

4.3. World Health Organization. *Disability-inclusive emergency preparedness and response.* Geneva: WHO; 2022.

4.4. Federal Emergency Management Agency. *Guidance on Planning for the Evacuation of People with Disabilities.* Washington (DC): FEMA; 2019.

4.5. International Organization for Standardization. *ISO 22320:2018 — Security and resilience — Emergency management — Guidelines for incident response.* Geneva: ISO; 2018.

5. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**
2	06th Jan 2026		References are revised and updated

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

13. BASIC SCIENCES AND PRE-CLINICAL COURSES

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Basic Sciences and Pre-Clinical Courses**	**Prepared by:** **Dr. Md. Sofiqul Islam** **Associate Professor**
Title:	**General Regulations**	
Policy Number:	**GR.01**	**Reviewed by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Dec 2023**	
Edition Number	**1**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

To establish a comprehensive framework that governs the foundational aspects of dental education. These regulations aim to ensure academic rigor, maintain standards of excellence, and foster a conducive learning environment for students pursuing a career in dentistry.

Students are expected to obey policies of the Basic Sciences and Pre-Clinical laboratories along with the rules and regulations of RAKMHSU.

2. Policy Statement

The policy includes the comprehensive compilation of all the policies and procedures to guide students in their basic sciences and pre-clinical training

3. Procedures

3.1. Attendance

- Attendance for all practical sessions will be strictly monitored.
- Students should attend their laboratory session on time.
- Students who are absent from the laboratory sessions for any reason should inform the concerned instructor.
- It is the responsibilities of the students who are absent to make-up the missed work to avoid any delay in their academic progress

- Lab timings are generally between 8:30 am – 4:30 pm during the working days.

3.2. Conduct & Attire

- Students are expected to conduct themselves in a professional manner.
- Students must adhere to safety and infection control regulations regarding handling of impressions, casts and other contaminated items.
- Appropriate safety attire must be worn when working in the preclinical laboratory. This may include one or a combination of the following:
- Apron or white lab coats are to be worn buttoned and they must be clean.
- Masks and Eye protection (safety glasses, face shield)
- Long hair must be managed to prevent it from being caught in machinery
- Food, drink and smoking are not allowed in the labs.
- Mobile phones should be switched off or silent during the procedure.
- Students are prohibited to wear shorts, sleeveless shirts, T-shirts, jeans, sport shoes and baseball caps.
- Staff and students must wear neat and clean dress.
- Jeans and open shoes are not allowed in the clinics.
- Fingernails should always be cut short.
- Hand or wrist jewelry should not be worn while working with gloves.
- Personal equipment and instruments should not be left in the laboratories. Bags, books, cell phones and other personal items should be stored in the designated lockers/areas.
- The Dental faculty and staff are not responsible for loss of personal items stored or left in the laboratories.
- The laboratories (including benches, model trimmers, and casting areas, polishing and finishing benches) must be kept clean and neat at all times. Dental stone and casting materials must be properly discarded after completion of work. They are not to be discarded in the sink as this may choke the pipes.
- All equipment and supplies provided for student use in the laboratories are the property of the College and must remain in the laboratories and should be used only for the preclinical and related work.

- Microscopes and slides should be handled with utmost care. Students should be well versed with the use of the microscopes. Microscopes used should be switched off and placed back properly into their original places.
- On completion of the laboratory session, items used should be put back into their original places.
- Students who are not in compliance with these minimal dress requirements will not be allowed to remain in the laboratory premises.
- Students are individually responsible for following these instructions at the laboratory areas.
- Failure to do so will result in referral to the Disciplinary Committee.

3.3. Body Safety Measures and Personal Protection

3.3.1. Eye and Face Protection

All students, staff, faculty and visitors must wear appropriate eye and/or facial protection in the following:

- Eyewear must be worn during changeover and cleaning of the instruments and all times in the sterilizing room.
- Light-to-moderate work: laboratory approved safety glasses with side shields.
- Work with significant risk of splash of chemicals, or projectiles: goggles.
- Work with significant risk of splash on face, or possible explosion: full face shield, plus goggles.
- If safety glasses with correction lenses are needed, first consult with your optometrist or ophthalmologist.
- If magnifying loupes or prescription glasses are used care with respect to the above eye and face protection measures must be complied with.
- Glasses and attachments (e.g. loupes) and face shields should be regularly cleaned and when visibly soiled.

3.3.2. Masks

- Masks should be changed after every procedure involving aerosols or splatter.

- Masks must be adapted well to the face, and should cover the nose and mouth completely,
- The metal insert must be adapted to the bridge of the nose, and the mask strings should be tied firmly (both upper and lower).
- Masks should not be worn under the chin, touched with gloves during practical procedure or worn outside the treatment zone.
- Masks should be worn beneath full-face shields.

3.3.3. Lab Coats

Instructions for selection and use of protective laboratory clothing are as follows:

- White coats must be worn when performing practical.
- Select knee-length lab coats with button or snap closures
- Wear a solid-front lab coat or gown with back closures and knitted cuffs when working with highly toxic or infectious agents
- Wear protective aprons for special procedures such as transferring large volumes of corrosive material
- An additional waterproof apron must be worn if there is likely to be significant splashes during instrument cleaning.
- Remove protective clothing in the event of visible or suspected contamination
- Remove protective clothing when leaving the laboratory
- Hair must be kept short/tied up, or a hair net should be used.

3.3.4. Hand Protection

In the laboratory, gloves are used for protection from chemical products, biohazardous material and physical hazards such as abrasion, tearing, puncture, exposure to temperature extremes and infection control.

- Hands should be washed before and after laboratory work/procedures.
- A thorough and consistent hand washing technique must be used, which includes forearms, fingertips, thumbs and knuckles.
- Taps must be operated by elbow controls or foot controls or using a no-touch technique.

- Rings, watches, bracelets and other items of hand 474jewelry should be removed before hand. Washing. Hands should be dried thoroughly before gloving, using disposable paper towels.
- Routine use of moisturizing cream at the end of each practical session is recommended.
- Any breaks in the skin (cuts, abrasions etc.) must be covered with a waterproof barrier (tape, Band-Aid, or spray-on-film) before commencing practical work.
- Nails must be scrubbed only once at the beginning of a session
- Nails should be kept short and manicured on a regular basis.

3.3.5. Glove Usage

- Bulk supplies of gloves must be stored in clean, dry and cool area.
- The student before every new practical procedure should wear new gloves.
- Individuals with proven hypersensitivity to latex (i.e. true delayed hypersensitivity, NOT irritant dermatitis) should wear nitrile or vinyl gloves
- Gloves must be checked for visible defects immediately upon gloving, and are changed during a procedure when visibly torn or punctured.
- The assistant must wear fresh new gloves during the session. During practical, contact between gloves and incompatible materials (e.g. solvents, some impression materials, and open flames) should be minimized. Students should also practice to limit contamination by using over-gloves or by avoiding contact with objects such as telephones and patient records while wearing gloves.

3.4 Laboratory Safety Guidelines

The college strongly recognizes its responsibility to provide a safe and healthy working environment for its students, faculty, staff and the patients. This includes:

- Providing training, materials, safety equipment and technical advice necessary for a safe workplace
- Not allowing students and staff to perform tasks that are dangerous to their health (without adequate training and safety)

- Efforts to promptly investigate and address safety issues

All members of the College are expected to show their commitment towards a safe and healthy environment.

The faculty, staff and the students must act in a responsible manner at all times and report any workplace situation which might lead to injury or any other hazard to health.

These guidelines are for establishing and maintaining safe working conditions at RAKCODS and for promoting safe work practices by students, faculty and staff.

Any specific situation, which is not included in these guidelines, if arises, will be dealt in accordance with the rules applied in the UAE.

The guidelines to deal with hazards include but are not limited to:

- Fire hazards
- Electrical hazards
- Chemical hazards
- Radiation hazards
- Infection Control

4. <u>Document Change Record:</u>

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

14.

COMPETENCIES IN BASIC SCIENCES COURSES

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Basic Sciences and Pre-Clinical Competencies**	**Prepared by:** **Dr. B.S.M.S. Siriwardena** **Professor**
Title:	**Oral Biology and Tooth Morphology**	**Reviewed by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Policy Number:	**BS.01**	
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Dec 2023**	
Edition Number	**2**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. Introduction

This course offered to the BDS Year 1 students is approved by CAA as the reform dentistry program 2021. The learning outcomes and course contents are covered as per the course syllabus. Students should achieve competence in practical component as per the competency criteria provided to the students. This will enable the students to proceed successfully towards all clinical courses.

2. Practical Work

- Identifying the histological findings with the microscopic slides and microanatomical pictures of the virtual slides of various oral and maxillofacial histology
- Identifying the microanotomical structures and interpreting their presentation
- Identify the Macroanatomical and microanatomical structures on models
- Duly complete the lab record book with diagrammatic presentation of histological features of the given slides
- Enumerate the details of the given histology slide specimen

3. **Practical Requirements**

Requirements of Laboratory Sessions:

- The students have to demonstrate the ability to identify the various teeth, carve the designated teeth in wax and cusp build up exercises.
- The students should be able to determine the approximate the dental age on OPG.
- The students should be able to operate the microscopes professionally and identify the types of tissue sections and the staining procedures used.
- The students should be able to microscopically recognize the various stages of tooth development, hard dental structures and alveolar bone.
- The students should be able to microscopically identify the various types of oral mucosae, maxillary sinus lining, histology of salivary glands and various components of the TMJ
- Individual and group presentation with a selected topic through question-based discussions.
- To appear for the Final Theory/Practical Examination, students must have completed all the requirements.
- To appear for the Final Theory Examination, a student must have passed the OSPE/Practical Examination.
- To achieve an overall pass grade, a student has to obtain a minimum passing Grade (60%) in each OSPE/Practical component.

Please refer to the course syllabus of BDS Curriculum 2021, pp 86-97.

4. **Assessment of the Practical Components**

- Continuous Assessment OSPE/ Practical
- Final Practical Examination

4.1 Assessment Criteria for Student Performance and Grading

CRITERIA	GRADE/ MARKS
Excellent knowledge and able to recall broad information related to the oral and histology slide identification and carving of the tooth without assistance from the instructor.	Excellent 90-100%
Good Knowledge and able to recall almost all information related to the oral and histology slide identification and carving of the tooth without assistance yet seeking assistance from the instructor when in doubt.	Very good 80-89%
Sound knowledge, the student can recall the important information related to the oral and histology slide identification and carving of the tooth. Occasional assistance is required from the instructor while performing the discussion of histology slides under the microscopes and carving the teeth.	Good 70-89 % Performance better than expected
Acceptable Knowledge the student is able to recall the most important information related to the oral and histology slide identification and carving of the tooth with minor deviations from accepted practice that can be easily corrected, and need limited assistance from the instructor while performing procedures.	Satisfactory 60-69% Consistent with expected
Cannot identify the oral and histology slide identification and unable to carve the teeth. Significant knowledge gaps and/or deviations from accepted practice that compromise the completion of the required procedures and needs assistance continuously from the instructor	Unsatisfactory < 60 % Repeat the procedures

5. Rubrics for Oral Biology and tooth Morphology Competency

5.1 The Marks distribution for the five domains is as follows

No	Assessment Criteria	Marks
1	Professionalism	10
2	Practical Skills-Carving the teeth in natural size with wax blocks	30
3	Dental age estimation using panoramic radiographs.	20
4	Scientific and Practical Knowledge.	10
5	Practical Skills- Microscopically recognize the histology slides	30
	Total	100

5.2 Competence Standards and Assessment Criteria

1. Professionalism (10 Marks)			
Competence Standards	**Assessment Criteria**	**Marks**	**Marks Obtained**
Apply ethical and professional standards. Comply with general rules and regulations in the lab.	• Adhere to ethical and general rules and regulations while delivering practical work • Follow all the lab safety instructions. • Respect and efficiently communicate with peers and instructors and avoid negligence, misconduct, or unacceptable behavior. • Able to adhere to high moral and ethical standards while Following ethics and professionalism while carrying out practical work in the lab.	**5**	
Implement infection control standards.	• Wear neat, clean & buttoned white coat, hair kept away from the face, and short fingernails without nail polish and no accessories. • Disinfect surfaces with disinfectants / surface covering. • Proper hand hygiene • Proper handling of laboratory equipment and aware of sterilization/disinfection.	**5**	
2. Practical Skills-Carving the teeth in natural size with wax blocks (30 Marks)			
Competence Standards	**Assessment Criteria**	**Marks**	**Marks Obtained**
Differentiate the importance and application of different biopsy and staining techniques.	Able to draw and carve the natural size of the teeth	**5**	
	Able to explain the details of the dental notations, occlusion, and related surface details of the teeth	**5**	
3. Dental age estimation using panoramic radiographs (20 Marks)			
Competence Standards	**Assessment Criteria**	**Marks**	**Marks Obtained**
Dental age determination using panoramic radiographs	Demonstrate the ability to estimate dental age using panoramic radiographs and background knowledge of teeth chronology and development	**10**	
	Able to identify all the teeth present in intra bony and extra bony locations.	**5**	
	Able to identify any abnormal presentation related to the tooth eruption	**5**	

4. Practical Skills (50 Marks)			
Competence Standards	**Assessment Criteria**	**Marks**	**Marks Obtained**
Identifying the histopathological slides at various magnifications and disease models and submit the lab record book.	Skilled to differentiate normal structure of various hard and soft oral tissues	**10**	
	Apply knowledge to distinguish abnormal oral structures	**10**	
	Comprehensive in submitting the diagrammatic representation of the histology slides with the appropriate descriptions.	**20**	
	Communicate effectively with colleagues, instructors and adapt a self-learning approach to build up robust sound basic knowledge necessary for the profession	**10**	

6. Document Change Record:

Edition Number	**Review Date**	**Description of Change**	
		Current	**Revised**

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Basic Sciences and Pre-Clinical Competencies**	**Prepared by:** **Dr. Vijay Paul Samuel** **Professor**
Title:	**Anatomy - Head & Neck and Cell Biology**	**Reviewed by:** **Dr. B.S.M.S. Siriwardena** **Professor** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Policy Number:	**BS.02**	
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Dec 2023**	
Edition Number	**2**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. Introduction

This course provides an understanding of the basic anatomy, embryology, histology, imaging and relevant clinical anatomy of the Head and neck region, CNS along with general outline of Respiratory, cardiovascular and digestive system. The course prepares the students for the application of head and neck anatomy and embryology and radiology in clinical sciences which will help them towards diagnosis of clinical disorders.

2. Practical Work

- Identifying the histological findings with the microscopic slides and microanatomical pictures of various epithelium, connective tissue, bone, cartilages, nerves tissue, lymphoid organs and muscles.
- Identify the bones of the skull including the mandible, hyoid bone along with the major muscles attached to them. Locate the various foramina of the skull with the structures passing through them along with the description of the cranial cavity.
- Identify the gross anatomical features of major structures in the cardiovascular, respiratory, nervous and gastrointestinal system on pictures, models and dissected specimens.
- Identification of head and neck region on models, pictures and dissected specimens to study the anatomical structures relevant to dentistry, such as muscles of mastication, temporal

and infratemporal fossa, pterygopalatine fossa, orbit, ear, triangles of neck, oral cavity and palate, maxilla-facial anatomy, larynx, pharynx, salivary glands, blood vessels, and nerves.

- Duly complete the lab practical manual book with diagrammatic presentation of histological features of the given slides

3. Practical Requirements

- Students should be able to demonstrate the Gross anatomical structures of the Scalp, face, oral cavity, salivary glands, pharynx, larynx, nose and paranasal air sinuses, nerves of the face, lymph nodes of face region.
- Students should be able to demonstrate the bones, joints, foramens, structures passing through the foramens, parts and muscles attached to skull, mandible and hyoid bones
- Students should be able to demonstrate the mediastinum, pericardium, heart, lungs, pleura, GIT organs.
- Students should be able to demonstrate the embryology models showing the first 4 weeks of gestation with common congenital anomalies.
- Students should be able to demonstrate the general histology of epithelium, cartilage, muscles, bone, nerves system, salivary glands, lymphatic tissues and tongue
- Students should be able to demonstrate the Demonstration of anatomical relationships with the use of cross-sectional, radiographic and digital imaging.
- **Second sem topics to be added**
- To appear for the Final Theory/Practical Examination, students must have completed all the requirements.
- To appear for the Final Theory Examination, a student must have pass the OSPE/Practical Examination.
- To achieve an overall pass grade, a student has to obtain a minimum passing Grade (60%) in each OSPE/Practical components.

Please refer to the course syllabus of BDS Curriculum 2021, pp 62-74.

4. Assessment of the Practical Components

- Continuous Assessment OSPE/ Practical
- Final Practical Examination

a. Assessment Criteria for Student Performance and Grading

Criteria	Grade/ Marks
Student accurately identifies all structures and provides exceptionally detailed and comprehensive observations for each gross anatomical and histological structure.	Excellent 90-100%
Student accurately identifies most structures and provides detailed and comprehensive observations for most gross anatomical and histological structures.	Very good 80-89%
Student identifies some structures and provides adequate details and observations of the structures seen during the laboratory session.	Good 70-79 % Performance better than expected
Student identifies structures with assistance and provides acceptable details and observations of structures seen during the laboratory session.	Satisfactory 60-69% Consistent with expected
Student unable to identify structures and fails to provide meaningful details or observations.	Unsatisfactory < 60 % Repeat the procedure

5. Rubrics for Anatomy-Head & Neck and Cell Biology Competency

5.1 The Marks distribution for the five Assessment Domains

No	Assessment Domains	Marks
1	Professionalism and Infection Control	10
2	Demonstrate Proficient Skills to identify histology slides:	30
3	Ability to recognize and interpret gross anatomical structures relevant to oral health	30
4	Recording gross anatomical and histological observations in the practical manual	30
Total Marks		100

5.2 Competence Standards and Assessment Criteria

Competence Standards	Assessment Criteria	Marks	Marks Obtained
1. Professionalism & Infection Control (10 Marks)			
Apply ethical and professional standards. Comply with general rules and regulations in the lab.	• Adhere to ethical and general rules and regulations while delivering practical work. • Follow all the lab safety instructions. • Respect and efficiently communicate with peers and instructors and avoid negligence, misconduct, or unacceptable behavior. • Able to adhere to high moral and ethical standards while • Following ethics and professionalism while carrying out practical work in the lab.	**5**	
Implement infection control standards.	• Wear neat, clean & buttoned white coat, hair kept away from the face, and short fingernails without nail polish and no accessories. • Washes hands thoroughly before and after handling specimens, using the recommended techniques. • Applies aseptic techniques during specimen and slide handling to minimize the risk of contamination. • Follows guidelines for the safe disposal of sharps, biohazardous waste, and other potentially infectious materials	**5**	
2. Demonstrate Proficient Skills to identify and explain histology slides using microscope and virtual microscopic pictures.: (30 Marks)			
Demonstrate Proficient Microscopy Skills	• Successfully operate light microscopes for histological examination. • Achieve clear and focused microscope images for accurate identification of histological features. • Sets up the microscope correctly, including adjusting the oculars, focusing knobs, and light source. • Ensures proper calibration of the microscope for optimal viewing.	**15**	

Competence Standards	Assessment Criteria	Marks	Marks Obtained
Correctly identifies, labels and explains histological structures	• Accurately identify and label key histological structures including epithelium, connective tissue, bones, cartilage, muscle, glands, nervous tissue and blood vessels. • Demonstrate proficiency in recognizing variations in histological features among different tissues. • Integrates knowledge of histological structures with broader anatomical and physiological concepts. • Relates histological findings to their functional significance in the context of oral health and disease.	**15**	
3. Ability to recognize and interpret gross anatomical structures relevant to oral health (30 marks)			
Provide clear and concise descriptions of gross anatomical structures seen in anatomy specimen and models	• Identify and Communicate observations and descriptions of anatomical structures clearly and concisely. • Use written and verbal communication to convey complex information regarding gross anatomical structures effectively.	**10**	
	• Relates the observed structures to their roles in physiological processes or clinical relevance.	**10**	
	• Discuss how normal gross anatomical structures may manifest in radiographic images.	**10**	
4. Recording gross anatomical and histological observations in the practical manual (30 Marks)			
Documentation of Histological Structures:	• Accurately document and label identified histological and gross anatomical structures in the practical manual. • Provide detailed descriptions of key histological and gross anatomical features observed during practical sessions. • Organize histological observations and reflections in a systematic and timely manner.	**15**	

Competence Standards	Assessment Criteria	Marks	Marks Obtained
	• Prioritize record-keeping tasks based on the complexity of structures and concepts.		
Integration of Clinical Relevance and Reflection on Practical Experiences	• Relate histological and gross anatomical observations to their clinical significance in dental practice. • Explain how specific histological and gross anatomical structures are relevant to the understanding of oral health and diseases. • Reflect on personal experiences and challenges encountered during histology practical sessions. • Describe strategies employed to overcome difficulties and improve histological identification skills.	**15**	

6. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Basic Sciences and Pre-Clinical Competencies**	**Prepared by:** **Dr. Rasha Abuelgasim Eltigani Babiker** **Assistant Professor**
Title:	**Physiology**	**Reviewed by:** **Dr. B.S.M.S. Siriwardena** **Professor** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Policy Number:	**BS.03**	
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Dec 2023**	
Edition Number	**2**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. **Introduction**

   This course offered to the BDS Year 1 students is approved by CAA as the reform dentistry program 2021. The learning outcomes and course contents are covered as per the course syllabus. Students should achieve competence in practical component as per the competency criteria provided to the students. This will enable the students to proceed successfully towards year two courses.

2. **Practical Work**

   - Perform hemoglobin estimation, hematocrite estimation, blood grouping and blood pressure measurement.
   - Identify instruments needed to examine parameters in blood, respiratory, cardiovascular, and central nervous systems.
   - Interpret results of osmotic challenge on cells, blood indices, electrocardiogram, spirogram, glomerular filtration rate and signs of endocrine disorders.
   - Duly complete the exercises in the lab practical manual.

3. **Practical Requirements**

Requirements of Laboratory Sessions:

- The students have to demonstrate ability to identify different blood cells, the effect of different tonicity solution on RBC's, determine PCV, hemoglobin, & bleeding time & clotting time.
- The students should be able to determine lung volumes, capacities and blood pressure.
- The students should be able to differentiate different endocrine conditions and various stages menstruation.
- The students should be able to demonstrate the skills of examining the nervous system.
- To appear for the Final Theory/Practical Examination, students must have completed all the requirements.
- To appear for the Final Theory Examination, a student must have pass the OSPE/Practical Examination.
- To achieve an overall pass grade, a student has to obtain a minimum passing Grade (60%) in each OSPE/Practical component.

Please refer to the course syllabus of BDS Curriculum 2021, pp 75-85

4. **Assessment of the Practical Components**
    - Continuous Assessment OSPE/ Practical
    - Final Practical Examination

4.1 Assessment Criteria for Student Performance and Grading

CRITERIA	GRADE/ MARKS
Excellent skills and able to recall broad information related to the physiological parameters identification and interpret results without assistance from the instructor.	Excellent 90-100%
Good skills and able to recall almost all information related to the physiological parameters identification and interpret results without assistance yet seeking assistance from the instructor when in doubt.	Very good 80-89%
Sound skills and the student can recall the important information related to the physiological parameters identification and interpret results. Occasional assistance is required from the instructor while performing the discussion of physiological experiment and interpret results.	Good 70-89 % Performance better than expected

CRITERIA	GRADE/ MARKS
Acceptable skills and the student is able to recall the most important information related to the physiological parameters identification and interpret results with minor deviations from accepted practice that can be easily corrected and need limited assistance from the instructor while performing procedures.	Satisfactory 60-69% Consistent with expected
Cannot identify the physiological parameters identification and unable to interpret results. Significant knowledge gaps and/or deviations from accepted practice that compromise the completion of the required procedures and needs assistance continuously from the instructor	Unsatisfactory < 60 % Repeat the procedures

5. Rubrics for Physiology Competency

5.1 The Marks distribution for the five domains is as follows

No	Assessment Criteria	Marks
1	Professionalism and Infection Control	10
2	Identification and Selection of Armamentarium	30
3	Scientific and Practical Knowledge	20
4	Interpretation of physiological results	10
5	Practical Skills	30
	Total	100

5.2 Competence Standards and Assessment Criteria

Competence Standards	Assessment Criteria	Marks	Marks Obtained
1. Professionalism and Infection Control (10 Marks)			
Apply ethical and professional standards. Comply with general rules and regulations in the lab.	• Adhere to ethical and general rules and regulations while delivering practical work • Follow all the lab safety instructions. • Respect and efficiently communicate with peers and instructors and avoid negligence, misconduct, or unacceptable behavior. • Able to adhere to high moral and ethical standards while Following ethics and professionalism while carrying out practical work in the lab.	**5**	

Competence Standards	Assessment Criteria	Marks	Marks Obtained
Implement infection control standards.	• Wear neat, clean & buttoned white coat, hair kept away from the face, and short fingernails without nail polish and no accessories. • Disinfect surfaces with disinfectants / surface covering. • Proper hand hygiene • Proper handling of laboratory equipment and aware of sterilization/disinfection.	**5**	
2. Identification and Selection of Armamentarium (30 Marks)			
Identify the instruments used for the physiology practical.	• Identify instruments with their use and normal range of values.	**10**	
Selection of appropriate instruments according to the test.	• Explain the details of the instrument. • Apply instruments according to the assigned experiment.	**10**	
Identify physiological changes presented in figures or diagrams.	• Identify diagrams, figures, photos, and charts with different changes.	**10**	
3. Scientific and Practical Knowledge (20 Marks)			
Implement the general principles and use of instrumentations	• Demonstrate different instruments use.	**5**	
Knowledge about the physiological concepts and homeostasis.	• Define homeostasis, and physiological concepts in human organic systems. • Understand the role of homeostasis in maintain normal vital physiological parameters in normal range.	**5**	
Recording all the required information in practical manual.	• Understand recording results and calculations. • Differentiate between normal and abnormal results.	**10**	
4. Interpretation of Laboratory Results (10 Marks)			
	• Apply knowledge to distinguish abnormal range.	**5**	

Competence Standards	Assessment Criteria	Marks	Marks Obtained
Understanding the variability of measurements.	• Assessing the level of certainty required for clinical significance.	**5**	
5. Practical Skills (30 Marks)			
Perform and measure human body parameters with recognition of abnormalities.	• Proper skill application to distinguish normal and abnormal results.	**10**	
	• Proper interpretation of the results	**10**	
	• Proper clinical integration with the physiological variables.	**10**	

6. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Basic Sciences and Pre-Clinical Competencies**	**Prepared by:** **Dr. Grisilda Vidya Bernhardt** **Associate Professor**
Title:	**Biochemistry**	**Reviewed by:** **Dr. B.S.M.S. Siriwardena** **Professor** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Policy Number:	**BS.04**	
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Dec 2023**	
Edition Number	**2**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. **Introduction**

   This course is offered to the BDS Year 2 students according to the 2021 study plan. The learning outcomes and course contents are covered as per the course syllabus. Practical training on biochemistry labs will prepare the students to be equipped with clinical biochemistry and research skills. By the end of the practical training, students should achieve competence in the practical component as per the competency criteria provided in the rubrics. This will enable the students to proceed successfully toward required biochemistry skills to peruse their dental practice and basic research.

2. **Practical Work**

   - Practical work recognition of normal biochemistry procedures and research skills
   - Biochemistry analytical instrumentations, identification and their uses the conceptual discipline based on the structure and function of components of living tissues in health and disease.
   - provide the basic knowledge of the biochemistry of the human body as an aid in the diagnosis, prevention and treatment of oral diseases.

3. **Practical Requirements**

Requirements/Outcomes

- Mastery of Laboratory Techniques: Instrumentation Skills: Demonstrate proficiency in handling and operating common biochemistry laboratory instruments such as spectrophotometers, other point of care instruments
- Precision in Pipetting: Develop accurate pipetting techniques for the measurement and transfer of liquids, ensuring precise experimental results.
- Sample Preparation: Master the art of preparing various biological samples, including tissues, cells, and fluids, while adhering to proper ethical and safety guidelines.
- Troubleshooting Skills: Develop the ability to identify and troubleshoot issues that may arise during experiments, fostering adaptability and problem-solving capabilities.
- Adhere to strict safety protocols, including the proper use of personal protective equipment (PPE) and the handling and disposal of hazardous materials.
- Understand and practice ethical conduct, ensuring the responsible use of data, respect for colleagues' work, and compliance with ethical standards.
- Application of Theoretical Knowledge: Bridge theoretical biochemistry concepts with practical applications in the laboratory, reinforcing the connection between classroom learning and real-world experimentation.
- Cultivate critical thinking skills to evaluate experimental outcomes, identify potential sources of error, and propose improvements or alternative approaches.
- Linkage to Clinical Relevance: Appreciate the clinical relevance of biochemistry by understanding the molecular basis of diseases, drug actions, and diagnostic techniques.

4. **Practical Work Evaluation**

4.1 Practical Work Evaluation – basic and clinical Biochemistry

Student Name:
Student I.D:

Date	Sem3 and 4	Type of work	Evaluation	Remarks	Signature
Weeks 1-3	- Introduction to biochemistry practical* - Clinical Biochemistry - Color reactions of Carbohydrates	**Practical**			
Weeks	Color reactions of amino	**Practical**			

Date	Sem3 and 4	Type of work	Evaluation	Remarks	Signature
4-7	acids/Proteins - Introduction to colorimeter - Enzymes as markers of diseases Introduction to (AST) - Enzymes as markers of diseases (ALT) - Enzymes- salivary alkaline phosphatase estimation				
Weeks 8-9	- Quantitative estimation glucose - Glucose tolerance test	**Practical**			
Week 10	Revisit clinical enzymology	**Practical**			
Week 11	Tests for urine glucose/Proteins	**Practical**			
Weeks 12-13	- Quantitative estimation of cholesterol Quantitative - Estimation of HDL,	**Practical**			
Weeks 14-15	- Estimation of Triglycerides - Interpretation of lipid profile	**Practical**			
Weeks 16	-Quantitative estimation of salivary amylase -Quantitative estimation of Protein	**Practical**			
Semester 4 Week 17-18	Continuation: -Quantitative estimation of salivary amylase - Quantitative estimation of Protein	**Practical**			
Weeks 19-24	- Inborn errors of metabolism of amino acids- - Quantitative estimation of Creatinine - Estimation of urea	**Practical**			
Week 25	Revisit Inborn test for common inborn errors	**Practical**			
Weeks 26-29	Collecting saliva , DNA Extraction and PCR	**Practical**			
Week 30	- Interpretation of serum and urine bilirubin tests	**Practical**			

5. **<u>Assessment of the Practical Components</u>**
    - Continuous Assessment OSPE/ Practical
    - Final Practical Examination

a. Assessment Criteria for Student Performance and Grading

Criteria	Grade/ Marks
• Excellent knowledge and ability to recall all information-related to principles of biochemistry analytical instrumentation and perform the procedures in the lab without assistance from the instructor.	Excellent 90-100%
• Good Knowledge the student can recall almost all information related to principles of biochemistry instrumentation and perform the procedures in the lab without assistance only seeking assistance from the instructor when in doubt.	Very good 80-89%
• Sound knowledge, the student can recall the important information related to the principles of biochemistry instrumentation with few missing points. Occasional assistance is required from the instructor while performing the procedures.	Good 70-79 % Performance better than expected
• Acceptable Knowledge the student is able to recall the most important information related to the principles of biochemistry instrumentation with missing points. performed the procedures in the laboratory with minor deviations from accepted practice that can be easily corrected, and need Limited assistance from the instructor.	Satisfactory 60-69% Consistent with expected
• Significant knowledge gaps and/or deviations from accepted practice that compromise the Procedure. • Cannot perform procedure in the biochemistry laboratory and Significant assistance is required from the instructor	Unsatisfactory < 60 % Repeat the procedure

6. Rubrics for Biochemistry Competency

6.1 The Marks distribution for the five Assessment Domains

No	Assessment Domains	Marks
1	Professionalism and Infection Control	15
2	Preparation of workstations and Mastery over common lab techniques	10
3	Identification and Selection of reagents test sand instruments	10
4	Scientific and Practical Knowledge.	15
5	Practical Skill.	50
Total Marks		100

6.2 Competence Standards and Assessment Criteria

Competence Standards	Assessment Criteria	Marks	Marks Obtained
1. Professionalism & Infection Control (15 Marks)			
Apply ethical and professional standards. Comply with general rules and regulations in the lab.	• Adhere to ethical and general rules and regulations while delivering practical work. • Follow all the lab safety instructions. • Respect and efficiently communicate with peers and instructors and avoid negligence, misconduct, or unacceptable behavior. • Able to adhere to high moral and ethical standards while • Following ethics and professionalism while carrying out practical work in the lab.	**7.5**	
Implement infection control standards.	• Wear neat, clean & buttoned white coat, hair kept away from the face, and short fingernails without nail polish and no accessories. • Disinfect surfaces with disinfectants / surface covering. • Proper hand hygiene & Selection of Proper PPE. • Proper handling of instrument and aware of instrument sterilization/ disinfection. • Arrange the instruments in the working station before starting the practical procedure.	**7.5**	
2. Preparation of workstations and Mastery over common lab techniques (10 Marks)			
Adopt maximum and safe functionality of the biochemistry working station and operator.	• Mastery of Laboratory Techniques: Instrumentation Skills: Demonstrate proficiency in handling and operating common biochemistry laboratory instruments such as spectrophotometers, other point of care instruments • Precision in Pipetting: Develop accurate pipetting techniques for the measurement and transfer of liquids, ensuring precise experimental results.	**10**	
3. Identification and Selection of reagents test sand instruments (10 Marks)			
Identify the instruments used for the biochemistry procedures	• Know the different parts of the instrument (Handle, flask, and colorimetry) with their use. • Identify instruments to be used for different procedures. • Identify required reagents for particular test and interpret the results	**10**	
4. Scientific and Practical Knowledge (15 Marks)			

Competence Standards	Assessment Criteria	Marks	Marks Obtained
Implement the general principles of biochemistry with practical skills	• Sample Preparation: Master the art of preparing various biological samples, including tissues, cells, and fluids, while adhering to proper ethical and safety guidelines.	**15**	
	• Troubleshooting Skills: Develop the ability to identify and troubleshoot issues that may arise during experiments, fostering adaptability and problem-solving capabilities. • Application of Theoretical Knowledge: Bridge theoretical biochemistry concepts with practical applications in the laboratory, reinforcing the connection between classroom learning and real-world experimentation. • Cultivate critical thinking skills to evaluate experimental outcomes, identify potential sources of error, and propose improvements or alternative approaches.		
5. Practical Skills (50 Marks)			
Application of instruments, procedure, reagents tests in relation to biochemistry laboratory work	• Proper instrument handling • Sample preparation • Minimizing pre, post analytic errors, Minimizing analytic errors. • Interpreting results • Identifying errors and troubleshooting	**15**	
Result interpretation	• Calculation of experimental values for interpretation	**15**	
Clinical significance	• Understanding the clinical significance of interpreted results • Application of Theoretical Knowledge: Bridge theoretical biochemistry concepts with practical applications in the laboratory, reinforcing the connection between classroom learning and real-world experimentation.	**20**	

7. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Basic Sciences and Pre-Clinical Competencies**	**Prepared by:** **Dr. Suresh Kumar S.** **Associate Professor** **Dr. Shakta Mani Satyam** **Associate Professor**
Title:	**Pathology**	**Reviewed by:** **Dr. B.S.M.S. Siriwardena** **Professor** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Policy Number:	**BS.05**	
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Dec 2023**	
Edition Number	**2**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. **Introduction**

   This course is offered to the BDS Year 2 students according to the 2021 study plan. The learning outcomes and course contents are covered as per the course syllabus. By the end of the practical training, students should achieve competence in the practical component as per the competency criteria provided in the rubrics. This will enable the students to proceed successfully toward all clinical courses.

2. **Practical Work**

   - Describe methods of biopsy taking and steps of tissue processing
   - Identify and interpret the morphologic features of the cellular adaptations, reversible and irreversible cell injury, intracellular accumulations, acute & chronic inflammation, tissue repair and hemodynamic disorders.
   - Identify the gross and microscopic findings with pictures of slides of benign and malignant neoplasms
   - Identify the morphologic features of disorders of RBCs and WBCs

- Illustrate the gross and microscopic features of common GIT, cardiovascular, respiratory, endocrine and bone diseases
- Diagnose the pathological lesions based on morphological features demonstrating on slide pictures
- Duly complete the lab practical book with morphological features of the given virtual slides

3. **Practical Requirements**
    - The students should be able to describe different types of biopsy and various steps of tissue processing
    - The students should be able to demonstrate the gross and microscopic features of cellular adaptations, intracellular accumulations, acute & chronic inflammation, tissue repair and hemodynamic disorders.
    - The students should be able to demonstrate the gross and microscopic findings of benign and malignant neoplasms
    - The students should be able to differentiate and describe the morphologic features of disorders of RBCs and WBCs
    - The students should be able to demonstrate the gross and microscopic features of common GIT, cardiovascular, respiratory, endocrine and bone diseases
    - The students should be able to diagnose the pathological lesions based on morphological features
    - To appear for the Final Theory/Practical Examination, students must have completed all the requirements and must have passed the OSPE/Practical Examination.

Please refer to the course syllabus of BDS Curriculum 2021, pp 119-130.

4. **Assessment of the Practical Components**
    - Continuous Assessment OSPE/ Practical
    - Final Practical Examination

a. Assessment Criteria for Student Performance and Grading

Criteria	Grade/ Marks
• Excellent knowledge and ability to diagnose all pathological lesions and provides detailed and comprehensive findings for each gross and microscopic pathological lesion without assistance from the instructor.	Excellent 90-100%
• Good knowledge and ability to diagnose almost all of pathological lesions and provides comprehensive findings for each gross and microscopic pathological lesion without assistance only seeking assistance from the instructor when in doubt.	Very good 80-89%
• Sound knowledge and ability to diagnose important pathological lesions and provides adequate findings for each gross and microscopic pathological lesion. Occasional assistance is required from the instructor while observing the morphological features of pathological lesions	Good 70-79 % Performance better than expected
• Acceptable knowledge and ability to diagnose the most important pathological lesions and provides acceptable findings for each gross and microscopic pathological lesion with minor deviations from accepted findings that can be easily corrected, and need limited assistance from the instructor.	Satisfactory 60-69% Consistent with expected
• Unable to identify and diagnose pathological lesions and fails to provide meaningful findings for each gross and microscopic pathological lesion. Significant knowledge gaps that compromise the diagnosis of the pathological lesions and needs assistance continuously from the instructor	Unsatisfactory < 60 % Repeat the procedure

5. <u>Rubrics for Pathology Competency</u>

5.1 The Marks distribution for the five Assessment Domains

No	Assessment Domains	Marks
1	Professionalism and infection control	10
2	Demonstrate Proficient Skills to diagnose the pathological slides/pictures	30
3	Ability to identify gross and microscopic morphological features of pathological lesions of various systems of human body	30
4	Recording the gross and microscopic findings of pathological lesions in the practical manual	30
Total Marks		100

5.2 Competence Standards and Assessment Criteria

Competence Standards	Assessment Criteria	Marks	Marks Obtained
5. Professionalism (10 Marks)			
Apply ethical and professional standards. Comply with general rules and regulations in the lab.	• Adhere to ethical and general rules and regulations while delivering practical work. • Follow all the lab safety instructions. • Respect and efficiently communicate with peers and instructors and avoid negligence, misconduct, or unacceptable behavior. • Able to adhere to high moral and ethical standards while • Following ethics and professionalism while carrying out practical work in the lab.	**5**	
Implement infection control standards.	• Wear neat, clean & buttoned white coat, hair kept away from the face, and short fingernails without nail polish and no accessories. • Disinfect surfaces with disinfectants / surface covering. • Proper hand hygiene • Proper handling of laboratory equipment and aware of instrument sterilization/ disinfection.	**5**	
2. Demonstrate Proficient Skills to diagnose the pathological slides/pictures (30 Marks)			
Correctly diagnose the pathological lesions and mention the diagnosis based on morphological description	• Ability to consistently and correctly identify pathological lesions • Effectively describes pathological diagnosis using appropriate terminology • Demonstrates sound professional judgment in distinguishing between normal and pathological conditions.	**15**	
Integrates clinical information with pathological slides/pictures to enhance diagnostic accuracy	• Demonstrates the ability to thoroughly review and understand relevant clinical information associated with each case. • Successfully connects clinical data with observed pathological findings, demonstrating a holistic understanding of the case	**15**	

Competence Standards	Assessment Criteria	Marks	Marks Obtained
3. Ability to Identify Gross and Microscopic Morphological Features of Pathological Lesions of Various Systems of Human Body (30 Marks)			
Provide clear and concise descriptions of gross and microscopic features of pathological lesions in slides/ pictures	• Demonstrates the ability to accurately identify and precisely describe gross features of pathological lesions. • Communicates descriptions in a clear and easily understandable manner, using appropriate medical terminology	**15**	
	• Demonstrates the ability to accurately identify and precisely describe microscopic features of pathological lesions. • Communicates descriptions in a clear and easily understandable manner, using appropriate medical terminology	**15**	
4. Recording the Gross and Microscopic Findings of Pathological Lesions in the Practical Manual (30 Marks)			
Documentation of pathological morphological findings in practical manual	• Accurately document identified both gross and microscopic features in the practical manual • Organize morphological observations and reflections in a systematic manner	**15**	
Integration of Clinical Relevance and Reflection on Practical Experiences	• Relate morphological observations to their clinical significance in dental practice • Explain how specific gross and microscopic findings are relevant to the understanding of oral health and diseases • Reflect on personal experiences and challenges encountered during pathology practical sessions • Describe strategies employed to overcome difficulties and improve pathological identification skills	**15**	

6. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Basic Sciences and Pre-Clinical Competencies**	**Prepared by:** **Dr. Hafiz Ahmad** **Associate Professor**
Title:	**Microbiology**	**Reviewed by:** **Dr. B.S.M.S. Siriwardena** **Professor** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Policy Number:	**BS.06**	
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Dec 2023**	
Edition Number	**2**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. **Introduction**

   This course is offered to the BDS Year 2 students according to the 2021 study plan. The learning outcomes and course contents are covered as per the course syllabus. Practical training in microbiology and molecular biology will prepare the students to develop clinical and diagnostic skills for understanding pathogenesis, antibiotics for oral microbes and associated diseases and help in clinical decision making. By the end of the practical training, students should achieve competence in the practical component as per the competency criteria provided in the rubrics. This will enable the students to proceed successfully toward clinical practice.

2. **Practical Work**

   - Practical work recognition of normal Microscope used in lab.
   - Microbiology instrumentations, identification and tools used in microbiology for detection of bacteria and sterilization/Infection control measures
   - Duly complete the lab record book with diagrammatic presentation of microbes and diagnostic features of the given slides
   - DNA Extraction, PCR and other tools for detection of oral microbes

- Bacteria culture, Antibiotic sensitivity testing and interpretation of AST reports

3. **Practical Requirements**
   - Gram Staining (identification of gram positive and gram-negative oral pathogens)
   - Bacterial growth using aerobic and anerobic methods culture media
   - Antibiotic susceptibility testing and interpretation
   - Interpretation of Serology and Molecular PCR tests
   - Virus culture techniques and Fungus- Candida identification
   - To appear for the Final Theory/Practical Examination, students must have completed all the requirements and pass the OSPE/Practical Examination.

Please refer to the course syllabus of BDS Curriculum 2021, pp 141-148

4. **Practical Work Evaluation**

4.1 Practical Work Evaluation for Gram staining, Microscopic examination & Tools and techniques in Microbiology

Student Name:
Student I.D:

Date	Quadrant	Type of work	Evaluation	Remarks	Signature

4.2 Practical Work Evaluation Sheet for Bacteria identification and Antimicrobial Sensitivity testing

Student Name:
Student I.D:

Date	Microbiology Procedure	Evaluation	Remarks	Signature

5. **Assessment of the Practical Components**
   - Continuous Assessment OSPE/ Practical
   - Final Practical Examination

a. Assessment Criteria for Student Performance and Grading

Criteria	Grade/ Marks
• Excellent knowledge and student have ability to recall all information-related microbiology including gram staining, sterilization, bacteria identification, Antibiotic testing, serology, mycology and tuberculosis and molecular lab diagnosis principles and independently perform all the procedures in lab without assistance from the instructor.	Excellent 90-100%
• Good knowledge and student have ability to recall all information-related microbiology including gram staining, sterilization, bacteria identification, Antibiotic testing, serology, mycology, tuberculosis and molecular lab diagnosis principles without assistance only seeking assistance from the instructor when in doubt.	Very good 80-89%
• Sound knowledge, the student can recall the important information related to the principles of microbiology with few missing points. Occasional assistance is required from the instructor while performing procedures independently	Good 70-79 % Performance better than expected
• Acceptable Knowledge the student is able to recall the most important information related to the principles of microbiology with missing points. performed the procedures on the phantom head with minor deviations from accepted practice that can be easily corrected, and need Limited assistance from the instructor.	Satisfactory 60-69% Consistent with expected
• Significant knowledge gaps and/or deviations from accepted practice that compromise the Procedure, diagnostic and clinical outcome • Cannot perform microbiology lab procedures and Significant assistance is required from the instructor	Unsatisfactory < 60 % Repeat the procedure

6. Rubrics for Microbiology Competency

6.1 The Marks distribution for the five Assessment Domains

No	Assessment Domains	Marks
1	Professionalism and Infection Control	15
2	Identification of oral pathogens using biochemical and molecular tests	10
3	Identification and Selection of Antibiotics for oral infections	10
4	Scientific and Practical Knowledge.	15
5	Practical Skill.	50
Total Marks		100

6.2 Competence Standards and Assessment Criteria

Competence Standards	Assessment Criteria	Marks	Marks Obtained
6. Professionalism & Infection Control (15 Marks)			
Apply ethical and professional standards. Comply with general rules and regulations in the lab.	• Adhere to ethical and general rules and regulations while delivering practical work. • Follow all the lab safety instructions. • Respect and efficiently communicate with peers and instructors and avoid negligence, misconduct, or unacceptable behavior. • Able to adhere to high moral and ethical standards while • Following ethics and professionalism while carrying out practical work in the lab. • Aware of Blood borne virus risk and vaccination status	**5**	
Implement infection control standards.	• Wear neat, clean & buttoned white coat, hair kept away from the face, and short fingernails without nail polish and no accessories. • Disinfect surfaces with disinfectants / surface covering. • Proper hand hygiene & Selection of Proper PPE. • Proper handling of instrument and aware of instrument sterilization/ disinfection. • Arrange the instruments in the working station before starting the practical procedure.	**10**	
7. Identification of oral pathogens using biochemical and molecular tests (10 Marks)			
Adept with use of different techniques used for bacterial identification of oral pathogens.	• Understand the use of Catalase, coagulase Oxidase and other basic biochemical test for oral bacteria identification. • Demonstrate proper technique for performing and interpretation of results	**10**	
8. Identification and Selection of microbiology culture tools & Antibiotics(10 Marks)			
Identify the instruments used for the microbiology culture and identification procedures	• Know the different parts of the instrument (Eye piece, Objective lens systems, and safe handling) • Identify instruments to be used for different culture media, aerobic and anaerobic procedures for bacteria • Principle of AST and antibiotic report interpretation for oral pathogens	**10**	
9. Scientific and Practical Knowledge (15 Marks)			

Competence Standards	Assessment Criteria	Marks	Marks Obtained
Implement the general principles and use of instrumentation used in microbiology	• Demonstrate different instrument and techniques like Microscopes, serology equipment's and PCR diagnostic tools	**5**	
Knowledge about the Oral microbiome and oral infections.	• Define periodontal pocket and clinical attachment loss on phantom head and know how to measure. • Understand the role of plaque, calculus and pocket depth in periodontal diagnosis. • Describe different tooth brushing techniques.	**5**	
Recording all the required information in Hospital Information Management System (HIMS)	• Understand the use of HIMS in recording data such as patient history, clinical finding and simplified oral hygiene index and periodontal chart. • Differentiate between normal and abnormal microbiology flora and oral pathogens.	**5**	
10. Practical Skills (50 Marks)			
Apply the correct method of collection, storage and transport of oral ample materials for microbiological investigations	•Proper positioning of oral swabs and collection method for samples from gingiva, dental caries using posts for bacterial culture • Saliva collection and transportation for DNA extraction and PCR.	**5**	
Demonstrate the ability to select proper microbiological techniques for diagnosis and detection of oral pathogens	• Perform streaking technique for isolation of bacteria • Perform AST and other culture methods including for oral pathogen identification • Use of special media for Streptococcus mutans and other oral pathogens from aerobic/anaerobic oral sites	**15**	
Adapt advanced clinical and molecular methods of diagnosis and management of patients with oral infections	• Proper knowledge and use of molecular tests including PCR • Knowledge of Real Time PCR and graph interpretation for dental infections	**15**	

Competence Standards	Assessment Criteria	Marks	Marks Obtained
Perform Gram staining and other AFB stains	• Proper use different stains used in Microbiology	**10**	
Dilution techniques and titration	• Demonstrate dilution technique for serum and titre calculations	**5**	

7. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Basic Sciences and Pre-Clinical Competencies**	**Prepared by:** **Dr. Krishna Chytanya Nallan Chakravartula Sri** **Assistant Professor**
Title:	**General Medicine**	**Reviewed by:** **Dr. B.S.M.S. Siriwardena** **Professor** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Policy Number:	**BS.07**	
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Dec 2023**	
Edition Number	**2**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. Introduction

This course is offered to the BDS Year 2 students according to the 2021 study plan. The learning outcomes and course contents are covered as per the course syllabus. Practical training on manikin and group discussion will prepare the students to develop manual skills for General medicine competency. By the end of the practical training, students should achieve competence in the practical component as per the competency criteria provided in the rubrics. This will enable the students to proceed successfully toward completion of course curriculum in general medicine speciality.

2. Practical Work

Practical work of demonstration of normal pulse rate

- Demonstrate and perform blood pressure examination.
- Recognize and learn history taking with special emphasis on medical history.
- Perform CPR on manikin models
- Perform the examination of cranial nerves with emphasis on 5th, 7th, 9th and 12 cranial nerves
- Perform the examination of respiratory and cardiovascular system

- Interpretation of complete hemogram and normal blood indices

3. Practical requirements:

The students have to demonstrate the ability to:

- Take patient history and to ask relevant questions.
- Demonstrate CPR and to record urgent vital signs in cardiopulmonary system.
- Recognize dermatological and oral signs related to systemic diseases.
- Interpretate laboratory blood test to reach proper differential diagnosis.
- Perform systemic examination.
- To appear for the Final Theory Examination, a student must have pass the OSPE/Practical Examination.
- To achieve an overall pass grade, a student has to obtain a minimum passing Grade (60%) in each OSPE/Practical components.

Please refer to the course syllabus of BDS Curriculum 2021, pp 149-156.

4. Practical Work Evaluation

3.1 Practical Work Evaluation Sheet for General medicine competency on manikin

Student Name:
Student I.D:

Date	Procedure	Evaluation	Remarks	Signature
	CPR			
	History taking			
	Examination of cranial nerves			
	Examination of CVS			
	Examination of pulse and blood pressure			
	Examination of Respiratory system			
	Interpretation of blood indices			

5. Assessment of the Practical Components

- Continuous Assessment OSPE/ Practical
- Final Practical Examination

a. Assessment Criteria for Student Performance and Grading

Criteria	Grade/ Marks
• Excellent knowledge and ability to recall all information-related to principles of General medicine and perform the CPR on the manikin, Demonstrate pulse and blood pressure recording, cranial nerve examination and CVS examination without assistance from the instructor.	Excellent 90-100%
• Good Knowledge the student can recall almost all information related to principles of General medicine and perform the CPR on the manikin, Demonstrate pulse and blood pressure recording, cranial nerve examination and CVS examination without assistance from the instructor only seeking assistance from the instructor when in doubt.	Very good 80-89%
• Sound knowledge, the student can recall the important information related to the principles of General medicine and perform the CPR on the Manikin, Demonstrate pulse and blood pressure recording, cranial nerve examination and CVS examination without assistance from the instructor with few missing points. Occasional assistance is required from the instructor while performing on the Models	Good 70-89 % Performance better than expected
• Acceptable Knowledge the student is able to recall the most important information related to the principles of General medicine with missing points. Performed the procedures on the Manikin with minor deviations from accepted practice that can be easily corrected, and need Limited assistance from the instructor.	Satisfactory 60-69% Consistent with expected
• Significant knowledge gaps and/or deviations from accepted practice that compromise the Procedure. • Cannot perform procedure on the phantom and Significant assistance is required from the instructor	Unsatisfactory < 60 % Repeat the procedure

6. Rubrics for General Medicine Competency

6.1. The Marks distribution for the five Assessment Domains

No	Assessment Domains	Marks
1	Professionalism and Infection Control	15
2	Preparation of Workstation and Ergonomic Position.	10
3	Identification and Selection of Armamentarium	10
4	Scientific and Practical Knowledge.	15
5	Practical Skill.	50
Total Marks		100

6.2. Competence Standards and Assessment Criteria

Competence Standards	Assessment Criteria	Marks	Marks Obtained
11. Professionalism & Infection Control (15 Marks)			
Apply ethical and professional standards. Comply with general rules and regulations in the lab.	• Adhere to ethical and general rules and regulations while delivering practical work. • Follow all the lab safety instructions. • Respect and efficiently communicate with peers and instructors and avoid negligence, misconduct, or unacceptable behavior. • Able to adhere to high moral and ethical standards while • Following ethics and professionalism while carrying out practical work in the lab.	**5**	
Implement infection control standards.	• Wear neat, clean & buttoned white coat, hair kept away from the face, and short fingernails without nail polish and no accessories. • Disinfect surfaces with disinfectants / surface covering. • Proper hand hygiene & Selection of Proper PPE. • Proper handling of instrument and aware of instrument sterilization/ disinfection. • Arrange the instruments in the working station before starting the practical procedure.	**5**	
12. Preparation of workstations and Ergonomic Position (10 Marks)			
Adopt maximum and safe functionality of the working station.	• Understand the operator zone and static zone. • Demonstrate proper position during performing of different system examination • Proper Position of the phantom for each procedure.	**5**	
Ensure adequate visibility and accessibility.	• Ensure adequate visibility and accessibility and the proper position of the operatory. • Effective manual dexterity and proper • Ergonomic positions.	**5**	
13. Identification and Selection of Armamentarium (10 Marks)			
Identify the instruments used for the various procedures like CPR, pulse and BP	• Know the different parts of pulse, bp instrument and instrument required for systemic and cranial nerve examination	**5**	

Competence Standards	Assessment Criteria	Marks	Marks Obtained
examination, System examination			
Selection of appropriate instruments according to the procedure	• Selection of the instruments according to the need. • Selection of the instruments according to the assigned procedure.	**5**	
14. Scientific and Practical Knowledge (15 Marks)			
Implement the general principles and use of proper method for examination	• Demonstrate different instrument holding techniques. • Understand the use of different areas of systemic examination such as respiratory and CVS examination and cranial exam.	**5**	
Knowledge about the each system such as respiratory, cvs and cranial nerves	• Define each of the area of examination. • Understand the role instruments, technique and method of examination. • Describe CPR techniques. • Describe the need for blood investigations and interpretation of the blood indices	**10**	
15. Practical Skills (50 Marks)			
Application of instruments for each of the system examination	• Proper positioning of instruments according to the working site of the manikin • Activation of the instrument according to the procedure.	**5**	
Perform CPR.	• Perform the proper technique of CPR • Identify the need for CPR • Identify the lack of pulse and need for artificial respiration • Perform the use of AED box	**15**	
Perform the Pulse and BP examination	• Proper instrument and technique for Pulse and BP examination. • Interpretation of the findings and abnormalities	**15**	
Perform cranial nerve examination.	• Proper instrument and technique for each of the cranial nerve examination • Identify the normal and abnormalities of the examination findings	**10**	

Competence Standards	Assessment Criteria	Marks	Marks Obtained
Demonstrate Respiratory and cvs examination with special emphasis on the investigative findings related to blood indices	• Proper technique on cardio vascular examination and respiratory examination • Interpretation on blood indices and identifying the normal and abnormal blood indices.	**5**	

7. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

15.

COMPETENCIES IN PRE-CLINICAL COURSES

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Basic Sciences and Pre-Clinical Competencies**	**Prepared by:** **Dr. Md. Sofiqul Islam** **Associate Professor**
Title:	**Pre-Clinical Operative Dentistry & Biomaterials**	**Reviewed by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Policy Number:	**PC.01**	
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Dec 2023**	
Edition Number	**2**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. Introduction

This course is offered to the BDS Year 2 students and approved by CAA as the reform dentistry program 2021. The learning outcomes and course contents are covered as per the course syllabus. Students should achieve competence in the practical component as per the competency criteria provided to the students. This will enable the students to proceed successfully towards clinical Operative Dentistry course in year 4.

2. Practical Work

- Ergonomics in dental practices and four handed Dentistry
- Operating field isolation and infection control
- Various cavity preparation technique for amalgam and composite restoration
- Caries removal using stimulated caries model
- Restoration technique and finishing polishing of amalgam and composite materials.

3. Practical Requirements

Requirements of Laboratory Sessions:

- Single and multiple tooth isolation
- Cavity preparation and curving on preparation plate
- Two Class 1 amalgam restorations

- Two Class 2 amalgam restorations
- Two MOD amalgam restorations
- Two Class 3 composite restorations
- Two Class 4 composite restorations
- Two Class 5 composite restorations
- Two Class 1 composite restorations
- Two Class 2 composite restorations
- Two complex composite restorations
- Two complex amalgam restorations
- One replacement of amalgam restoration
- One repair of composite restoration

Please refer to the course syllabus of BDS Curriculum 2021, pp 131-140.

4. **Assessment of the Practical Components**
    - **Continuous Assessment OSPE/ Practical**
    - **Final Practical Examination**

The following table is used to grade student performance for all the Assessment Criteria

CRITERIA	GRADE/ MARKS
• Excellent knowledge and ability to recall all information-related to principles of periodontal instrumentation and perform the periodontal treatment procedures on the phantom head without assistance from the instructor.	Excellent 90-100%
• Good Knowledge the student can recall almost all information related to principles of periodontal instrumentation and perform the periodontal treatment procedures on the phantom head without assistance only seeking assistance from the instructor when in doubt.	Very good 80-89%
• Sound knowledge, the student can recall the important information related to the principles of periodontal instrumentation with few missing points. Occasional assistance is required from the instructor while performing periodontal treatment procedures on the phantom head	Good 70-89 % Performance better than expected
• Acceptable Knowledge the student is able to recall the most important information related to the principles of periodontal instrumentation with missing points. performed the periodontal	Satisfactory 60-69%

CRITERIA	GRADE/ MARKS
treatment procedures on the phantom head with minor deviations from accepted practice that can be easily corrected, and need Limited assistance from the instructor.	Consistent with expected
• Significant knowledge gaps and/or deviations from accepted practice that compromise the Procedure. • Cannot perform periodontal treatment procedure on the phantom head and Significant assistance is required from the instructor	Unsatisfactory < 60 % Repeat the procedure

5. Rubrics for Pre-Clinical Operative Dentistry Competency

5.1 The Marks distribution for the five assessment criteria

No	Assessment Criteria	Marks
1	Professionalism and Infection Control	15
2	Preparation of work station and Ergonomic position	10
3	Identification and Selection of Armamentarium	10
4	Scientific and Practical Knowledge	15
5	Practical Skill	50
Total Marks		100

5.2 Competence Standards and Assessment Criteria

1. Professionalism & Infection Control (15 Marks)			
Competence Standards	**Assessment Criteria**	**Marks**	**Marks Obtained**
Ethical and general rules and regulations in the lab.	Adhere to ethical and general rules and regulations while delivering practical work and this is reflected by wearing a neat and clean, buttoned white coat, hair kept away from the face, and fingernails should always be short, proper PPE. Avoid negligence, misconduct, or unacceptable behavior. Cooperate with the staff.	**5**	
Abide to infection control. Infection control is the responsibility of students and staff.	Proper application of rubber dam	**10**	

2. Preparation of workstations and Ergonomic Position (10 Marks)			
Competence Standards	**Assessment Criteria**	**Marks**	**Marks Obtained**
• Adopt a proper position for both the operator and the phantom head.	Understand the operator zone, static zone, and dental assistant zone.	**3**	
	Proper Position of the operator during different operative procedure.	**3**	
	Proper Position of the phantom head during performing different operative procedure.	**2**	
	Ensure adequate visibility and accessibility.	**2**	
3. Identification and Selection of Armamentarium (10 Marks)			
Competence Standards	**Assessment Criteria**	**Marks**	**Marks Obtained**
• Choose the appropriate instruments according to the procedure that will be conducted.	Selection of the instruments according to the given task.	**4**	
	Ergonomic arrangement and use of frequently and non-frequently used instrument and matrix application	**6**	
4. Scientific and Practical Knowledge (15 Marks)			
Competence Standards	**Assessment Criteria**	**Marks**	**Marks Obtained**
• Implement the general principles of operating field isolation. • Implement the general principles of cavity preparation • Knowledge about restorative materials	Demonstrate proper knowledge about ergonomics, four handed dentistry, operating field isolation and infection control, various cavity preparation technique for amalgam and composite restoration, caries removal, restoration technique and finishing polishing of restorative materials.	**15**	
5. Practical Skills (50 Marks)			
Competence Standards	**Assessment Criteria**	**Marks**	**Marks Obtained**
• Cavity preparation and restoration with different restorative materials	Cavity preparation (outline, resistance, retention, convenience form)	**20**	
	Application of restorative martials following anatomical guideline.	**20**	
	Adequate finishing and polishing of restoration	**10**	

6. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Basic Sciences and Pre-Clinical Competencies**	**Prepared by:** **Dr. Nada Tawfig Hashim Ahmed** **Assistant Professor**
Title:	**Pre-Clinical Periodontics**	**Reviewed by:** **Dr. Md. Sofiqul Islam** **Associate Professor** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Policy Number:	**PC.02**	
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Dec 2023**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**2**	
Next Review Date	**30 Sep 2028**	

1. Introduction

This course is offered to the BDS Year 2 students according to the 2021 study plan. The learning outcomes and course contents are covered as per the course syllabus. Practical training on phantom heads will prepare the students to develop manual skills for non-surgical periodontal therapy. By the end of the practical training, students should achieve competence in the practical component as per the competency criteria provided in the rubrics. This will enable the students to proceed successfully toward clinical periodontics practice.

2. Practical Work

- Practical work recognition of normal periodontal structure.
- Periodontal instrumentations, identification and their uses for supra and sub-gingival debridement & polishing.
- Perform the procedure on phantom heads to remove supra and subginival deposits on teeth and root surfaces.
- Root planing after removing of subgingival deposit
- Polishing of teeth to remove stains and smoothing the teeth surfaces.
- Plaque Control; Tooth brushing techniques & interdental cleaning aids on models

- Periodontal charting including patient history and indices

3. Practical Requirements

- Remove deposit (supra and sub-gingival debridement) and polishing for 8 quadrants (maxillary and mandibular teeth) on phantom head
- Oral hygiene instructions with different brushing techniques and different interdental cleaning aids. (1 case).
- Complete one periodontal chart with the case history
- To appear for the Final Theory/Practical Examination, students must have completed all the requirements and pass the OSPE/Practical Examination.

Please refer to the course syllabus of BDS Curriculum 2021, pp 184-191.

4. Practical Work Evaluation

4.1 Practical Work Evaluation for the removal of deposits and polishing

Student Name:
Student I.D:

Date	Quadrant	Type of work	Evaluation	Remarks	Signature

4.2 Practical Work Evaluation Sheet for Periodontal Chart and Tooth brushing Techniques

Student Name:
Student I.D:

Date	Periodontal Procedure	Evaluation	Remarks	Signature
	Periodontal Chart			
	Tooth Brushing Techniques on model			

5. Assessment of the Practical Components

- Continuous Assessment OSPE/ Practical
- Final Practical Examination

5.1. Assessment Criteria for Student Performance and Grading

Criteria	Grade/ Marks
• Excellent knowledge and ability to recall all information-related to principles of periodontal instrumentation and perform the periodontal treatment procedures on the phantom head without assistance from the instructor.	Excellent 90-100%
• Good Knowledge the student can recall almost all information related to principles of periodontal instrumentation and perform the periodontal treatment procedures on the phantom head without assistance only seeking assistance from the instructor when in doubt.	Very good 80-89%
• Sound knowledge, the student can recall the important information related to the principles of periodontal instrumentation with few missing points. Occasional assistance is required from the instructor while performing periodontal treatment procedures on the phantom head	Good 70-89 % Performance better than expected
• Acceptable Knowledge the student is able to recall the most important information related to the principles of periodontal instrumentation with missing points. performed the periodontal treatment procedures on the phantom head with minor deviations from accepted practice that can be easily corrected, and need Limited assistance from the instructor.	Satisfactory 60-69% Consistent with expected
• Significant knowledge gaps and/or deviations from accepted practice that compromise the Procedure. • Cannot perform periodontal treatment procedure on the phantom head and Significant assistance is required from the instructor	Unsatisfactory < 60 % Repeat the procedure

6. Rubrics for Pre-Clinical Periodontics Competency

6.1 The Marks distribution for the five Assessment Domains

No	Assessment Domains	Marks
1	Professionalism and Infection Control	15
2	Preparation of Workstation and Ergonomic Position.	10
3	Identification and Selection of Armamentarium	10
4	Scientific and Practical Knowledge.	15
5	Practical Skill.	50
Total Marks		100

6.2 Competence Standards and Assessment Criteria

Competence Standards	Assessment Criteria	Marks	Marks Obtained
Professionalism & Infection Control (15 Marks)			
Apply ethical and professional standards. Comply with general rules and regulations in the lab.	• Adhere to ethical and general rules and regulations while delivering practical work. • Follow all the lab safety instructions. • Respect and efficiently communicate with peers and instructors and avoid negligence, misconduct, or unacceptable behavior. • Able to adhere to high moral and ethical standards while • Following ethics and professionalism while carrying out practical work in the lab.	**5**	
Implement infection control standards.	• Wear neat, clean & buttoned white coat, hair kept away from the face, and short fingernails without nail polish and no accessories. • Disinfect surfaces with disinfectants / surface covering. • Proper hand hygiene & Selection of Proper PPE. • Proper handling of instrument and aware of instrument sterilization/ disinfection. • Arrange the instruments in the working station before starting the practical procedure.	**5**	
Preparation of workstations and Ergonomic Position (10 Marks)			
Adopt maximum and safe functionality of the dental working station and operator.	• Understand the operator zone, static zone, and dental assistant zone. • Demonstrate proper position during performing of different periodontal procedures. • Proper Position of the phantom head for each periodontal procedure.	**5**	
Ensure adequate visibility and accessibility.	• Ensure adequate visibility and accessibility and the proper position of the operatory. • Effective manual dexterity and proper • Ergonomic positions.	**5**	
3. Identification and Selection of Armamentarium (10 Marks)			
Identify the instruments used for the periodontal p procedures	• Know the different parts of the instrument (Handle, Shank, and working end) with their use. • Identify instruments to be used for different periodontal procedures.	**5**	

Competence Standards	Assessment Criteria	Marks	Marks Obtained
Selection of appropriate instruments according to the procedure	• Selection of the instruments according to their function. • Selection of the instruments according to the assigned procedure.	**5**	
4. Scientific and Practical Knowledge (15 Marks)			
Implement the general principles and use of instrumentations	• Demonstrate different instrument holding techniques/ pen grasp, modified pen grasp, and palm and thumb grasp. • Understand the use of different types of intraoral and extra-oral finger rest. • Describe adaptation, angulation, lateral pressure and activation of the instrument during periodontal procedure.	**5**	
Knowledge about the Oral Hygiene Index and periodontal pockets.	• Define periodontal pocket and clinical attachment loss on phantom head and know how to measure. • Understand the role of plaque, calculus and pocket depth in periodontal diagnosis. • Describe different tooth brushing techniques.	**5**	
Recording all the required information in Hospital Information Management System (HIMS)	• Understand the use of HIMS in recording data such as patient history, clinical finding and simplified oral hygiene index and periodontal chart. • Differentiate between normal and abnormal periodontal structure. • Describe periodontal pockets, loss of attachment and gingival margins.	**5**	
5. Practical Skills (50 Marks)			
Application of instruments for periodontal procedure	•Proper positioning of instruments according to the working site of the jaw and surfaces of the teeth. • Insertion, angulation, lateral pressure and activation of the instrument according to the procedure.	**5**	
Removal of supragingival deposits.	• Perform the suitable stroke (Vertical, Horizontal, and Oblique) and angulation according to the procedure. • Proper positioning during removal of the deposit according to the working site. • Removal of supragingival deposits with minimum scratching of the tooth surface.	**15**	
Removal of subgingival deposits.	• Proper angulation and stroke according to the procedure.	**15**	

Competence Standards	Assessment Criteria	Marks	Marks Obtained
	• Proper positioning during removal of the deposit according to the working site. • Removal of subgingival deposits with proper smoothening of root surface.		
Perform polishing on the phantom head.	• Proper use of rubber cup with angulation and proper positioning. • Perform polishing to remove stain and appropriate smoothening of the tooth surface.	**10**	
Oral Hygiene Instructions	• Demonstrate different tooth brushing techniques on the model. • Proper oral hygiene instructions and education with tooth brushing technique and other cleaning aids	**5**	

7. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Basic Sciences and Pre-Clinical Competencies**	**Prepared by:** **Dr. Dusan Surdilovic** **Professor**
Title:	**Community Dentistry**	**Reviewed by:** **Dr. Md. Sofiqul Islam** **Associate Professor** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Policy Number:	**PC.03**	
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Dec 2023**	
Edition Number	**2**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. Introduction

This annual course is offered to the BDS Year 3 students during fall and spring semesters of Academic Year 2023-24. The course is delivered with 4 theory credit hours (2 fall + 2 spring) and 2 practical credit hours (1fall +1 spring). The course is delivered according to the BDS study plan 2021, which was approved by CAA during the re-accreditation of the BDS program in 2021. The learning outcomes and course contents are covered as per the course syllabus. Students should achieve the competence in theory and practical components as per the competency criteria provided to the students. This course is a pre-requisite for Year 4 Clinical Courses and will enable the students to develop skills which is required for clinical courses of BDS Program. The course also enables students understand the significance of community services and how to conduct oral health drives at different levels of the society. The overall target of achievement for the cohort is 80%.

2. Practical Work

- Oral Hygiene Instructions
- Tooth numbering systems
- Preparation of presentations for community visits
- Practicing informed consent

- Demonstrating the use of plaque disclosing agents
- Demonstrating different tooth brushing techniques
- Giving oral hygiene instructions
- Exercise on models and extracted teeth for charting of caries and periodontitis
- Oral health awareness instructions to school children
- Demonstration of Fissure sealants
- Demonstrating ART on phantom head/extracted teeth
- Demonstration of Fluoride Gel
- Fissure sealant on molars
- ART on molars
- Applying fluoride varnish full jaw
- Community Campaign programs

3. **Practical Requirements**

Guidelines for Practical:

- Uphold professional attitude and behavior
- Adapt the ability to work safely and effectively
- Select proper materials and instruments
- Handle the equipment properly during the lab work
- Communicate respectfully with colleagues and staff
- Apply appropriate infection control measures
- Fissure sealing on phantom head/extracted teeth
- Applying fluoride gel/varnish on phantom head teeth
- Designing dental health education material
- Planning dental health education sessions/program
- Implementation of dental health education session/program
- Monitoring and evaluating the dental health education sessions/program
- Oral health awareness drives in schools
- Demonstrating ART on phantom head/extracted teeth

Practical Requirements:

- Fissure sealing on phantom head/extracted teeth
- Applying fluoride gel/varnish on phantom head teeth
- Designing dental health education material
- Planning dental health education sessions/program
- Implementation of dental health education session/program
- Monitoring and evaluating the dental health education sessions/program
- Oral health awareness drives in schools
- Demonstrating ART on phantom head/extracted teeth
- To appear for the Final Theory/Practical Examination, students must have completed all the requirements.
- To appear for the Final Theory Examination, a student must have pass the OSPE/ Practical CA Examination.
- To achieve an overall pass grade, a student has to obtain a minimum passing Grade (60%) in each OSPE / Practical components.

Please refer to the course syllabus of BDS Curriculum 2021, pp 202-214.

4. Practical Work Evaluation

Date	Topics		Signature	Remarks
	BRUSHING TECHNIQUES	HORIZONTAL		
		FONES		
		LEONARD		
		ROLLING STROKE		
		STILLMAN		
		CHARTER		
		BASS		
		MODIFIED STILLMAN		
		MODIFIED CHARTER		
		MODIFIED BASS		
	PRESENTATION			
	COMMUNITY VISIT			
	DISCLOSING TABLETS			
	INDICES	DMFT		
		GINGIVAL INDEX		
	NUMBERING OR CODING SYSTEMS	Palmer Notation System		
		Universal System		
		International FDI System (two digit system)		
	FLUORIDE APPLICATION	Upper Arch		
		Lower Arch		
	PIT AND FISSURE SEALANTS	Upper molar		
		Upper molar		
		Lower molar		
		Lower molar		
	PRESENTATIONS			
	PREVENTIVE RESIN RESTORATIONS (PRRs)	Upper molar		
		Upper molar		
		Lower molar		
		Lower molar		

5. Assessment of the Practical Components

- Continuous Assessment OSPE/ Practical
- Final Practical Examination

a. Assessment Criteria for Student Performance and Grading

Criteria	Grade/ Marks
• Excellent knowledge and ability to recall all information-related to the community services and its instrumentation and perform the related procedures on the phantom head without assistance from the instructor.	Excellent 90-100%
• Good Knowledge, the student can recall almost all information related to the community services and its instrumentation and perform the related procedures on the phantom head without assistance from the instructor, only seeking assistance from the instructor when in doubt.	Very good 80-89%
• Sound knowledge, the student can recall the important information related to the community services and its instrumentation with few missing points. Occasional assistance is required from the instructor while performing the related procedures on the phantom head.	Good 70-89 % Performance better than expected
• Acceptable Knowledge, the student is able to recall the most important information related to the community services and its instrumentation with missing points. Performed the related procedures on the phantom head with minor deviations from accepted practice that can be easily corrected, and need limited assistance from the instructor.	Satisfactory 60-69% Consistent with expected
• Significant knowledge gaps and/or deviations from accepted practice that compromise the Procedure. • Cannot perform the related procedure on the phantom head and significant assistance is required from the instructor	Unsatisfactory < 60 % Repeat the procedure

6. Rubrics for Pre-Clinical Periodontics Competency

6.1 The Marks distribution for the five Assessment Domains

No	Assessment Domains	Marks
1	Professionalism and Infection Control	15
2	Preparation of Workstation and Ergonomic Position.	10
3	Identification and Selection of Armamentarium	10
4	Scientific and Practical Knowledge.	15
5	Practical Skill.	50
Total Marks		100

6.2 Competence Standards and Assessment Criteria

Competence Standards	Assessment Criteria	Marks	Marks Obtained
1. Professionalism & Infection Control (15 Marks)			
Apply ethical and professional standards. Comply with general rules and regulations in the lab.	• Adhere to ethical and general rules and regulations while delivering practical work. • Follow all the lab safety instructions. • Respect and efficiently communicate with peers and instructors and avoid negligence, misconduct, or unacceptable behavior. • Able to adhere to high moral and ethical standards while • Following ethics and professionalism while carrying out practical work in the lab.	**10**	
Implement infection control standards.	• Wear neat, clean & buttoned white coat, hair kept away from the face, and short fingernails without nail polish and no accessories. • Disinfect surfaces with disinfectants / surface covering. • Proper hand hygiene & Selection of Proper PPE. • Proper handling of instrument and aware of instrument sterilization/ disinfection. • Arrange the instruments in the work station before starting the practical procedure.	**5**	
2. Preparation of workstations and Ergonomic Position (10 Marks)			
Adopt maximum and safe functionality of the dental working station and operator.	• Understand the operator zone, static zone, and dental assistant zone. • Demonstrate proper position during performing of different procedures. • Proper Position of the phantom head for each procedure as required.	**5**	
Ensure adequate visibility and accessibility.	• Ensure adequate visibility and accessibility and the proper position of the operatory. • Effective manual dexterity and proper • Ergonomic positions.	**5**	
3. Identification and Selection of Armamentarium (10 Marks)			
Identify the instruments used for the procedures	• Know the different parts of the instrument with their use. • Identify instruments to be used for different procedures according to the requirements.	**5**	
Selection of appropriate instruments	• Selection of the instruments according to their function.	**5**	

Competence Standards	Assessment Criteria	Marks	Marks Obtained
according to the procedure	• Selection of the instruments according to the assigned procedure.		
4. Scientific and Practical Knowledge (15 Marks)			
Select proper materials and instruments	• Handle the equipment properly during the lab work • Proper selection of materials and instruments for each procedure.	**5**	
Knowledge about the Gingival Index, DMFT, Fissure sealants, PRRs, fluoride gel/varnish application	• Define gingival index • Define DMFT and dmft • Understand pit and fissure and PRRS techniques • Describe fluoride gel and varnish application.	**5**	
Community campaign programs	• Designing dental health education material • Planning dental health education sessions/program • Oral health awareness drives in schools	**5**	
5. Practical Skills (50 Marks)			
Demonstration of brushing techniques.	• Demonstrate different tooth brushing techniques on the model (total of 10 techniques)	**5 marks for each technique**	
Demonstration of numbering or coding systems	• Demonstrate Palmer Notation System • Demonstrate Universal System • Demonstrate International FDI System (two digit system)	**15 marks 15 marks 20 marks**	
Calculating DMFT and gingival index	• Perform disclosing tablets and gingival index • Calculating DMFT	**25 marks 25 marks**	
Application of fluoride gel and varnish	• Cleaning, drying of involved teeth • Application of fluoride • Delivering of post-instructions	**15 marks 25 marks 10 marks**	
Performing pit and fissure sealants	• Cleaning, drying of involved tooth • Applying of etching • Pit and fissure sealants application • Checking for adequate flow of material • Finishing	**10 marks for each step**	
Performing PRRs	• Cleaning, drying of involved tooth • GIC mixing • GIC application • Checking for adequate flow of material • Finishing	**10 marks for each step**	

7. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Basic Sciences and Pre-Clinical Competencies**	**Prepared by:** **Dr. Sara Zaki** **Assistant Professor**
Title:	**Pre-Clinical Prosthodontics & Biomaterials**	
Policy Number:	**PC.04**	**Reviewed by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Dec 2023**	
Edition Number	**2**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. **Introduction**

   This course is offered to BDS Year 3 students according to the 2025 study plan. The learning outcomes and course contents are covered as per the course syllabus. Practical training in the prosthodontics lab and phantom heads will prepare the students to develop the skills and competencies required for the laboratory steps in complete and partial denture construction as well as teeth preparation for a fixed prosthesis.

2. **Practical Work**

   Upon completion of the course, the candidate will be able to:

   1. Recognize, select, and properly handle the dental materials and hand instruments used in removable prosthodontics.
   2. Understand and apply the correct methods for manipulating dental materials relevant to removable prosthodontics, including impression-making techniques.
   3. Identify, classify, and differentiate the various types of partial removable denture saddle areas.

4. Identify and critically evaluate the anatomical landmarks of edentulous maxillary and mandibular models and their prosthodontic significance.
5. Perform all laboratory procedures involved in the construction of complete and partial removable dentures.
6. Apply practical training in the design, planning, and fabrication of removable prostheses based on clinical requirements.
7. Plan and perform appropriate tooth preparation for different types of crown restorations, following biological, mechanical, and esthetic principles.
8. Demonstrate readiness for upcoming clinical sessions by integrating theoretical knowledge with practical skills.

   The student will be prepared with all the required competencies needed for practicing clinical fixed and removable prosthodontics.

3. **Instruments list for removable and fixed prosthodontics (Appendix 1 & 2):**

   The students should prepare the required set of instruments for each step before the preclinical lab session in order to avoid delay in the work.

4. **Practical Requirements**

   By the completion of the course, the students should submit the following requirements:

   - One partial denture on ideal models.
   - One complete denture (maxillary/mandibular) on ideal model.
   - Two metals and two porcelains fused to metal crown preparation on Phantom head.

Please refer to the course syllabus of BDS Curriculum 2025, pp 209-226

5. Practical Work Evaluation

5.1 Practical Work Evaluation for the Removable Partial Denture

Student Name: **Student I.D.:**

Practical Work	Submitted Date	Grade	Evaluator	Remarks
Identification and learning of all instruments and materials used in removable prosthodontics				
Impression making demo and Model pouring from partially dentate molds				
Marking of the Maxillary and mandibular anatomical landmarks				
Wax pattern designing and construction				
Clasp making exercise				
occlusal rim fabrication for upper and lower				
Maxillary and mandibular casts articulation				
Selection and arrangement of Artificial teeth				
Wax-up denture construction (Festooning and gingival carving)				
Flasking procedure including: dewaxing, packing and curing				
Finishing and polishing of the final denture				

5.2 Practical Work Evaluation for the Removable Complete Denture

Student Name: **Student I.D.:**

Practical Work	Submitted Date	Grade	Evaluator	Remarks
Identification and learning of all instruments and materials used in removable prosthodontics				
Impression making demo and Model pouring from partially dentate molds				
Marking of the Maxillary and mandibular anatomical landmarks				
Demo on special tray and final impression making				
Wax template designing and construction for permanent denture base				
Sealing, packing, flasking and curing permanent denture base				
occlusal rim fabrication for upper and lower				
Maxillary and mandibular casts articulation				

Practical Work	Submitted Date	Grade	Evaluator	Remarks
Selection and arrangement of Artificial teeth				
Wax-up denture construction (Festooning and gingival carving)				
Flasking procedure including: dewaxing, packing and curing				
Finishing and polishing of the final denture				

5.3 Practical Work Evaluation for the Fixed Prosthesis

Student Name: **Student I.D:**

Practical Work	Submitted Date	Grade	Evaluator	Remarks
Metal Crown preparation				
Metal Crown preparation				
Anterior Porcelain fuse to metal crown preparation				
Posterior porcelain fuse to metal crown preparation				
All ceramic crown preparation				
Impression Making (Demo)				
Post and core buildup (Demo)				

6. Assessment of the Practical Components

- Continuous Assessment OSPE/ Practical
- Final Practical Examination

a. Assessment Criteria for Student Performance and Grading

Criteria	Grade/ Marks
• Excellent knowledge and competency to perform the different steps of complete and partial dentures construction and the tooth preparation on the model without assistance from the instructor.	Excellent 90-100%
• Good Knowledge and competency to perform the different steps of complete and partial dentures construction and the tooth preparation on the model without assistance only seeking assistance from the instructor when in doubt.	Very good 80-89%
• Sound knowledge, the student can recall the important information of the different steps of complete and partial dentures construction and the tooth preparation on the model. Occasional assistance is required from the instructor while performing the different steps of complete and partial dentures construction and the tooth preparation on the model	Good 70-89 % Performance better than expected

Criteria	Grade/ Marks
• Acceptable Knowledge, the student is able to recall the most important information related to the different steps of complete and partial dentures construction and the tooth preparation on the model. The student performed the different steps of complete and partial dentures construction and the tooth preparation on the model with minor deviations from accepted practice that can be easily corrected, and need Limited assistance from the instructor.	Satisfactory 60-69% Consistent with expected
• Significant knowledge gaps and/or deviations from accepted practice that compromise the Practical work. • The student Cannot perform the different steps of complete and partial dentures construction and the tooth preparation on the model and Significant assistance is required from the instructor	Unsatisfactory < 60 % Repeat the procedure

7. Rubrics for Pre-Clinical Prosthodontics Competency

7.1 The Marks distribution for the five Assessment Domains

No	Assessment Domains	Marks
1	Professionalism and Infection Control	10
2	Preparation of Workstation and Ergonomic Position.	10
3	Identification and Selection of Armamentarium	10
4	Scientific, Practical Knowledge, and Skill.	70
Total Marks		100

7.2 Competence Standards and Assessment Criteria

Competence Standards	Assessment Criteria	Marks	Marks Obtained
1.Professionalism & Infection Control (10 Marks)			
Apply ethical and professional standards. Comply with general rules and regulations in the lab.	• Adhere to ethical and general rules and regulations while performing practical work. • Follow all the lab safety instructions. Respect and efficiently communicate with peers and instructors, and avoid negligence, misconduct, or unacceptable behavior	**5**	

Competence Standards	Assessment Criteria	Marks	Marks Obtained
Implement infection control standards.	• Wear a neat, clean, and buttoned white coat, and keep your hair away from the face and working area. • Apply appropriate infection control measures during the lab session. • Proper selection and handling of instruments are required for the procedure. • Arrange the instruments in the working station before starting the practical procedure.	**5**	
2.Preparation of workstations and Ergonomic Position (10 Marks)			
Adopt maximum work safety work environment	• Adapt the ability to work safely and effectively. • Take all the protective measures needed during the practical session, including the use of vacuum and protective shield. • Understand the operator zone, static zone, and dental assistant zone during tooth preparation. • Proper positioning of the phantom head during tooth preparation.	**5**	
Ensure adequate visibility and accessibility.	• Ensure adequate visibility and accessibility and the proper position during all the practical sessions, including tooth preparation. • Develop the required manual dexterity and proper ergonomic position.	**5**	
3.Identification and Selection of Armamentarium (10 Marks)			
Identify the instruments used for the construction of Removable and Fixed prostheses.	• Appraise the different instruments and dental rotary tools & burs with their use. • Plan the instruments and materials required for the specified practical step.	**5**	
Selection of appropriate instruments according to the procedure	• Selection of the instruments according to the assigned practical step.	**5**	
4.Scientific, Practical Knowledge and Skills (70 Marks)			

Competence Standards	Assessment Criteria	Marks	Marks Obtained
Removable Partial Denture: Impression-making demo and Model pouring from partially dentate molds	• Recognize and appraise the different impression materials and techniques including the advantages, disadvantages, limitations and their clinical application. • Differentiate between the stock and custom trays. • Identify the different types of Dental stone and their uses. • Perform cast pouring, the poured cast should be bubble-free, including all the anatomical landmarks with accurate base dimensions. • Identify the different pouring defects and how to avoid.	**1**	
Marking of the Maxillary and mandibular anatomical landmarks	• Identify the positions of the anatomical landmarks in the Maxillary and Mandibular Casts. • Mark the anatomical landmarks on the Maxillary and Mandibular Casts. • Mark and differentiate between the primary, secondary, and non-stress-bearing (relief) areas.	**1**	
Wax pattern designing and construction	• Draw distinct and precise functional and anatomical lines. • Identify the different types of wax and denture base materials. • Construct the wax pattern with proper extension, thickness, and finishing.	**2**	
Surveying	• Identify the dental surveyor and perform cast surveying. • Identify and demarcate the height of the contour. • Determine the supra- and infrabulg areas of the abutment teeth. • Appraise the undercut area. • Manage properly the wrought wire by utilizing appropriate pliers, adapt correctly the clasp to the abutment tooth, and affix it.	**2**	

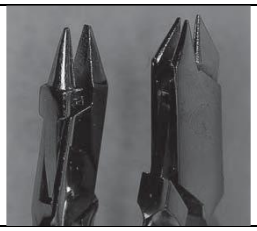
Competence Standards	Assessment Criteria	Marks	Marks Obtained
Occlusal rim fabrication for Maxillary and Mandibular casts	• Identify the different occlusion rim materials and indications. • Identify the different types of wax materials and their uses. • Differentiate between the prefabricated (ready-made) and the fabricated wax occlusal rims. • Construct the wax occlusal rim with the correct dimensions, position, and finishing.	**2**	
Maxillary and mandibular casts articulation	• Identify the various types of articulators and recognize the differences. • Perform the scoring and indexing of the maxillary and mandibular casts. • Assemble the maxillary and the mandibular casts in a correct relation. • Mount the maxillary and mandibular casts with proper orientation on the articulator.	**1**	
Selection and arrangement of Artificial teeth	• Identify and recognize the different tooth molds, including tooth shades and sizes. • Select the appropriate tooth size. • Arrangeme the artificial teeth following the anatomical- and functional guidelines, and the contemporary applied techniques. • Check the static and dynamic occlusion using articulating paper and adjust when needed.	**2**	
Wax-up denture construction (Festooning and gingival carving)	• Perform waxing up of the polished surface following the guidelines of aesthetic standards. • Finishing and polishing of the trail denture. • Perform Stippling and sealing of denture margins to the cast land area.	**1**	
Flasking procedure including: dewaxing, packing and curing (DEMO)	• Identify the components of the dental flask. • De-articulate the maxillary and mandibular casts. • Perform denture processing steps, including: - Denture investing. - Dewaxing - Separating medium coating	**2**	

Competence Standards	Assessment Criteria	Marks	Marks Obtained
	- Acrylic mixing and packing - Processing technique - Deflasking and retrieval of the denture		
Finishing and polishing of the final denture (DEMO)	• Proper selection of the finishing burs. • Be familiar with the polishing machine. • Perform the finishing procedure. • Perform the polishing procedure.	**1**	
Removable Complete Denture: Impression making demo and Model pouring from Completely edentate molds	• Recognize and appraise the different impression materials and techniques, including their advantages, disadvantages, limitations, and clinical applications. • Differentiate between the stock and custom trays. • Identify the different types of dental stones and their uses. • Perform cast pouring; the poured cast should be bubble-free, including all the anatomical landmarks with an accurate base dimensions. • Identify the different pouring defects and how to avoid them.	**2**	
Marking of the Maxillary and mandibular anatomical landmarks	• Identify the positions of the anatomical landmarks in the Maxillary and Mandibular Casts. • Mark the anatomical landmarks on the Maxillary and Mandibular Casts. • Mark and differentiate between the primary, secondary, and non-stress-bearing (relief) areas. • Describe the different Kennedy classifications and differentiate between tooth-supported and tooth-tissue-supported partial dentures.	**2**	
Demo on special tray and final impression making	• Identify the different materials used in special tray constructions, their advantages and disadvantages, and handling. • Construction of a wax spacer with proper extension and thickness.	**-**	

Competence Standards	Assessment Criteria	Marks	Marks Obtained
	• Identify the variations of soft tissue displaceability, and figure stopper and their functions. • Identify the different impression materials, advantages, disadvantages, and techniques.		
Wax template designing and construction for permanent denture base	• Draw distinct and precise functional and anatomical lines. • Construct the wax pattern with proper extension, thickness, and finishing.	**2**	
Sealing, packing, flasking and curing permanent denture base	• Identify the components of the dental flask. • Perform the maxillary and mandibular cast's seal. • Perform denture processing steps, including: -Denture investing. -Dewaxing - Acrylic mixing and packing - Processing technique - Deflasking • Identify the errors that can occur during denture processing and how to prevent them. • Proper selection of the finishing burs • Identify the polishing machine. • Perform the finishing procedure. • Perform the polishing procedure.	**2**	
Occlusal rim fabrication for Maxillary and Mandibular casts	• Identify the different occlusion-rim materials and their uses. • Identify the different types of dental wax materials and their uses. • Differentiate between the prefabricated (ready-made) and the fabricated wax occlusal rims. • Construct the wax occlusal rim with the correct dimensions and position.	**2**	
Maxillary and mandibular casts articulation	• Identify the various types of articulators and recognize the differences. • Perform the scoring and indexing of the maxillary and mandibular casts. • Assemble the maxillary and the mandibular casts in a correct relation.	**1**	

Competence Standards	Assessment Criteria	Marks	Marks Obtained
	• Mount the maxillary and mandibular casts with proper orientation on the articulator.		
Selection and arrangement of the Artificial teeth	• Identify and recognize the different tooth molds, including tooth shades and sizes. • Select the appropriate tooth size. • Arrange the artificial teeth following the anatomical- and functional guidelines, and the contemporary applied techniques. • Check the static and dynamic occlusion using articulating paper and adjust when needed.	**2**	
• Wax-up denture construction (Festooning and gingival carving)	• Perform waxing up of the polished surface following the guidelines of aesthetic standards.	**2**	
Fixed Prostheses: • Margins	**Each requirement (10 Marks) including Metal, anterior PFM, Posterior PFM, All ceramic crown** The evaluation will be performed as follow: • Perform the correct design of the finishing margin • Perform the correct placement of the preparation finish line. • Perform the perfect marginal integrity with a continuous and well-defined Finish line.	**2**	
• Axial walls • (Buccal, Lingual/ Palatal, Proximal Mesial, Proximal Distal)	• Sufficient axial reduction with proper proximal clearance & path of insertion. • Adequate resistance and retention form; length & taper.	**4**	
• Occlusal/ Incisal	• Proper occlusal clearance & functional cusps bevel.	**1**	
• Finishing	• The prepared tooth surface should be smooth with no sharp points or line angles.	**2**	
• Intact adjacent tooth	• The adjacent teeth should be intact.	**1**	

Appendix (1)
Instruments list for Removable Prosthodontics

Alginate Spatula (straight metallic is preferred)	
Curved Gypsum Spatula	
Wax Knife	
Wax Carver (Lecron's)	
Plaster Knife	
Rubber Bowl (LARGE SIZE!)	
Indelible pencil double-sided or one-sided (red and blue colors)	
No. 139 "bird-beak" plier and No. 200 "three-prong=Aderer plier" plier	
Universal loop forming plier	
Flat Adams plier.	

Wire cutter (good quality)	 
Dental Flask size 7 or 8 with clamp (ejector type: three members)	 
Dental Torch	
Mean value articulator (fixed condylar path)	
Glass slab thin and thick type	
Acrylic mixing cup	

Instruments list for Fixed Prosthodontics

1. Examination set.
2. Burs for teeth preparation, including the following

   Other required items for the lab:

   - Lead pencil
   - Metal scale/ruler
   - Scissors
   - Divider
   - Color pencil set
   - Neat Lab coat

Instruction: Please ensure that the required set of instruments be brought to the preclinical lab in order to avoid delay in the work.

REF.-No	ISO	Diameter ø1/10	Head L mm	Grit
858	165	012	8	Standard (Blue or no ring)
859	166	012	10	Standard (Blue or no ring)
868K	222	016	8	Standard (Blue or no ring)+ Fine (Red ring)
856	198	021	8	Standard (Blue or no ring)+ Fine (Red ring)
839	150	014	0.2	Fine (Red ring)
847	172	016	8	Standard (Blue or no ring)+ Fine (Red ring)
878K	298	016	8	Standard (Blue or no ring)+ Fine (Red ring)
379	277	023	4.5	Standard (Blue or no ring)+ Fine (Red ring)
909	040	010	5.2	Standard (Blue)
Total Burs				12

8. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Basic Sciences and Pre-Clinical Competencies**	**Prepared by:** **Dr. Riham Abdelraouf Hyder Mohammed** **Assistant Professor**
Title:	**Pre-Clinical Oral Surgery**	
Policy Number:	**PC.05**	**Reviewed by:** **Dr. Md. Sofiqul Islam** **Associate Professor** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Dec 2023**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**2**	
Next Review Date	**30 Sep 2028**	

1. **Introduction**

   This is annual course offered to the BDS Year 3 students according to the 2021 study plan. The learning outcomes and course contents are covered as per the course syllabus. Practical training on phantom heads will prepare the students to develop manual skills for administration of local anaesthesia and performance basic oral surgical procedure; tooth extraction, suturing and abscess drainage. By the end of the practical training, students should achieve competence in the practical component as per the competency criteria provided in the rubrics. This will enable the students to proceed successfully toward clinical oral surgery practice.

2. **Practical Work**

   1. Review the surgical head and neck anatomy on skull
   2. Identification and selection of armamentarium for local anesthesia and calculate the dose of local anesthesia
   3. Principles of injection techniques

4. Demonstration of injection technique on phantom heads and application of different types of infiltration anesthesia, regional block anesthesia and supplementary injection techniques in maxilla and the mandible.
5. History taking, record vital signs, demonstrate TMJ, lymph nodes and salivary glands examination.
6. Demonstration of aseptic techniques and apply pre-operative preparations of the surgeon and the patient.
7. Identify basic instruments used in oral surgery and apply the general principles of instrumentation.
8. Recognition and use of different extraction forceps and elevators
9. Demonstration and practice of extractions on phantom head
10. Demonstration of suturing techniques on phantom head
11. Demonstration of closure of oro-antral fistulas and drainage of dent Alveolar abscesses
12. Interpretation of radiographs

3. **Practical Requirements**

- Perform 4 different regional block anesthesia techniques.
- Perform 4 infiltration anesthesia techniques on phantom head.
- Perform 10 extractions on maxillary and mandibular teeth.
- Perform 4 different types of suturing Technique on phantom head.
- Complete one simulated case form
- To appear for the Final Theory/Practical Examination, students must have completed all the requirements and pass the OSPE/Practical Examination.

Please refer to the course syllabus of BDS Curriculum 2021, pp 233-243.

4. **Practical Work Evaluation:**

Student Name: Student I.D:

Date	Type of work	Evaluation	Remarks	Signature

5. Assessment of the Practical Components

- Continuous Assessment OSPE/ Practical
- Final Practical Examination

a. Assessment Criteria for Student Performance and Grading

CRITERIA	GRADE/MARKS
• Excellent knowledge and ability to recall all information related local anesthesia and basic oral surgical procedures and performed the LA procedure, tooth extraction and suture techniques on the phantom head without assistance from the instructor.	Excellent 90-100%
• Good knowledge the student can recalls almost all information related to the local anesthesia and basic oral surgical procedures. Performed the LA injection techniques, tooth extraction and suture techniques on the phantom head without assistance only seek assistant from the instructor when in doubt.	Very good 80-89%
• Sound knowledge the student is able to recall the important information related to the local anesthesia and basic oral surgical procedures with few missing points. Occasional assistance is required from the instructor while performed the LA injection techniques, tooth extraction and suture techniques on the phantom head	Good 70-89 % Performance better than expected
• Acceptable Knowledge the student is able to recall the most important information related to the local anesthesia and basic oral surgical procedures with missing points. performed the LA injection techniques, tooth extraction and suture techniques on the phantom head with minor deviations from accepted practice that can be easily corrected, and need Limited assistance from the instructor.	Satisfactory 60-69% Consistent with expected
• Significant knowledge gaps and/or deviations from accepted practice that compromises the Procedure. • Cannot perform LA injection techniques, tooth extraction and suture techniques on the phantom head and Significant assistance required from the instructor	Unsatisfactory < 60 % Repeat the procedure

6. Rubrics for Pre-Clinical Oral Surgery Competency

6.1 The Marks distribution for the five Assessment Domains

No	Assessment Domains	Marks
1	Professionalism and Infection Control	15
2	Preparation of Workstation and Ergonomic Position.	10
3	Identification and Selection of Armamentarium	10
4	Scientific and Practical Knowledge.	15
5	Practical Skill.	50
Total Marks		100

6.2 Competence Standards and Assessment Criteria

Competence Standards	Assessment Criteria	Marks	Marks Obtained
16. Professionalism & Infection Control (15 Marks)			
Apply ethical and professional standards. Comply with general rules and regulations in the lab.	• Adhere to ethical and general rules and regulations while delivering practical work. • Follow all the lab safety instructions. • Respect and efficiently communicate with peers and instructors and avoid negligence, misconduct, or unacceptable behavior. • Able to adhere to high moral and ethical standards while • Following ethics and professionalism while carrying out practical work in the lab.	**5**	
Implement infection control standards.	• Wear neat, clean & buttoned white coat, hair kept away from the face, and short fingernails without nail polish and no accessories. • Disinfect surfaces with disinfectants / surface covering. • Proper hand hygiene & Selection of Proper PPE. • Proper handling of instrument and aware of instrument sterilization/ disinfection. • Perform Preoperative Preparation of the surgeon in comply with clean or sterile technique and preparation of the surgical site • Perform Proper Sharps handling and disposal	**5**	
17. Preparation of workstations and Ergonomic Position (10 Marks)			
Adopt maximum and safe functionality of the dental working station and operator.	• Understand the operator zone, static zone and dental assistant zone • Demonstrate proper position while performing the injection technique • Proper Position of phantom head during performing injection technique • Ensure adequate visibility and accessibility	**5**	
Ensure adequate visibility and accessibility.	• Ensure adequate visibility and accessibility and the proper position of the operatory. • Effective manual dexterity and proper ergonomic positions. • Arrange the instruments in the surgical tray.	**5**	
18. Identification and Selection of Armamentarium (10 Marks)			
Identify instrument and materials that	• Identify the types and parts of dental syringe • Recognize the parts and constituent of Local anesthetic cartridge, aware with MRD and	**5**	

Competence Standards	Assessment Criteria	Marks	Marks Obtained
necessary for application of Local anesthesia and oral surgical procedure	calculate the dose of lidocaine and epinephrine in mg, ml, and No. of cartridge. • Recognize the different parts of the needle understand the needle gauge and aware with the available lengths and color code. • Identify the types and parts of extraction forceps and elevators and their uses. • Identify of the needle holder, suture needle and materials, tissue forceps and suture scissor		
Selection of appropriate instruments according to the local anesthetic technique, tooth to be extracted and suturing technique.	• Select of the suitable needle for the LA technique. • Perform proper mounting of the local anesthetic syringe and check needle patency • Adopt palm-thumb grasp of the syringe • Select the suitable forceps and elevator according to the tooth to be extracted • Select the appropriate suture size and material to be used as intraoral suture.	**5**	
19. Scientific and Practical Knowledge (15 Marks)			
Understand the anatomical and neurophysiological bases for local anesthesia and knowledgeable with regional orofacial and supplementary injection techniques	• Identify the nerves to be anesthetized • Recognize the areas that will be anesthetized in each technique. • Select the suitable injection technique. • Aware with the indications, contraindications, expected complications and alternatives for each technique	**5**	
Implement the general principle of tooth extraction	• Demonstrate the mechanical principle with use of elevators (lever and fulcrum, the wedge and wheel and axle). • Describe the major motions that can be applied by the extraction forceps to luxate the teeth. • Aware with the indications, contraindications and possible complications of teeth extraction.	**5**	

Competence Standards	Assessment Criteria	Marks	Marks Obtained
Understand the biology of wound healing and the functions of sutures and knowledgeable with different intra oral suturing techniques	• Describe primary and secondary wound healing mechanisms. • Describe the different functions of suturing in oral surgery. • Aware with different suturing techniques and enumerate advantages and disadvantages of each one.	**5**	
20. Practical Skills (50 Marks)			
Application of instruments during LA injection technique, extraction and suturing techniques	• Demonstrate the orientation of the needle bevel and angulation of the needle during injection. • Establish firm hand rest and support • Withdraw the needle and make the needle safe (one hand scoop Technique) • Perform unmounting of the dental syringe and discard the sharp object • Establish correct grip of the forceps and elevator and application of forceps blades to the tooth – two-point contact below the cervical line-. • Demonstrate proper holding of the needle holder -with thumb and ring finger while index finger extending along the instrument for stability and support- along with handling of the suture needle	**5**	
Demonstrate the local anesthetic injection technique on phantom heads	• Identify the landmarks. • Prepare the injection site and apply topical anesthesia • Retract lip, check and soft tissue and make the mucosa taught. • Identify penetration site and reach the target area. • Demonstrate adequate penetration depth and perform aspiration to prevent intravascular injection. • Deposit the optimum amount of Local anesthetic solution at optimum rate. • Check for profound LA before starting the procedure understand subjective signs and symptoms and perform objective testing for profound pulpal and soft tissue anesthesia	**15**	
Perform the five steps of intra-	• Perform mucoperiosteal separation using periosteal elevator	**15**	

Competence Standards	Assessment Criteria	Marks	Marks Obtained
alveolar extraction on phantom head	• Luxate the tooth with dental elevator: Proper handling and application of straight elevator • Demonstrate the correct movement of tooth with forceps and deliver the tooth from the socket • Demonstrate proper use of non-working hand • Inspect the extracted tooth and extraction socket and apply the gauze pack. • Explain the post-operative instructions		
Perform intra oral suture on suturing model	• Insert the needle at the surface mucosa at 90º and pass the suture first through the mobile tissue (facial aspect) then re-grasped the needle (not from tip) and passed through the attached tissue (lingual aspect). • Demonstrate equidistant along the Incision line with minimum amount of tissue (3 mm) from incision line has been kept • Perform proper suture tie (Knot) with instrument tie, the suture adequately tied not too tightly nor loosely and placed the knot on one side of incision line, the end of the suture cut with the tip of the scissor and the end is <1cm. • Maintain adequate distance between the sutures (5mm). • Demonstrate suture removal by cutting with the tip of the suture scissor removed by pulling towered the incision line	**15**	

7. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Basic Sciences and Pre-Clinical Competencies**	**Prepared by:** **Dr. Nancy Soliman Ahmed Farghal** **Assistant Professor**
Title:	**Pre-Clinical Endodontics**	
Policy Number:	**PC.06**	**Reviewed by:** **Dr. Md. Sofiqul Islam** **Associate Professor** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Dec 2023**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**2**	
Next Review Date	**30 Sep 2028**	

1. Introduction

This course is offered to the BDS Year 3 students according to the 2021 study plan. The learning outcomes and course contents are covered as per the course syllabus. Practical training on artificial teeth models and extracted teeth will prepare the students to develop manual skills for non-surgical endodontic treatment. By the end of the practical training, students should achieve competence in the practical component as per the competency criteria provided in the rubrics. This will enable the students to proceed successfully toward clinical endodontics practice.

2. Practical Work

1. Recognition of pulp space anatomy for maxillary and mandibular anterior teeth, premolars, and molars teeth and drawing of their relative access cavities.
2. Perform access cavity preparations for the required teeth.
3. Locating canal orifices for the assigned teeth.
4. Working length determination for the assigned teeth.

5. Cleaning and shaping of the canal system of the assigned teeth using Stainless Steel hand files.
6. Three dimensional obturation of the cleaned and shaped canal system of the assigned teeth.

3. Practical Requirements

The students are required to:

- **Expose and prepare and obturate the root canals for three extracted single rooted teeth**
- Expose and prepare and obturate the root canals for two multi rooted premolar or molar
- To appear for the Final Theory/Practical Examination, students must have completed all the requirements and pass the OSPE/Practical Examination.
- To achieve an overall pass grade, a student has to obtain a minimum passing Grade (60%) in each OSPE/Practical components.

Please refer to the course syllabus of BDS Curriculum 2021, pp.261-267.

4. Practical Work Evaluation

4.1 Practical Work Evaluation for the requirements:

Student Name:
Student I.D:

Date	Tooth No.	Type of work	Evaluation	Remarks	Signature

4.2 Practical Work Evaluation Sheet for the final practical exam:

Student Name:
Student I.D:

Date	Tooth no.	Access cavity	Canal Identification	Working Length Determination	Obturation	Remarks

5. Assessment of the Practical Components

- Continuous Assessment OSPE/ Practical
- Final Practical Examination

a. Assessment Criteria for Student Performance and Grading

Criteria	Grade/ Marks
• Excellent knowledge, and ability to recall all information-related to principles of endodontic instrumentation and perform the endodontic treatment procedures on the phantom head without assistance from the instructor.	Excellent 90-100%
• Good knowledge, the student can recall almost all information related to principles of endodontic instrumentation and perform the endodontic treatment procedures on the phantom head without assistance only seeking assistance from the instructor when in doubt.	Very good 80-89%
• Sound knowledge, the student can recall the important information related to the principles of endodontic instrumentation with few missing points. Occasional assistance is required from the instructor while performing endodontic treatment procedures on the phantom head	Good 70-89 % Performance better than expected
• Acceptable Knowledge, the student is able to recall the most important information related to the principles of endodontic instrumentation with missing points. Performed endodontic treatment procedures on the phantom head with minor deviations from accepted practice that can be easily corrected, and need Limited assistance from the instructor.	Satisfactory 60-69% Consistent with expected
• Significant knowledge gaps and/or deviations from accepted practice that compromise the Procedure. • Cannot perform endodontic treatment procedure on the phantom head and significant assistance is required from the instructor	Unsatisfactory < 60 % Repeat the procedure

6. Rubrics for Pre-Clinical Endodontics Competency

6.1 The Marks distribution for the five Assessment Domains

Practical Work	Grades	Obtained
Position of operator for visibility & illumination	**10 M**	
Access cavity preparation	**15 M**	
Canal identification	**10 M**	
Working length determination	**15 M**	

Practical Work	Grades	Obtained
Cleaning and shaping of canal	**15 M**	
Master cone placement	**15 M**	
Final obturation	**15 M**	
Coronal seal	**5 M**	
TOTAL	**100 M**	

6.2 Competence Standards and Assessment Criteria

Competence Standards	Assessment Criteria	Marks	Marks Obtained
1. Professionalism & Infection Control (15 Marks)			
Apply ethical and professional standards. Comply with general rules and regulations in the lab.	• Adhere to ethical and general rules and regulations while delivering practical work. • Follow all the lab safety instructions. • Respect and efficiently communicate with peers and instructors and avoid negligence, misconduct, or unacceptable behavior. • Able to adhere to high moral and ethical standards while • Following ethics and professionalism while carrying out practical work in the lab.	**5**	
Implement infection control standards.	• Wear neat, clean & buttoned white coat, hair kept away from the face, and short fingernails without nail polish and no accessories. • Disinfect surfaces with disinfectants / surface covering. • Proper hand hygiene & Selection of Proper PPE. • Proper handling of instrument and aware of instrument sterilization/ disinfection. • Arrange the instruments in the working station before starting the practical procedure.	**5**	
2. Preparation of workstations and Ergonomic Position (10 Marks)			
Adopt maximum and safe functionality of the dental working station and operator.	• Understand the operator zone, static zone, and dental assistant zone. • Demonstrate proper position during performing of different endodontic procedures. • Proper Position of the phantom head for each endodontic procedure.	**5**	

Competence Standards	Assessment Criteria	Marks	Marks Obtained
Ensure adequate visibility and accessibility.	• Ensure adequate visibility and accessibility and the proper position of the operatory. • Effective manual dexterity and proper Ergonomic positions	**5**	
3. Identification and Selection of Armamentarium (10 Marks)			
Identify the instruments used for the endodontic procedures.	• Know the different parts of the instrument (Handle, Shank, and working end) with their use. • Identify instruments to be used for different endodontic procedures.	**5**	
Selection of appropriate instruments according to the procedure.	• Selection of the instruments according to their function. • Selection of the instruments according to the assigned procedure.	**5**	
4. Scientific and Practical Knowledge (15 Marks)			
Implement the general principles and use of endodontic instrumentation	• Recognize different armamentarium used in endodontic treatment. • Understand the different motions of the hand files.	**5**	
Recognize the different materials and intra-canal medications used in endodontic treatment	• Identify the radicular obturation materials and their proper handling. • Recognize the different root canal sealers and their method of application • Differentiate between different intra-canal medications and their method of application. • Understand the concept of irrigation and its proper application technique.	**5**	
Understand endodontic mishaps and their consequences.	• Recognize the different mishaps that occur during endodontic treatment and how to treat each.	**5**	
5. Practical Skills (50 Marks)			
Perform Endodontic Access Opening for anterior and posterior teeth	• Correct shape and location of the access cavity on the respective tooth. • Identify canal orifices using endodontic explorer.	**15**	

Competence Standards	Assessment Criteria	Marks	Marks Obtained
	• Perform straight line access through complete de-roofing of the pulp chamber and removal of the pulp horns and the dentin shoulder.		
Determine the working length on the exposed roots.	• Determine the working length using electronic apex locator and radiographs. • Perform proper insertion motion of the initial hand file. • Utilize the cone-shift concept for multi-rooted teeth.	**10**	
Perform cleaning and shaping of the root system using hand files.	• Perform cleaning and shaping of the requited teeth using hand files in step-back technique. • Perform different motions of hand files according to the respective step of cleaning and shaping. • Perform root canal irrigation properly.	**15**	
Perform three dimensional obturation of the root canal system with apical seal.	• Perform obturation the prepared teeth using lateral compaction technique. • Proper application of the root canal sealer • Proper coronal condensation and hermetic seal	**10**	

7. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Basic Sciences and Pre-Clinical Competencies**	**Prepared by:** **Dr. Krishna Chytanya Nallan Chakravartula Sri** **Assistant Professor**
Title:	**Oral Radiology**	
Policy Number:	**PC.07**	**Reviewed by:** **Dr. Md. Sofiqul Islam** **Associate Professor** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Dec 2023**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**2**	
Next Review Date	**30 Sep 2028**	

1. Introduction

This course is offered to the BDS Year 2 students according to the 2021 study plan. The learning outcomes and course contents are covered as per the course syllabus. Practical training on phantom heads will prepare the students to develop manual skills for oral radiology. By the end of the practical training, students should achieve competence in the practical component as per the competency criteria provided in the rubrics. This will enable the students to proceed successfully toward clinical practice of Oral radiology.

2. Practical Work

- Radiographic techniques for Periapical, Bite Wing, Occlusal, Panoramic
- Processing of films
- Radiographic techniques by all types of digital radiography
- Interpretation of different radiographs for differential diagnosis
- Opportunity will be provided for the students to integrate oral radiology with, oral medicine and other clinical courses so as to make them understand the role of radiograph and its interpretations in oral diseases.

3. Practical Requirements

The students are required to record:

- Full mouth Intra-Oral Radiographs with Reports (8 required)
- Bitewing Radiograph with report = 1
- Occlusal Radiograph with report = 1
- Two Panoramic Radiographs Reports
- Two different radiographs for RO & RL lesions with complete reports and diagnostic follow up charts

Please refer to the course syllabus of BDS Curriculum 2021, pp 256-266.

4. Practical Work Evaluation

4.1 Practical Work Evaluation for the Oral radiological procedures Practical Work Evaluation Sheet

Student Name: **Student I.D:**

Date	Jaw segment	Type of work	Remarks	Signature

5. Assessment of the Practical Components

- Continuous Assessment OSPE/ Practical
- Final Practical Examination

a. Assessment Criteria for Student Performance and Grading

Criteria	Grade/ Marks
• Excellent knowledge and ability to recall all information-related to principles of Oral radiological procedures and perform the procedures on the phantom head without assistance from the instructor.	Excellent 90-100%
• Good Knowledge the student can recall almost all information related to principles of Oral radiology and perform the procedures on the phantom head without assistance only seeking assistance from the instructor when in doubt.	Very good 80-89%
• Sound knowledge, the student can recall the important information related to the principles of oral radiology with few missing points. Occasional assistance is required from the instructor while performing procedures on the phantom head	Good 70-89 % Performance better than expected
• Acceptable Knowledge the student is able to recall the most important information related to the principles of oral radiology instrumentation with missing points. Performed the procedures on the phantom head	Satisfactory 60-69%

with minor deviations from accepted practice that can be easily corrected, and need limited assistance from the instructor.	Consistent with expected
• Significant knowledge gaps and/or deviations from accepted practice that compromise the Procedure. • Cannot perform procedure on the phantom head and Significant assistance is required from the instructor	Unsatisfactory < 60 % Repeat the procedure

6. Rubrics for Oral Radiology Competency

6.1 The Marks distribution for the five Assessment Domains

No	Assessment Domains	Marks
1	Professionalism and Infection Control	15
2	Preparation of Workstation and Ergonomic Position.	10
3	Identification and Selection of Armamentarium	10
4	Scientific and Practical Knowledge.	15
5	Practical Skill.	50
Total Marks		100

6.2 Competence Standards and Assessment Criteria

Competence Standards	Assessment Criteria	Marks	Marks Obtained
1. Professionalism & Infection Control (15 Marks)			
Apply ethical and professional standards. Comply with general rules and regulations in the lab.	• Adhere to ethical and general rules and regulations while delivering practical work. • Follow all the lab safety instructions. • Respect and efficiently communicate with peers and instructors and avoid negligence, misconduct, or unacceptable behavior. • Able to adhere to high moral and ethical standards while • Following ethics and professionalism while carrying out practical work in the lab.	**5**	
Implement infection control standards.	• Wear neat, clean & buttoned white coat, hair kept away from the face, and short fingernails without nail polish and no accessories. • Disinfect surfaces with disinfectants / surface covering. • Proper hand hygiene & Selection of Proper PPE. • Proper handling of instrument and aware of instrument sterilization/ disinfection. • Arrange the instruments in the working station before starting the practical procedure.	**5**	

Competence Standards	Assessment Criteria	Marks	Marks Obtained
2. Preparation of workstations and Ergonomic Position (10 Marks)			
Adopt maximum and safe functionality of the dental working station and operator.	• Understand the operator zone, static zone, and dental assistant zone. • Demonstrate proper position during performing of different oral radiological procedures. • Proper Position of the phantom head for each procedure.	**5**	
Ensure adequate visibility and accessibility.	• Ensure adequate visibility and accessibility and the proper position of the operatory. • Effective manual dexterity and proper • Ergonomic positions.	**5**	
3. Identification and Selection of Armamentarium (10 Marks)			
Identify the instruments used for the oral radiological procedures	• Know the different parts of the instrument (Sensors, PSP plates or conventional film or OPG) with their use. • Identify instruments to be used for different procedures.	**5**	
Selection of appropriate instruments according to the procedure	• Selection of the instruments according to their function. • Selection of the instruments according to the assigned procedure.	**5**	
4. Scientific and Practical Knowledge (15 Marks)			
Implement the general principles and use of instrumentations	• Demonstrate different instrument holding techniques and placement of same in the oral cavity. • Understand the use of different types of radiation protection agents.	**5**	
Knowledge about the techniques of intra oral and extra oral radiography.	• Describe armamentarium, procedure, adaptation for each tooth using different angulations and techniques. • Understand the role of radiation protection agents such as lead aprons, lead barriers and thyroid collars. • Describe different angulations for each of tooth imaging techniques.	**5**	

Competence Standards	Assessment Criteria	Marks	Marks Obtained
Recording all the required information in Hospital Information Management System (HIMS)	• Understand the use of HIMS in recording data such as patient history, clinical finding and radiological findings. • Differentiate between normal and abnormal radiographic anatomical structures. • Formulate a differential diagnosis	**5**	
5. Practical Skills (50 Marks)			
Application of instruments for oral radiographic examination	• Proper positioning of instruments according to the working site of the jaw and surfaces of the teeth. • Insertion, angulation and activation of the instrument according to the procedure.	**5**	
Imaging of individual teeth with bisecting angle or paralleling technique	• Perform the suitable procedures -Vertical, Horizontal, and angulation according to the procedure. • Proper positioning during x ray examination according to the working site.	**15**	
Radiographic image interpretation	• Identifying the normal and pathology in the radiographic images • Proper interpretation of the obtained images on the digital display. • Formulation of differential diagnosis	**15**	
Perform radiation protection measures	• Proper use of lead aprons for the operator and usage of lead barriers • Proper positioning and disposal of the instrument used for radiological examination	**15**	

7. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Basic Sciences and Pre-Clinical Competencies**	**Prepared by:** **Dr. Suresh Kumar S.** **Associate Professor**
Title:	**Oral Pathology**	**Dr. Shakta Mani Satyam** **Associate Professor**
Policy Number:	**PC.08**	**Reviewed by:** **Dr. Md. Sofiqul Islam** **Associate Professor**
Ownership:	**RAKCODS**	**Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Effective (Issue) Date:	**Dec 2023**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**2**	
Next Review Date	**30 Sep 2028**	

1. **Introduction**

This course DOP326 offered to the BDS Year 3 students is approved by CAA as the reform dentistry program 2021. The learning outcomes and course contents are covered as per the course syllabus. Students should achieve competence in practical component as per the competency criteria provided to the students. This will enable the students to proceed successfully towards all clinical courses.

2. **Practical Work**

1. Identifying the histopathological findings with the microscopic slides and microanatomical pictures of the virtual slides of various oral and maxillofacial pathologies
2. Diagnosing the lesions and interpreting the differential diagnosis
3. Identify the disease manifestation on models
4. Duly complete the lab record book with diagrammatic presentation of histopathological features of the given slides
5. Learn to generate the histopathological report of the given slide specimen

3. **Practical Requirements**

Requirements of Laboratory Sessions:

- The students should be able to understand the biopsy and staining techniques and their applications in oral and craniofacial pathologies.
- The students have to demonstrate ability to identify and discuss the various developmental dental and craniofacial pathologies in specimens, models and with the projected multimedia slides and radiographs.
- The students should be able to characterize and discuss the clinical pictures, illustrative features from the microscopic slides, virtual slides, and photomicrographs projected as multimedia slides of the maxillofacial pathologies and diagnose and discuss the probable differential diagnosis.
- The students should be able to operate the microscopes professionally and recognize the histopathological slides from oral and maxillofacial pathologies under the microscopes at various magnifications and comprehensively submit the record book with a diagrammatic presentation of the histopathological features of the given microscopic slide with a proper histopathological report.
- Individual and group presentation with selected published articles of indexed journals as case-based discussions (CbD) and journal club.

Please refer to course syllabus of BDS Curriculum 2021, pp 244-255.

4. Assessment of the Practical Components

- Continuous Assessment OSPE/ Practical
- Final Practical Examination

4.1 Assessment Criteria for Student Performance and Grading

CRITERIA	GRADE/ MARKS
Excellent knowledge and able to recall broad information related to the diseases of oral and craniofacial pathologies that were discussed with the clinical pictures and histopathological slides without assistance from the instructor.	Excellent 90-100%
Good Knowledge and able to recall almost all information related to the diseases of oral and craniofacial pathologies that were discussed with the clinical pictures and histopathological slides without assistance yet seeking assistance from the instructor when in doubt.	Very good 80-89%

Sound knowledge, the student can recall the important information related to the diseases of oral and craniofacial pathologies that were discussed with the histopathological slides. Occasional assistance is required from the instructor while performing the discussion of clinical pictures and histopathological examination under the microscopes.	Good 70-89 % Performance better than expected
Acceptable Knowledge the student is able to recall the most important information related to the diseases of oral and craniofacial pathologies that were discussed with the clinical pictures and histopathological slides with minor deviations from accepted practice that can be easily corrected, and need limited assistance from the instructor while performing the discussion of clinical pictures and histopathological examination under the microscopes.	Satisfactory 60-69% Consistent with expected
Cannot identify the diseases of oral and craniofacial pathologies that were discussed with the clinical pictures and histopathological slides. Significant knowledge gaps and/or deviations from accepted practice that compromise the discussion of clinical pictures and histopathological examination under the microscopes and needs assistance continuously from the instructor.	Unsatisfactory < 60 % Repeat the discussion

5. Rubrics for Oral Pathology Competency

5.1 The Marks distribution for the four assessment criteria is as follows

No	Assessment Criteria	Marks
1	Professionalism	15
2	Understanding the various biopsy and staining technique	15
3	Scientific and Practical Knowledge.	20
4	Practical Skill	50
Total Marks		100

5.2 Competence Standards and Assessment Criteria

Competence Standards	Assessment Criteria	Marks	Marks Obtained
1. Professionalism (15 Marks)			
Apply ethical and professional standards. Comply with general rules and regulations in the lab.	• Adhere to ethical and general rules and regulations while delivering practical work. • Follow all the lab safety instructions. • Respect and efficiently communicate with peers and instructors and avoid negligence, misconduct, or unacceptable behavior. • Able to adhere to high moral and ethical standards while	**5**	

Competence Standards	Assessment Criteria	Marks	Marks Obtained
	Following ethics and professionalism while carrying out practical work in the lab.		
Implement infection control standards.	• Wear neat, clean & buttoned white coat, hair kept away from the face, and short fingernails without nail polish and no accessories. • Disinfect surfaces with disinfectants / surface covering. • Proper hand hygiene & Selection of Proper PPE. • Proper handling of laboratory equipment and aware of sterilization/disinfection.	**5**	
2. Understanding the various biopsy and staining techniques (15 Marks)			
Differentiate the importance and application of different biopsy and staining techniques.	Able to outline the procedure for submitting specimens for laboratory diagnosis, and demonstrate ability to interpret diagnostic reports and detail the principles and types of biopsies and stains.	**5**	
	Able to identify the tissues as gross specimens and differences in the biopsy sections.	**5**	
	Able to identify the different stains.	**5**	
3. Scientific and Practical Knowledge (20 Marks)			
Implement the general principles of histopathological examinations and diagnosis. Understands and competent in the differential diagnosis of the lesions.	Able to explain the etiopathogenesis of oral diseases and correlate them with the clinical sign and symptoms.	**5**	
	Competent to analyse and interpret the differential diagnosis	**5**	
	Capable to identify the sign and symptoms of various oral diseases and their important characteristic features	**5**	
	Able to recall the important histological and radiographic features of various diseases of head and neck region.	**5**	
4. Practical Skills (50 Marks)			
Identifying the histopathological slides at various magnifications and disease models and submit the lab record book.	Skilled to analyze clinical, histologic and radiographic findings to help in investigation and diagnosis of various oral diseases and	**10**	
	Identify the abnormal oral tissue changes, provide provisional diagnosis and communicate with colleagues in the field for management, and develop robust knowledge for future	**10**	
	Comprehensive in submitting the diagrammatic representation of the histopathology slides with a proper histopathological report.	**20**	

Competence Standards	Assessment Criteria	Marks	Marks Obtained
	Communicate effectively with colleagues and instructors, and adapt a self-learning approach to build up robust sound knowledge necessary for proper diagnosis and management of diseases	**10**	

6. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

16.

CLINICAL COURSES

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Clinical Courses**	**Prepared by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Title:	**Clinical Regulations**	
Policy Number:	**CR.01**	
Ownership:	**RAKCODS**	**Reviewed by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Effective (Issue) Date:	**Dec 2023**	
Edition Number	**2**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. **Purpose and Scope**

   The clinical committee is responsible for promoting patient care and keeping the clinics clean and functioning effectively as per RAKCODS policy.

   Students and Interns are expected to obey policies of the clinic along with the rules and regulations of the University.

2. **Policy Statement**

   The policy covers the clinical regulations which are expected to be followed by all clinical year students and interns in RAKCODS.

3. **Procedures**

   3.1 Attendance

   Attendance for all clinic sessions is monitored by clinic instructor and should be reported to the responsible faculty.

   - Students and interns who are more than 15 minutes late from the start of the clinic will be considered absent.
   - Students and interns should attend all the clinics regularly. In case student is unable to attend, he/she is responsible for the appointment of their patients.

- Students and interns who are unable to attend the clinic due to any emergency should call the clinic reception to rearrange the scheduled appointments of his/her patients.
- Students and interns should work 4-handed dentistry.
- Clinic setting- charts, forms, supplies and equipment should be arranged by the student before the patient is seated.
- Student should discuss the case with the instructor before clinical examination and starting of any procedure.
- Procedure should be finished 15 minutes prior to end of the session for adequate infection control, cleaning of the unit and execution of the treatment procedure.
- Do not accept a patient in the last half an hour of the clinic session.
- At the end of the clinic time, the chair should be raised to its full height position and the foot pedals placed on the base of the chair to facilitate cleaning of the floors by cleaning staff.
- Food, drink and smoking are not allowed in the clinics. Mobile phones should be switched off or silent during the procedure.

3.2. Dress Code and Appearance

- Students are responsible to be appropriately dressed during clinic hours as per University regulations.
- Staff and students must wear neat and clean dress.
- White coats/scrubs/surgical gowns are to be worn buttoned and must be clean.
- Jeans and open shoes are not allowed in the clinics.
- Hair should be cleared away from the face. Fingernails should always be cut short.
- The students are responsible for the appearance and cleanliness of their cubicle while working on it and before leaving.

3.3. Dental Ethics in Clinical Practice

The RAK College of Dental Sciences calls upon all students, faculty members, and staff to follow high ethical standards which have the benefits of the patient as their primary goal. The privilege of being a dentist comes with a responsibility to patients, community and colleagues of the profession to conduct one's professional activities in a highly ethical manner. The dentist

–patient relationship is the cornerstone of dental ethics. Faculty, students and staff are expected to adhere closely to dental ethics.

Respect and Equal Treatment: The dental treatment in RAKCODS is provided without discrimination based on patient's gender, sexual, racial, religious, or ethnic characteristic.

Informed Consent: Fully informed consent is essential to the ethical practice of dentistry and reflects the patient's right of self-decision. A clinician (student or faculty) must get valid consent before starting treatment or physical investigation, or providing personal care, for a patient. Clinician must provide all the information patients need to make their decisions. This involve explaining complex dental diagnosis, prognoses and treatment regimes in simple language, confirming or correcting information that the patients may have obtained elsewhere (e.g., from another health practitioner, magazines or the internet), ensuring that patients understand the treatment options (including the option of no treatment) advantages and disadvantages of each, answering any questions they may have, and understanding whatever decision the patient has reached and, if possible, the reasons for it.

A parent or legally appointed guardian must consent to the treatment for young children and mentally disabled adults. Parents or legal guardians have a right to an explanation regarding the options for behavioral management of children, and are responsible to ask for additional information if they do not understand explanations. Siblings, friends, or any person other than a parent or legal guardian cannot provide consent.

Confidentiality: Students are obliged to safeguard the confidentiality of patient records. Dentists shall maintain patient records in a manner consistent with the protection of the welfare of the patient.

Refuse of Patient Treatment: The student may, in non-emergency cases, refuse to treat a patient for personal or professional reasons which might infringe the quality of the service rendered to the patient. Provided that such refusal should not cause harm to the patient's health, and that there is another dentist who could perform the treatment.

Patient Referral: The student should refer the patient in any situation he/she can't provide good quality type of treatment or when he/she feels that another dentist can provide a better service.

Patient should be referred to another dentist specialized in the treatment of the patient condition or to the dentist who has more advanced and effective means if the condition of the patient so

requires. The dentist should not delay the referral, whenever such referral is in the best interest of the patient.

3.4. Clinical Research

- All clinical research projects and studies must have ethical approval from the Dental Research Ethical Review Committee of RAK College of Dental Sciences, RAK Medical & Health Sciences University. Then the clinical studies should be submitted to Ras Al Khaimah Research Ethics Committee (RAK-REC), which may take approximately 8 weeks.
- If approved, the RACCODS research committee which will send an approval letter to the researcher(s), with a copy to the clinical manager, where the study will be rendered for facilitation.
- Patients' approval should be obtained before the study in a form of informed consent. It is the responsibility of the researcher(s) to explain to the patients the nature of the study and get their signed approval which is kept in the patient's file.
- The study procedure which will be performed on the patients should be documented on the patient's file clinical notes.
- If approved, the Director of Clinics will send an approval letter to the researcher(s), with a copy to the clinical area Head/Supervisor, where the study will be rendered for facilitation.

4. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Clinical Courses**	**Prepared by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Title:	**Clinical Practice Guidelines and Protocols**	
Policy Number:	**CR.02**	
Ownership:	**RAKCODS**	**Reviewed by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Effective (Issue) Date:	**Dec 2023**	
Edition Number	**2**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

This policy applies to all members of students, interns, faculty, and staff working within RAKCODS.

2. Policy Statement

This policy covers the standards and methods to be used in the development, ratification, review and dissemination of Clinical Practice Guidelines and Protocols within RAK College of Dental Sciences (RAKCODS). Clinical Practice Guidelines and Protocols should be in place in all Clinical Specialties for the most commonly used procedures.

3. Aim of the Policy

The aim of this policy is to ensure an up to date, evidence-based set of Clinical Practice Guidelines and Protocols underpinning health care for patients of RAKCODS.

This aim will be achieved by means of:

3.1. Rigorous methods used in the development and ratification of evidence based Clinical Practice Guidelines and Protocols

3.2. Processes to identify duplications and/or gaps in the set of Clinical Practice Guidelines and Protocols and to address those duplications/gaps

3.3. A review process carried out on a regular basis using a common standard for appraisal

3.4. Clinical Audit driven by Clinical Practice Guidelines and Protocols.

4. Duties – Roles and Responsibilities

4.1. Faculty - The faculty will provide the clinical guidelines and protocols for each of their discipline

4.2. Chairperson Clinical Sciences - The chairperson of clinical sciences will review the guidelines and protocols provided by the faculty and is also responsible to solve any conflicts in the guidelines

4.3. Dean- Final approval of the guidelines and protocols and implementation

4.4. Job Description and Job Responsibilities of Students and Interns at RAKCODS –

- Clinical Training Program at RAK College of Dental Sciences (RAKCODS) is based on the philosophy of Comprehensive Dental Care for all assigned patients under the supervision of qualified clinical faculty of different specialties.
- Student and Interns will follow all the policies and procedures as enlisted in RAKCODS Health and Safety Policies and Procedure Manual during their clinical training.
- The students and interns are allowed to take leaves as per policies. A sick leave certificate, duly attested by competent authority must be submitted to the Dean's office.
- Students and Interns are expected to be present in all assigned sessions. Prior permission is required if the students/interns are unable to attend the clinic.
- Recording patient information into the electronic medical record (HIMS)
- Students and Interns will comply with all clinical guidelines and protocols at all times. The treatment plan should be discussed with the patient and staff. Approvals should be completed on HIMS.
- Students and Interns should follow all the guidelines as provided in Internship handbook, RAKCODS Health and safety procedures, RAKMHSU student handbook & other documents
- Complete all the clinical procedures/requirements in each of dental discipline on a satisfactory level.
- Continuously improve knowledge, clinical & communication Skills.
- Provide treatment with proper attitude and **uphold patient safety** as a priority always
- To contribute or participate towards quality improvement activities at RAKCODS
- Developing patient education tools for oral health promotion
- Students and Inters will report to the faculty in-charge firstly then to the academic adviser then to the Chair of Clinical Sciences and finally to the Dean's Office. This reporting relationship should be strictly adhered with.
- Violation Warning will be executed if any of the above mentioned guidelines are not followed.

5. Procedures

5.1. The faculty are responsible to provide the clinical guidelines and protocols for the common procedures performed in the clinics.

5.2. If there are multiple faculty in the discipline they are encouraged to team up and provide the guidelines.

5.3. In case if there are two guidelines provided for the same procedure, a meeting will be convened by the chairperson of clinical sciences to resolve the matter and then it will be made as a single guideline with the consent of all the faculty involved.

5.4. The final approval and implementation is the responsibility of the dean.

6. Monitor and Review

The clinical procedure guidelines and protocols will be reviewed as needed or every three years as for other policies.

7. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

17.

COMPETENCIES IN CLINICAL COURSES

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Competencies in Clinical Courses**	**Prepared by:** **Dr. Nada Tawfig Hashim Ahmed** **Assistant Professor**
Title:	**Clinical Periodontics**	
Policy Number:	**CC.01**	**Reviewed by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Oct 2022**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**2**	
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

Purpose

The clinical component of this course is aimed to prepare the students for proficient periodontal examination including oral hygiene index, gingival status and periodontal status, identify various instruments and their use to develop manual skills.

It also focuses on diagnosis, prognosis, treatment planning, and the non-surgical management (oral hygiene instruction, removal supra and subgingival calculus and other contributing factors) of different forms of periodontal diseases.

Scope

To understand the number of clinical requirements at different levels of BDS program in the specific discipline and to illustrate the BDS professional competency standards rubrics used for the assessment of clinical competency at RAK College of Dental Sciences (RAKCODS).

2. Policy Statements

2.1. Guidelines for Clinical Work:

1. Uphold professional attitude and behaviour
2. Communicate respectfully with colleagues and staff
3. Show empathy towards patients and attendants
4. Apply appropriate infection control measures
5. Adapt the ability to work safely and effectively
6. Collect the relevant information and use them for diagnosis
7. Apply a systematic process for patient management
8. Select the proper instruments for the procedure
9. Enter all the procedures in progress sheet and complete patient's file
10. Maintain the clinical competency evaluation form and enter all details with timely approvals on HIMS

2.2. Clinical Work:

1. Patient history, examination and other diagnostic procedures to establish diagnosis and develop an appropriate, comprehensive, properly sequenced and individualized therapeutic treatment plan
2. Advising and counseling patients about the nature of periodontal diseases, risk factors and treatment options in a way that is easily understood by patients of different backgrounds
3. All medically compromised or patients with risk factors need to be controlled or taken certain precaution before proceeding to the periodontal therapy.
4. Educate, motivate and encourage patients to assume appropriate responsibility for their oral hygiene
5. Practice non-surgical periodontal procedures during the assign clinical session. Evaluate all treatment results after Phase-I therapy recommend appropriate additional action and maintenance
6. Identify conditions or patients with severe periodontitis which require surgical treatment or to be referred to a specialist.

2.3. Assist/ observe the surgical procedure or work under the supervision of faculty

2.4. Clinical Requirements:

1. **BDS Year 3**

   Perform periodontal charting, oral hygiene instructions scaling and polishing for 12 patients. Among these 12 at least 6 patients will have full mouth scaling, polishing and Root Planning for mild to moderate periodontitis cases with supra and sub gingival calculus in most of his/ her teeth. Assist or observe one periodontal surgery.

2. **BDS Year 5**

   Total 15 cases of prophylaxis; among these scaling, polishing and Root Planing for minimum seven patients with chronic or aggressive periodontitis having supra and subgingival calculus. One periodontal surgery and one surgery as assistant.

3. **Internship**

   - Scaling and root planning – 15 teeth
   - Flap Surgery/Gingivectomy/Crown Lengthening – 2 teeth

2.5. Assessments

Students' competency on clinical skills is assessed on a specially designed "Clinical examination Assessment criteria" based on a 5-point scale Excellent (90-100%), Very Good (80-89%), Good (70-79%), Satisfactory (60-69%) and Unsatisfactory (< 60%). If it is found to be unsatisfactory, the student will be informed immediately or within 24 hours by email and the student has to repeat the procedure within two weeks' time.

Following are used to assess the clinical skills of the students

1. Objective Structured Clinical Examination (OSCE); one OSCE will be conducted during the mid of fall semester.
2. In Course Assessment Clinical Examination; 2 clinical examinations, one of which will be at the end of fall semester and the other in the mid of spring semester as per the criteria given below in each discipline.

2.5.1. The clinical requirements and examinations are graded based upon the Professional Competence Standards of Graduates of Baccalaureate Dental Initial Training and Education Programs laid down by the Ministry of Education as a part of the Reforming Dentistry Program in 2021.

2.5.2. The following table is used to grade student performance for all the domains

NO.	DOMAIN	MARKS
1	**Professional Domain**	15
2	**Patient-Centered Care Domain** • ***Clinical Information Gathering*** • ***Diagnosis and Management Planning*** • ***Clinical Treatment and Evaluation***	40
3	**Health Promotion Domain**	15
4	**Communication and Social Skills Domain**	15
5	**Scientific and Clinical Knowledge Domain**	15

2.5.3. The following table shows the criteria to grade students for clinical requirements and clinical assessments

CRITERIA	GRADE/ MARKS
• Excellent knowledge and ability to recall all information related to professionalism as mentioned below in the competency. • No assistance is required from the clinical supervisor	**Excellent** 90-100%
• Good Knowledge. Student recalls almost all points related to the case. Seeks supervision from supervisor at times when in doubt, does not need assistance while working from supervisor	**Very good** 80-89%
• Sound knowledge and ability. The student is able to recall all information with few missing points. • Occasional assistance while working is required from the clinical supervisor.	**Good** 70-79 % Performance better than expected
• Sound knowledge and ability. May include minor deviations from accepted practice that can be easily corrected and that would not significantly compromise the clinical outcome. Limited assistance required from the clinical supervisor.	**Satisfactory** 60-69% Consistent with expected
• Significant gaps in understanding and/or deviations from accepted practice that compromises patient safety or patient outcomes. • Performing treatment without approval from clinical supervisor. • Significant assistance required from the clinical supervisor to prevent adverse outcomes.	**Unsatisfactory** < 60 % Unsafe treatment Repeat the procedure

2.5.4. Clinical Procedure Evaluation Form to be used for requirements and clinical examinations

MR No	**Student ID and Name**	
Tooth Number and Clinical Procedure	**Faculty Name, Sign & Date**	
1. Professionalism Domain 15 marks	**Grades**	**Remarks**
• Apply ethical standards and comply with national legal and regulatory requirements in the provision of dental care. • Ensure that patient safety is paramount in all decisions and actions. • Recognize professional and individual scopes and limitations of practice or refer patients to professional colleagues when indicated. • Demonstrate empathy and caring behavior towards patients, their families and members of the community. • Ensure that all actions focus on the patients' best interests and respect patients' dignity, rights and choices. • Protect patients' privacy and confidentiality. • Maintain effective relationships with peers and respect professional boundaries. • Recognize the importance of continuing education and professional development for self and all members of the dental team.		
2. Section 2: Patient-Centered Care Domain- 40 marks		
2.1 Clinical Information Gathering- 10 marks • Perform an extra-oral and intra-oral examination for health, disease and abnormalities of the dentition, mouth and associated structures, including assessment of vital signs. • Identify and record the chief complaint, history of the present condition, medical, oral and social history of the patient. • Select, take, and interpret diagnostic images and other diagnostic procedures relevant to the patient's condition. • Maintain accurate, consistent, legible and contemporaneous records of the patient.		
2.2 Diagnosis and Management Planning -15 marks • Formulate and record a comprehensive, patient-centered, evidence • Diagnose disease or abnormalities of the oral cavity and associated structures and identify conditions which require management and referral. • Recognize the manifestations of systemic conditions and how these and their management may affect the management of dental care. • Apply the principles of preventive care as part of comprehensive treatment plan.		

• Ensure and record patient informed consent for treatment and their financial obligation.			
2.3 Clinical Treatment and Evaluation (will differ specialty wise, highlight the procedure) - 15 marks			
Oral Hygiene Instructions	**Polishing**		
Proper oral hygiene instruction and education with proper tooth brushing technique and other cleansing aid.	Remove stains, soft deposit and smoothing of the tooth surface Use of rubber cup mounted on a low-speed handpiece with special polishing paste.		
Scaling	**Follow-up for Re-evaluation**		
All supra-gingival plaque and calculus should be removed. Adequate tissue manipulation with no injury or tearing to tissues.	Recordings of oral hygiene status. Record probing and charting of pocket depths Check gingival inflammation (bleeding, change in color, consistency) Gingival recession and mobility.		
Root Planning	**Supportive Periodontal Therapy**		
• All subgingival plaque and calculus should be removed. • Adequate pain control and no injury or tearing to tissues.	• Ensuring excellent oral hygiene. • Frequent monitoring for progression or recurrence of disease. • Removal of microbial deposits.		
3. Health Promotion Domain **15 marks**			
• Evaluate the social, cultural and environmental factors which contribute to health or illness. • Apply the principles of health promotion strategies and disease prevention to promote periodontal and general health, quality of life and wellbeing. • Collaborate with dental team members and other health care professionals in the management of oral health care and health promotion for all patients. • Assess the risk factors and behaviors such as nutrition, drugs and diseases that can have an impact on periodontal health. • Design, implement and evaluate evidence-based health promotion programs.			

• Apply different oral hygiene instruction and techniques on different age groups and design a customized preventive program. • Demonstrate creativity in promoting periodontal health within the community using a variety of platforms.		
4. Communication and Social Skills Domain 15 marks		
• Apply appropriate interprofessional and communication skills that allow building a teamwork approach to the delivery of periodontal healthcare. • Demonstrate appropriate interpersonal skills in mentoring and participating in activities within a health care team. • Document and shared written and electronic information about the dental encounter to optimize clinical decision-making and patient safety, ensuring confidentiality and privacy. • Present clear information to patients in a timely manner, that ensures that they are advised of and understand the different treatment options including risks and benefits. • Communicate responsibly and professionally, including when using social media. • Communicate and engage patients, their families and communities in relation to periodontal health. • Communicate effectively within the organizational hierarchy. • Recognize cultural diversity and apply cultural competency in caring for patients and communities.		
5. Scientific and Clinical Knowledge Domain 15 marks		
• Evaluate published clinical and basic science research and integrate this information to improve the periodontal health of the patient. • Apply the biomedical, physical and behavioral sciences in relation to periodontal health and disease. • Design and implement research in a critical and scientific manner relevant to dentistry. • Apply the scientific basis, application and risks of using Ozone , laser, tissue regenerative material and risk management and quality improvement. • Demonstrate foundation knowledge as relevant to clinical skills in Clinical periodontics.		

Grades: Grades are based on a 5-point scale (tick as applicable)

Excellent (90-100%) ☐

Very-good (80-89%) ☐

Good (70-79%) ☐

Satisfactory (60-69%) ☐

Unsatisfactory (Repeat procedure) (<60%) ☐

2.5.4.1.The rubrics based upon which the evaluation form has been prepared is as follows

Competence Standards	Assessment Criteria	Marks
1. Professional Domain – 15 Marks		
Apply ethical standards and comply with national legal and regulatory requirements in the provision of dental care.	• Checks patient record to understand • Patient meets the criteria of registration • Signed consent form available • Patient rights & responsibilities available • Informed consent signed for periodontal surgical procedures.	2
Ensure that patient safety is paramount in all decisions and actions.	• Patient identification done • Reassessment was done as necessary • Checked for medical alerts on system.	2
Recognize professional and individual scopes and limitations of practice or refer patients to professional colleagues when indicated.	• Required investigations done • Provisional and final diagnosis is correct • Treatment plan is completed and discussed with patient and family • Refers patient for specialty treatment if the periodontal pocket is deep and the patient has systemic problems that compromised the periodontal health.	2
Demonstrate empathy and caring behavior towards patients, their families and members of the community.	• Greets the patient and makes him/ her comfortable in the clinic. • Makes sure the patient/families of the patients are also attended to and involved in decision making. • Interdisciplinary health education form completed as per HIMS.	2
Ensure that all actions focus on the patients' best interests and respect patients' dignity, rights and choices.	• The care plan is discussed with the patient and family. • His/her choices of treatment is respected.	2

Competence Standards	Assessment Criteria	Marks
	• Performs periodontal treatment in the best interest of the patient.	
Protect patients' privacy and confidentiality.	• Patients history and case details are kept confidential. • There is no breach of patient's personal information. • The information of the patient is dealt professionally. • All the patient details after being saved in HIMS, the student logs out.	2
Maintain effective relationships with peers and respect professional boundaries.	• Behaves and respects patients, colleagues, staff and faculty professionally and ethically. • All the patient information discussed with the faculty.	1
Recognize the importance of continuing education and professional development for self and all members of the dental team.	• Appropriate knowledge related to the diagnosis and treatment planning of periodontal diseases presented. • The knowledge shown during the case presentation was updated and was evidence based.	2
2: Patient-centred Care Domain - 40 marks		
<u>Clinical Information Gathering 10 Marks</u>		
Perform an extra-oral and intra-oral examination for health, disease and abnormalities of the dentition, mouth and associated structures, including assessment of vital signs.	• Findings of Extra-oral examination including Head, Neck, TMJ and Lymph nodes and details recorded. Findings of Intra-oral examination recorded. • Any abnormal change of both intra oral and extra oral examination are identified correctly and recorded. • Calculus & debris score and gingival index accurately recorded for all required teeth. • Accurate measurement of pocket depths and gingival bleeding. • Tooth mobility, migration, furcation involvement & recession (if present) are recorded • Any abnormality on the tongue, buccal mucosa, soft palate and frenum attachment are identified.	2
Identify and record the chief complaint, history of the present condition, medical,	• Case history recorded correctly including details of: ▪ Chief complaint ▪ History of presenting illness ▪ Medical & Social history	2

Competence Standards	Assessment Criteria	Marks
oral and social history of the patient.	• Checked for vital signs on HIMS and any deviation is updated.	
Select, take, and interpret diagnostic images and other diagnostic procedures relevant to the patient's condition.	• Selection of appropriate investigation for the patient. • Correct Interpretation of investigations. • Interpretation of radiograph for horizontal or vertical bone loss. Furcation involvement, tooth mobility/ migration (if any) recorded accurately.	2
Maintain accurate, consistent, legible and contemporaneous records of the patient.	• Diagnosis and treatment plan discussed with the supervisor • All details of patient including diagnosis and treatment plans duly approved on HIMS before performing treatment • Progress notes correctly mentioned • Next/follow up appointment of patient provided	2
Formulate and record a comprehensive, patient-centered, evidence-based oral health treatment plan.	• Proper treatment plan established based upon the history and investigations and contemporary knowledge as per evidence available • A Patient centric treatment plan is explained with the patient and family for his/their opinion	2
Diagnosis and Management Planning – 10 Marks		
Formulate and record a comprehensive, patient-centred, evidence-based oral health treatment plan.	• Proper diagnosis and treatment plan established based upon the history, investigations and contemporary knowledge as per evidence available • A Patient centric treatment plan is explained and discussed with the patient and family for their opinion	2
Diagnose disease or abnormalities of the oral cavity and associated structures and identify conditions which require management and referral.	• All intra/extra oral abnormality recorded and addressed • Diagnosis for all findings established • Comprehensive treatment plan prepared. • Patient prepared for referral if complex in nature. • Diagnosis of different types of plaque or non-plaque associated periodontal & other lesions in the oral cavity.	2
Recognize the manifestations of systemic conditions and how these and their management may	• Details of medical history and hospitalization recorded Oral manifestations of systemic conditions recorded	2

Competence Standards	Assessment Criteria	Marks
affect the management of dental care.	• Risk of periodontal diseases on systemic health noted. • Appropriate referrals/ consent obtained from physician prior to treatment.	
Apply the principles of preventive care as part of comprehensive treatment plan.	• Preventive care explained to the patient and encourages the patient for same • Oral hygiene education & motivation provided	2
Ensure and record patient informed consent for treatment and their financial obligation.	• Informed consent recorded if the procedure needs it • Financial obligations if any is discussed with the patient	2
Clinical Treatment and Evaluation – 20 Marks		
Identify patient's anxiety and pain related to the oral cavity and associated structures and respond appropriately.	• Identify the patient's ability to cope with treatment procedure based on medical & Dental History. • Appropriate handling & use of instruments during the treatment procedures.	3
Evaluate and manage the periodontium with surgical and non-surgical treatment plans.	• Correct and proper sequence of treatment planning. • Explain the treatment plan to the patient with different treatment options that can be done. • Detection of supra and subgingival calculus. • Perform scaling & root planing with proper handling of instruments. • All stain removed from tooth surface. • Control of bleeding, pain and no injury or tearing of the tissue. • Follow up appointment protocol as per need of the patient. • Identify patients with severe periodontitis which require surgical treatment or to be referred to a specialist.	8
Apply universal infection control guidelines for all clinical procedures.	Apply universal infection control guidelines for all clinical procedures by: ▪ Practicing Hand hygiene. ▪ Working in clean/ and disinfected operatory. ▪ Appropriate use of personal protective equipment.	4

Competence Standards	Assessment Criteria	Marks
	▪ Sterilized instruments are used. ▪ Appropriate handling of instruments, sharp and medical waste.	
Manage patients from different age groups, medically compromised patients, and people of determination according to their needs.	• Identify the risk factors of periodontal disease and manifestation of certain systemic disease in periodontium. • Refer for medical evaluation and treatment and develop complete periodontal treatment plan with physician • Precautions that should be taken before proceeding to periodontal therapy and effect of different drugs on the periodontal tissues` • Apply periodontal disease risk assessment on different age groups and design a customized preventive and management program	3
Administer and/or prescribe pharmaceutical agents relevant to routine dental practice.	Has knowledge and demonstrates ability in prescribing drugs for Periodontal patients.	2
Section 3: Health Promotion Domain – 15 marks		
Evaluate the social, cultural and environmental factors which contribute to health or illness.	• Recorded complete demographic details of the patient. • Demonstrates the understanding of the significance of demographic details. • Evaluate how it may influence the presenting condition/s.	3
Apply the principles of health promotion strategies and disease prevention to promote periodontal and general health, quality of life and wellbeing.	• Health promotion principles are applied with evidence on the importance and practice of prevention of periodontal diseases. • Demonstrates skills of proper oral hygiene instruction and education with proper tooth brushing technique and other cleansing aid. • Provides demonstrations on proper diet and its impact on health. • Identify the contributing factors and its prevention & management if applicable.	3
Collaborate with dental team members and other	• Maintains professional relationship with patients, colleagues, staff and faculty	3

Competence Standards	Assessment Criteria	Marks
health care professionals in the management of oral health care and health promotion for all patients.	• Seeks/refers for consultation from specialists as needed.	

Assess the risk factors and behaviors such as nutrition, drugs and diseases that can have an impact on oral healthcare.	• Risk assessment done in terms of Dietary factors
	• Oral hygiene maintenance
	  • Systemic conditions
	  • Smoking
	  • Snuffing
		3

Design, implement and evaluate evidence-based health promotion programs.	Is innovative in providing a care plan Practices a follow up plan as applicable to the patient.	3
Section 4. Communication and Social Skills Domain – 15 marks		
Apply appropriate inter-professional and communication skills that allow building a teamwork approach to the delivery of oral healthcare.	Communicates effectively with: ▪ Peer group/team ▪ Staff ▪ Faculty ▪ Other healthcare professionals as applicable ▪ Applied 4 handed dentistry	3
Demonstrate appropriate interpersonal skills in mentoring and participating in activities within a health care team.	• Demonstrate appropriate interpersonal communication skills • In case presentation • Discussion of care plan • In referring patients to other team members	3
Document and share written and electronic information about the dental encounter to optimize clinical decision-making and patient safety, ensuring confidentiality and privacy.	All the information is recorded appropriately to: ▪ Prioritize patient safety. ▪ Provide a handover If and when needed. ▪ Ensures privacy and confidentiality regarding details of patient.	3
Present clear information to patients in a timely manner, that ensures that they are advised of and understand the different treatment	• Details of treatment plans discussed with patient including both the ideal and alternative treatment plans. • Advantages, risks and disadvantages of the treatment planned is explained to the patient.	2

Competence Standards	Assessment Criteria	Marks
options including risks and benefits.		
Communicate responsibly and professionally, including when using social media.	• Communicates respectfully with patients, colleagues, staff and faculty. • Seeks permission from patients and the faculty before using social media to showcase the treatment on social 2 media.	2
Communicate and engage patients, their families and communities in relation to oral health.	Treatment plan discussed with patients and families.	2
Section 5: Scientific and Clinical Knowledge Domain -15 Marks		
Communicate effectively within the organizational hierarchy.	Respects the hierarchy of the team and communicates accordingly in a disciplined manner.	2
Recognize cultural diversity and apply cultural competency in caring for patients and communities.	Respects the cultural and ethnical differences of all involved.	2
Evaluate published clinical and basic science research and integrate this information to improve the periodontal health of the patient.	• Has knowledge relevant to the most recent published literature • Applies knowledge adequately to treat the patient satisfactorily.	2
Apply the biomedical, physical, and behavioral sciences in relation to Periodontal health and disease.	Plans to prevent unwanted exposure to ionizing radiation or X rays.	2
Apply the scientific basis, application and risks of using ionizing radiation, anesthesia, and risk management and quality improvement.	Decides upon the type of x-rays needed and prevents unnecessary and repeated exposure.	2

Competence Standards	Assessment Criteria	Marks
Demonstrate foundation knowledge as relevant to clinical skills related to periodontics.	Demonstrates knowledge & skills in: • Accurate measurement of pocket depths, loss of attachment, furcation, mobility and recession. • Detection and recording of oral hygiene and gingival indices. • Interpretation of radiograph for horizontal or vertical bone loss. Furcation involvement, tooth mobility/migration (if any) recorded accurately. • Ability to prescribe antibiotics in periodontal patients. • Advising proper oral hygiene instruction, education with proper tooth brushing technique and other cleansing aid. • Performing different nonsurgical and surgical procedures. • Follow up re-evaluation appointment protocol as supportive periodontal care	5

3. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Competencies in Clinical Courses**	**Prepared by:** **Dr. Md. Sofiqul Islam** **Associate Professor**
Title:	**Clinical Operative Dentistry**	
Policy Number:	**CC.02**	**Reviewed by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Oct 2022**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**2**	
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

Purpose

The clinical component of this course is aimed to prepare the students for efficient examination and diagnosis in operative dentistry and develop their skills to prepare and restore different types of cavities in clinical situations. The students will be able to develop an appropriate, comprehensive, properly sequenced and individualized treatment plan based on the evaluation of all diagnostic data and identify conditions which require operative management or should be referred to a specialist for management.

Scope

To understand the number of clinical requirements at different levels of BDS program in the specific discipline and to illustrate the BDS professional competency standards rubrics used for the assessment of clinical competency at RAK College of Dental Sciences (RAKCODS).

2. Policy Statements

2.1. Guidelines for Clinical Work:

2.1.1. Uphold professional attitude and behaviour

2.1.2. Communicate respectfully with colleagues and staff

2.1.3. Show empathy towards patients and attendants

2.1.4. Apply appropriate infection control measures

2.1.5. Adapt the ability to work safely and effectively

2.1.6. Collect the relevant information and use them for diagnosis

2.1.7. Apply a systematic process for patient management

2.1.8. Select the proper instruments for the procedure

2.1.9. Enter all the procedures in progress sheet and complete patient's file

2.1.10. Maintain the clinical competency evaluation form and enter all details with timely approvals on HIMS

2.2. Clinical Work:

2.2.1. History taking and examination of the assigned patients

2.2.2. Interpret the findings from history, clinical examination, radiographs and other appropriate diagnostic procedures/tests to identify the etiology, pathogenesis and to establish diagnosis and treatment planning

2.2.3. Perform fillings during the clinical session on the assigned patients

2.2.4. Educate the patients for caries control methods

2.3. Clinical Requirements:

2.3.1. BDS Year 4

- Five class 1 amalgam/ Composite restorations *
- Five class 2 amalgam/ composite restorations
- Five anterior class 3 and 4 restorations
- Five class 5 restorations
- Root Caries - 3
- Complex amalgam restoration – 2 teeth
- Inlay / Onlay-1

2.3.2. BDS Year 5

Total 30 permanent restorations (Minimum 5 amalgam and 5 complex restorations)
Bleaching of 1 case.

2.3.3. Internship

- Thirty (30) complex composite restorations
- Thirty (30) tooth color restorations

2.4. Assessments

Students' competency on clinical skills is assessed on a specially designed "Clinical examination Assessment criteria" based on a 5-point scale Excellent (90-100%), Very Good (80-89%), Good (70-79%), Satisfactory (60-69%) and Unsatisfactory (< 60%). If it is found to be unsatisfactory, the student will be informed immediately or within 24 hours by email and the student has to repeat the procedure within two weeks' time.

Following are used to assess the clinical skills of the students

1. Objective Structured Clinical Examination (OSCE); one OSCE will be conducted during the mid of fall semester.
2. In Course Assessment Clinical Examination; 2 clinical examinations, one of which will be at the end of fall semester and the other in the mid of spring semester as per the criteria given below in each discipline.

2.4.1. The clinical requirements and examinations are graded based upon the Professional Competence Standards of Graduates of Baccalaureate Dental Initial Training and Education Programs laid down by the Ministry of Education as a part of the Reforming Dentistry Program in 2021.

2.4.1.1. The following table is used to grade student performance for all the domains

NO.	DOMAIN	MARKS
1	**Professional Domain**	15
2	**Patient-Centered Care Domain** • ***Clinical Information Gathering*** • ***Diagnosis and Management Planning*** • ***Clinical Treatment and Evaluation***	40
3	**Health Promotion Domain**	15
4	**Communication and Social Skills Domain**	15
5	**Scientific and Clinical Knowledge Domain**	15

2.4.1.2. The following table shows the criteria to grade students for clinical requirements and clinical assessments

CRITERIA	GRADE/ MARKS
• Excellent knowledge and ability to recall all information related to professionalism as mentioned below in the competency. • No assistance is required from the clinical supervisor	Excellent 90-100%
• Good Knowledge. Student recalls almost all points related to the case. Seeks supervision from supervisor at times when in doubt, does not need assistance while working from supervisor	Very good 80-89%
• Sound knowledge and ability. The student is able to recall all information with few missing points. • Occasional assistance while working is required from the clinical supervisor.	Good 70-89 % Performance better than expected
• Sound knowledge and ability. May include minor deviations from accepted practice that can be easily corrected and that would not significantly compromise the clinical outcome. Limited assistance required from the clinical supervisor.	Satisfactory 60-69% Consistent with expected
• Significant gaps in understanding and/or deviations from accepted practice that compromises patient safety or patient outcomes. • Performing treatment without approval from clinical supervisor. • Significant assistance required from the clinical supervisor to prevent adverse outcomes.	Unsatisfactory < 60 % Unsafe treatment Repeat the procedure

2.4.1.3. Clinical Procedure Evaluation Form to be used for requirements and clinical examinations

MR No	**Student ID and Name**	
Tooth Number and Clinical Procedure	**Faculty Name, Sign & Date**	
1. Professionalism Domain 15 marks	**Grades**	**Remarks**
• Apply ethical standards and comply with national legal and regulatory requirements in the provision of dental care. • Ensure that patient safety is paramount in all decisions and actions. • Recognize professional and individual scopes and limitations of practice or refer patients to professional colleagues when indicated. • Demonstrate empathy and caring behavior towards patients, their families and members of the community. • Ensure that all actions focus on the patients' best interests and respect patients' dignity, rights and choices. • Protect patients' privacy and confidentiality. • Maintain effective relationships with peers and respect professional boundaries. • Recognize the importance of continuing education and professional development for self and all members of the dental team.		
2. Section 2: Patient-Centered Care Domain- 40 marks		
2.1 Clinical Information Gathering- 10 marks • Perform an extra-oral and intra-oral examination for health, disease and abnormalities of the dentition, mouth and associated structures, including assessment of vital signs. • Identify and record the chief complaint, history of the present condition, medical, oral and social history of the patient. • Select, take, and interpret diagnostic images and other diagnostic procedures relevant to the patient's condition. • Maintain accurate, consistent, legible and contemporaneous records of the patient.		
2.2 Diagnosis and Management Planning -10marks • Formulate and record a comprehensive, patient-centered, evidence • Diagnose disease or abnormalities of the oral cavity and associated structures and identify conditions which require management and referral. • Recognize the manifestations of systemic conditions and how these and their management may affect the management of dental care.		

• Apply the principles of preventive care as part of comprehensive treatment plan. • Ensure and record patient informed consent for treatment and their financial obligation.		
2.3 Clinical Treatment and Evaluation -20 marks		
Identify patient's anxiety and pain related to the oral cavity and associated structures and respond appropriately.		
Apply universal infection control guidelines for all clinical procedures.		
Manage restorative procedures that preserve tooth structure, replace defective tooth structure, maintain function, aesthetics, and promote soft and hard tissue health using direct or indirect methods.		
Perform preventive therapeutic procedures to preserve the vitality of the pulp.		
Administer and/or prescribe pharmaceutical agents relevant to routine dental practice.		
3. Health Promotion Domain 15 marks		
• Evaluate the social, cultural and environmental factors which contribute to health or illness. • Apply the principles of health promotion strategies and disease prevention to promote oral health, quality of life and wellbeing. • Collaborate with dental team members and other health care professionals in the management of oral health care and health promotion for all patients. • Assess the risk factors and behaviors such as nutrition, drugs and diseases that can have an impact on oral healthcare. • Design, implement and evaluate evidence-based health promotion programs.		
4. Communication and Social Skills Domain 15 marks		
• Apply appropriate inter-professional and communication skills that allow building a teamwork approach to the delivery of oral healthcare. • Demonstrate appropriate interpersonal skills in mentoring and participating in activities within a health care team. • Document and share written and electronic information about the dental encounter to optimize clinical decision-making and patient safety, ensuring confidentiality and privacy. • Present clear information to patients in a timely manner, that ensures that they are advised of and understand the different treatment options including risks and benefits.		

• Communicate responsibly and professionally, including when using social media. • Communicate and engage patients, their families and communities in relation to oral health.		
5. Scientific and Clinical Knowledge Domain 15 marks		
• Communicate effectively within the organizational hierarchy. • Recognize cultural diversity and apply cultural competency in caring for patients and communities. • Evaluate published clinical and basic science research and integrate this information to improve the oral health of the patient. • Apply the biomedical, physical and behavioral sciences in relation to oral health and disease. • Apply the scientific basis, application and risks of using ionizing radiation, anesthesia, and risk management and quality improvement. • Demonstrate foundation knowledge as relevant to clinical skills in Operative dentistry.		

Grades: Grades are based on a 5-point scale (tick as applicable)

Excellent (90-100%) ☐

Very-good (80-89%) ☐

Good (70-79%) ☐

Satisfactory (60-69%) ☐

Unsatisfactory (Repeat procedure) (< 60%) ☐

2.4.1.4. The rubrics based upon which the evaluation form has been prepared is as follows

Competence Standards	Assessment Criteria	Marks
1. Professional Domain – 15 Marks		
Apply ethical standards and comply with national legal and regulatory requirements in the provision of dental care.	• Checks patient record to understand • Patient meets the criteria of registration • Signed consent form available • Patient rights & responsibilities available	2

Competence Standards	Assessment Criteria	Marks
Ensure that patient safety is paramount in all decisions and actions.	• Patient identification done • Reassessment was done as necessary • Checked for medical alerts on system.	2
Recognize professional and individual scopes and limitations of practice or refer patients to professional colleagues when indicated.	• Required investigations done • Provisional and final diagnosis is correct • Treatment plan is completed and discussed with patient and family	2
Demonstrate empathy and caring behaviour towards patients, their families and members of the community.	• Greets the patient and makes him/ her comfortable in the clinic. • Makes sure the patient/families of the patients are also attended to and involved in decision making. • Interdisciplinary health education form completed as per HIMS.	2
Ensure that all actions focus on the patients' best interests and respect patients' dignity, rights and choices.	• The care plan is discussed with the patient and family. • His /her choice of treatment is respected. • Performs Restorative treatment in the best interest of the patient.	2
Protect patients' privacy and confidentiality.	• Patient's history and case details are kept confidential. • There is no breach of patient's personal information. • The information of the patient is dealt professionally. • All the patient details after being saved in HIMS, the student logs out.	2
Maintain effective relationships with peers and respect professional boundaries.	• Behaves and respects patients, colleagues, staff and faculty professionally and ethically. • All the patient information discussed with the faculty.	1
Recognize the importance of continuing education and professional development for self and	• Appropriate knowledge related to the diagnosis and treatment planning of tooth defect. • The knowledge shown during the case presentation was updated and was evidence based.	2

Competence Standards	Assessment Criteria	Marks
all members of the dental team.		
2. Patient-centred Care Domain - 40 marks		
<u>Clinical Information Gathering 10 Marks</u>		
Perform an extra-oral and intra-oral examination for health, disease and abnormalities of the dentition, mouth and associated structures, including assessment of vital signs.	• Findings of Extra-oral examination including Head, Neck, TMJ and Lymph nodes and details recorded. Findings of Intra-oral examination recorded. • Any abnormal change of both intra oral and extra oral examination are identified correctly and recorded. • Visual and tactile examination of dental hard tissue • Evaluation of pulp and periodontal status • Occlusal assessment • Tooth shade assessment	2
Identify and record the chief complaint, history of the present condition, medical, oral and social history of the patient.	• Case history recorded correctly including details of: ▪ Chief complaint ▪ History of presenting illness ▪ Medical & Social history • Checked for vital signs on HIMS and any deviation is updated.	2
Select, take, and interpret diagnostic images and other diagnostic procedures relevant to the patient's condition.	• Selection of appropriate investigation for the patient. • Correct Interpretation of investigations. • Interpretation of radiograph for dental caries and non-carious tooth structure loss	3
Maintain accurate, consistent, legible and contemporaneous records of the patient.	• Diagnosis and treatment plan discussed with the supervisor • All details of patient including diagnosis and treatment plans duly approved on HIMS before performing treatment • Progress notes correctly mentioned • Next/follow up appointment of patient provided	3
Diagnosis and Management Planning – 10 Marks		

Competence Standards	Assessment Criteria	Marks
Formulate and record a comprehensive, patient-centred, evidence-based oral health treatment plan.	• Proper diagnosis and treatment plan established based upon the history, investigations and contemporary knowledge as per evidence available • A Patient centric treatment plan is explained and discussed with the patient and family for their opinion	2
Diagnose disease or abnormalities of the oral cavity and associated structures and identify conditions which require management and referral.	• All intra/extra oral abnormality recorded and addressed • Diagnosis for all findings established • Comprehensive treatment plan prepared. • Patient prepared for referral if complex in nature. • Caries location and severity correctly diagnosed using ICDAS system. • Pulp and periodontal status correctly diagnosed.	2
Recognize the manifestations of systemic conditions and how these and their management may affect the management of dental care.	• Details of medical history and hospitalization recorded Oral manifestations of systemic conditions recorded • Caries risk assessed properly. • Appropriate referrals/ consent obtained from physician prior to treatment.	2
Apply the principles of preventive care as part of comprehensive treatment plan.	• Preventive care explained to the patient and encourages the patient for same • Oral hygiene education & motivation provided	2
Ensure and record patient informed consent for treatment and their financial obligation.	• Informed consent recorded if the procedure needs it • Financial obligations if any is discussed with the patient	2
<u>Clinical Treatment and Evaluation – 20 Marks</u>		
Identify patient's anxiety and pain related to the oral cavity and associated	• Identify the patient's ability to cope with treatment procedure based on medical & Dental History.	3

Competence Standards	Assessment Criteria	Marks
structures and respond appropriately.	• Appropriate handling & use of instruments during the treatment procedures. • Administer local anaesthesia in the oral cavity as needed and manage potential complications.	
Apply universal infection control guidelines for all clinical procedures.	Apply universal infection control guidelines for all clinical procedures by: • Practicing Hand hygiene. • Working in clean/ and disinfected operatory. • Appropriate use of personal protective equipment. • Sterilized instruments are used. • Appropriate handling of instruments, sharp and medical waste. • Proper isolation of the operating field	5
Manage restorative procedures that preserve tooth structure, replace defective tooth structure, maintain function, aesthetics, and promote soft and hard tissue health using direct or indirect methods.	• Cavity preparation with proper outline form, resistance form, retention form and convenience form. • Removal of caries and defective tooth structure following minimally invasive concept.	5
Perform preventive therapeutic procedures to preserve the vitality of the pulp.	• Selection of restorative material properly. • Development of proximal and occlusal contacts. • Preservation of pulp vitality and adjacent tooth structure. • Finishing and Polishing of restoration.	5
Administer and/or prescribe pharmaceutical agents relevant to routine dental practice.	• Has knowledge and demonstrates ability in prescribing drugs. • Post-operative instructions.	2
Section 3: Health Promotion Domain – 15 marks		
Evaluate the social, cultural and environmental	• Recorded complete demographic details of the patient.	3

Competence Standards	Assessment Criteria	Marks
factors which contribute to health or illness.	• Demonstrates the understanding of the significance of demographic details. • Evaluate how it may influence the presenting condition/s.	
Apply the principles of health promotion strategies and disease prevention to promote oral health, quality of life and wellbeing.	• Health promotion principles are applied with evidence on the importance and practice of prevention oral diseases. • Demonstrates skills of proper oral hygiene instruction and education with proper tooth brushing technique and other cleansing aid. • Provides demonstrations on proper diet and its impact on health. • Identify the contributing factors and its prevention & management if applicable.	3
Collaborate with dental team members and other health care professionals in the management of oral health care and health promotion for all patients.	• Maintains professional relationship with patients, colleagues, staff and faculty • Seeks/refers for consultation from specialists as needed.	3

Assess the risk factors and behaviors such as nutrition, drugs and diseases that can have an impact on oral healthcare.	• Risk assessment done in terms of Dietary factors
	• Oral hygiene maintenance
	  • Systemic conditions
	  • Smoking
	  • Snuffing
		3

Design, implement and evaluate evidence-based health promotion programs.	Is innovative in providing a care plan Practices a follow up plan as applicable to the patient.	3
Section 4. Communication and Social Skills Domain – 15 marks		
Apply appropriate inter-professional and communication skills that allow building a teamwork approach to the delivery of oral healthcare.	Communicates effectively with: • Peer group/team • Staff • Faculty • Other healthcare professionals as applicable • Applied 4 handed dentistry	3

Competence Standards	Assessment Criteria	Marks
Demonstrate appropriate interpersonal skills in mentoring and participating in activities within a health care team.	• Demonstrate appropriate interpersonal communication skills • In case presentation • Discussion of care plan • In referring patients to other team members	3
Document and share written and electronic information about the dental encounter to optimize clinical decision-making and patient safety, ensuring confidentiality and privacy.	All the information is recorded appropriately to: • Prioritize patient safety. • Provide a handover If and when needed. • Ensures privacy and confidentiality regarding details of patient.	3
Present clear information to patients in a timely manner, that ensures that they are advised of and understand the different treatment options including risks and benefits.	• Details of treatment plans discussed with patient including both the ideal and alternative treatment plans. • Advantages, risks and disadvantages of the treatment planned are explained to the patient.	2
Communicate responsibly and professionally, including when using social media.	• Communicates respectfully with patients, colleagues, staff and faculty. • Seeks permission from patients and the faculty before using social media to showcase the treatment on social 2 media.	2
Communicate and engage patients, their families and communities in relation to oral health.	• Treatment plan discussed with patients and families.	2
Section 5: Scientific and Clinical Knowledge Domain -15 Marks		
Communicate effectively within the organizational hierarchy.	• Respects the hierarchy of the team and communicates accordingly in a disciplined manner.	2
Recognize cultural diversity and apply cultural competency in caring for patients and communities.	• Respects the cultural and ethnical differences of all involved.	2

Competence Standards	Assessment Criteria	Marks
Evaluate published clinical and basic science research and integrate this information to improve the oral health of the patient.	• Has knowledge relevant to the most recent published literature • Applies knowledge adequately to treat the patient satisfactorily.	2
Apply the biomedical, physical, and behavioral sciences in relation to oral health and disease.	• Plans to prevent unwanted exposure to ionizing radiation or X rays.	2
Apply the scientific basis, application and risks of using ionizing radiation, anesthesia, and risk management and quality improvement.	• Decides upon the type of x-rays needed and prevents unnecessary and repeated exposure. • Describes recently developed material used in operative dentistry	2
Demonstrate foundation knowledge as relevant to clinical skills related to Operative dentistry.	Demonstrates knowledge & skills in: • Minimally invasive cavity preparation • Restorative materials used in operative dentistry	5

3. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Competencies in Clinical Courses**	**Prepared by:** **Dr. Fadia Alfateh Hamedalneel Awadalkreem** **Assistant Professor**
Title:	**Removable Clinical Prosthodontics**	
Policy Number:	**CC.03**	**Reviewed by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Oct 2022**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**2**	
Next Review Date	**30 Sep 2028**	

1. Introduction

This competency is observed for BDS Year 4 and Year 5 students in accordance with the approved 2025 study plan and Internship Program.

2. Purpose and Scope

Purpose

The clinical component of this course is intended to equip students with the competence to perform systematic examination and accurate diagnosis in the field of removable prosthodontics. It further aims to develop their proficiency in the design and fabrication of all categories of removable prostheses.

Upon completion, students will be able to formulate an appropriate, comprehensive, and logically sequenced treatment plan that is individualized based on the assessment of all diagnostic findings. They will also demonstrate the ability to recognize conditions

necessitating prosthetic intervention or referral to an appropriate specialist for further management.

Scope

To understand the number of clinical requirements at different levels of the BDS program in specific discipline and to illustrate the BDS professional competency standards rubrics used for the assessment of clinical competency at RAK College of Dental Sciences (RAKCODS).

3. Policy Statements

3.1. Guidelines for Clinical Work:

3.1.1. Uphold professional attitude and behaviour

3.1.2. Communicate respectfully with colleagues and staff

3.1.3. Show empathy towards patients and attendants

3.1.4. Apply appropriate infection control measures

3.1.5. Demonstrate the ability to work safely and effectively

3.1.6. Collect the relevant information and use them for diagnosis

3.1.7. Apply a systematic process for patient management

3.1.8. Select the proper instruments for the procedure

3.1.9. Enter all the procedures in the progress sheet and complete the patient's file

3.1.10. Maintain the clinical competency evaluation form and enter all details with timely approvals on HIMS

3.2. Clinical Work:

3.2.1. History taking and examination of the oral cavity and behavior management of the assigned patient

3.2.2. Interpret the findings from history, clinical examination, radiographs and other appropriate diagnostic procedures/tests to establish diagnosis and treatment planning

3.2.3. Perform the clinical steps in the fabrication of removable prostheses

3.2.4. Perform the insertion of the removable prostheses

3.2.5. Educate the patients in denture plaque control methods and the maintenance of the removable prostheses

3.2.6. Manage the post insertion complaints

3.3. Clinical Requirements:

3.3.1. BDS Year 4

- Two removable acrylic or cast partial dentures
- One case of repair/reline or rebasing of a removable denture
- Three crowns
- One 3-unit bridge or an inlay / onlay or veneer

3.3.2. BDS Year 5

- Four crowns
- One Resin bonded bridge/ Ceramic veneer 1
- One Fixed Bridge Anterior/ posterior
- One Post and core
- One Complete Denture / immediate denture/ Over denture
- Two Acrylic removable partial denture or Cast partial denture
- Two Tissue conditioning or repair or relining or rebasing 1 case

3.3.3. Internship

- One (1) complete denture (maxillary / mandibular set) or four (4) chrome-cobalt
- Two Removable partial dentures
- One (1) dentures (complete or partial) repair or One (1) tissue conditioning

3.4. Assessments

Students' competency on clinical skills is assessed using a specially designed "Clinical Examination Assessment Criteria" based on a 5-point scale Excellent (90-100%), Very Good (80-89%), Good (70-79%), Satisfactory (60-69%) and Unsatisfactory (< 60%). If the student is graded as unsatisfactory, the student will be informed immediately or within 24 hours by email and the student must repeat the clinical procedure within **two weeks**, following supervisor guidance and remediation support where required.

Assessment Methods Used to Evaluate Clinical Skills

The following assessment methods are used to evaluate student clinical competence:

1. Objective Structured Clinical Examination (OSCE); one OSCE will be conducted during the midpoint of the fall semester.

2. In Course Assessment Clinical Examination; 2 clinical examinations, one of which will be at the end of fall semester and the other in the mid of spring semester as per the criteria given below in each discipline.

Assessment is conducted according to discipline-specific criteria outlined below.

3.4.1 The clinical requirements and examinations are graded based upon the Professional Competence Standards of Graduates of Baccalaureate Dental Initial Training and Education Programs laid down by the Ministry of Education as a part of the Reforming Dentistry Program in 2025.

3.4.1.1. The following table is used to grade student performance for all the domains

NO.	DOMAIN	MARKS
1	**Professional Domain**	15
2	**Patient-Centered Care Domain** • ***Clinical Information Gathering*** • ***Diagnosis and Management Planning*** • ***Clinical Treatment and Evaluation***	40
3	**Health Promotion Domain**	15
4	**Communication and Social Skills Domain**	15
5	**Scientific and Clinical Knowledge Domain**	15

3.4.1.2. The following table shows the criteria to grade students for clinical requirements and clinical assessments

CRITERIA	GRADE/ MARKS
• Excellent knowledge and ability to recall all information related to professionalism as mentioned below in the competency. • No assistance is required from the clinical supervisor. • Consistently applies professional and ethical standards.	Excellent 90-100%
• Good Knowledge. Student recalls almost all points related to the case. Seeks supervision from supervisor at times when in doubt, does not need assistance while working from supervisor.	Very good 80-89%
• Sound knowledge and ability. The student is able to recall all information with few missing points.	Good 70-89 % Performance better than expected

CRITERIA	GRADE/ MARKS
• Occasional assistance while working is required from the clinical supervisor.	
• Sound knowledge and ability. May include minor deviations from accepted practice that can be easily corrected and that would not significantly compromise the clinical outcome. Limited assistance required from the clinical supervisor.	Satisfactory 60-69% Consistent with expected
• Significant gaps in understanding and/or deviations from accepted practice that compromises patient safety or patient outcomes. • Performing treatment without approval from clinical supervisor. • Significant assistance required from the clinical supervisor to prevent adverse outcomes.	Unsatisfactory < 60 % Unsafe treatment Repeat the procedure

3.4.1.3. Clinical Procedure Evaluation Form to be used for requirements and clinical examinations

MR No	**Student ID and Name**		
Tooth Number and Clinical Procedures	**Faculty Name, Sign & Date**		
1. Professionalism Domain	**15 marks**	**Grades**	**Remarks**
• Apply ethical standards and comply with national legal and regulatory requirements in the provision of dental care. • Ensure that patient safety is paramount in all decisions and actions. • Recognize professional and individual scopes and limitations of practice**, or refer patients to professional colleagues when indicated. • Demonstrate empathy and patient - centered care behavior towards patients, their families and members of the community. • Ensure that all actions focus on the patients' best interests and respect patients' dignity, rights, and choices. • Protect patients' privacy and confidentiality. • Maintain effective relationships with peers and respect professional boundaries. • Recognize the importance of continuing education and professional development for self and all members of the dental team.			
2. Section 2: Patient-Centered Care Domain- 40 marks			
2.1 Clinical Information Gathering- 10 marks • Perform an extra-oral and intra-oral examination for health, disease, and abnormalities of the dentition, mouth, and associated structures, including assessment of vital signs. • Identify and record the chief complaint, history of the present condition, medical, oral, and social history of the patient.			

• Select, take, and interpret diagnostic images and other diagnostic procedures relevant to the patient's condition. • Maintain accurate, consistent, legible, and contemporaneous records of the patient.			
2.2 Diagnosis and Management Planning -10 marks • Formulate and record a comprehensive, patient-centered, evidence-based treatment plan. • Diagnose diseases or abnormalities of the oral cavity and associated structures and identify conditions that necessitate pre-prosthetic management and referral. • Recognize the manifestations of systemic conditions and how these and their management may affect the delivery of dental care. • Apply the principles of preventive care as part of a comprehensive treatment plan. • Ensure and obtain patient informed consent for treatment and their financial obligations.			
2.3 Clinical Treatment and Evaluation -20 marks			
Removable Complete/ Partial Dentures			
Explain the treatment plan to the patient, including the different treatment options available.			
Primary impression	Selection of the tray, material and technique		
Final impression	Border modeling Selection of the material and technique		
Maxilla-mandibular registration records	Occlusal plane orientation, vertical dimension at rest/ and occlusion, centric and eccentric relations and teeth selection		
Trail Denture (Try in)	Evaluation of the trail denture's extension, retention, support. Stability, Aesthetic, phonetic and occlusion		
Denture insertion	Evaluate the denture's extension, retention, support, stability, Aesthetic, phonetic, occlusion, and provide post insertion instructions		
Maintenance and Recall Appointment	Correct diagnosis and management of the post insertion complaints		
Repair , Reline, Rebase	Identify the need for denture repair , reline , and rebase and perform		

Management of developmental or Acquired Occlusal Abnormalities	Diagnosis, management, or referral		
3. Health Promotion Domain **15 marks**			
• Evaluate the social, cultural, and environmental factors which contribute to health or illness. • Apply the principles of health promotion strategies and disease prevention to promote oral and general health, quality of life, and wellbeing. • Collaborate with dental team members and other health care professionals in the management of oral health care and health promotion for all patients. • Assess the risk factors and behaviors such as nutrition, drugs and diseases that can have an impact on oral healthcare. • Design, implement, and evaluate evidence-based health promotion programs. • Apply caries risk assessment (CRA) across different age groups and design a customized preventive program. • Demonstrate creativity in promoting oral health within the community using a variety of platforms.			
4. Communication and Social Skills Domain **15 marks**			
• Apply appropriate interprofessional and communication skills that allow building a teamwork approach to the delivery of oral healthcare. • Demonstrate appropriate interpersonal skills in mentoring and participating in activities within a healthcare team. • Document and share written and electronic information about the dental encounter to optimize clinical decision-making and patient safety, ensuring confidentiality and privacy. • Present clear information to patients in a timely manner, that ensures that they are advised of and understand the different treatment options including risks and benefits. • Communicate responsibly and professionally, including when using social media. • Communicate and engage patients, their families, and communities in relation to oral health. • Communicate effectively within the organizational hierarchy. • Recognize cultural diversity and apply cultural competency in caring for patients and communities.			
5. Scientific and Clinical Knowledge Domain **15 marks**			

• Evaluate published clinical and basic science research and integrate this information to improve the oral health of the patient. • Apply the biomedical, physical and behavioral sciences in relation to oral health and disease. • Design and implement research in a critical and scientific manner relevant to dentistry. • Apply the scientific basis, application, and risks of using ionizing radiation, dental materials and risk management and quality improvement. • Demonstrate foundational knowledge as relevant to clinical skills in Prosthodontic Dentistry.		

Grades: Grades are based on a 5-point scale (tick as applicable)

Excellent (90-100%) ☐
Very-good (80-89%) ☐
Good (70-79%) ☐
Satisfactory (60-69%) ☐
Unsatisfactory (Repeat procedure Required) (< 60%) ☐

3.4.1.4. The rubrics upon which the evaluation form has been prepared are as follows

Competence Standards	Assessment Criteria	Marks
1. Professional Domain – 15 Marks		
Apply ethical standards and comply with national legal and regulatory requirements in the provision of dental care.	• Checks patient record to understand the clinical condition. • Patient meets the criteria of registration. • Signed consent form available. • Patient rights & responsibilities are available.	2
Ensure that patient safety is paramount in all decisions and actions.	• Patient identification done. • Reassessment was done as necessary. • Checked for medical alerts in the system.	2
Recognize professional and individual scopes and limitations of practice or refer patients to professional colleagues when indicated.	• Required investigations are done. • Provisional and final diagnosis are correct. • Treatment plan is completed and discussed with patient and family. • Refers patient for specialty treatment in case of complicated prosthetic treatments such as complete oral rehabilitation.	2

Competence Standards	Assessment Criteria	Marks
Demonstrate empathy and caring behaviour towards patients, their families, and members of the community.	• Greets the patient and makes him/ her comfortable in the clinic. • Makes sure the patient/family members of the patients are also attended to and involved in decision making. • Interdisciplinary health education form is completed as per HIMS.	2
Ensure that all actions focus on the patients' best interests and respect patients' dignity, rights and choices.	• The care plan is discussed with the patient and family. • His/her treatment choices of treatment are respected. • Performs prosthetic treatment in the best interest of the patient.	2
Protect patients' privacy and confidentiality.	• Patient's history and case details are kept confidential. • There is no breach of patient's personal information. • The information of the patient is dealt with professionally. • All the patient details after being saved in HIMS, the student logs out.	2
Maintain effective relationships with peers and respect professional boundaries.	• Behaves and respects patients, colleagues, staff and faculty professionally and ethically. • All the patient information is discussed with the faculty.	1
Recognize the importance of continuing education and professional development for self and all members of the dental team.	• Appropriate knowledge related to the diagnosis and treatment planning of prosthetic oral rehabilitation presented. • The knowledge shown during the case presentation was updated and evidence-based.	2
2: Patient-centred Care Domain - 40 marks		
<u>Clinical Information Gathering 10 Marks</u>		
Perform an extra-oral and intra-oral examination for health, disease and abnormalities of the dentition, mouth and associated structures,	• Findings of extra-oral examination including Head, Neck, TMJ and Lymph nodes, and details recorded. Findings of Intra-oral examination are recorded. • Any abnormal change of both intra oral and extra oral examination are correctly identified and recorded. • Visual and tactile examinations of abutment teeth are recorded.	2

Competence Standards	Assessment Criteria	Marks
including assessment of vital signs.	• Visual and digital examination of residual alveolar ridges, bone resorption, tori, undercuts, and classification of residual alveolar ridges and hard palate. • Evaluation of pulp and periodontal status is recorded. • Examinations of abutment teeth mobility, migration, furcation involvement, and recession (if present) are recorded. • Any abnormality on the tongue, buccal mucosa, salivary flow, mouth floor, attached gingiva and frenum attachment are identified. • Any facial abnormalities and asymmetries, loss of facial vertical dimension are identified. • Static and dynamic occlusal relations are identified. • Evaluation of initial tooth shade is recorded (when applicable).	
Identify and record the chief complaint, history of the present condition, medical, oral, and social history of the patient.	• Case history is recorded correctly including details of: ▪ Chief complaint. ▪ History of presenting illness. ▪ Medical & Social history. • Vital signs are checked and recorded on HIMS and any deviation is updated.	2
Select, take, and interpret diagnostic images and other diagnostic procedures relevant to the patient's condition.	• Selection of appropriate investigation for the patient. • Correct Interpretation of investigations. • Interpretation of radiograph for bone loss, remaining roots or impacted teeth, intraosseous lesions, and furcation involvement. • Satisfactory endodontic treatments and presence of peri-apical lesions (if any) recorded accurately. • Interpretation of radiograph for dental caries, non-carious tooth structure loss, existing restorations, and signs of occlusal trauma. • Assessment of study casts for abutment teeth mal-positioning, tilting , drifting, and bony undercuts or prominences.	2
Maintain accurate, consistent, legible and	• Diagnosis and treatment plan are discussed with the supervisor.	2

Competence Standards	Assessment Criteria	Marks
contemporaneous records of the patient.	• All details of patient including diagnosis and treatment plans are duly approved on HIMS before performing treatment. • Progress notes are correctly recorded. • Next/follow-up appointment is provided.	
Formulate and record a comprehensive, patient-centered, evidence-based oral health treatment plan.	• Proper treatment plan established based upon the history and investigations and contemporary knowledge as per evidence available. • A Patient-centred treatment plan is explained with the patient and family for his/their opinion.	2
Diagnosis and Management Planning – 10 Marks		
Formulate and record a comprehensive, patient-centred, evidence-based oral health treatment plan.	• Proper diagnosis and treatment plan are established based upon the history, investigations and contemporary knowledge as per evidence available • A Patient- centric treatment plan is explained and discussed with the patient and family for their opinion	2
Diagnose disease or abnormalities of the oral cavity and associated structures and identify conditions which require management and referral.	• All intra/extra-oral abnormalities are recorded and addressed. • Diagnosis for all findings is established. • Comprehensive treatment plan prepared. • Patient is prepared for referral if complex in nature. • Diagnosis of different types of residual ridges, classification of edentulous spaces, classification of malocclusion. • Pulp, endodontic treatment, existing restorations and periodontal status of the abutment teeth are correctly diagnosed. • Patient is prepared for referral when pre-prosthetic surgical procedures are indicated.	2
Recognize the manifestations of systemic conditions and how these and their management may affect the management of dental care.	• Details of medical history and hospitalization are recorded. • Oral manifestations of systemic conditions and/or medications are recorded. • Risk of compromised stomatognathic system and deteriorated oral conditions on systemic health noted. • Appropriate referrals/ consent are obtained from the physician prior to treatment.	2

Competence Standards	Assessment Criteria	Marks
Apply the principles of preventive care as part of a comprehensive treatment plan.	• Preventive care is explained to the patient and the patient is encouraged for the same patient. • Oral hygiene education & motivation provided.	2
Ensure and record patient informed consent for treatment and their financial obligation.	• Informed consent recorded if the procedure requires it. • Financial obligations, if any, is discussed with the patient.	2
Clinical Treatment and Evaluation – 20 Marks		
Identify patient's anxiety and pain related to the oral cavity and associated structures and respond appropriately.	• Identify the patient's ability to cope with treatment procedure based on Medical & Dental History. • Appropriate handling & use of instruments during the treatment procedures. • Administer local anaesthesia in the oral cavity as needed.	2
Utilise patient removable and/or fixed prostheses to rehabilitate, restore appearance and function, prevent injury, and stabilise the occlusion.	• Correct and proper sequence of treatment planning. • Explain the treatment plan to the patient including different treatment options that can be done. • Primary Impressions: ▪ Appropriate size of impression stock tray is selected and modified as necessary. ▪ Accurate selection and manipulation of the impression material. ▪ Complete capturing of the targeted oral structures with borders in harmony with limiting structures. ▪ Accurate impression, free of defects or detachment from the tray. ▪ Cleansing and disinfection of the impression. • Final impression: ▪ Custom-made tray checked and adjusted as required. ▪ Accurate selection and manipulation of the impression material. ▪ Application of proper impression technique and controlled gag reflex. ▪ Accurate impression, including teeth, saddles, extensions free from defects.	12

Competence Standards	Assessment Criteria	Marks
	▪ Cleansing and disinfection of the impression. • Jaw relation records: ▪ Laboratory work checked and adjusted to required standard. ▪ Border smoothness, fit and stability of record bases verified, and accuracy of wax rim dimensions checked. ▪ Accurate registration of orientation, vertical and horizontal jaw relations. ▪ Proper securing of the recorded jaw relations. ▪ Jaw relation records are properly cleansed and disinfected. • Tooth selection: ▪ Appropriate shade and mould size are selected and accurate relevant records achieved. ▪ The selected tooth shade and mould size is discussed with the patient and his/ her family. • Evaluation of trial removable prosthesis: ▪ Laboratory work checked and adjusted to required standard. ▪ Fit of base (including occlusion) is verified. ▪ Jaw relation records are verified or retaken if incorrect. ▪ Tooth selection and arrangement are discussed with patient and confirmed or altered. • Insertion: ▪ Defects in finished dentures are recognized and corrected where possible. ▪ Fit, stability and retention of the base of removable prosthesis are verified. ▪ Accuracy of occlusal contacts and harmony of occlusion verified and adjusted if necessary. ▪ Finished dentures well-polished, have satisfactory appearance, and are comfortable. ▪ Careful verbal & written instructions given to patient.	
Apply universal infection control guidelines for all clinical procedures.	• Apply universal infection control guidelines for all clinical procedures by: ▪ Practicing hand hygiene.	2

Competence Standards	Assessment Criteria	Marks
	▪ Working in clean/ and disinfected operatory. ▪ Appropriate use of personal protective equipment. ▪ Sterilized instruments are used. ▪ Appropriate handling of instruments, sharp and medical waste.	
Apply principles of management of developmental or acquired occlusal abnormalities.	• Demonstrates ability in recognising TMJ disorders. • Demonstrates an understanding of normal and abnormal dynamics of jaw movements and malocclusion classification. • Recognises the developmental and/or acquired deflective occlusal contacts and interferences. • Identify the masticatory muscular pain and limitation of mouth opening.	2
Administer and/or prescribe pharmaceutical agents relevant to routine dental practice.	• Has knowledge and demonstrates ability in prescribing drugs. • Verbal and written Post-operative instructions.	2
Section 3: Health Promotion Domain – 15 marks		
Evaluate the social, cultural, and environmental factors which contribute to health or illness.	• Records complete demographic details of the patient. • Demonstrates the understanding of the significance of demographic details. • Evaluates how it may influence the presenting condition/s.	3
Apply the principles of health promotion strategies and disease prevention to promote oral and general health, quality of life and wellbeing.	• Health promotion principles are applied with evidence on the importance and practice of prevention of dental and periodontal diseases. • Demonstrates skills of proper oral hygiene instruction and education with proper tooth brushing technique and other cleansing aids. • Provides demonstrations on proper diet and its impact on health. • Identify the contributing factors and its prevention & management if applicable.	3
Collaborate with dental team members and other	• Maintains a professional relationship with patients, colleagues, staff and faculty	3

Competence Standards	Assessment Criteria	Marks
health care professionals in the management of oral health care and health promotion for all patients.	• Seeks/refers for consultation from specialists as needed.	

Assess the risk factors and behaviours such as nutrition, drugs, and diseases that can have an impact on oral healthcare.	• Risk assessment done in terms of Dietary factors.
	• Oral hygiene maintenance:
	  • Systemic conditions.
	  • Smoking.
	  • Snuffing.
	  • Alcohol consumption.
		3

Design, implement and evaluate evidence-based health promotion programs.	• Is innovative in providing a care plan. • Practices a follow-up plan as applicable to the patient.	3
Section 4. Communication and Social Skills Domain – 15 marks		

Apply appropriate inter-professional and communication skills that allow building a teamwork approach to the delivery of oral healthcare.	• Communicates effectively with:
	  ▪ Peer group/team.
	  ▪ Staff.
	  ▪ Faculty.
	  ▪ Other healthcare professionals as applicable.
	  ▪ Applies 4 handed dentistry.
		2

Demonstrate appropriate interpersonal skills in mentoring and participating in activities within a health care team.	• Demonstrate appropriate interpersonal communication skills. • In case presentation. • Discussion of care plan. • In referring patients to other team members.	2

Document and share written and electronic information about the dental encounter to optimize clinical decision-making and patient safety, ensuring confidentiality and privacy.	• All the information is recorded appropriately to:
	  ▪ Prioritize patient safety.
	  ▪ Provide a handover if and when needed.
	  ▪ Ensure privacy and confidentiality regarding details of the patient.
		2

Present clear information to patients in a timely manner, that ensures that	• Details of treatment plans discussed with patient including both the ideal and alternative treatment plans.	2

Competence Standards	Assessment Criteria	Marks
they are advised of and understand the different treatment options including risks and benefits.	• Advantages, risks and disadvantages of the treatment planned are explained to the patient.	
Communicate responsibly and professionally, including when using social media.	• Communicates respectfully with patients, colleagues, staff, and faculty. • Seeks permission from patients and the faculty before using social media to show case the treatment on social media.	2
Communicate and engage patients, their families and communities in relation to oral health.	• Treatment plan is discussed with patients and families.	2
Communicate effectively within the organizational hierarchy.	• Respects the hierarchy of the team and communicates accordingly in a disciplined manner.	2
Recognize cultural diversity and apply cultural competency in caring for patients and communities.	• Respects the cultural and ethnic differences of all involved.	1
Section 5: Scientific and Clinical Knowledge Domain -15 Marks		
Evaluate published clinical and basic science research and integrate this information to improve the oral health of the patient.	• Has knowledge relevant to the most recent published literature • Applies knowledge adequately to treat the patient satisfactorily.	3
Apply the biomedical, physical, and behavioural sciences in relation to oral health and disease.	• Plans to prevent unwanted exposure to ionizing radiation or X rays. • Implements the contemporary techniques and advancements in daily practice for the best interest of the patient	3
Apply the scientific basis, application and risks of using ionizing radiation, anaesthesia, and risk management and quality improvement.	• Decides upon the type of x-rays needed and prevents unnecessary and repeated exposure. • Manages complications related to local anaesthesia. • Applies knowledge and skills in handling arising emergency cases.	3

Competence Standards	Assessment Criteria	Marks
Demonstrate foundation knowledge as relevant to clinical skills related to prosthodontics.	• Demonstrates knowledge & skills in: • Interpretation of radiograph for bone loss, remaining roots or impacted teeth, intraosseous lesions, and furcation involvement. • Proper planning and execution of partial or complete removable prosthesis. • Preservation of the integrity of oral and perioral structures. • Handling and manipulation of prosthetic dental materials. • Successful primary and final impression taking. • Mastering the techniques of jaw relation recording, try-in of trial prosthesis, insertion and post-insertion complaints management. • Advising proper verbal & written oral hygiene instructions. • Follow-up re-evaluation appointment protocol as supportive prosthetic care	6

4. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Competencies in Clinical Courses**	**Prepared by:** **Dr. Fadia Alfateh Hamedalneel Awadalkreem** **Assistant Professor**
Title:	**Fixed Clinical Prosthodontics**	
Policy Number:	**CC.04**	**Reviewed by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Oct 2022**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**2**	
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

Purpose

This competency is observed for BDS Year 4 and Year 5 students in accordance with the approved 2025 study plan and Internship Program.

The clinical component of this course is at preparing the students in the correct methodology and fundamentals of fixed prosthodontics, including tooth preparation. It also focuses on diagnosis, prognosis, and treatment planning for single crowns to full-mouth rehabilitation**.**

Scope

To understand the number of clinical requirements at different levels of the BDS program in the specific discipline and to illustrate the BDS professional competency standards rubrics used for the assessment of clinical competency at RAK College of Dental Sciences (RAKCODS).

2. Policy Statements

2.1. Guidelines for Clinical Work:

2.1.1. Uphold professional attitude and behaviour

2.1.2. Communicate respectfully with colleagues and staff

2.1.3. Show empathy towards patients and attendants

2.1.4. Apply appropriate infection control measures

2.1.5. Demonstrate the ability to work safely and effectively

2.1.6. Collect the relevant information and use them for diagnosis

2.1.7. Apply a systematic process for patient management

2.1.8. Select the proper instruments for the procedure

2.1.9. Enter all the procedures in the progress sheet and complete the patient's file

2.1.10. Maintain the clinical competency evaluation form and enter all details with timely approvals on HIMS

2.2. Clinical Work:

2.2.1. Patient history and Oral examination for teeth & periodontium to complete the periodontal chart on assigned patients.

2.2.2. Interpret the findings from history, clinical & radiographic examination and other appropriate diagnostic procedures to establish diagnosis and develop appropriate, comprehensive, properly sequenced and individualized treatment plans.

2.2.3. All medically compromised patients with risk factors need to be controlled or certain precaution needs to be taken before proceeding to periodontal therapy.

2.2.4. Educate, motivate, and encourage patients to assume appropriate responsibility for their oral hygiene

2.2.5. Practice crown and bridges during the clinical session on assigned patients

2.2.6. Evaluate all treatment results after Phase-I therapy and recommend appropriate additional action and maintenance

2.3. Clinical Requirements:

2.3.1. BDS Year 4

- Two removable acrylic or cast partial dentures
- One case of repair/reline or rebasing of a removable denture
- Three crowns
- One 3-unit bridge or an inlay / onlay or veneer

2.3.2. BDS Year 5

- Four crowns
- One Resin bonded bridge/ Ceramic veneer 1
- One Fixed Bridge Anterior/ posterior
- One Post and core
- One Complete Denture / immediate denture/ Over denture
- Two Acrylic removable partial denture or Cast partial denture
- Two Tissue conditioning or repair or relining or rebasing 1 case

2.3.3. Internship

- Two anterior / Posterior fixed bridges
- One Resin Bonded Bridge
- One post and core

2.4. Assessments

Students' competency on clinical skills is assessed on a specially designed "Clinical examination Assessment criteria" based on a 5-point scale Excellent (90-100%), Very Good (80-89%), Good (70-79%), Satisfactory (60-69%) and Unsatisfactory (< 60%). If it is found to be unsatisfactory, the student will be informed immediately or within 24 hours by email and the student must repeat the procedure within two weeks' time.

The following methods are used to assess the clinical skills of the students

1. Objective Structured Clinical Examination (OSCE); one OSCE will be conducted during the middle of the Fall semester.
2. In Course Assessment Clinical Examination; two clinical examinations, one of which will be at the end of the Fall semester and the other in the middle of the Spring semester, as per the criteria given below in each discipline.

2.4.1. The clinical requirements and examinations are graded based upon the Professional Competence Standards of Graduates of Baccalaureate Dental Initial Training and Education Programs laid down by the Ministry of Education as a part of the Reforming Dentistry Program in 2021.

2.4.1.1. The following table is used to grade student performance for all the domains

NO.	DOMAIN	MARKS
1	**Professional Domain**	15
2	**Patient-Centered Care Domain** • ***Clinical Information Gathering*** • ***Diagnosis and Management Planning*** • ***Clinical Treatment and Evaluation***	40
3	**Health Promotion Domain**	15
4	**Communication and Social Skills Domain**	15
5	**Scientific and Clinical Knowledge Domain**	15

2.4.1.2. The following table shows the criteria used to grade students for clinical requirements and clinical assessments.

CRITERIA	GRADE/ MARKS
• Excellent knowledge and ability to recall all information related to professionalism as mentioned below in the competency. • No assistance is required from the clinical supervisor.	Excellent 90-100%
• Good Knowledge. Student recalls almost all points related to the case. Seeks supervision from supervisor at times when in doubt, does not need assistance while working from supervisor.	Very good 80-89%
• Sound knowledge and ability. The student is able to recall all information with few missing points. • Occasional assistance while working is required from the clinical supervisor.	Good 70-89 % Performance better than expected
• Sound knowledge and ability. May include minor deviations from accepted practice that can be easily corrected and that would not significantly compromise the clinical outcome. Limited assistance required from the clinical supervisor.	Satisfactory 60-69% Consistent with expected
• Significant gaps in understanding and/or deviations from accepted practice that compromises patient safety or patient outcomes. • Performing treatment without approval from clinical supervisor. • Significant assistance required from the clinical supervisor to prevent adverse outcomes.	Unsatisfactory < 60 % Unsafe treatment Repeat the procedure

2.4.1.3. Clinical Procedure Evaluation Form to be used for requirements and clinical examinations

MR No	**Student ID and Name**	
Tooth Number and Clinical Procedure	**Faculty Name, Sign & Date**	
1. Professionalism Domain - 15 marks	**Grades**	**Remarks**
• Apply ethical standards and comply with national legal and regulatory requirements in the provision of dental care. • Ensure that patient safety is paramount in all decisions and actions. • Recognize professional and individual scopes and limitations of practice or refer patients to professional colleagues when indicated. • Demonstrate empathy and caring behavior towards patients, their families, and members of the community. • Ensure that all actions focus on the patients' best interests and respect patients' dignity, rights and choices. • Protect patients' privacy and confidentiality. • Maintain effective relationships with peers and respect professional boundaries. • Recognize the importance of continuing education and professional development for self and all members of the dental team.		
2. Section 2: Patient-Centered Care Domain - 40 marks		
2.1 Clinical Information Gathering- 10 marks • Perform an extra-oral and intra-oral examination for health, disease, and abnormalities of the dentition, mouth and associated structures, including assessment of vital signs. • Identify and record the chief complaint, history of the present condition, medical, oral and social history of the patient. • Select, take, and interpret diagnostic images and other diagnostic procedures relevant to the patient's condition. • Maintain accurate, consistent, legible, and contemporaneous records of the patient.		
2.2 Diagnosis and Management Planning - 15 marks • Formulate and record a comprehensive, patient-centered, evidence-based oral treatment plan. • Diagnose diseases or abnormalities of the oral cavity and associated structures and identify conditions which require management and referral. • Recognize the manifestations of systemic conditions and how these and their management may affect the delivery of dental care.		

• Apply the principles of preventive care as part of comprehensive treatment plan. • Ensure and record patient informed consent for treatment and their financial obligation.			
2.3 Clinical Treatment and Evaluation - 15 marks			
Tooth Preparation & Conservation for fixed prosthesis			
Anatomical reduction, occlusal clearance, and functional cusps bevel.	Marginal integrity & Finish line type and positioning.		
Axial reduction and resistance and retention form.	Adjacent teeth intactness, and finished axial occlusal line angles.		
Impression for fixed prosthesis			
Moisture control and gingival retraction.	Relevant tissues clearly recorded and defect-free.		
Proper selection and handling of the impression material.	Impression is cleansed and disinfected.		
Provisional Restoration			
Contours, thickness, fit, and smoothing of margins.	Cementation with excess cement removal.		
Proximal contacts contouring, seating & occlusal relationships.	Patient satisfaction with appearance, comfort, and function.		
3. Health Promotion Domain - 15 marks			
• Evaluate the social, cultural and environmental factors which contribute to health or illness. • Apply the principles of health promotion strategies and disease prevention to promote oral and general health, quality of life and wellbeing. • Collaborate with dental team members and other healthcare professionals in the management of oral health care and health promotion for all patients. • Assess the risk factors and behaviors such as nutrition, drugs and diseases that can have an impact on oral healthcare. • Design, implement and evaluate evidence-based health promotion programs.			
4. Communication and Social Skills Domain - 15 marks			
• Apply appropriate interprofessional and communication skills that allow building a teamwork approach to the delivery of oral healthcare. • Demonstrate appropriate interpersonal skills in mentoring and participating in activities within a health care team.			

• Document and share written and electronic information about the dental encounter to optimize clinical decision-making and patient safety, ensuring confidentiality and privacy. • Present clear information to patients in a timely manner, that ensures that they are advised of and understand the different treatment options including risks and benefits. • Communicate responsibly and professionally, including when using social media. • Communicate and engage patients, their families and communities in relation to oral health. • Communicate effectively within the organizational hierarchy. • Recognize cultural diversity and apply cultural competency in caring for patients and communities.		
5. Scientific and Clinical Knowledge Domain - 15 marks		
• Evaluate published clinical and basic science research and integrate this information to improve the oral health of the patient. • Apply the biomedical, physical and behavioral sciences in relation to oral health and disease. • Design and implement research in a critical and scientific manner relevant to dentistry. • Apply the scientific basis, application and risks of using ionizing radiation, dental materials and risk management and quality improvement. • Demonstrate foundational knowledge as relevant to clinical skills in Prosthodontics Dentistry.		

Grades: Grades are based on a 5-point scale (tick as applicable)

Excellent (90-100%) ☐

Very-good (80-89%) ☐

Good (70-79%) ☐

Satisfactory (60-69%) ☐

Unsatisfactory (Repeat procedure) (< 60%) ☐

2.4.1.4. The rubrics based upon which the evaluation form has been prepared is as follows

Competence Standards	Assessment Criteria	Marks
1. Professional Domain – 15 Marks		
Apply ethical standards and comply with national legal and regulatory requirements in the provision of dental care.	• Checks patient record to understand the clinical condition. • Patient meets the criteria of registration. • Signed consent form are available. • Patient rights & responsibilities available.	2
Ensure that patient safety is paramount in all decisions and actions.	• Patient identification done. • Reassessment was done as necessary. • Checked for medical alerts in the system.	2
Recognize professional and individual scopes and limitations of practice or refer patients to professional colleagues when indicated.	• Required investigations are done. • Provisional and final diagnosis are correct. • Treatment plan is completed and discussed with patient and family. • Refers patient for specialty treatment in case of complicated prosthetic treatments such as complete oral rehabilitation.	2
Demonstrate empathy and caring behaviour towards patients, their families and members of the community.	• Greets the patient and makes him/ her comfortable in the clinic. • Makes sure the patient/families of the patients are also attended to and involved in decision making. • Interdisciplinary health education form is completed as per HIMS.	2
Ensure that all actions focus on the patients' best interests and respect patients' dignity, rights and choices.	• The care plan is discussed with the patient and family. • His/her choices of treatment are respected. • Performs prosthetic treatment in the best interest of the patient.	2
Protect patients' privacy and confidentiality.	• Patient's history and case details are kept confidential. • There is no breach of patient's personal information. • The information of the patient is dealt with professionally. • All the patient details after being saved in HIMS, the student logs out.	2

Competence Standards	Assessment Criteria	Marks
Maintain effective relationships with peers and respect professional boundaries.	• Behaves and respects patients, colleagues, staff and faculty professionally and ethically. • All the patient information discussed with the faculty.	1
Recognize the importance of continuing education and professional development for self and all members of the dental team.	• Appropriate knowledge related to the diagnosis and treatment planning of prosthetic oral rehabilitation presented. • The knowledge shown during the case presentation is updated and evidence- based.	2
2: Patient-centred Care Domain - 40 marks		
<u>Clinical Information Gathering 10 Marks</u>		
Perform an extra-oral and intra-oral examination for health, disease and abnormalities of the dentition, mouth and associated structures, including assessment of vital signs.	• Findings of Extra-oral examination including Head, Neck, TMJ and Lymph nodes and details recorded. Findings of Intra-oral examination recorded. • Any abnormal changes of both intra oral and extra oral examination are correctly identified and recorded. • Visual and tactile examinations of abutment teeth are recorded. • Evaluation of pulp and periodontal status is recorded. • Examinations of abutment teeth mobility, migration, furcation involvement, and recession (if present) are recorded. • Any abnormality on the tongue, buccal mucosa, attached gingiva and frenum attachment are identified. • Static and dynamic occlusal relations are identified. • Evaluation of initial tooth shade is recorded.	2
Identify and record the chief complaint, history of the present condition, medical, oral and social history of the patient.	• Case history is recorded correctly including details of: ▪ Chief complaint. ▪ History of presenting illness. ▪ Medical and Social history. • Checked for vital signs on HIMS and any deviation is updated.	2
Select, take, and interpret diagnostic images and other diagnostic procedures relevant to the patient's condition.	• Selection of appropriate investigation for the patient. • Correct Interpretation of investigations. • Interpretation of radiograph for bone loss and furcation involvement.	2

Competence Standards	Assessment Criteria	Marks
	• Satisfactory endodontic treatments and presence of periapical lesions (if any) are recorded accurately. • Interpretation of radiograph for dental caries, non-carious tooth structure loss, existing restorations, and signs of occlusal trauma. • Assessment of study casts for abutment teeth mal-positioning, tilting and drifting.	
Maintain accurate, consistent, legible and contemporaneous records of the patient.	• Diagnosis and treatment plan discussed with the supervisor. • All details of patient including diagnosis and treatment plans are duly approved on HIMS before performing treatment. • Progress notes are correctly recorded. • Next/follow up appointment of patient is provided.	2
Formulate and record a comprehensive, patient-centred, evidence-based oral health treatment plan.	• Proper treatment plan established based upon the history and investigations and contemporary knowledge as per evidence available. • A Patient-centred treatment plan is explained with the patient and family for their opinion.	2
Diagnosis and Management Planning – 10 Marks		
Formulate and record a comprehensive, patient-centred, evidence-based oral health treatment plan.	• Proper diagnosis and treatment plan are established based upon the history, investigations and contemporary knowledge as per evidence available • A Patient- centre treatment plan is explained and discussed with the patient and family for their opinion	2
Diagnose disease or abnormalities of the oral cavity and associated structures and identify conditions which require management and referral.	• All intra/extra- oral abnormalities recorded and addressed. • Diagnosis for all findings established. • Comprehensive treatment plan prepared. • Patient prepared for referral if the case is complex in nature. • Diagnosis of different types of residual ridges, classification of edentulous spaces, classification of malocclusion. • Pulp, endodontic treatment, existing restorations and periodontal status of the abutment teeth are correctly diagnosed.	2

Competence Standards	Assessment Criteria	Marks
Recognize the manifestations of systemic conditions and how these and their management may affect the management of dental care.	• Details of medical history and hospitalization are recorded. • Oral manifestations of systemic conditions are recorded. • Risk of compromised stomatognathic system and deteriorated oral conditions on systemic health is noted. • Appropriate referrals/ consent are obtained from the physician prior to treatment.	2
Apply the principles of preventive care as part of comprehensive treatment plan.	• Preventive care explained to the patient and the patient is encouraged to follow the same. • Oral hygiene education and motivation provided.	2
Ensure and record patient informed consent for treatment and their financial obligation.	• Informed consent recorded if the procedure needs it. • Financial obligations if any is discussed with the patient.	2
<u>Clinical Treatment and Evaluation – 20 Marks</u>		
Identify patient's anxiety and pain related to the oral cavity and associated structures and respond appropriately.	• Identify the patient's ability to cope with treatment procedure based on Medical and Dental History. • Appropriate handling & use of instruments during the treatment procedures. • Administer local anaesthesia in the oral cavity as needed.	2
Utilise patient removable and/or fixed prostheses to rehabilitate, restore appearance and function, prevent injury, and stabilise the occlusion.	• Correct and proper sequence of treatment planning. • Explain the treatment plan to the patient including different treatment options that can be done. • Tooth Preparation for fixed prosthesis: ▪ Proper anatomical reduction. ▪ Proper occlusal clearance and functional cusps bevel. ▪ Sufficient axial reduction with proper proximal clearance and path of insertion. ▪ Adequate resistance and retention form; length & taper. ▪ Marginal integrity and continuous and well-defined finish line.	10

Competence Standards	Assessment Criteria	Marks
	▪ Finish line at gingival margin and margins on tooth structure • Conservation: ▪ Adjacent teeth intactness/ integrity. ▪ Finished axial occlusal line angles. • Impression: ▪ Moisture control and gingival retraction. ▪ Proper handling of the appropriate impression material. ▪ All relevant tissues clearly recorded and free of defects. ▪ Student is able to interpret any minor bubbles/defects as significant or otherwise. ▪ Impression is properly cleansed and disinfected. • Provisional Restoration: ▪ Appropriate contours, thickness, excellent fit, and smoothing of margins. ▪ Properly contoured proximal contacts. ▪ Correct seating and occlusal relationships. ▪ Correct cementation with accurate excess cement removal. ▪ Patient satisfied with appearance, comfort and function.	
Apply universal infection control guidelines for all clinical procedures.	• Apply universal infection control guidelines for all clinical procedures by: ▪ Practicing hand hygiene. ▪ Working in a clean and disinfected operatory. ▪ Appropriate use of personal protective equipment. ▪ Sterilized instruments are used. ▪ Appropriate handling of instruments, sharp, and medical waste.	2
Apply principles of management of developmental or acquired occlusal abnormalities.	• Demonstrates ability in recognising TMJ disorders. • Demonstrates an understanding of normal and abnormal dynamics of jaw movements & malocclusion classification. • Recognises the developmental and/or acquired deflective occlusal contacts and interferences. • Identify the masticatory muscular pain and limitation of mouth opening.	2

Competence Standards	Assessment Criteria	Marks
Perform preventive therapeutic procedures to preserve the vitality of the pulp.	• Selection of proper preparation burs & copious water cooling during tooth preparation. • Fabrication of excellent provisional restoration and correct cementation. • Utilization of non-irritant materials for vital abutment teeth.	2
Administer and/or prescribe pharmaceutical agents relevant to routine dental practice.	• Has knowledge and demonstrates ability in prescribing drugs. • Verbal & written Post-operative instructions.	2
Section 3: Health Promotion Domain – 15 marks		
Evaluate the social, cultural and environmental factors which contribute to health or illness.	• Records complete demographic details of the patient. • Demonstrates an understanding of the significance of demographic details. • Evaluates how it may influence the presenting condition/s.	3
Apply the principles of health promotion strategies and disease prevention to promote oral and general health, quality of life and wellbeing.	• Health promotion principles are applied with evidence on the importance and practice of prevention of dental diseases. • Demonstrates skills of proper oral hygiene instruction and education with proper tooth brushing technique and other cleansing aids. • Provides demonstrations on proper diet and its impact on health. • Identify the contributing factors and its prevention and management if applicable.	3
Collaborate with dental team members and other health care professionals in the management of oral health care and health promotion for all patients.	• Maintains a professional relationship with patients, colleagues, staff and faculty • Seeks/refers for consultation from specialists as needed.	3
Assess the risk factors and behaviours such as nutrition, drugs and	• Risk assessment is done in terms of Dietary factors • Oral hygiene maintenance: • Systemic conditions.	3

Competence Standards	Assessment Criteria	Marks
diseases that can have an impact on oral healthcare.	• Smoking. • Snuffing. • Alcohol consumption.	
Design, implement and evaluate evidence-based health promotion programs.	• Is innovative in providing a care plan. • Practices a follow- up plan as applicable to the patient.	3
Section 4. Communication and Social Skills Domain – 15 marks		
Apply appropriate inter-professional and communication skills that allow building a teamwork approach to the delivery of oral healthcare.	• Communicates effectively with: ▪ Peer group/team. ▪ Staff. ▪ Faculty. ▪ Other healthcare professionals as applicable. ▪ Applied 4- handed dentistry.	2
Demonstrate appropriate interpersonal skills in mentoring and participating in activities within a health care team.	• Demonstrate appropriate interpersonal communication skills. • In case presentation. • Discussion of care plan. • In referring patients to other team members.	2
Document and share written and electronic information about the dental encounter to optimize clinical decision-making and patient safety, ensuring confidentiality and privacy.	• All the information is recorded appropriately to: ▪ Prioritize patient safety. ▪ Provide a handover If and when needed. ▪ Ensure privacy and confidentiality regarding details of patient.	2
Present clear information to patients in a timely manner, that ensures that they are advised of and understand the different treatment options including risks and benefits.	• Details of treatment plans discussed with patient including both the ideal and alternative treatment plans. • Advantages, risks and disadvantages of the treatment planned is explained to the patient.	2
Communicate responsibly and professionally, including when using social media.	• Communicates respectfully with patients, colleagues, staff and faculty.	2

Competence Standards	Assessment Criteria	Marks
	• Seeks permission from patients and the faculty before using social media to show case the treatment on social media.	
Communicate and engage patients, their families and communities in relation to oral health.	• Treatment plan discussed with patients and families.	2
Communicate effectively within the organizational hierarchy.	• Respects the hierarchy of the team and communicates accordingly in a disciplined manner.	2
Recognize cultural diversity and apply cultural competency in caring for patients and communities.	• Respects the cultural and ethnical differences of all involved.	1
Section 5: Scientific and Clinical Knowledge Domain -15 Marks		
Evaluate published clinical and basic science research and integrate this information to improve the oral health of the patient.	• Has knowledge relevant to the most recent published literature • Applies knowledge adequately to treat the patient satisfactorily.	3
Apply the biomedical, physical, and behavioural sciences in relation to oral health and disease.	• Plans to prevent unwanted exposure to ionizing radiation or X rays. • Implements the contemporary techniques and advancements in daily practice for the best interest of the patient	3
Apply the scientific basis, application and risks of using ionizing radiation, anaesthesia, and risk management and quality improvement.	• Decides upon the type of x-rays needed and prevents unnecessary and repeated exposure. • Manages complications related to local anaesthesia. • Applies knowledge and skills in handling arising emergency cases.	3

Demonstrate foundation knowledge as relevant to clinical skills related to prosthodontics.	• Demonstrates knowledge & skills in:
	  • Interpretation of radiographs for bone loss, furcation involvement, endodontic treatments (if any), dental caries, quality of existing restorations, signs of occlusal trauma.
	  • Proper planning and execution of conservative tooth preparation.
		6

Competence Standards	Assessment Criteria	Marks
	• Preservation of the integrity of oral and perioral structures. • Handling and manipulation of prosthetic dental materials • Moisture control, gingival retraction, and successful impression taking. • Providing satisfactory temporisation for protection of prepared teeth and associated structures. • Advising proper verbal & written oral hygiene instructions. • Follow-up re-evaluation appointment protocol as supportive prosthetic care	

3. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Competencies in Clinical Courses**	**Prepared by:** **Dr. Mohamed Ahmed Elsayed** **Assistant Professor** **Dr. Nancy Soliman Ahmed Farghal** **Assistant Professor**
Title:	**Clinical Endodontics**	
Policy Number:	**CC.05**	**Reviewed by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Oct 2022**	
Edition Number	**2**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

Purpose

The clinical component of this course is aimed to prepare the students for efficient examination and diagnosis in endodontics and develop their skills to prepare access cavities, clean and shape and obturate root canals of single and multi-rooted teeth in clinical situations.

The students will be able to develop an appropriate, comprehensive, properly sequenced and individualized treatment plan based on the evaluation of all diagnostic data and identify conditions which require endodontic management or should be referred to a specialist for management.

Scope

To understand the number of clinical requirements at different levels of BDS program in the specific discipline and to illustrate the BDS professional competency standards rubrics

used for the assessment of clinical competency at RAK College of Dental Sciences (RAKCODS).

2. Policy Statements

2.1. Guidelines for Clinical Work:

2.1.1. Uphold professional attitude and behaviour

2.1.2. Communicate respectfully with colleagues and staff

2.1.3. Show empathy towards patients and attendants

2.1.4. Apply appropriate infection control measures

2.1.5. Adapt the ability to work safely and effectively

2.1.6. Collect the relevant information and use them for diagnosis

2.1.7. Apply a systematic process for patient management

2.1.8. Select the proper instruments for the procedure

2.1.9. Enter all the procedures in progress sheet and complete patient's file

2.1.10. Maintain the clinical competency evaluation form and enter all details with timely approvals on HIMS

2.2. Clinical Work:

2.2.1. To diagnose cases those, require endodontic treatment

2.2.2. Perform endodontic treatment on assigned patients following the explained protocol

2.3. Clinical Requirements:

2.3.1. BDS Year 4

Perform root canal treatment for 2 anterior teeth, premolar and molar 3

2.3.2. BDS Year 5

Root canal treatment of 8 teeth (Minimum 3 multi rooted teeth and 1 re-treatment)

2.3.3. Internship

- Ten (10) Endodontic cases of which:
- Five (5) single rooted
- Five (5) multi rooted

2.4. Assessments

Students' competency on clinical skills is assessed on a specially designed "Clinical examination Assessment criteria" based on a 5-point scale Excellent (90-100%), Very Good (80-89%), Good (70-79%), Satisfactory (60-69%) and Unsatisfactory (< 60%). If

it is found to be unsatisfactory, the student will be informed immediately or within 24 hours by email and the student has to repeat the procedure within two weeks' time.

Following are used to assess the clinical skills of the students

1. Objective Structured Clinical Examination (OSCE); one OSCE will be conducted during the mid of fall semester.
2. In Course Assessment Clinical Examination; 2 clinical examinations, one of which will be at the end of fall semester and the other in the mid of spring semester as per the criteria given below in each discipline.

2.4.1. The clinical requirements and examinations are graded based upon the Professional Competence Standards of Graduates of Baccalaureate Dental Initial Training and Education Programs laid down by the Ministry of Education as a part of the Reforming Dentistry Program in 2021.

2.4.1.1. The following table is used to grade student performance for all the domains

NO.	DOMAIN	MARKS
1	**Professional Domain**	15
2	**Patient-Centered Care Domain** • ***Clinical Information Gathering*** • ***Diagnosis and Management Planning*** • ***Clinical Treatment and Evaluation***	40
3	**Health Promotion Domain**	15
4	**Communication and Social Skills Domain**	15
5	**Scientific and Clinical Knowledge Domain**	15

2.4.1.2. The following table shows the criteria to grade students for clinical requirements and clinical assessments

CRITERIA	GRADE/ MARKS
• Excellent knowledge and ability to recall all information related to professionalism as mentioned below in the competency. • No assistance is required from the clinical supervisor	Excellent 90-100%

• Good Knowledge. The student recalls almost all points related to the case. Seeks supervision from the supervisor at times when in doubt, and does not need assistance while working from the supervisor.	Very good 80-89%
• Sound knowledge and ability. The student is able to recall all information with a few missing points. • Occasional assistance while working is required from the clinical supervisor.	Good 70-89 % Performance better than expected
• Sound knowledge and ability. This may include minor deviations from accepted practice that can be easily corrected and that would not significantly compromise the clinical outcome. Limited assistance required from the clinical supervisor.	Satisfactory 60-69% Consistent with expected
• Significant gaps in understanding and/or deviations from accepted practice that compromises patient safety or patient outcomes. • Performing treatment without approval from the clinical supervisor. • Significant assistance is required from the clinical supervisor to prevent adverse outcomes.	Unsatisfactory < 60 % Unsafe treatment Repeat the procedure

2.4.1.3. Clinical Procedure Evaluation Form to be used for requirements and clinical examinations

MR No	**Student ID and Name**	
Tooth Number and Clinical Procedure	**Faculty Name, Sign & Date**	
1. Professionalism Domain 15 marks	**Grades**	**Remarks**
• Apply ethical standards and comply with national legal and regulatory requirements in the provision of dental care. • Ensure that patient safety is paramount in all decisions and actions. • Recognize professional and individual scopes and limitations of practice or refer patients to professional colleagues when indicated. • Demonstrate empathy and caring behavior towards patients, their families and members of the community. • Ensure that all actions focus on the patients' best interests and respect patients' dignity, rights and choices. • Protect patients' privacy and confidentiality. • Maintain effective relationships with peers and respect professional boundaries.		

• Recognize the importance of continuing education and professional development for self and all members of the dental team.		
2. Section 2: Patient-Centered Care Domain- 40 marks		
2.1 Clinical Information Gathering- 10 marks • Perform an extra-oral and intra-oral examination for health, disease and abnormalities of the dentition, mouth and associated structures, including assessment of vital signs. • Identify and record the chief complaint, history of the present condition, medical, oral and social history of the patient. • Select, take, and interpret diagnostic images and other diagnostic procedures relevant to the patient's condition. • Maintain accurate, consistent, legible and contemporaneous records of the patient.		
2.2 Diagnosis and Management Planning -15 marks • Formulate and record a comprehensive, patient-centered, evidence based oral health treatment plan. • Diagnose disease or abnormalities of the oral cavity and associated structures and identify conditions which require management and referral. • Recognize the manifestations of systemic conditions and how these and their management may affect the management of dental care. • Apply the principles of preventive care as part of comprehensive treatment plan. • Ensure and record patient informed consent for treatment and their financial obligation.		
2.3 Clinical Treatment and Evaluation -15 marks		
• **Conventional Root Canal Treatment / Nonsurgical retreatment**		
o Removal of caries and build-up of the tooth if indicated.		
o Isolation procedures for the tooth to be treated.		
o Outline form of access cavity preparation.		
o Canals Identification		
o Achieve patent canals		
o Working length determination		
o Cleaning and shaping to working length.		
o Master cone placement		
o Quality of filling		
o Coronal seal		
3. Health Promotion Domain 15 marks		

• Evaluate the social, cultural and environmental factors which contribute to health or illness. • Apply the principles of health promotion strategies and disease prevention to promote oral and general health, quality of life and wellbeing. • Collaborate with dental team members and other health care professionals in the management of oral health care and health promotion for all patients. • Assess the risk factors and behaviors such as nutrition, drugs and diseases that can have an impact on oral healthcare. • Design, implement and evaluate evidence-based health promotion programs. • Evaluate and manage the tooth/teeth with pulp and periapical diseases.		
4. Communication and Social Skills Domain 15 marks		
• Apply appropriate interprofessional and communication skills that allow building a teamwork approach to the delivery of oral healthcare. • Demonstrate appropriate interpersonal skills in mentoring and participating in activities within a health care team. • Document and share written and electronic information about the dental encounter to optimize clinical decision-making and patient safety, ensuring confidentiality and privacy. • Present clear information to patients in a timely manner, that ensures that they are advised of and understand the different treatment options including risks and benefits. • Communicate responsibly and professionally, including when using social media. • Communicate and engage patients, their families and communities in relation to oral health. • Communicate effectively within the organizational hierarchy. • Recognize cultural diversity and apply cultural competency in caring for patients and communities.		
5. Scientific and Clinical Knowledge Domain 15 marks		
• Evaluate published clinical and basic science research and integrate this information to improve the oral health of the patient. • Apply the biomedical, physical and behavioral sciences in relation to oral health and disease. • Design and implement research in a critical and scientific manner relevant to dentistry.		

• Apply the scientific basis, application and risks of using ionizing radiation, dental materials and risk management and quality improvement. • Demonstrate foundation knowledge as relevant to clinical skills related to Clinical Endodontic.		

Grades: Grades are based on a 5-point scale (tick as applicable)

Excellent (90-100%) ☐

Very-good (80-89%) ☐

Good (70-79%) ☐

Satisfactory (60-69%) ☐

Unsatisfactory (Repeat procedure) (<60%) ☐

2.4.1.4. The rubrics based upon which the evaluation form has been prepared is as follows

Competence Standards	Assessment Criteria	Marks
1. Professional Domain – 15 Marks		
Apply ethical standards and comply with national legal and regulatory requirements in the provision of dental care.	• Checks patient record to understand • The patient meets the criteria for registration • The signed consent form is available • Patient rights & responsibilities available.	2
Ensure that patient safety is paramount in all decisions and actions.	• Patient identification done • Reassessment was done as necessary • Checked for medical alerts on the system.	2
Recognize professional and individual scopes and limitations of practice or refer patients to professional colleagues when indicated.	• Required investigations done • The provisional and final diagnosis is correct • The treatment plan is completed and discussed with the patient and family • Refer the patient for specialty treatment if the patient has localized or systemic problems that compromised periapical tissue health.	2

Competence Standards	Assessment Criteria	Marks
Demonstrate empathy and caring behavior towards patients, their families, and members of the community.	• Greets the patient and makes him/ her comfortable in the clinic. • Makes sure the patients/families of the patients are also attended to and involved in decision-making. • Interdisciplinary health education form completed as per HIMS.	2
Ensure that all actions focus on the patient's best interests and respect patients' dignity, rights, and choices.	• The care plan is discussed with the patient and family. • His/her choices of treatment are respected. • Performs Endodontic treatment in the best interest of the patient.	2
Protect patients' privacy and confidentiality.	• Patients' histories and case details are kept confidential. • There is no breach of the patient's personal information. • The information of the patient is dealt with professionally. • After all the patient details are saved in HIMS, the student logs out.	2
Maintain effective relationships with peers and respect professional boundaries.	• Behaves and respects patients, colleagues, staff, and faculty professionally and ethically. • All the patient information was discussed with the faculty.	1
Recognize the importance of continuing education and professional development for self and all members of the dental team.	• Appropriate knowledge related to the diagnosis and treatment planning of Pulp and periapical diseases presented. • The knowledge shown during the case presentation was updated and evidence-based.	2
2: Patient-centred Care Domain - 40 marks		
<u>Clinical Information Gathering 10 Marks</u>		
Perform an extra-oral and intra-oral examination for health, disease, and	• Findings of Extra-oral examination including Head, Neck, TMJ, and Lymph nodes and details recorded.	2

Competence Standards	Assessment Criteria	Marks
abnormalities of the dentition, mouth, and associated structures, including assessment of vital signs.	Findings of Intra-oral examination recorded. • Any abnormal changes in both intra-oral and extra-oral examination are identified correctly and recorded. • Any abnormality on the tongue, buccal mucosa, soft palate, and frenum attachment are identified. • Clinical examination findings are accurately recorded for all required teeth. • Tooth mobility, pocket depth, and furcation involvement & are recorded. • Checked for vital signs on HIMS and any deviation is updated.	
Identify and record the chief complaint, history of the present condition, and medical, oral, and social history of the patient.	• Case history recorded correctly including details of: ▪ Chief complaint ▪ History of presenting illness ▪ Medical & Social History	2
Select, take, and interpret diagnostic images and other diagnostic procedures relevant to the patient's condition.	• Selection of appropriate investigation for the patient. • Correct Interpretation of investigations. • Interpretation of radiograph findings for radiolucencies or radioopacities in the pulp space and/or along the root side, periapical and/or Furcation areas, and relation to adjacent structures, and recorded accurately.	3
Maintain accurate, consistent, legible, and contemporaneous records of the patient.	• Diagnosis and treatment plan discussed with the supervisor. • All details of the patient including diagnosis and treatment plan duly approved on HIMS before performing treatment • Progress notes correctly mentioned • Next/follow-up appointment of the patient provided	3
Diagnosis and Management Planning – 10 Marks		

Competence Standards	Assessment Criteria	Marks
Formulate and record a comprehensive, patient-centered, evidence-based oral health treatment plan.	• Proper Diagnosis and treatment plan established based upon the history, investigations, and contemporary knowledge as per evidence available. • A Patient-centric treatment plan is explained and discussed with the patient and family for their opinion.	2
Diagnose disease or abnormalities of the oral cavity and associated structures and identify conditions that require management and referral.	• All Intra/extraoral abnormalities were recorded and addressed. • Diagnosis for all findings established • A comprehensive treatment plan was prepared. • Patient prepared for referral if complex. • Diagnosis of different types of pulp and periapical diseases& other lesions in the oral cavity.	2
Recognize the manifestations of systemic conditions and how these and their management may affect the management of dental care.	• Details of medical history and hospitalization recorded Oral manifestations of systemic conditions recorded. • Risk of periodontal, pulp, and periapical diseases on systemic health noted. • Appropriate referrals/ consent obtained from the physician before treatment.	2
Apply the principles of preventive care as part of the comprehensive treatment plan.	• Preventive care is explained to the patient and encourages the patient to same. • Oral hygiene education & motivation were provided.	2
Ensure and record patient informed consent for treatment and their financial obligation.	• Informed consent is recorded if the procedure needs it. • Financial obligations if any discussed with the patient.	2
Clinical Treatment and Evaluation – 20 Marks		
Identify the patient's anxiety and pain related to the oral cavity and associated structures and respond appropriately.	• Identify the patient's ability to cope with treatment procedures based on medical & Dental History.	3

Competence Standards	Assessment Criteria	Marks
	• Appropriate handling & use of diagnostic and endodontic instruments during the treatment procedures.	
Evaluate and manage the tooth/teeth with pulp and periapical diseases.	• The correct and proper sequence of treatment planning. • Explain the treatment plan to the patient with different treatment options that can be done. • Detection of teeth associated with pulp and periapical diseases. • Isolation procedures for the tooth to be restored. • Removal of caries and build-up of the tooth if indicated. • Outline form of access cavity preparation. • Canals Identification • Working length determination • Cleaning and shaping to working length. • Master cone placement • Quality of filling • Coronal seal • Follow up appointment protocol as per the need of the patient.	8
Apply universal infection control guidelines for all clinical procedures.	Apply universal infection control guidelines for all clinical procedures by: ▪ Practicing Hand hygiene. ▪ Working in a clean/ and disinfected operatory. ▪ Appropriate use of personal protective equipment. ▪ Sterilized instruments are used. ▪ Appropriate handling of instruments, sharp and medical waste.	4

Competence Standards	Assessment Criteria	Marks
Manage patients from different age groups, medically compromised patients, and people of determination according to their needs.	• Identify the risk factors of pulp and periodontal disease and the manifestation of certain systemic diseases in the pulp and periapical tissue. • Refer for medical evaluation if indicated. • Precautions that should be taken before proceeding to Endodontic treatment and the effect of different drugs on the periapical bone healing.	3
Administer and/or prescribe pharmaceutical agents relevant to routine dental practice.	Has knowledge and demonstrates ability in prescribing drugs for patients.	2
Section 3: Health Promotion Domain – 15 marks		
Evaluate the social, cultural, and environmental factors which contribute to health or illness.	• Recorded complete demographic details of the patient. • Demonstrates an understanding of the significance of demographic details. • Evaluate how it may influence the presenting condition/s.	3
Apply the principles of health promotion strategies and disease prevention to promote dental general health, quality of life, and well-being.	• Health promotion principles are applied with evidence on the importance and practice of prevention of pulp diseases. • Demonstrates skills in proper oral hygiene instruction and education with proper tooth brushing technique and other cleansing aid.	3
Collaborate with dental team members and other health care professionals in the management of oral health care and health promotion for all patients.	• Maintains a professional relationship with patients, colleagues, staff, and faculty • Seeks/refers for consultation from specialists as needed.	3

Assess the risk factors and behaviors such as nutrition, drugs, and diseases that can have an impact on oral healthcare.	• Risk assessment was done in terms of Dietary factors
	• Oral hygiene maintenance
	  • Systemic conditions
	  • Smoking
		3

Competence Standards	Assessment Criteria	Marks
	• Snuffing	
Design, implement and evaluate evidence-based health promotion programs.	Is innovative in providing a care plan Practices a follow-up plan as applicable to the patient.	3
Section 4. Communication and Social Skills Domain – 15 marks		
Apply appropriate inter-professional and communication skills that allow for building a teamwork approach to the delivery of oral healthcare.	Communicates effectively with: ▪ Peer group/team ▪ Staff ▪ Faculty ▪ Other healthcare professionals as applicable ▪ Applied 4 handed dentistry	3
Demonstrate appropriate interpersonal skills in mentoring and participating in activities within a healthcare team.	• Demonstrate appropriate interpersonal communication skills • In case presentation • Discussion of the care plan • In referring patients to other team members	3
Document and share written and electronic information about the dental encounter to optimize clinical decision-making and patient safety, ensuring confidentiality and privacy.	All the information is recorded appropriately to: ▪ Prioritize patient safety. ▪ Provide a handover If and when needed. ▪ Ensures privacy and confidentiality regarding details of the patient.	3
Present clear information to patients in a timely manner, that ensures that they are advised of and understand the different treatment options including risks and benefits.	• Details of treatment plans discussed with patient including both the ideal and alternative treatment plans. • The advantages, risks, and disadvantages of the treatment planned are explained to the patient.	2
Communicate responsibly and professionally, including when using social media.	• Communicates respectfully with patients, colleagues, staff, and faculty. • Seeks permission from patients and the faculty before using social media to showcase the treatment on social media.	2

Competence Standards	Assessment Criteria	Marks
Communicate and engage patients, their families, and communities in relation to oral health.	The treatment plan was discussed with patients and families.	2
Section 5: Scientific and Clinical Knowledge Domain -15 Marks		
Communicate effectively within the organizational hierarchy.	Respects the hierarchy of the team and communicate accordingly in a disciplined manner.	2
Recognize cultural diversity and apply cultural competency in caring for patients and communities.	Respects the cultural and ethnic differences of all involved.	2
Evaluate published clinical and basic science research and integrate this information to improve the dental health of the patient.	• Has knowledge relevant to the most recently published literature. • Applies knowledge adequately to treat the patient satisfactorily.	2
Apply the biomedical, physical, and behavioral sciences concerning pulp and periapical health and disease.	Plans to prevent unwanted exposure to ionizing radiation or X-rays.	2
Apply the scientific basis, application, and risks of using ionizing radiation, anaesthesia, and risk management and quality improvement.	Decides upon the type of x-rays needed and prevents unnecessary and repeated exposure.	2
Demonstrate foundation knowledge as relevant to clinical skills related to Endodontics.	Demonstrates knowledge & skills in: • Detection and recording of Intra oral examination, diagnosis of pulpal diseases, and evaluation of pulp vitality. • Interpretation of radiograph of pulpal conditions, identification of peri radicular disease, if present recorded accurately.	5

Competence Standards	Assessment Criteria	Marks
	• Sequencing of treatment done properly and Isolation procedures for the tooth to be restored. • Completely remove caries and restore the tooth. • Outline form of access cavity preparation • Canals Identification • Working length determination • Cleaning and shaping to the full working length. • The spreader fits 1 mm short of the working length • Master cone fits at the working length with tug back • Dense homogenous fill without voids • Proper coronal seal • Follow up re-evaluation appointment protocol.	

3. <u>Document Change Record:</u>

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Competencies in Clinical Courses**	**Prepared by:** **Dr. Riham Abdelraouf Hyder Mohammed** **Assistant Professor**
Title:	**Clinical Oral Surgery**	
Policy Number:	**CC.06**	**Reviewed by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Oct 2022**	
Edition Number	**2**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

Purpose

The clinical component of this course is aimed to prepare the students for proficient oral surgery clinical examination including extra / intraoral inspection, percussion and palpation, identify various armamentariums for tooth extraction and to develop manual skills. It also focuses on differential diagnosis and management, indications for tooth extraction and minor oral surgeries as well as election of adequate methods for pain control.

Scope

To understand the number of clinical requirements at different levels of BDS program in the specific discipline and to illustrate the BDS professional competency standards rubrics used for the assessment of clinical competency at RAK College of Dental Sciences (RAKCODS).

2. Policy Statements

2.1. Guidelines for Clinical Work:

2.1.1. Uphold professional attitude and behaviour

2.1.2. Communicate respectfully with colleagues and staff

2.1.3. Show empathy towards patients and attendants

2.1.4. Apply appropriate infection control measures

2.1.5. Adapt the ability to work safely and effectively

2.1.6. Collect the relevant information and use them for diagnosis

2.1.7. Apply a systematic process for patient management

2.1.8. Select the proper instruments for the procedure

2.1.9. Enter all the procedures in progress sheet and complete patient's file

2.1.10. Maintain the clinical competency evaluation form and enter all details with timely approvals on HIMS

2.2. Clinical Work:

2.2.1. Apply appropriate infection control measures

2.2.2. Adapt the ability to work safely and effectively

2.2.3. Collect the relevant information and use them for diagnosis

2.2.4. Apply a systematic process for patient management

2.2.5. Select the proper instruments for the non-surgical & surgical tooth extraction

2.2.6. Practicing non-surgical extraction under the supervision of faculty

2.2.7. Practicing different suturing techniques under supervision of faculty

2.2.8. Assist/ observe the minor oral surgical procedures

2.2.9. Enter all the procedures in HIMS complete patient's file

2.2.10. Maintain the clinical competency evaluation form and all the information in HIMS system.

2.3. Clinical Requirements:

2.3.1. BDS Year 4

Perform clinical examination and 10 nonsurgical tooth extractions (five anterior and five posterior).

2.3.2. BDS Year 5

- Extraction of 20 teeth
- Two (2) Minor Oral Surgery cases

2.3.3. Internship

- Twenty-five (25) teeth extraction

- Two (2) Alveoloplasty
- One (1) Minor Oral Surgery (Biopsy/apicoectomy/impaction)
- Any Two (2) full case presentations of oral lesion/pathology

2.4. Assessments

Students' competency on clinical skills is assessed on a specially designed "Clinical examination Assessment criteria" based on a 5-point scale Excellent (90-100%), Very Good (80-89%), Good (70-79%), Satisfactory (60-69%) and Unsatisfactory (≤ 60%). If it is found to be unsatisfactory, the student will be informed immediately or within 24 hours by email and the student has to repeat the procedure within two weeks' time.

Following are used to assess the clinical skills of the students

1. Objective Structured Clinical Examination (OSCE); one OSCE will be conducted during the mid of fall semester.

2. In Course Assessment Clinical Examination; 2 clinical examinations, one of which will be at the end of fall semester and the other in the mid of spring semester as per the criteria given below in each discipline.

2.4.1. The clinical requirements and examinations are graded based upon the Professional Competence Standards of Graduates of Baccalaureate Dental Initial Training and Education Programs laid down by the Ministry of Education as a part of the Reforming Dentistry Program in 2021.

2.4.1.1. The following table is used to grade student performance for all the domains

NO.	DOMAIN	MARKS
1	**Professional Domain**	15
2	**Patient-Centered Care Domain** • ***Clinical Information Gathering*** • ***Diagnosis and Management Planning*** • ***Clinical Treatment and Evaluation***	40
3	**Health Promotion Domain**	15
4	**Communication and Social Skills Domain**	15
5	**Scientific and Clinical Knowledge Domain**	15

2.4.1.2. The following table shows the criteria to grade students for clinical requirements and clinical assessments

CRITERIA	GRADE/ MARKS
• Excellent knowledge and ability to recall all information related to professionalism as mentioned below in the competency. • No assistance is required from the clinical supervisor	**Excellent** 90-100%
• Good Knowledge. Student recalls almost all points related to the case. Seeks supervision from supervisor at times when in doubt, does not need assistance while working from supervisor	**Very good** 80-89%
• Sound knowledge and ability. The student is able to recall all information with few missing points. • Occasional assistance while working is required from the clinical supervisor.	**Good** 70-79 % Performance better than expected
• Sound knowledge and ability. May include minor deviations from accepted practice that can be easily corrected and that would not significantly compromise the clinical outcome. Limited assistance required from the clinical supervisor.	**Satisfactory** 60-69% Consistent with expected
• Significant gaps in understanding and/or deviations from accepted practice that compromises patient safety or patient outcomes. • Performing treatment without approval from clinical supervisor. • Significant assistance required from the clinical supervisor to prevent adverse outcomes.	**Unsatisfactory** < 60 % Unsafe treatment Repeat the procedure

2.4.1.3. Clinical Procedure Evaluation Form to be used for requirements and clinical examinations

MR No	**Student ID and Name**		
Tooth Number and Clinical Procedure	**Faculty Name, Sign & Date**		
1. Professionalism Domain	**15 marks**	**Grades**	**Remarks**
• Apply ethical standards and comply with national legal and regulatory requirements in the provision of dental care. • Ensure that patient safety is paramount in all decisions and actions. • Recognize professional and individual scopes and limitations of practice or refer patients to professional colleagues when indicated. • Demonstrate empathy and caring behavior towards patients, their families and members of the community.			

• Ensure that all actions focus on the patients' best interests and respect patients' dignity, rights and choices. • Protect patients' privacy and confidentiality. • Maintain effective relationships with peers and respect professional boundaries. • Recognize the importance of continuing education and professional development for self and all members of the dental team.		
2. Section 2: Patient-Centered Care Domain- 40 marks		
2.1 Clinical Information Gathering- 10 marks • Perform an extra-oral and intra-oral examination for health, disease and abnormalities of the dentition, mouth and associated structures, including assessment of vital signs. • Identify and record the chief complaint, history of the present condition, medical, oral and social history of the patient. • Select, take, and interpret diagnostic images and other diagnostic procedures • relevant to the patient's condition. • Maintain accurate, consistent, legible and contemporaneous records of the patient		
2.2 Diagnosis and Management Planning -15 marks • Formulate and record a comprehensive, patient-centred, evidence-based oral health treatment plan. • Diagnose disease or abnormalities of the oral cavity and associated structures and identify conditions which require management and referral. • Recognize the manifestations of systemic conditions and how these and their management may affect the management of dental care • Apply the principles of preventive care as part of comprehensive treatment plan. • Ensure and record patient informed consent for treatment and their financial obligation.		
2.3 Clinical Treatment and Evaluation (will differ specialty wise, highlight the procedure) -15 marks		
Local Anaesthesia / **Tooth Extraction**		
✓ Surgical site preparation and applications of principles of Infection Control and Asepsis		
✓ Proper position of operator/ patient		

<table>
<tr><td colspan="2">✓ Adjust the light and maintain proper visibility and accessibility to the surgical site</td><td></td><td></td></tr>
<tr><td><u>Selection and handling of armamentarium for LA</u>
✓ Correct selection of the needle, LA agent and vasoconstrictor
✓ Accurate calculation of the dose of the LA agent and vasoconstrictor
✓ Mounting of the local anaesthetic syringe and Check needle patency
✓ Proper Palm-thumb grasp of the syringe

<u>Perform proper LA injection technique</u>
✓ Identify the nerves and areas to be anesthetized
✓ Preparation of injection site
✓ Identification of the landmarks, Penetration site, Adequate penetration depth and reach the target area
✓ Correct Orientation of the needle bevel and angulation of the needle
✓ Establish firm hand rest and support
✓ Aspiration
✓ Deposition of the optimum amount of Local anaesthetic solution at optimum rate.
✓ Proper withdraw of the needle and make the needle safe (one hand scoop Technique)
✓ Check for profound LA
✓ Unmounting of the dental syringe and proper discard the sharp object</td><td><u>Selection and preparation of instruments</u>
✓ Select the suitable forceps and elevator
✓ Correct grip of the forceps

<u>Perform 5 steps of Intra-alveolar extraction:</u>
✓ Muocperiosteal separation using periosteal elevator
✓ Luxation of the tooth with dental elevator: Proper handling and application of straight elevator
✓ Correct application of forceps blades to the tooth
✓ Correct movement of tooth with forceps
✓ Proper delivery of the tooth from the socket

Proper use of non-working hand

Inspection of the extracted tooth/ root

Inspection of extraction socket
✓ Curettage and irrigation of the socket if indicated
✓ Secure hemostasis
✓ Proper application of gauze pack

Correct prescription of Post-Operative medications if indicated</td><td></td><td></td></tr>
</table>

Clear explanation of Post-operative instructions: ✓ Bite firmly on the gauze for a minimum of half an hour after extraction. ✓ Refrain from eating and drinking for 1 hour after extraction ✓ Take paracetamol tabs after removal of gauze ✓ Do not rinse your mouth vigorously. ✓ Avoid any hot food or beverages and take cold ones. ✓ Take soft diet. ✓ Avoid smoking ✓ Take prescribed medication on time. ✓ Do not touch the site of extraction with your tongue or finger. ✓ Avoid strenuous exercises and activities. ✓ Start warm salted water rinses on next day. ✓ In case of emergency contact the doctor and go to the nearest hospital ✓ Check patient recall and understand		
3. Health Promotion Domain 15 marks		
• Evaluate the social, cultural and environmental factors which contribute to health or illness. • Apply the principles of health promotion strategies and disease prevention to promote oral and general health, quality of life and wellbeing. • Collaborate with dental team members and other health care professionals in the management of oral health care and health promotion for all patients. • Assess the risk factors and behaviors such as nutrition, drugs and diseases that can have an impact on oral healthcare. • Design, implement and evaluate evidence-based health promotion programs.		
4. Communication and Social Skills Domain 15 marks		
• Apply appropriate inter-professional and communication skills that allow building a teamwork approach to the delivery of oral healthcare. • Demonstrate appropriate interpersonal skills in mentoring and participating in activities within a health care team. • Document and share written and electronic information about the dental encounter to optimize clinical decision-making and patient safety, ensuring confidentiality and privacy. • Present clear information to patients in a timely manner, that ensures that they are advised of and understand the different treatment options including risks and benefits.		

• Communicate responsibly and professionally, including when using social media. • Communicate and engage patients, their families and communities in relation to oral health.		
5. Scientific and Clinical Knowledge Domain 15 marks		
• Evaluate published clinical and basic science research and integrate this information to improve the oral health of the patient. • Apply the biomedical, physical, and behavioural sciences in relation to oral health and disease. • Apply the scientific basis, application and risks of using ionizing radiation, anaesthesia, and risk management and quality improvement. • Demonstrate foundation knowledge as relevant to clinical skills related to oral surgery.		

Grades: Grades are based on a 5-point scale (tick as applicable)

Excellent (90-100%) ☐

Very-good (80-89%) ☐

Good (70-79%) ☐

Satisfactory (60-69%) ☐

Unsatisfactory (Repeat procedure) (<60%) ☐

2.4.1.4. The rubrics based upon which the evaluation form has been prepared is as follows

Competence Standards	Assessment Criteria	Marks
1. Professional Domain – 15 Marks		
Apply ethical standards and comply with national legal and regulatory requirements in the provision of dental care.	• Checks patient record to understand • Patient meets the criteria of registration • Signed consent form available • Patient rights & responsibilities available • Informed consent signed for oral surgical procedures.	2
Ensure that patient safety is paramount in all decisions and actions.	• Patient identification done • Reassessment was done as necessary • Checked for medical alerts on system.	2

Competence Standards	Assessment Criteria	Marks
Recognize professional and individual scopes and limitations of practice or refer patients to professional colleagues when indicated.	• Required investigations done • Provisional and final diagnosis is correct • Treatment plan is completed and discussed with patient and family • Refers patient for specialty treatment if the case is complicated and the patient has systemic problems that compromised the patient general health or the outcome of the oral surgery.	2
Demonstrate empathy and caring behavior towards patients, their families and members of the community.	• Greets the patient and makes him/ her comfortable in the clinic. • Makes sure the patient/families of the patients are also attended to and involved in decision making. • Interdisciplinary health education form completed as per HIMS.	2
Ensure that all actions focus on the patients' best interests and respect patients' dignity, rights and choices.	• The care plan is discussed with the patient and family. • His/her choices of treatment is respected. • Performs oral surgery procedures in the best interest of the patient.	2
Protect patients' privacy and confidentiality.	• Patients history and case details are kept confidential. • There is no breach of patient's personal information. • The information of the patient is dealt professionally. • All the patient details after being saved in HIMS, the student logs out.	2
Maintain effective relationships with peers and respect professional boundaries.	• Behaves and respects patients, colleagues, staff and faculty professionally and ethically. • All the patient information discussed with the faculty.	1
Recognize the importance of continuing education and professional development	• Appropriate knowledge related to the diagnosis and treatment planning of individual case presented.	2

Competence Standards	Assessment Criteria	Marks
for self and all members of the dental team.	• The knowledge shown during the case presentation was updated and was evidence based.	
2: Patient-centred Care Domain - 40 marks		
<u>Clinical Information Gathering 10 Marks</u>		
Perform an extra-oral and intra-oral examination for health, disease and abnormalities of the dentition, mouth and associated structures, including assessment of vital signs.	• Perform an Extra-oral examination including Head, Neck, TMJ, Lymph nodes and Salivary Glands and details recorded. • Perform an Intra-oral examination of occlusion, status of dentition, salivary flow, oral mucosa, tongue, vestibule, frenulum, hard and soft palate, floor of the mouth and oropharynx and record the findings. • Any abnormal change of both intra oral and extra oral examination are identified correctly and recorded. • Assess the patient general look and the vital signs. • Assess the periodontal and the pulp status of the tooth of complain.	2
Identify and record the chief complaint, history of the present condition, medical, oral and social history of the patient.	• Case history recorded correctly including details of: ▪ Chief complaint ▪ History of presenting illness ▪ Family history ▪ Medical & Social history • Checked for vital signs on HIMS and any deviation is updated.	2
Select, take, and interpret diagnostic images and other diagnostic procedures relevant to the patient's condition.	• Selection of appropriate investigation for the patient. • Correct Interpretation of investigations and correlate it with the clinical presentation. • Interpretation of radiograph for; type of bone, root numbers and shape, presence of curvature, dilacerations or tooth	3

Competence Standards	Assessment Criteria	Marks
	Ankylosis, Associated radiolucency or radiopacity and the relation of the roots with the associated vital structures Maxillary sinus, inferior alveolar canal and mental foramen.	
Maintain accurate, consistent, legible and contemporaneous records of the patient.	• Diagnosis and treatment plan discussed with the supervisor • All details of patient including diagnosis and treatment plans duly approved on HIMS before performing treatment • Progress notes correctly mentioned • Next/follow up appointment of patient provided	3
Diagnosis and Management Planning – 10 Marks		
Formulate and record a comprehensive, patient-centered, evidence-based oral health treatment plan.	• Proper Diagnosis and treatment plan established based upon the history, investigations and contemporary knowledge as per evidence available • A Patient centric treatment plan is explained and discussed with the patient and family for their opinion	2
Diagnose disease or abnormalities of the oral cavity and associated structures and identify conditions which require management and referral.	• All intra/extra oral abnormality recorded and addressed • Diagnosis for all findings established • Comprehensive treatment plan prepared. • Patient prepared for referral if complex in nature. • Diagnosis of different dentoalveolar conditions that need surgical interventions as well as other lesions and conditions of the oral cavity. • Classify the different type of teeth impaction and the available management options.	2
Recognize the manifestations of systemic conditions and how these and their management may	• Details of medical history and hospitalization recorded Oral manifestations of systemic conditions recorded	2

Competence Standards	Assessment Criteria	Marks
affect the management of dental care.	• Properly assess the Risk from oral surgery. • Appropriate referrals/ consent obtained from physician prior to treatment.	
Apply the principles of preventive care as part of comprehensive treatment plan.	• Preventive care explained to the patient and encourages the patient for same • Oral hygiene education & motivation provided	2
Ensure and record patient informed consent for treatment and their financial obligation.	• Informed consent recorded if the procedure needs it • Financial obligations if any is discussed with the patient	2
Clinical Treatment and Evaluation – 20 Marks		
Identify patient's anxiety and pain related to the oral cavity and associated structures and respond appropriately.	• Identify the patient's ability to cope with treatment procedure based on medical & Dental History. • Apply the principles of Stress Reduction Protocol and Iatrosedation. • Select the appropriate way of pain control. • Appropriate handling & use of instruments during the treatment procedures.	3
Evaluate and manage the teeth with surgical and non-surgical extractions.	• Correct and proper sequence of treatment planning. • Explain the treatment plan to the patient with different treatment options that can be done. • Discuss the expected peri/post-operative complications. • Proper positioning of the patient and operator and selection preparation of the armamentarium for the anesthesia and surgical procedure and preparation of surgical site. • Identify the nerves to be anesthetized and Administer the appropriate profound LA Technique.	8

Competence Standards	Assessment Criteria	Marks
	• Perform simple atraumatic forceps or elevator extraction and deliver the whole tooth/root out. • Inspection of the socket, control of bleeding, pain and no injury or tearing of the tissue. • Educate the patient with post-operative care and instructions. • Follow up appointment protocol as per need of the patient. • Identify patients with complicated exodontia which require surgical extraction or to be referred to a specialist.	
Apply universal infection control guidelines for all clinical procedures.	Apply universal infection control guidelines for all clinical procedures by: ▪ Practicing Hand hygiene. ▪ Working in clean/ and disinfected operatory. ▪ Appropriate use of personal protective equipment. ▪ Sterilized instruments are used. ▪ Appropriate handling of instruments, sharp and medical waste.	4
Manage patients from different age groups, medically compromised patients, and people of determination according to their needs.	• Identify the orofacial manifestations of systemic diseases or their treatments. • Classify patient according to ASA criteria and Refer for medical evaluation and treatment and develop complete surgical treatment plan with physician • Precautions that should be taken before proceeding to oral surgery; assessing bleeding profile, blood glucose level, the need for pre-operative antibiotic or steroid prophylaxis, secession of anti-coagulant before extraction. • Selection of appropriate type and dose of LA agent and vasoconstrictor with respect to underlying medical problem.	3

Competence Standards	Assessment Criteria	Marks
	• Assess the surgical risk on different age groups and design a customized preventive and management program • Anticipate and plan to prevent the expected complications	
Administer and/or prescribe pharmaceutical agents relevant to routine dental practice.	Has knowledge and demonstrates ability in prescribing drugs for pre and post-operative surgical phases.	2
Section 3: Health Promotion Domain – 15 marks		
Evaluate the social, cultural and environmental factors which contribute to health or illness.	• Recorded complete demographic details of the patient. • Demonstrates the understanding of the significance of demographic details. • Evaluate how it may influence the presenting condition/s.	3
Apply the principles of health promotion strategies and disease prevention to promote periodontal and general health, quality of life and wellbeing.	• Health promotion principles are applied with evidence on the importance and practice of prevention of periodontal diseases. • Demonstrates skills of proper oral hygiene instruction and education with proper tooth brushing technique and other cleansing aid. • Provides demonstrations on proper diet and its impact on health. • Identify the contributing factors and its prevention & management if applicable.	3
Collaborate with dental team members and other health care professionals in the management of oral health care and health promotion for all patients.	• Maintains professional relationship with patients, colleagues, staff and faculty • Seeks/refers for consultation from specialists as needed.	3
Assess the risk factors and behaviors such as nutrition, drugs and diseases that can	• Risk assessment done in terms of Dietary factors • Oral hygiene maintenance • Systemic conditions	3

Competence Standards	Assessment Criteria	Marks

have an impact on oral healthcare.	• Assessment of risk factors for oral cancer:
	  • Smoking -Alcohol -HPV, HIV, HBV, HCV
	  • Snuffing - betel nut chewing	

Design, implement and evaluate evidence-based health promotion programs.	Is innovative in providing a care plan Practices a follow up plan as applicable to the patient.	3
Section 4. Communication and Social Skills Domain – 15 marks		
Apply appropriate inter-professional and communication skills that allow building a teamwork approach to the delivery of oral healthcare.	Communicates effectively with: ▪ Peer group/team ▪ Staff ▪ Faculty ▪ Other healthcare professionals as applicable ▪ Applied 4 handed dentistry	3
Demonstrate appropriate interpersonal skills in mentoring and participating in activities within a health care team.	• Demonstrate appropriate interpersonal communication skills • In case presentation • Discussion of care plan • In referring patients to other team members	3
Document and share written and electronic information about the dental encounter to optimize clinical decision-making and patient safety, ensuring confidentiality and privacy.	All the information is recorded appropriately to: ▪ Prioritize patient safety. ▪ Provide a handover If and when needed. ▪ Ensures privacy and confidentiality regarding details of patient.	3
Present clear information to patients in a timely manner, that ensures that they are advised of and understand the different treatment options including risks and benefits.	• Details of treatment plans discussed with patient including both the ideal and alternative treatment plans. • Advantages, risks and disadvantages of the treatment planned is explained to the patient.	2
Communicate responsibly and professionally,	• Communicates respectfully with patients, colleagues, staff and faculty.	2

Competence Standards	Assessment Criteria	Marks
including when using social media.	• Seeks permission from patients and the faculty before using social media to showcase the treatment on social 2 media.	
Communicate and engage patients, their families and communities in relation to oral health.	Treatment plan discussed with patients and families.	2
Section 5: Scientific and Clinical Knowledge Domain -15 Marks		
Evaluate published clinical and basic science research and integrate this information to improve the oral health of the patient.	• Has knowledge relevant to the most recent published literature • Applies knowledge adequately to treat the patient satisfactorily.	3
Apply the biomedical, physical, and behavioral sciences in relation to oral health and disease.	Plans to prevent unwanted exposure to ionizing radiation or X rays.	3
Apply the scientific basis, application and risks of using ionizing radiation, anesthesia, and risk management and quality improvement.	Decides upon the type of x-rays needed and prevents unnecessary and repeated exposure.	3
Demonstrate foundation knowledge as relevant to clinical skills related to oral surgery.	Demonstrates knowledge & skills in: • Interpret the surgical anatomy and innervation of orofacial region. • Accurate diagnosis of the common conditions related to oral surgery like impacted teeth, odontogenic cysts and tumors odontogenic infections. • Understand and perform common maxillary and mandibular anaesthetic techniques. • Understand the principle of complicated and uncomplicated exodontia and perform atraumatic simple extraction and assist in surgical extractions.	6

Competence Standards	Assessment Criteria	Marks
	• Ability to diagnose and manage common post extraction complications like bleeding, dry socket and trismus. • Apply post-operative care and Follow up re-evaluation appointment protocol as needed.	

3. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Competencies in Clinical Courses**	**Prepared by:** **Dr. Shahistha Parveen** **Assistant Professor** **Dr. Ghiath Mahmoud** **Associate Professor**
Title:	**Clinical Orthodontics**	
Policy Number:	**CC.07**	**Reviewed by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Oct 2022**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**2**	
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

Purpose

The students must have knowledge and skill in the recognition, diagnosis, and management of dentofacial abnormalities in the primary, mixed, and permanent dentitions with adequate knowledge on preventive and interceptive orthodontics.

1.1 Review on the concepts of development of dentition and occlusion with adequate knowledge of primary, mixed and permanent dentition periods.

1.2 Review on the definition, classifications, modifications, etiology and diagnosis of various malocclusions.

1.3 Compare removable, functional and fixed appliances in orthodontics with evaluation of each of their indications, advantages and disadvantages.

1.4 Compare and evaluate preventive and interceptive orthodontics with emphasis on diagnosis and treatment of different deleterious oral habits, space supervision and serial extractions.

Scope

To understand the number of clinical requirements at different levels of BDS program in the specific discipline and to illustrate the BDS professional competency standards rubrics used for the assessment of clinical competency at RAK College of Dental Sciences (RAKCODS).

2. Policy Statements

2.1. Guidelines for Clinical Work:

2.1.1. Uphold professional attitude and behaviour

2.1.2. Communicate respectfully with colleagues and staff

2.1.3. Show empathy towards patients and attendants

2.1.4. Apply appropriate infection control measures

2.1.5. Adapt the ability to work safely and effectively

2.1.6. Collect the relevant information and use them for diagnosis

2.1.7. Apply a systematic process for patient management

2.1.8. Select the proper instruments for the procedure

2.1.9. Enter all the procedures in progress sheet and complete patient's file

2.1.10. Maintain the clinical competency evaluation form and enter all details with timely approvals on HIMS

2.2. Clinical Work:

2.2.1. Wire bending exercises of various designs on study models.

2.2.2. Fabrication of retentive and active components of removable orthodontic appliances.

2.2.3. Case evaluation by cast study, space analyses

2.2.4. Cephalometric analysis

2.2.5. Patient diagnosis and treatment planning

2.2.6. An orthodontic case presentation of a malocclusion with all records

2.3. Clinical Requirements:

2.3.1. BDS Year 4

- Fabricate one each of Straight wire, Square, Triangle and Circle
- Fabricate on an ideal cast one each of C- Clasp, Adams Clasp, Finger spring, Z
- Spring, Short labial bow, Canine retractors, Hawley's appliance,
- One Cephalometric tracing
- One each of Model analysis, OPG analysis for age estimation, Case history taking & study model preparation and presentation
- Fabricate 1 Removable appliance on model and perform 5 Cephalometric tracing and interpretation exercises for any 5 patients

2.3.2. Internship

- One Cases Presentations – (one removable orthodontic case in the form of a fully documented printed report)

2.4. Assessments

Students' competency on clinical skills is assessed on a specially designed "Clinical examination Assessment criteria" based on a 5-point scale Excellent (90-100%), Very Good (80-89%), Good (70-79%), Satisfactory (60-69%) and Unsatisfactory (≤ 60%). If it is found to be unsatisfactory, the student will be informed immediately or within 24 hours by email and the student has to repeat the procedure within two weeks' time.

Following are used to assess the clinical skills of the students

1. Objective Structured Clinical Examination (OSCE); one OSCE will be conducted during the mid of fall semester.
2. In Course Assessment Clinical Examination; 2 clinical examinations, one of which will be at the end of fall semester and the other in the mid of spring semester as per the criteria given below in each discipline.

2.4.1. The clinical requirements and examinations are graded based upon the Professional Competence Standards of Graduates of Baccalaureate Dental Initial Training and Education Programs laid down by the Ministry of Education as a part of the Reforming Dentistry Program in 2021.

2.4.1.1. The following table is used to grade student performance for all the domains

NO.	DOMAIN	MARKS
1	**Professional Domain**	15
2	**Patient-Centered Care Domain** • ***Clinical Information Gathering*** • ***Diagnosis and Management Planning*** • ***Clinical Treatment and Evaluation***	40
3	**Health Promotion Domain**	15
4	**Communication and Social Skills Domain**	15
5	**Scientific and Clinical Knowledge Domain**	15

2.4.1.2. The following table shows the criteria to grade students for clinical requirements and clinical assessments

CRITERIA	GRADE/ MARKS
• Excellent knowledge and ability to recall all information related to professionalism as mentioned below in the competency. • No assistance is required from the clinical supervisor	**Excellent** 90-100%
• Good Knowledge. Student recalls almost all points related to the case. Seeks supervision from supervisor at times when in doubt, does not need assistance while working from supervisor	**Very good** 80-89%
• Sound knowledge and ability. The student is able to recall all information with few missing points. • Occasional assistance while working is required from the clinical supervisor.	**Good** 70-79 % Performance better than expected
• Sound knowledge and ability. May include minor deviations from accepted practice that can be easily corrected and that would not significantly compromise the clinical outcome. Limited assistance required from the clinical supervisor.	**Satisfactory** 60-69% Consistent with expected
• Significant gaps in understanding and/or deviations from accepted practice that compromises patient safety or patient outcomes. • Performing treatment without approval from clinical supervisor. • Significant assistance required from the clinical supervisor to prevent adverse outcomes.	**Unsatisfactory** < 60 % Unsafe treatment Repeat the procedure

2.4.1.3. Clinical Procedure Evaluation Form to be used for requirements and clinical examinations

MR No	**Student ID and Name**	
Malocclusion type- Angle classification	**Faculty Name, Sign & Date**	
1. Professionalism Domain - 15 marks	**Grades**	**Remarks**
• Apply ethical standards and comply with national legal and regulatory requirements in the provision of dental care. • Ensure that patient safety is paramount in all decisions and actions. • Recognize professional and individual scopes and limitations of practice or refer patients to professional colleagues when indicated. • Demonstrate empathy and caring behavior towards patients, their families and members of the community. • Ensure that all actions focus on the patients' best interests and respect patients' dignity, rights and choices. • Protect patients' privacy and confidentiality. • Maintain effective relationships with peers and respect professional boundaries. • Recognize the importance of continuing education and professional development for self and all members of the dental team.		
2. Section 2: Patient-Centered Care Domain - 40 marks		
2.1 Clinical Information Gathering- 10 marks • Perform an extra-oral and intra-oral examination for health, disease and abnormalities of the dentition, mouth and associated structures, including assessment of vital signs. • Identify and record the chief complaint, history of the present condition, medical, oral and social history of the patient. • Select, take, and interpret diagnostic images and other diagnostic procedures relevant to the patient's condition. • Maintain accurate, consistent, legible and contemporaneous records of the patient.		
2.2 Diagnosis and Management Planning -15 marks • Formulate and record a comprehensive, patient-centered, evidence • Diagnosis of different types malocclusions with knowledge on the same. Differential diagnosis if applicable. • Sequential Treatment Planning presentation which require management and referral. • Apply the principles of preventive, interceptive, corrective orthodontics as part of comprehensive treatment plan.		

• Ensure and record patient informed consent for treatment and their financial obligation.		
2.3 Procedures like Wire Bending/ Cephalometric analysis/ Model Analysis - 15 marks		
Adequate choice of armamentarium used for the procedure.		
• **Impression making and study model preparation with following appropriate angulations** • Selection of appropriate impression tray of upper and lower arches • Alginate impression with appropriate sulcus depth • Study models with adequate anatomic and artistic proportions		
• **Extra oral and intra oral different photographs with interpretation** • Quality of photos (Exposure, Depth) • If included all mandatory photographic views for interpretation • Able to gather diagnostic information from photographs		
• **Different cephalometric analyses and interpretations** • Able to locate cephalometric land marks, planes and angles • Interpretation of cephalometric parameters and able ti incorporate in orthodontic diagnosis		
• **Different model analyses and interpretations** • Use of appropriate dentition analyses in mixed and permanent dentition		
• **Making problems list**		
• **Formulating treatment plan** • Space analysis and calculations • Managing space calculation with Space required and space available for correction of malocclusion • Prioritize patients chief complains and concern		
• **Presentation of a cases with comprehensive analyses and different treatment options, with an emphasis on retention protocol**		
3. Health Promotion Domain - 15 marks		
• Evaluate the social, cultural and environmental factors which contribute to health or illness. • Apply the principles of health promotion strategies and disease prevention to promote oral and general health, quality of life and wellbeing. • Collaborate with dental team members and other health care professionals in the management of oral health care, preventive orthodontics with emphasis on parents counselling and health promotion for all patients.		

• Assess the risk factors and behaviors such as nutrition, drugs and diseases that can have an impact on malocclusion. • Design, implement and evaluate evidence-based health promotion programs. • Apply on different age groups and design a customized preventive program. • Demonstrate creativity in promoting oral health within the community using a variety of platforms.		
4. Communication and Social Skills Domain - 15 marks		
• Apply appropriate interprofessional and communication skills that allow building a teamwork approach to the delivery of oral healthcare. • Demonstrate appropriate interpersonal skills in mentoring and participating in activities within a health care team. • Document and share written and electronic information about the dental encounter to optimize clinical decision-making and patient safety, ensuring confidentiality and privacy. • Present clear information to patients in a timely manner, that ensures that they are advised of and understand the different treatment options including risks and benefits. • Communicate responsibly and professionally, including when using social media. • Communicate and engage patients, their families and communities in relation to oral health and importance oral health during orthodontic therapy. • Communicate effectively within the organizational hierarchy. • Recognize cultural diversity and apply cultural competency in caring for patients and communities.		
5. Scientific and Clinical Knowledge Domain - 15 marks		
• Evaluate published clinical and basic science research and integrate this information to improve the oral health of the patient. • Apply the biomedical, physical and behavioral sciences in relation to oral health and disease. • Design and implement research in a critical and scientific manner relevant to dentistry. • Apply the scientific basis, application and risks of using ionizing radiation, dental materials and risk management and quality improvement. • Demonstrate foundation knowledge as relevant to clinical skills in orthodontics.		

Grades: Grades are based on a 5-point scale (tick as applicable)

Excellent (90-100%) ☐

Very-good (80-89%) ☐

Good (70-79%) ☐

Satisfactory (60-69%) ☐

Unsatisfactory (Repeat procedure) (<60%) ☐

2.4.1.4. The rubrics based upon which the evaluation form has been prepared is as follows

Competence Standards	Assessment Criteria	Marks
1. Professional Domain – 15 Marks		
Apply ethical standards and comply with national legal and regulatory requirements in the provision of dental care.	• Checks patient record to understand • Patient meets the criteria of registration • Signed consent form available • Patient rights & responsibilities available • Informed consent signed for Orthodontic procedures.	2
Ensure that patient safety is paramount in all decisions and actions.	• Patient identification done • Reassessment was done as necessary • Checked for medical alerts on system.	2
Recognize professional and individual scopes and limitations of practice or refer patients to professional colleagues when indicated.	• Required investigations done • Provisional and final diagnosis is correct • Treatment plan is completed and discussed with patient and family • Refers patient for speciality treatment beyond their scope	2
Demonstrate empathy and caring behaviour towards patients, their families and members of the community.	• Greet the patient and make him/ her comfortable in the clinic. • Makes sure the patient/legal guardian of the patients are also attended to and involved in decision making. • Interdisciplinary health education form completed as per HIMS.	2

Competence Standards	Assessment Criteria	Marks
Ensure that all actions focus on the patients' best interests and respect patients' dignity, rights and choices.	• The care plan is discussed with the patient and family. • His/her choices of treatment are respected. • Performs oral health in the best interest of the patient.	2
Protect patients' privacy and confidentiality.	• Patients history and case details are kept confidential. • There is no breach of patient's personal information. • The information of the patient is dealt professionally.	2
Maintain effective relationships with peers and respect professional boundaries.	• Behaves and respects patients, colleagues, staff and faculty professionally and ethically. • All the patient information discussed with the faculty.	1
Recognize the importance of continuing education and professional development for self and all members of the dental team.	• Appropriate knowledge related to the diagnosis and treatment planning of orthodontic case presented. • The knowledge shown during the case presentation was updated and was evidence based.	2
2: Patient-centred Care Domain - 40 marks		
<u>Clinical Information Gathering 10 Marks</u>		
Perform an extra-oral and intra-oral examination for health, disease and abnormalities of the dentition, mouth and associated structures, including assessment of vital signs.	• Findings of General examination, Extra-oral examination including Head, Neck, TMJ and Lymph nodes and details recorded • Findings of Intra-oral examination recorded. • Any abnormal change of both intra oral and extra oral examination are identified correctly and recorded. • Any abnormality on the tongue, buccal mucosa, soft palate and frenum attachment are identified	2
Identify and record the chief complaint, history of the present condition, medical,	• Case history recorded correctly including details of: ▪ Chief complaint ▪ History of presenting illness	2

Competence Standards	Assessment Criteria	Marks
oral and social history of the patient.	▪ Medical & Social history ▪ Past dental history	
Select, take, and interpret diagnostic images and other diagnostic procedures relevant to the patient's condition.	• Selection of appropriate investigation for the patient • Cephalometric analysis • Correct Interpretation of teeth present in the OPG • Recognize dental age of the patient	3
Maintain accurate, consistent, legible and contemporaneous records of the patient.	• Diagnosis and treatment plan discussed with the supervisor • Next/follow up appointment of patient provided	3
Diagnosis and Management Planning – 10 Marks		
Formulate and record a comprehensive, patient-centred, evidence-based oral health treatment plan.	• Proper Diagnosis and treatment plan established based upon the history, Clinical examination, Radiographs Study model analysis and contemporary knowledge as per evidence available • A Patient centric treatment plan is explained and discussed with the patient and family for their opinion	2
Diagnose disease or abnormalities of the oral cavity and associated structures and identify conditions which require management and referral.	• All extra oral/ intra oral abnormality recorded and addressed • Formulate problem list after case history, Clinical Examination, Study models, Photographic analysis and Cephalometric analysis • Comprehensive treatment plan prepared. • Diagnosis of malocclusion • Patient prepared for referral if complex in nature.	2
Recognize the manifestations of systemic conditions and how these and their management may affect the management of dental care.	• Details of medical history and hospitalization recorded Oral manifestations of systemic conditions recorded • Risk of orthodontic therapy on systemic health noted	2

Competence Standards	Assessment Criteria	Marks
	• Appropriate referrals/ consent obtained from physician prior to treatment	
Apply the principles of preventive care as part of comprehensive treatment plan.	• In Preventive orthodontic significance of maintaining good oral hygiene explained to the patient and encourages the patient for same • Oral hygiene education and motivation provided	2
Ensure and record patient informed consent for treatment and their financial obligation.	• Informed consent recorded if the procedure needs it • Financial obligations if any is discussed with the patient	2
<u>Clinical Treatment and Evaluation – 20 Marks</u>		
Identify patient's anxiety and pain related to the oral cavity and associated structures and respond appropriately.	• Identify the patient's ability to cope with treatment procedure based on medical & Dental History. • Appropriate handling & use of instruments during the treatment procedures.	3
Evaluate and formulate treatment plan based on all available diagnostic records.	• Explain the treatment plan to the patient with different treatment options that can be done • Wire bending skills • to be referred to a orthodontic specialist for standard of care	8
Apply universal infection control guidelines for all clinical procedures.	Apply universal infection control guidelines for all clinical procedures by: ▪ Practicing Hand hygiene. ▪ Working in clean/ and disinfected operatory. ▪ Appropriate use of personal protective equipment. ▪ Sterilized instruments are used. ▪ Appropriate handling of instruments, sharp and medical waste.	4
Manage patients from different age groups, medically compromised patients, and people of determination according to their needs.	• Identify the risk factors of orthodontic patient with systemic diseases • Refer for medical evaluation and treatment and develop complete orthodontic treatment plan with physician • Precautions that should be taken before proceeding to orthodontic therapy and effect of different drugs on orthodontic therapy	3

Competence Standards	Assessment Criteria	Marks
	• Assessment of periodontal disease risk with different age groups with definitive orthodontic therapy	
Administer and/or prescribe pharmaceutical agents relevant to routine dental practice.	Has knowledge and demonstrates ability in prescribing drugs during orthodontic therapy	2
Section 3: Health Promotion Domain – 15 marks		
Evaluate the social, cultural and environmental factors which contribute to health or illness	• Recorded complete demographic details of the patient. • Demonstrates the understanding of the significance of demographic details. • Evaluate how it may influence the presenting condition	3
Apply the principles of health promotion strategies and disease prevention to promote oral l and general health, quality of life, and wellbeing	• Health promotion principles are applied with evidence on the importance and practice of prevention of oral diseases. • Demonstrates skills of proper oral hygiene instruction and education with proper tooth brushing technique and other cleansing aid. • Provides demonstrations on proper diet and its impact on oral and dental health. • Identify the contributing factors and the preventive methods of caries • Occlusal equilibration if premature contact exist to avoid establishing malocclusion	3
Collaborate with dental team members and other health care professionals in the management of oral health care and health promotion for all patients	• Maintains professional relationships with patients, colleagues, staff and faculty • Seeks/refers for consultation from specialists as needed.	3
Assess the risk factors and behaviours such as nutrition, drugs and diseases that can have an impact on oral healthcare	Risk assessment done in terms of Oral hygiene maintenance • Systemic conditions such diabetes and endocrine imbalance	3

Competence Standards	Assessment Criteria	Marks
Design, implement and evaluate evidence-based health promotion programs.	Is innovative in providing a care plan Practices a follow-up plan as applicable to the patient.	3
Section 4. Communication and Social Skills Domain – 15 marks		
Apply appropriate inter-professional and communication skills that allow building a teamwork approach to the delivery of oral healthcare.	Communicates effectively with: ▪ Peer group/team ▪ Staff ▪ Faculty ▪ Other healthcare professionals as applicable ▪ Applied 4 handed dentistry	3
Demonstrate appropriate interpersonal skills in mentoring and participating in activities within a health care team.	• Demonstrate appropriate interpersonal communication skills • In case presentation • Discussion of care plan • In referring patients to other team members	3
Document and share written and electronic information about the dental encounter to optimize clinical decision-making and patient safety, ensuring confidentiality and privacy.	All the information is recorded appropriately to: ▪ Prioritize patient safety. ▪ Provide a handover/referral If and when needed. ▪ Ensures privacy and confidentiality regarding details of patients.	3
Present clear information to patients in a timely manner, that ensures that they are advised of and understand the different treatment options including risks and benefits.	• Details of treatment plans discussed with the patient including both the ideal and alternative treatment plans. • Advantages, risks, and disadvantages of the treatment planned are explained to the patient.	2
Communicate responsibly and professionally, including when using social media.	• Communicates respectfully with patients, colleagues, staff and faculty. • Seeks permission from patients and the faculty before using social media to showcase the treatment on social 2 media.	2
Communicate and engage patients, their families and communities in relation to oral health	Treatment plan discussed with patients and families.	2

Competence Standards	Assessment Criteria	Marks
Section 5: Scientific and Clinical Knowledge Domain -15 Marks		
Communicate effectively within the organizational hierarchy.	Respects the hierarchy of the team and communicates accordingly in a disciplined manner.	2
Recognize cultural diversity and apply cultural competency in caring for patients and communities.	Respects the cultural and ethnical differences of all involved.	2
Evaluate published clinical and basic science research and integrate this information to improve oral and dental health	• Has knowledge relevant to the most recent published literature • Applies knowledge adequately to treat the patient satisfactorily.	2
Apply the biomedical, physical, and behavioral sciences in relation to oral health and disease.	Plans to prevent unwanted exposure to ionizing radiation or X rays.	2
Apply the scientific basis, application and risks of using ionizing radiation, anesthesia, and risk management and quality improvement.	Decides upon the type of x-rays needed and prevents unnecessary and repeated exposure. 3D imaging is advised only if 2D imaging Fails to give needed information for diagnose where 3-D imaging give additional information	2
Demonstrate foundation knowledge as relevant to clinical skills related to orthodontics	Demonstrates knowledge & skills in: • Space analysis for the correction of malocclusion • Photographic analysis for treatment planning	5

3. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type: **Procedure Type:**	**Competencies in Clinical Courses**	**Prepared by:** **Dr. Dusan Surdilovic** **Professor**
Title:	**Clinical Pediatric Dentistry**	
Policy Number:	**CC.08**	**Reviewed by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Oct 2022**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Edition Number	**2**	
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

Purpose

This course describes the principles of pediatric oral health management with special emphasis on growth & development. Theory and clinical training will be focused on the significance of preventive dentistry, understanding of child psychology, guidance of behaviour, management of dental problems in children including early childhood caries, rampant caries, pulp therapies, space management and temporary/metallic crowns.

Scope

To understand the number of clinical requirements at different levels of BDS program in the specific discipline and to illustrate the BDS professional competency standards rubrics used for the assessment of clinical competency at RAK College of Dental Sciences (RAKCODS).

2. Policy Statements

2.1. Guidelines for Clinical Work:

2.1.1. Uphold professional attitude and behaviour

2.1.2. Communicate respectfully with colleagues and staff

2.1.3. Show empathy towards patients and attendants

2.1.4. Apply appropriate infection control measures

2.1.5. Adapt the ability to work safely and effectively

2.1.6. Collect the relevant information and use them for diagnosis

2.1.7. Apply a systematic process for patient management

2.1.8. Select the proper instruments for the procedure

2.1.9. Enter all the procedures in progress sheet and complete patient's file

2.1.10. Maintain the clinical competency evaluation form and enter all details with timely approvals on HIMS

2.2. Clinical Work:

2.2.1. History taking and examination of the oral cavity and behavior management of the assigned pediatric patients

2.2.2. Interpret the findings from history, clinical examination, radiographs and other appropriate diagnostic procedures/tests to identify the etiology, pathogenesis and to establish diagnosis and treatment planning

2.2.3. Perform fillings, provide stainless steel crowns and fissure sealants during the clinical session on the assigned pediatric patients

2.2.4. Educate the patients in plaque control methods

2.3. Clinical Requirements:

2.3.1. BDS Year 4

- Fissure sealants - 5 teeth
- Fluoride application - 5 patients
- Restorations - 5 primary teeth
- Extractions - 5 primary teeth
- Direct/indirect pulp capping - 2 primary teeth
- Pulpotomy/Pulpectomy - 2 primary teeth
- Stainless steel crowns - 2 primary teeth

- Space maintainers – 2

2.3.2. BDS Year 5

- Fissure sealant – 5 teeth
- Fluoride application – 5 patients
- Restorations - 10 teeth
- Extractions - 10 teeth
- Pulp treatment (Indirect/Direct Pulp capping, Pulpotomy/Pulpectomy) - 5 teeth
- Space maintainer - 1

2.3.3. Internship

- Fissure sealant – 10 teeth
- Fluoride application – 10 patients
- Restorations - 10 teeth
- Extractions - 10 teeth
- Pulpotomy/Pulpectomy – 2 teeth
- Space maintainer – 1

2.4. Assessments

Students' competency on clinical skills is assessed on a specially designed "Clinical examination Assessment criteria" based on a 5-point scale Excellent (90-100%), Very Good (80-89%), Good (70-79%), Satisfactory (60-69%) and Unsatisfactory (<60%). If it is found to be unsatisfactory, the student will be informed immediately or within 24 hours by email and the student has to repeat the procedure within two weeks' time.

Following are used to assess the clinical skills of the students

1. Objective Structured Clinical Examination (OSCE); one OSCE will be conducted during the mid of fall semester.
2. In Course Assessment Clinical Examination; 2 clinical examinations, one of which will be at the end of fall semester and the other in the mid of spring semester as per the criteria given below in each discipline.

2.4.1. The clinical requirements and examinations are graded based upon the Professional Competence Standards of Graduates of Baccalaureate Dental

Initial Training and Education Programs laid down by the Ministry of Education as a part of the Reforming Dentistry Program in 2021.

2.4.1.1. The following table is used to grade student performance for all the domains

NO.	DOMAIN	MARKS
1	**Professional Domain**	15
2	**Patient-Centered Care Domain** • ***Clinical Information Gathering*** • ***Diagnosis and Management Planning*** • ***Clinical Treatment and Evaluation***	40
3	**Health Promotion Domain**	15
4	**Communication and Social Skills Domain**	15
5	**Scientific and Clinical Knowledge Domain**	15

2.4.1.2. The following table shows the criteria to grade students for clinical requirements and clinical assessments

CRITERIA	GRADE/ MARKS
• Excellent knowledge and ability to recall all information related to professionalism as mentioned below in the competency. • No assistance is required from the clinical supervisor	**Excellent** 90-100%
• Good Knowledge. Student recalls almost all points related to the case. Seeks supervision from supervisor at times when in doubt, does not need assistance while working from supervisor	**Very good** 80-89%
• Sound knowledge and ability. The student is able to recall all information with few missing points. • Occasional assistance while working is required from the clinical supervisor.	**Good** 70-79 % Performance better than expected
• Sound knowledge and ability. May include minor deviations from accepted practice that can be easily corrected and that would not significantly compromise the clinical outcome. Limited assistance required from the clinical supervisor.	**Satisfactory** 60-69% Consistent with expected
• Significant gaps in understanding and/or deviations from accepted practice that compromises patient safety or patient outcomes. • Performing treatment without approval from clinical supervisor. • Significant assistance required from the clinical supervisor to prevent adverse outcomes.	**Unsatisfactory** < 60 % Unsafe treatment Repeat the procedure

2.4.1.3. Clinical Procedure Evaluation Form to be used for requirements and clinical examinations

MR No	**Student ID and Name**	
Tooth Number and Clinical Procedure	**Faculty Name, Sign & Date**	
1. Professionalism Domain 15 marks	**Grades**	**Remarks**
• Apply ethical standards and comply with national legal and regulatory requirements in the provision of dental care. • Ensure that patient safety is paramount in all decisions and actions. • Recognize professional and individual scopes and limitations of practice or refer patients to professional colleagues when indicated. • Demonstrate empathy and caring behavior towards patients, their families and members of the community. • Ensure that all actions focus on the patients' best interests and respect patients' dignity, rights and choices. • Protect patients' privacy and confidentiality. • Maintain effective relationships with peers and respect professional boundaries. • Recognize the importance of continuing education and professional development for self and all members of the dental team.		
2. Section 2: Patient-Centered Care Domain- 40 marks		
2.1 Clinical Information Gathering- 10 marks • Perform an extra-oral and intra-oral examination for health, disease and abnormalities of the dentition, mouth and associated structures, including assessment of vital signs. • Identify and record the chief complaint, history of the present condition, medical, oral and social history of the patient. • Select, take, and interpret diagnostic images and other diagnostic procedures relevant to the patient's condition. • Maintain accurate, consistent, legible and contemporaneous records of the patient.		
2.2 Diagnosis and Management Planning -15 marks • Formulate and record a comprehensive, patient-centered, evidence • Diagnose disease or abnormalities of the oral cavity and associated structures and identify conditions which require management and referral. • Recognize the manifestations of systemic conditions and how these and their management may affect the management of dental care.		

• Apply the principles of preventive care as part of comprehensive treatment plan. • Ensure and record patient informed consent for treatment and their financial obligation.			
2.3 Clinical Treatment and Evaluation (will differ specialty wise, highlight the procedure) -15 marks			
Restoration	**Pulp Therapy**		
Tooth preparation and restoration	Access opening, cleaning and shaping		
Finishing and polishing	Obturation and Restoration		
Extraction	**Fissure Sealants**		
Patient and Pain management Removal of tooth and post op instructions	Isolation, sealant application		
Stainless steel crown	Finishing and polishing if applicable		
Tooth preparation			
Crown fitting, placing and cementing			
3. Health Promotion Domain 15 marks			
• Evaluate the social, cultural and environmental factors which contribute to health or illness. • Apply the principles of health promotion strategies and disease prevention to promote oral and general health, quality of life and wellbeing. • Collaborate with dental team members and other health care professionals in the management of oral health care and health promotion for all patients. • Assess the risk factors and behaviors such as nutrition, drugs and diseases that can have an impact on oral healthcare. • Design, implement and evaluate evidence-based health promotion programs. • Apply caries risk assessment (CRA) on different age groups and design a customized preventive program. • Demonstrate creativity in promoting oral health within the community using a variety of platforms.			
4. Communication and Social Skills Domain 15 marks			
• Apply appropriate interprofessional and communication skills that allow building a teamwork approach to the delivery of oral healthcare.			

• Demonstrate appropriate interpersonal skills in mentoring and participating in activities within a health care team. • Document and share written and electronic information about the dental encounter to optimize clinical decision-making and patient safety, ensuring confidentiality and privacy. • Present clear information to patients in a timely manner, that ensures that they are advised of and understand the different treatment options including risks and benefits. • Communicate responsibly and professionally, including when using social media. • Communicate and engage patients, their families and communities in relation to oral health. • Communicate effectively within the organizational hierarchy. • Recognize cultural diversity and apply cultural competency in caring for patients and communities.		
5. Scientific and Clinical Knowledge Domain 15 marks		
• Evaluate published clinical and basic science research and integrate this information to improve the oral health of the patient. • Apply the biomedical, physical and behavioral sciences in relation to oral health and disease. • Design and implement research in a critical and scientific manner relevant to dentistry. • Apply the scientific basis, application and risks of using ionizing radiation, dental materials and risk management and quality improvement. • Demonstrate foundation knowledge as relevant to clinical skills in Pediatric dentistry.		

Grades: Grades are based on a 5-point scale (tick as applicable)

Excellent (90-100%) ☐

Very-good (80-89%) ☐

Good (70-79%) ☐

Satisfactory (60-69%) ☐

Unsatisfactory (Repeat procedure) (<60%) ☐

2.4.1.4. The rubrics based upon which the evaluation form has been prepared is as follows

Competence Standards	Assessment Criteria	Marks
1. Professional Domain – 15 Marks		
Apply ethical standards and comply with national legal and regulatory requirements in the provision of dental care.	Checks patient record to understand • Patient meets the criteria of registration • Signed consent form available on patient forms on HIMS • Patient rights & responsibilities available on patient forms on HIMS	2
Ensure that patient safety is paramount in all decisions and actions.	• Patient identification done • Reassessment was done as necessary • Checked for medical alerts on system	2
Recognize professional and individual scopes and limitations of practice or refer patients to professional colleagues when indicated.	• Required investigations done • Provisional and final diagnosis is correct • Treatment plan is completed and discussed with patient and family • Refers patient for specialty treatment if it is not within the scope of the school after consulting with the supervisor.	2
Demonstrate empathy and caring behaviour towards patients, their families and members of the community.	• Greets the patient and makes him/ her comfortable in the clinic. • Makes sure the patient/families of the patients are also attended to and involved in decision making. • Interdisciplinary health education form completed as per HIMS.	2
Ensure that all actions focus on the patients' best interests and respect patients' dignity, rights and choices.	• The care plan is discussed with the patient and family. • His/her choices of treatment are respected. • Performs treatment in the best interest of the patient.	2
Protect patients' privacy and confidentiality.	• Patients' history and case details are kept confidential. • There is no breach of patient's personal information.	2

Competence Standards	Assessment Criteria	Marks
	• The information of the patient is dealt professionally. • All the patient details after being saved in HIMS, the student checks out before logging out.	
Maintain effective relationships with peers and respect professional boundaries.	• Behaves and respects patients, colleagues, staff and faculty professionally and ethically. • All the patient information discussed with the faculty.	1
Recognize the importance of continuing education and professional development for self and all members of the dental team.	• Appropriate knowledge related to the diagnosis and treatment planning of pediatric dental diseases presented. • The knowledge shown during the case presentation was updated and was evidence based.	2
2: Patient-centered Care Domain - 40 marks		
<u>Clinical Information Gathering 10 Marks</u>		
Perform an extra-oral and intra-oral examination for health, disease and abnormalities of the dentition, mouth and associated structures, including assessment of vital signs.	• Findings of Extra-oral examination including Head, Neck, TMJ and Lymph nodes and details recorded. • Findings of Intra-oral examination recorded. • Any abnormal change of both intra oral and extra oral examination are identified correctly and recorded.	2
Identify and record the chief complaint, history of the present condition, medical, oral and social history of the patient.	• Case history recorded correctly including details of: ▪ Chief complaint ▪ History of presenting illness ▪ Medical & Social history ▪ Checked for vital signs on HIMS and any deviation is updated.	2
Select, take, and interpret diagnostic images and other diagnostic procedures	• Selection of appropriate investigation for the patient. • Correct Interpretation of investigations.	3

Competence Standards	Assessment Criteria	Marks
relevant to the patient's condition.	• Appropriate thermal tests or any other diagnostic procedure needed is completed	
Maintain accurate, consistent, legible and contemporaneous records of the patient.	• Diagnosis and treatment plan discussed with the supervisor • All details of patient including diagnosis and treatment plans duly approved on HIMS before performing treatment • Progress notes correctly mentioned • Next/follow up appointment of patient provided	3
Diagnosis and Management Planning – 10 Marks		
Formulate and record a comprehensive, patient-centered, evidence-based oral health treatment plan.	• Proper diagnosis and treatment plan established based upon the history, investigations and contemporary knowledge as per evidence available • A Patient centric treatment plan is explained and discussed with the patient and family for their opinion	2
Diagnose disease or abnormalities of the oral cavity and associated structures and identify conditions which require management and referral.	• All intra/extra oral abnormality recorded and addressed • Diagnosis for all findings established • Comprehensive treatment plan prepared. • Patient prepared for referral if complex in nature.	2
Recognize the manifestations of systemic conditions and how these and their management may affect the management of dental care.	• Details of medical history and hospitalization recorded • Oral manifestations of systemic conditions recorded • Risk of presenting dental diseases on systemic health noted if any. • Appropriate referrals/ consent obtained from physician prior to treatment if needed.	2
Apply the principles of preventive care as part of comprehensive treatment plan.	• Preventive care explained to the patient and encourages the patient for same • Oral hygiene education & motivation provided	2

Competence Standards	Assessment Criteria	Marks
Ensure and record patient informed consent for treatment and their financial obligation.	• Informed consent recorded if the procedure needs it • Financial obligations if any is discussed with the patient	2
Clinical Treatment and Evaluation – 20 Marks		
Identify patient's anxiety and pain related to the oral cavity and associated structures and respond appropriately.	• Identify the patient's ability to cope with treatment procedure based on medical & Dental History. • Appropriate handling & use of instruments during the treatment procedures.	2
Apply universal infection control guidelines for all clinical procedures.	Apply universal infection control guidelines for all clinical procedures by: ▪ Practicing Hand hygiene. ▪ Working in clean/ and disinfected operatory. ▪ Appropriate use of personal protective equipment. ▪ Sterilized instruments are used. ▪ Appropriate handling of instruments, sharp and medical waste.	2
	All the following clinical procedures	14
Manage patients from different age groups, medically compromised patients, and people of determination according to their needs.	• Adequate knowledge on child psychology and behaviour guidance • Manages patient according to age Preventive procedure like **<u>Fissure sealants</u>** • Is knowledgeable of the preventive procedures to be performed • Demonstrates skills in • Isolation • Fissurotomy • Sealant application • Checking for high points and polishing as needed • Post-operative instructions **<u>Fluoride application</u>**	

Competence Standards	Assessment Criteria	Marks
	• Is knowledgeable of the preventive procedures to be performed • Demonstrates skills in • Isolation • Fluoride application • Post-operative instructions	
Perform preventive therapeutic procedures to preserve the vitality of the pulp.	Restorative procedures & Pulp therapies including deep restorations, Indirect Pulp Capping, Direct Pulp Capping. Is knowledgeable of the restorative procedure/s to be performed • Demonstrates skills in • Case selection • Local anesthesia • Rubber dam application appropriate isolation • Preparation of tooth • Choice of restorative material • Proper restoration • Checking for high points • Polishing as needed • Post-operative instructions	
	Pulp therapies like pulpotomies and pulpectomies Is knowledgeable of the procedure/s to be performed **<u>Pulpotomy</u>** • Demonstrates skills in • Case selection • Local anesthesia • Rubber dam application/ appropriate isolation • Preparation of access • amputation of the coronal pulp • Haemostasis • applying theraputic pulp medicament • Intermediate Restorative Material	

Competence Standards	Assessment Criteria	Marks
	• Post-operative restoration • Post-operative instructions **<u>Pulpectomy</u>** • Demonstrates skills in • Case selection • Local anesthesia • Rubber dam application/ appropriate isolation • Preparation of access • Working length estimation • Cleaning & Shaping • Obturation of the canals • Post-operative restoration • Post-operative instructions	
• Manage uncomplicated tooth extractions and perform minor oral surgical procedures.	Is knowledgeable of the procedure/s to be performed • Demonstrates skills in • Case selection • Local anaesthesia • Choice of extraction forceps • Post-operative instructions	
Manage restorative procedures that preserve tooth structure, replace defective tooth structure, maintain function, aesthetics, and promote soft and hard tissue health using direct or indirect methods.	Stainless steel crowns Is knowledgeable of the procedure/s to be performed • Demonstrates skills in • Case selection • Local anesthesia • Choosing the correct crown • Tooth preparation • Seating/try-in of crown • Cementation of crown • Post-operative instructions Space management Is knowledgeable of the procedure/s to be performed • Demonstrates skills in • Case selection • Deciding upon type of space	

Competence Standards	Assessment Criteria	Marks
	maintainer • Impressions of arches • Lab requisition • Delivery of space maintainer • Post-operative instructions	
Administer and/or prescribe pharmaceutical agents relevant to routine dental practice.	Has knowledge and demonstrates ability in prescribing drugs for pediatric patients	2
Section 3: Health Promotion Domain – 15 marks		
Evaluate the social, cultural and environmental factors which contribute to health or illness.	• Recorded complete demographic details of the patient. • Demonstrates the understanding of the significance of demographic details. • Evaluate how it may influence the presenting condition/s.	2
Apply the principles of health promotion strategies and disease prevention to promote oral and general health, quality of life and wellbeing.	Health promotion principles are applied with evidence on the importance and practice of • Prevention of oral diseases • Demonstrating skills of proper oral hygiene instruction and education with proper tooth brushing technique and other cleansing aid. • Providing demonstrations on proper diet and its impact on health. • Identifying the contributing factors and its prevention & management if applicable.	3
Collaborate with dental team members and other health care professionals in the management of oral health care and health promotion for all patients.	• Maintains professional relationship with patients, colleagues, staff and faculty • Seeks/refers for consultation from specialists as needed.	2
Assess the risk factors and behaviours such as nutrition, drugs and	• Risk assessment done in terms of • Dietary factors • Oral hygiene maintenance	2

Competence Standards	Assessment Criteria	Marks
diseases that can have an impact on oral healthcare.	• Systemic health conditions	
Design, implement and evaluate evidence-based health promotion programs.	• Is innovative in providing a care plan • Practices a follow up plan as applicable to the patient	2
Apply caries risk assessment (CRA) on different age groups and design a customized preventive program.	• Caries risk assessment for the particular age group • Preventive program developed based upon the caries risk assessment	2
Demonstrate creativity in promoting oral health within the community using a variety of platforms.	• Is innovative in promoting oral health with the patients and their families	2
Section 4. Communication and Social Skills Domain – 15 marks		
Apply appropriate inter-professional and communication skills that allow building a teamwork approach to the delivery of oral healthcare.	Communicates effectively with: ▪ Peer group/team ▪ Staff ▪ Faculty ▪ Other healthcare professionals as applicable ▪ Applied 4 handed dentistry	2
Demonstrate appropriate interpersonal skills in mentoring and participating in activities within a health care team.	• Demonstrate appropriate interpersonal communication skills • In case presentation • Discussion of care plan • In referring patients to other team members	2
Document and share written and electronic information about the dental encounter to optimize clinical decision-making and patient safety, ensuring confidentiality and privacy.	All the information is recorded appropriately to: ▪ Prioritize patient safety. ▪ Provide a handover If and when needed. ▪ Ensures privacy and confidentiality regarding details of patient.	2

Competence Standards	Assessment Criteria	Marks
Present clear information to patients in a timely manner, that ensures that they are advised of and understand the different treatment options including risks and benefits.	• Details of treatment plans discussed with patient including both the ideal and alternative treatment plans. • Advantages, risks and disadvantages of the treatment planned is explained to the patient.	2
Communicate responsibly and professionally, including when using social media.	• Communicates respectfully with patients, colleagues, staff and faculty. • Seeks permission from patients and the faculty before using social media to showcase the treatment on social media.	2
Communicate and engage patients, their families and communities in relation to oral health.	Treatment plan discussed with patients and families.	2
Communicate effectively within the organizational hierarchy.	• Respects the hierarchy of the team and communicates accordingly in a disciplined manner	2
Recognize cultural diversity and apply cultural competency in caring for patients and communities.	• Respects the cultural and ethnical differences of all involved	1
Section 5: Scientific and Clinical Knowledge Domain -15 Marks		
Evaluate published clinical and basic science research and integrate this information to improve the dental and oral health of the patient.	• Has knowledge relevant to the most recent published literature • Applies knowledge adequately to treat the patient satisfactorily.	3
Apply the biomedical, physical, and behavioural sciences in relation to oral health and disease.	Plans to prevent unwanted exposure to ionizing radiation or X rays.	3
Apply the scientific basis, application and risks of using ionizing radiation, anaesthesia, and risk management and quality improvement.	• Decides upon the type of x-rays needed and prevents unnecessary and repeated exposure. • Uses dental materials without wasting • Demonstrates knowledge of recent updates in materials used	3

Competence Standards	Assessment Criteria	Marks
Demonstrate foundation knowledge as relevant to clinical skills in Pediatric Dentistry.	• Demonstrates knowledge of the procedure being performed • Demonstrates skills of pediatric dentistry as applicable to the patient and procedure	6

3. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type: **Procedure Type:**	**Competencies in Clinical Courses**	**Prepared by:** **Dr. Krishna Chytanya Nallan** **Assistant Professor**
Title:	**Clinical Oral Medicine and Oral Diagnosis**	
Policy Number:	**CC.09**	**Reviewed by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Oct 2022**	
Edition Number	**2**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. Purpose and Scope

Purpose

The clinical component of this course is aimed to prepare the students for diagnosis and management of oral diseases, to be caring with sympathetic attitude towards the patients, elicits clinical and medical history, undertake a systematic examination of the orofacial region, head and neck.

The students should be able to communicate with patients for establishment of report, facilitate gathering of subjective data and understanding the role between medical and psychosocial problems to oral health. The students should be focused for understanding of the natural history of common oral diseases of oral mucosa in order to get a clear understanding of etiology, pathogenesis, laboratory diagnosis, treatment and control of infections of the oral cavity.

Scope

To understand the number of clinical requirements at different levels of BDS program in the specific discipline and to illustrate the BDS professional competency standards rubrics

used for the assessment of clinical competency at RAK College of Dental Sciences (RAKCODS).

2. Policy Statements

2.1. Guidelines for Clinical Work:

2.1.1. Uphold professional attitude and behaviour

2.1.2. Communicate respectfully with colleagues and staff

2.1.3. Show empathy towards patients and attendants

2.1.4. Apply appropriate infection control measures

2.1.5. Adapt the ability to work safely and effectively

2.1.6. Collect the relevant information and use them for diagnosis

2.1.7. Apply a systematic process for patient management

2.1.8. Select the proper instruments for the procedure

2.1.9. Enter all the procedures in progress sheet and complete patient's file

2.1.10. Maintain the clinical competency evaluation form and enter all details with timely approvals on HIMS

2.2. Clinical Requirements

2.2.1. BDS Year 4

- 5 clinical case presentations

2.3. Assessments

Students' competency on clinical skills is assessed on a specially designed "Clinical examination Assessment criteria" based on a 5-point scale Excellent (90-100%), Very Good (80-89%), Good (70-79%), Satisfactory (60-69%) and Unsatisfactory (<60%). If it is found to be unsatisfactory, the student will be informed immediately or within 24 hours by email and the student has to repeat the procedure within two weeks' time.

Following are used to assess the clinical skills of the students

1. Objective Structured Clinical Examination (OSCE); one OSCE will be conducted during the mid of fall semester.
2. In Course Assessment Clinical Examination; 2 clinical examinations, one of which will be at the end of fall semester and the other in the mid of spring semester as per the criteria given below in each discipline.

2.4.1. The clinical requirements and examinations are graded based upon the Professional Competence Standards of Graduates of Baccalaureate Dental Initial Training and Education Programs laid down by the Ministry of Education as a part of the Reforming Dentistry Program in 2021.

2.4.1.1. The following table is used to grade student performance for all the domains

NO.	DOMAIN	MARKS
1	**Professional Domain**	15
2	**Patient-Centered Care Domain** • ***Clinical Information Gathering*** • ***Diagnosis and Management Planning*** • ***Clinical Treatment and Evaluation***	40
3	**Health Promotion Domain**	15
4	**Communication and Social Skills Domain**	15
5	**Scientific and Clinical Knowledge Domain**	15

2.4.1.2. The following table shows the criteria to grade students for clinical requirements and clinical assessment

CRITERIA	GRADE/ MARKS
• Excellent knowledge and ability to recall all information related to professionalism as mentioned below in the competency. • No assistance is required from the clinical supervisor	Excellent 90-100%
• Good Knowledge. Student recalls almost all points related to the case. Seeks supervision from supervisor at times when in doubt, does not need assistance while working from supervisor	Very good 80-89%
• Sound knowledge and ability. The student is able to recall all information with few missing points. • Occasional assistance while working is required from the clinical supervisor.	Good 70-89 % Performance better than expected
• Sound knowledge and ability. May include minor deviations from accepted practice that can be easily corrected and that would not significantly compromise the clinical outcome. Limited assistance required from the clinical supervisor.	Satisfactory 60-69% Consistent with expected
• Significant gaps in understanding and/or deviations from accepted practice that compromises patient safety or patient outcomes.	Unsatisfactory < 60 %

• Performing treatment without approval from clinical supervisor. • Significant assistance required from the clinical supervisor to prevent adverse outcomes.	Unsafe treatment Repeat the procedure

2.4.1.3. Clinical Procedure Evaluation Form to be used for requirements and clinical examinations

MR No	**Student ID and Name**		
Tooth Number and Clinical Procedure	**Faculty Name, Sign & Date**		
1. Professionalism Domain	**15 marks**	**Grades**	**Remarks**
• Apply ethical standards and comply with national legal and regulatory requirements in the provision of dental care. • Ensure that patient safety is paramount in all decisions and actions. • Recognize professional and individual scopes and limitations of practice or refer patients to professional colleagues when indicated. • Demonstrate empathy and caring behavior towards patients, their families and members of the community. • Ensure that all actions focus on the patients' best interests and respect patients' dignity, rights and choices. • Protect patients' privacy and confidentiality. • Maintain effective relationships with peers and respect professional boundaries. • Recognize the importance of continuing education and professional development for self and all members of the dental team.			
2. Section 2: Patient-Centered Care Domain- 40 marks			
2.1 Clinical Information Gathering- 10 marks • Perform an extra-oral and intra-oral examination for health, disease and abnormalities of the dentition, mouth and associated structures, including assessment of vital signs. • Identify and record the chief complaint, history of the present condition, medical, oral and social history of the patient. • Select, take, and interpret diagnostic images and other diagnostic procedures relevant to the patient's condition. • • Maintain accurate, consistent, legible and contemporaneous records of the patient.			
2.2 Diagnosis and Management Planning -15 marks • Formulate and record a comprehensive, patient-centered, evidence based oral health treatment plan			

• Diagnose disease or abnormalities of the oral cavity and associated structures and identify conditions which require management and referral. • Recognize the manifestations of systemic conditions and how these and their management may affect the management of dental care. • Apply the principles of preventive care as part of comprehensive treatment plan. • Ensure and record patient informed consent for treatment and their financial obligation.		
2.3 Clinical Treatment and Evaluation (will differ specialty wise, highlight the procedure) -20 marks		
• Identify patient's anxiety and pain related to the oral cavity and associated structures and respond appropriately. • Evaluate and manage the mucosal lesions and conditions of oral cavity • Apply universal infection control guidelines for all clinical procedures. • Manage patients from different age groups, medically compromised patients, and people of determination according to their needs • Administer and/or prescribe pharmaceutical agents relevant to routine dental practice.		
3. Health Promotion Domain 15 marks		
• Evaluate the social, cultural and environmental factors which contribute to health or illness. • Apply the principles of health promotion strategies and disease prevention to promote oral and general health, quality of life and wellbeing. • Collaborate with dental team members and other health care professionals in the management of oral health care and health promotion for all patients. • Assess the risk factors and behaviors such as nutrition, drugs and diseases that can have an impact on oral healthcare. • Design, implement and evaluate evidence-based health promotion programs.		
4. Communication and Social Skills Domain 15 marks		
• Apply appropriate interprofessional and communication skills that allow building a teamwork approach to the delivery of oral healthcare. • Demonstrate appropriate interpersonal skills in mentoring and participating in activities within a health care team.		

• Document and share written and electronic information about the dental encounter to optimize clinical decision-making and patient safety, ensuring confidentiality and privacy. • Present clear information to patients in a timely manner, that ensures that they are advised of and understand the different treatment options including risks and benefits. • Communicate responsibly and professionally, including when using social media. • Communicate and engage patients, their families and communities in relation to oral health.		
5. Scientific and Clinical Knowledge Domain 15 marks		
• Communicate effectively within the organizational hierarchy. • Recognize cultural diversity and apply cultural competency in caring for patients and communities. • Evaluate published clinical and basic science research and integrate this information to improve the oral health of the patient. • Apply the biomedical, physical and behavioral sciences in relation to oral health and disease. • Design and implement research in a critical and scientific manner relevant to dentistry. • Apply the scientific basis, application and risks of using ionizing radiation, anaesthesia and risk management and quality improvement. • Demonstrate foundation knowledge as relevant to clinical skills related to oral medicine.		

Grades: Grades are based on a 5-point scale (tick as applicable)

Excellent (90-100%) ☐

Very-good (80-89%) ☐

Good (70-79%) ☐

Satisfactory (60-69%) ☐

Unsatisfactory (Repeat procedure) (<60%) ☐

2.4.1.4. The rubrics based upon which the evaluation form has been prepared is as follows

Competence Standards	Assessment Criteria	Marks
1. Professional Domain – 15 Marks		
Apply ethical standards and comply with national legal and regulatory requirements in the provision of dental care.	• Checks patient record to understand • Patient meets the criteria of registration • Signed consent form available • Patient rights & responsibilities available	2
Ensure that patient safety is paramount in all decisions and actions.	• Patient identification done • Reassessment was done as necessary • Checked for medical alerts on system.	2
Recognize professional and individual scopes and limitations of practice or refer patients to professional colleagues when indicated.	• Required investigations done • Provisional and final diagnosis is correct • Treatment plan is completed and discussed with patient and family • Refers patient for specialty treatment as and when required	2
Demonstrate empathy and caring behavior towards patients, their families and members of the community.	• Greets the patient and makes him/ her comfortable in the clinic. • Makes sure the patient/families of the patients are also attended to and involved in decision making. • Interdisciplinary health education form completed as per HIMS.	2
Ensure that all actions focus on the patients' best interests and respect patients' dignity, rights and choices.	• The care plan is discussed with the patient and family. • His/her choices of treatment are respected.	2
Protect patients' privacy and confidentiality.	• Patients history and case details are kept confidential. • There is no breach of patient's personal information. • The information of the patient is dealt professionally. • All the patient details after being saved in HIMS, the student logs out.	2

Competence Standards	Assessment Criteria	Marks
Maintain effective relationships with peers and respect professional boundaries.	• Behaves and respects patients, colleagues, staff and faculty professionally and ethically. • All the patient information discussed with the faculty.	1
Recognize the importance of continuing education and professional development for self and all members of the dental team.	• Appropriate knowledge related to the diagnosis and comprehensive treatment planning presented. • The knowledge shown during the case presentation was updated and was evidence based.	2
2: Patient-centred Care Domain - 40 marks		
<u>Clinical Information Gathering 10 Marks</u>		
Perform an extra-oral and intra-oral examination for health, disease and abnormalities of the dentition, mouth and associated structures, including assessment of vital signs.	• Findings of Extra-oral examination including Head, Neck, TMJ and Lymph nodes and details recorded. Findings of Intra-oral examination recorded. • Any abnormal change of both intra oral and extra oral examination are identified correctly and recorded. • Calculus & debris, measurement of pocket depths and gingival bleeding, tooth mobility, migration, furcation involvement & recession (if present) are recorded • Any abnormality on the tongue, buccal mucosa, soft palate and frenum attachment are identified.	2
Identify and record the chief complaint, history of the present condition, medical, oral and social history of the patient.	• Case history recorded correctly including details of: ▪ Chief complaint ▪ History of presenting illness ▪ Medical & Social history • Checked for vital signs on HIMS and any deviation is updated.	2
Select, take, and interpret diagnostic images and other diagnostic procedures	• Selection of appropriate investigation for the patient. • Correct Interpretation of investigations.	3

Competence Standards	Assessment Criteria	Marks
relevant to the patient's condition.	• General overall assessment and Interpretation of Intraoral and panoramic radiographs	
Maintain accurate, consistent, legible and contemporaneous records of the patient.	• Diagnosis and treatment plan discussed with the supervisor • All details of patient including diagnosis and treatment plans duly approved on HIMS before performing treatment • Progress notes correctly mentioned	3
Diagnosis and Management Planning – 15 Marks		
Formulate and record a comprehensive, patient-centred, evidence-based oral health treatment plan.	• Proper Diagnosis and treatment plan established based upon the history, investigations and contemporary knowledge as per evidence available • A Patient centric treatment plan is explained and discussed with the patient and family for their opinion	3
Diagnose disease or abnormalities of the oral cavity and associated structures and identify conditions which require management and referral.	• All intra/extra oral abnormality recorded and addressed • Diagnosis for all findings established • Comprehensive treatment plan prepared. • Patient prepared for referral if complex in nature.	3
Recognize the manifestations of systemic conditions and how these and their management may affect the management of dental care.	• Details of medical history and hospitalization recorded Oral manifestations of systemic conditions recorded • Appropriate referrals/ consent obtained from physician prior to treatment.	3
Apply the principles of preventive care as part of comprehensive treatment plan.	• Preventive care explained to the patient and encourages the patient for same • Oral hygiene education & motivation provided	3
Ensure and record patient informed consent for	• Informed consent recorded if the procedure needs it	3

Competence Standards	Assessment Criteria	Marks
treatment and their financial obligation.	• Financial obligations if any is discussed with the patient	
<u>Clinical Treatment and Evaluation – 20 Marks</u>		
Identify patient's anxiety and pain related to the oral cavity and associated structures and respond appropriately.	• Identify the patient's ability to cope with treatment procedure based on medical & Dental History. • Appropriate handling & use of instruments during the examination.	3
Evaluate and manage the mucosal lesions and conditions of oral cavity	• Correct and proper sequence of treatment planning. • Explain the treatment plan to the patient with different treatment options that can be done. • Detection and diagnosis of oral potentially malignant conditions, salivary gland disorders, diseases of the tongue and any extraoral manifestation of systemic disorders are thoroughly checked for and appropriately noted. • Identify patients with compromised medical care and referred to the physician in case of any foreseen or immediate medical emergency	8
Apply universal infection control guidelines for all clinical procedures.	Apply universal infection control guidelines for all clinical procedures by: ▪ Practicing Hand hygiene. ▪ Working in clean/ and disinfected operatory. ▪ Appropriate use of personal protective equipment. ▪ Sterilized instruments are used. ▪ Appropriate handling of instruments, sharp and medical waste.	4

Competence Standards	Assessment Criteria	Marks
Manage patients from different age groups, medically compromised patients, and people of determination according to their needs.	• Identify the risk factors of periodontal disease and manifestation of certain systemic disease in oral cavity • Refer for medical evaluation and treatment and develop comprehensive treatment plan with physician in case of oral disorders with medically compromised conditions	3
Administer and/or prescribe pharmaceutical agents relevant to routine dental practice.	Has knowledge and demonstrates ability in prescribing drugs for oral mucosal and non-mucosal problems	2
Section 3: Health Promotion Domain – 15 marks		
Evaluate the social, cultural and environmental factors which contribute to health or illness.	• Recorded complete demographic details of the patient. • Demonstrates the understanding of the significance of demographic details. • Evaluate how it may influence the presenting condition/s.	3
Apply the principles of health promotion strategies and disease prevention to promote general health, quality of life and wellbeing.	• Health promotion principles are applied with evidence on the importance and practice of prevention of oral mucosal, infectious and non-infectious diseases. • Provides demonstrations on proper diet and its impact on health. • Identify the contributing factors and its prevention & management if applicable.	3
Collaborate with dental team members and other health care professionals in the management of oral health care and health promotion for all patients.	• Maintains professional relationship with patients, colleagues, staff and faculty • Seeks/refers for consultation from specialists as needed.	3

Assess the risk factors and behaviors such as nutrition, drugs and diseases that can have an impact on oral healthcare.	• Risk assessment done in terms of Dietary factors
	• Oral hygiene maintenance
	  • Systemic conditions
	  • Smoking
	  • Snuffing
		3

Competence Standards	Assessment Criteria	Marks
Design, implement and evaluate evidence-based health promotion programs.	Is innovative in providing a care plan Practices a follow up plan as applicable to the patient.	3
Section 4. Communication and Social Skills Domain – 15 marks		
Apply appropriate inter-professional and communication skills that allow building a teamwork approach to the delivery of oral healthcare.	Communicates effectively with: ▪ Peer group/team ▪ Staff ▪ Faculty ▪ Other healthcare professionals as applicable ▪ Applied 4 handed dentistry	3
Demonstrate appropriate interpersonal skills in mentoring and participating in activities within a health care team.	• Demonstrate appropriate interpersonal communication skills • In case presentation • Discussion of care plan • In referring patients to other team members	3
Document and share written and electronic information about the dental encounter to optimize clinical decision-making and patient safety, ensuring confidentiality and privacy.	All the information is recorded appropriately to: ▪ Prioritize patient safety. ▪ Provide a handover If and when needed. ▪ Ensures privacy and confidentiality regarding details of patient.	3
Present clear information to patients in a timely manner, that ensures that they are advised of and understand the different treatment options including risks and benefits.	• Details of treatment plans discussed with patient including both the ideal and alternative treatment plans. • Advantages, risks and disadvantages of the treatment planned is explained to the patient.	2
Communicate responsibly and professionally, including when using social media.	• Communicates respectfully with patients, colleagues, staff and faculty. • Seeks permission from patients and the faculty before using social media to showcase the treatment on social 2 media.	2
Communicate and engage patients, their families and communities in relation to oral health.	Treatment plan discussed with patients and families.	2

Competence Standards	Assessment Criteria	Marks
Section 5: Scientific and Clinical Knowledge Domain -15 Marks		
Communicate effectively within the organizational hierarchy.	Respects the hierarchy of the team and communicates accordingly in a disciplined manner.	2
Recognize cultural diversity and apply cultural competency in caring for patients and communities.	Respects the cultural and ethnical differences of all involved.	2
Evaluate published clinical and basic science research and integrate this information to improve the oral health of the patient.	• Has knowledge relevant to the most recent published literature • Applies knowledge adequately to treat the patient satisfactorily.	2
Apply the biomedical, physical, and behavioral sciences in relation to oral health and disease.	Plans to prevent unwanted exposure to ionizing radiation or X rays.	2
Apply the scientific basis, application and risks of using ionizing radiation, anesthesia, and risk management and quality improvement.	Decides upon the type of x-rays needed and prevents unnecessary and repeated exposure.	2
Demonstrate foundation knowledge as relevant to clinical skills related to oral medicine.	Demonstrates knowledge & skills in: • Extra oral Examination of head and neck including salivary glands and lymophnodes • Examination of assymetries, swellings, ulcers in the oral cavity • Comprehensive examination of muscles of mastication and the TMJ. Examination of the cranial nerves • Examination of soft tissue of oral cavity and gingiva with emphasis on red and white lesions and ulcerative vesiculo bullous lesions. • Examination of teeth- number fof teeth present, missing teeth, caries teeth, mobile teeth and occlusal abnormalities.	5

Competence Standards	Assessment Criteria	Marks
	• Formulating a provisional diagnosis, enlisting the required investigations and differential diagnosis • Follow up re-evaluation treatment protocol and referral.	

3. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

18.

CLINICAL PRACTICE GUIDELINES

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Clinical Practice Guidelines**	**Prepared by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Title:	**Policy on Clinical Practice Guidelines and Procedures**	**Reviewed by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Policy Number:	**CPG.01**	
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	
Edition Number	**3**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. Purpose and Goals

1.1 To standardize how RAKCODS identifies, appraises, selects, adapts, implements and reviews evidence-informed clinical practice guidelines.

1.2 To make approved guidelines the baseline for all clinical procedures, protocols and care pathways, reducing unnecessary variation and supporting patient safety, clinical outcomes and patient experience.

2. Scope

2.1 Clinic wide. This policy applies across all dental disciplines and clinical services and to faculty, clinical instructors, dentists, interns, students, nurses and clinical support staff involved in patient care.

3. Definitions and abbreviations

3.1 RAKCODS — RAK College of Dental Sciences. QPS — Quality and Patient Safety. CPG — Clinical Practice Guideline, a set of evidence-informed recommendations that guides clinical decisions.

4. Criteria for including in this policy

4.1 All new, existing and revised clinical procedures, protocols and care pathways, and any clinical checklist that implements them. Existing documents must be assessed at their next scheduled review or earlier if a safety concern or significant evidence change arises.

5. Excluding criteria from this policy

5.1 Administrative procedures outside clinical care is outside the scope of this policy. Clinical procedures without a suitable published guideline remain in scope and require a documented evidence review and approval.

6. Guidelines

6.1 Identify, appraise and select guidelines

6.1.1 The responsible clinical discipline identifies the clinical question and records the guideline source, publication or update date, intended population and services covered. The designated clinical review team uses a standard appraisal form to assess the quality and currency of the evidence, scope and purpose, stakeholder involvement, rigour of development, clarity, applicability to RAKCODS and editorial independence. It considers patient safety, clinical outcomes and patient experience.

6.1.2 The team records its recommendation to adopt, adapt or seek further evidence. It documents the evidence and rationale for any local adaptation. If no suitable guideline exists, it records the best available evidence, the proposed approach and its limitations before submitting the procedure for approval.

6.2 Prepare and review clinical guidelines and protocols

6.2.1 Clinical staff are responsible for preparing and submitting guidelines and protocols for common procedures performed in the clinics. Where a discipline has multiple staff members, they are encouraged to work together to prepare a joint submission.

6.2.2 The People Centered Care Committee discusses the guideline selection procedure with input from patients, families, clinical teams and relevant partners. The review record documents the feedback and how it informed the procedure as applicable and available.

6.3 Resolve conflicting guidelines

6.3.1 When two guidelines are submitted for the same procedure, the Chairperson of Clinical Sciences convenes a meeting with all staff involved. The staff compare the evidence, safety, applicability to RAKCODS and relevance to patient-centred care, then consolidate the submissions into one guideline with the agreement of all staff involved. The decision and rationale must be documented.

6.3.2 The Dean is responsible for final approval of clinical guidelines and protocols and for ensuring their implementation.

6.4 Develop and implement clinical procedures

6.4.1 The responsible discipline uses selected guidelines and input from patients and families to develop or revise procedures that reduce unnecessary variation in care. Each procedure identifies its supporting guideline or evidence, scope, responsibilities, key steps, documentation requirements, escalation criteria where applicable and review date.

6.4.2 The Chairperson of Clinical Sciences reviews clinical content with the Deanship before submission for approval. The responsible discipline communicates the approved procedure, provides training as needed and makes the current version available at the point of care.

6.4.3 Staff and students follow approved procedures within their scope and supervision requirements. When a patient's clinical circumstances or informed preferences warrant a deviation, the responsible clinician documents the rationale and agreed plan in the patient record. Students and interns refer proposed deviations to their supervising clinician.

6.5 Monitor and review guidelines and procedures

6.5.1 The clinical practice guidelines will be monitored during the clinical training of students and undergoes review periodically.

7. References

7.1 The AGREE Next Steps Consortium. *Appraisal of Guidelines for Research & Evaluation II (AGREE II) Instrument*. **2017 update. World Health Organization.** *WHO Handbook for Guideline Development*. **2nd ed. 2014.**

7.2 **National Institute for Health and Care Excellence (NICE).** *Developing NICE Guidelines: The Manual*. **Process and Methods PMG20.**

7.3 **Schünemann HJ, et al.** *GRADE Evidence to Decision (EtD) Frameworks for Adoption, Adaptation, and De Novo Development of Trustworthy Recommendations: GRADE-ADOLOPMENT*. **Journal of Clinical Epidemiology. 2017.**

8. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Clinical Practice Guidelines**	**Prepared by:** **Dr. Mohamed Elsayed Mousa**
Title:	**Root Canal Treatment**	**Reviewed by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Policy Number:	**CPG.02**	
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	
Edition Number	**3**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. Purpose and Goals

1.1. To provide evidence-based recommendations for the assessment, diagnosis, treatment planning, and delivery of root canal treatment to preserve restorable teeth affected by pulpal and apical disease.

1.2. To standardize clinical procedures for root canal treatment across RAKCODS clinics, while allowing appropriate clinical judgment based on the patient's diagnosis, individual circumstances, and treatment needs

2. Scope

2.1. These guidelines apply to the assessment, diagnosis, treatment planning, delivery, documentation, and follow-up of root canal treatment provided within RAKCODS clinical facilities by supervised undergraduate students, trainees, and qualified dental practitioners in accordance with institutional policies and individual scope of practice.

2.2. Cases that exceed the operator's competence, the available clinical resources, or the institution's approved scope of practice must be referred to an appropriately qualified clinician or specialist.

3. Definitions and abbreviations

3.1. RAKCODS- RAK College of Dental Sciences

4. Indications for Root Canal Treatment and Inclusion Criteria

4.1. Clinical and radiological findings of pulp and periapical diseases. Root canal treatment may be indicated when the patient's history, clinical examination, appropriate pulp sensibility and periapical tests, and radiographic findings support a pulpal or apical diagnosis for which root canal treatment is appropriate. The treatment decision must consider tooth restorability, periodontal status, strategic value, patient preferences, and available treatment alternatives.

4.2. Intentional root canal treatment may be considered for planned restorative or prosthodontic rehabilitation when clinically justified. The need for a post-and-core restoration or a prosthodontic request alone is insufficient justification. The decision must consider pulp status, restorability, and periodontal prognosis. The clinical rationale, expected benefits, risks, and available alternatives must be documented, and the patient's informed consent must be obtained before treatment.

4.3. Nonsurgical root canal retreatment may be considered when a previously treated tooth has new or persistent apical periodontitis, or a correctable deficiency in the previous root canal treatment that is likely to compromise the outcome. Before retreatment, the clinician must establish the likely cause of failure, assess tooth restorability and periodontal prognosis, consider alternative treatment options, and discuss the anticipated benefits, risks, and prognosis, with the patient. Referral to an endodontic specialist should be considered when the case exceeds the operator's competence or presents technical complexity.

5. Contraindications, Limitations, and Referral Criteria

5.1. Teeth with an unfavourable prognosis or insufficient functional, or strategic value to justify endodontic treatment.

5.2. Teeth that are non-restorable or for which a definitive restoration cannot reasonably be achieved should not undergo routine root canal treatment.

5.3. Teeth with extensive internal or external root resorption require an individualized assessment of restorability, remaining root structure, periodontal support, and treatment feasibility. Cases with an unfavourable prognosis or complexity beyond the operator's competence should be referred for specialist assessment or managed using an appropriate alternative treatment plan.

5.4. Teeth with confirmed vertical root fractures generally have a poor prognosis; extraction or root resection may be considered based on fracture extent, restorability, and periodontal status.

5.5. Complex anatomical or technical factors that prevent safe and predictable treatment within the operator's competence—including canal calcification, severe canal curvature, complex root anatomy, or other significant limitations—require specialist consultation or referral when indicated.

5.6. Teeth with severe periodontal attachment loss, advanced mobility, or unfavorable periodontal prognosis require an integrated endodontic-periodontal assessment. Root canal treatment should proceed only when the overall prognosis and anticipated benefits justify tooth retention.

5.7. Patients unable to provide informed consent or cooperate safely with treatment may require referral.

5.8. Patients with restricted mouth opening that compromises safe access, visualization, or instrumentation require assessment of treatment feasibility and may require referral.

5.9. Patients with severe temporomandibular joint disorders that limit treatment tolerance require individualized assessment and may require referral.

5.10. Patients with unstable or uncontrolled medical conditions, significant treatment-related risks, or a need for additional medical support should receive appropriate consultation, modification of the treatment plan, or referral to a suitably equipped setting.

6. Clinical guidelines

6.1. Patient assessment, diagnosis, and treatment planning

6.1.1. Before commencing root canal treatment, the clinician must obtain and document a relevant medical and dental history, the patient's presenting symptoms, clinical examination findings, appropriate pulp sensibility and periapical test results, and the results of indicated radiographic investigations.

6.1.2. A pulpal and apical diagnosis must be established and documented before treatment. The diagnosis should be based on the combined clinical findings and investigations; no single test should be interpreted in isolation.

6.1.3. The clinician must assess the tooth's restorability, periodontal condition, strategic value, and overall prognosis. Appropriate treatment alternatives, including vital pulp

treatment where indicated, root canal treatment, referral, and extraction where appropriate, must be considered.

6.1.4. The proposed treatment, reasonable alternatives, anticipated prognosis, significant risks, potential complications, likely number of visits where predictable, and need for definitive restoration and follow-up must be discussed with the patient.

6.2. **Preoperative radiographic assessment**

6.2.1. An appropriate preoperative intraoral radiograph must be obtained and evaluated before treatment, unless an adequate and diagnostically acceptable image is already available. The image should demonstrate the tooth's roots and surrounding periapical tissues as clearly as practicable, with minimal distortion.

6.2.2. Additional radiographic projections may be indicated when needed to clarify root anatomy, canal configuration, periapical findings, or other diagnostic uncertainties.

6.2.3. Cone-beam computed tomography (CBCT) must not be used routinely for uncomplicated cases.

6.3. **Local anesthesia**

6.3.1. The appropriate anesthetic agent and technique should be selected based on the tooth, diagnosis, medical history, allergies, medications, and relevant contraindications.

6.3.2. Adequate anesthesia must be established before commencing treatment. If anesthesia is insufficient, appropriate supplemental techniques should be considered before proceeding.

6.3.3. The administered anesthetic agent, concentration, dose, and relevant clinical details must be documented in accordance with institutional requirements.

6.4. **Pre-endodontic assessment and tooth preparation**

6.4.1. The tooth must be assessed for restorability, periodontal prognosis, structural integrity, and the feasibility of effective isolation before treatment.

6.4.2. Caries and defective restorative material should be removed as necessary to assess restorability, establish a suitable treatment field, and permit adequate isolation and subsequent restoration. Where indicated, pre-endodontic restorative procedures should be completed to provide adequate structural support, prevent contamination, and facilitate safe instrumentation.

6.5. **Rubber dam isolation**

6.5.1. Root canal treatment must be performed under rubber dam isolation. The rubber dam should be placed and its seal verified before endodontic instrumentation, and maintained throughout the procedure.

6.5.2. Effective isolation must prevent salivary contamination of the root canal system and reduce the risk of ingestion or aspiration of instruments and accidental exposure of the patient to irrigants and other treatment materials.

6.5.3. If adequate isolation cannot be achieved, treatment must not proceed until the problem has been resolved or an appropriate alternative management plan has been established.

6.6. **Access cavity preparation**

6.6.1. Access cavity preparation must provide adequate visibility of the pulp chamber, identification of the canal orifices, and straight-line access for safe instrumentation and irrigation while preserving as much sound tooth structure as practicable.

6.6.2. The access cavity should be designed according to the tooth's anatomy, existing restorations, canal configuration, and the requirements for effective cleaning, shaping, and obturation.

6.6.3. In some cases, the initial part of the access cavity is prepared before placing the dental dam so that the inclination of root eminences can be visualized; this information can be used as an indicator of the direction of the long axis of the treated tooth. The dental dam must be placed once the roof of the pulp chamber has been penetrated and the canals identified and before insertion of any hand or rotary file in the patient's mouth.

6.7. **Determination of working length**

6.7.1. Working length must be determined to establish the intended apical extent of canal instrumentation and preparation, taking into account the individual tooth's anatomy and the clinical findings.

6.7.2. An electronic apex locator should be used in conjunction with appropriate clinical assessment. Radiographic assessment should be used when indicated to evaluate root anatomy, verify instrument position, resolve uncertainty, or confirm the working length as part of the adopted clinical protocol.

6.7.3. The clinician must consider anatomical variation, open apices, resorption, and other factors that may affect the reliability or interpretation of working-length measurements. The final working length and the method used to establish it must be documented.

6.7.4. When a working-length radiograph is indicated, the image must clearly demonstrate the instrument in relation to the root apex, with minimal distortion. If the instrument position does not correspond to the intended working length or the image is inconclusive, the working length must be reassessed and further imaging obtained only when clinically justified.

6.8. **Root canal preparation**

6.8.1. Root canal preparation must facilitate effective cleaning, irrigation, and subsequent obturation while maintaining the original canal pathway and preserving as much sound radicular dentine as practicable.

6.8.2. Instrumentation must be performed using an appropriate technique and instruments selected according to the tooth's anatomy, canal curvature, and clinical requirements. The operator must take measures to minimize ledging, transportation, perforation, instrument separation, and other procedural complications.

6.8.3. Working length must be monitored throughout preparation. The intended apical extent of preparation should be maintained while avoiding unnecessary enlargement or damage to the apical anatomy.

6.8.4. Irrigation must accompany instrumentation throughout canal preparation, using an appropriate irrigant-delivery technique and measures to minimize the risk of irrigant extrusion.

6.8.5. The completion of preparation should be assessed before obturation, with additional clinical or radiographic verification when indicated.

6.9. **Irrigation**

6.9.1. Irrigation must be performed throughout root canal preparation to facilitate removal of debris, reduce the microbial load, and support cleaning of areas that cannot be reached directly by instruments.

6.9.2. Sodium hypochlorite may be used as the principal irrigant, with other irrigants selected according to the clinical requirements and the approved institutional

protocol. The choice, concentration, sequence, and use of irrigants must be based on current evidence and appropriate patient-safety considerations.

6.9.3. Irrigants must be delivered using an appropriate technique that allows coronal reflux and minimizes the risk of extrusion beyond the root apex. The needle or delivery device must not be forced or wedged into the canal, and excessive delivery pressure must be avoided.

6.9.4. The operator must take precautions to prevent irrigant contact with oral soft tissues and other unintended exposure. If an irrigant-related accident is suspected, treatment must be stopped and the patient assessed and managed promptly according to the institutional emergency protocol.

6.9.5. Sonic, ultrasonic, or other irrigant-activation methods may be used when indicated, provided that the selected technique is appropriate for the case and used according to the manufacturer's instructions and relevant safety precautions.

6.10. **Intracanal medication and inter-appointment management**

6.10.1. Intracanal medication may be used when clinically indicated to support management of infection or specific endodontic conditions between appointments. It is not required routinely in every case.

6.10.2. When an inter-appointment dressing is indicated, the selected material must be appropriate for the clinical diagnosis and treatment objectives and used according to the relevant evidence and manufacturer's instructions.

6.10.3. The canal must be managed using an appropriate aseptic technique, and the tooth must receive a secure temporary restoration to prevent coronal leakage and recontamination between appointments.

6.10.4. The need for further treatment, additional medication, or completion of treatment must be reassessed at the subsequent appointment.

6.10.5. When selecting an intracanal medication, the clinician should consider its clinical effectiveness, biocompatibility, compatibility with subsequent treatment procedures, ease of removal, and potential effects on tooth structure and restorative materials.

6.11. **Root canal obturation**

6.11.1. Root canal obturation should be performed when preparation is complete, the clinical circumstances permit completion, and the canal can be adequately dried. The

decision to obturate or defer treatment should consider the patient's symptoms. Confirm the working length and apical extent before obturation. Obtain a master cone radiograph to verify working length, canal anatomy, or cone fit, and document the findings as required.

6.11.2. The objective is to provide an adequate, homogeneous filling of the prepared canal space, with appropriate apical extent and adaptation to the canal walls, while minimizing voids and avoiding unnecessary extrusion of filling materials.

6.11.3. The prepared root canal should be obturated using a clinically appropriate core material and sealer, according to the selected technique and the manufacturer's instructions. The obturation technique and materials must be selected according to the clinical case, available evidence, and institutional protocol.

6.11.4. Root canal filling materials must be biocompatible, radiographically identifiable, and compatible with the selected obturation technique. Their handling characteristics, dimensional stability, sealing performance, and compatibility with subsequent restorative procedures must be considered. The potential need for future retreatment should also be taken into account when selecting materials.

6.11.5. A postoperative periapical radiograph should be obtained to assess the quality of obturation and document the immediate treatment result. The image should demonstrate the treated root or roots and the periapical region as clearly as practicable, with minimal distortion.

6.11.6. The clinician should assess the filling's length, density, homogeneity, and relationship to the canal anatomy, as well as any apparent voids, procedural complications, or unintended extrusion. Radiographic findings must be interpreted alongside the clinical findings and treatment record.

6.12. **Definitive restoration**

6.12.1. The tooth must receive an appropriate coronal seal and definitive restoration as soon as clinically feasible, taking into account the patient's clinical circumstances and restorative requirements. The restoration should protect the tooth against coronal leakage and structural failure while preserving function and periodontal health.

6.13. **Inter-appointment care**

6.13.1. When root canal treatment is not completed in a single visit, the tooth must be sealed with an appropriate temporary restoration capable of maintaining the coronal seal and protecting the tooth against contamination and fracture.

6.13.2. The clinician must provide appropriate instructions regarding the temporary restoration, expected symptoms, and circumstances requiring prompt reassessment.

6.14. **Antibiotic stewardship**

6.14.1. Systemic antibiotics must not be prescribed routinely for uncomplicated pulpitis or localized endodontic pain when definitive dental treatment can be provided.

6.14.2. When systemic involvement, spreading infection, or specific medical circumstances warrant antibiotics, the decision must be based on the clinical assessment and applicable prescribing guidelines. Antibiotics should be used as an adjunct to appropriate dental treatment, not as a substitute for establishing drainage, removing the source of infection, or providing definitive endodontic management.

6.14.3. Patients presenting with rapidly progressive infection, significant systemic involvement, or features suggesting airway compromise or other serious complications must receive urgent assessment and appropriate escalation of care.

6.14.4. The indication, prescribed medication, dose, duration, and relevant advice must be documented in accordance with the applicable prescribing policy.

6.15. **Management of procedural complications**

6.15.1. The operator must take appropriate precautions to prevent procedural complications and must recognize and assess complications promptly when they occur.

6.15.2. Complications may include instrument separation, perforation, loss of working length, canal transportation, irrigant extrusion, and other events that may affect patient safety or treatment prognosis.

6.15.3. When a significant complication occurs, the operator must stop or modify treatment as appropriate, assess the patient's condition, explain the situation to the patient, document the findings and management, and arrange specialist consultation or referral when indicated.

6.15.4. Suspected serious adverse events must be managed according to the institutional emergency and incident-reporting procedures.

7. Tools/Attachment Forms:

7.1. Guidelines monitoring tool

8. References:

8.1. Duncan HF, Kirkevang LL, Peters OA, et al. Treatment of pulpal and apical disease: The European Society of Endodontology (ESE) S3-level clinical practice guideline. International Endodontic Journal. 2023;56(Suppl 3):238–295. doi:10.1111/iej.13974.

8.2. American Association of Endodontists (AAE). Guide to Clinical Endodontics. Chicago, IL: American Association of Endodontists; 2019.

8.3. Dubai Health Authority's Clinical Guidelines for Endodontics, published in 2026.

9. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Clinical Practice Guidelines**	**Prepared by:** **Dr. Md. Sofiqul Islam**
Title:	**Amalgam Waste**	
Policy Number:	**CPG.03**	**Reviewed by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	
Edition Number	**3**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**Sep 2028**	

1. Purpose

1.1. To standardize the disposal process of amalgam waste in RAKCODS.

1.2. To provide guidance on safe/proper disposal of amalgam waste.

1.3. To protect the community from associated risks of amalgam waste and prevent amalgam sedimentation in sewage sludge, landfills and the atmosphere.

2. Scope

2.1. This policy applies to all Dental Health Care Providers who handle amalgam used in dental procedures at RAKCODS.

3. Definitions and Abbreviations

Abbreviations

- **DHCP:** Dental Health Care Provider
- **BMPs:** Best Management Practices for Amalgam waste

Definitions

- **Amalgam**: it is an alloy that contains mercury, silver, zinc and other materials. It is used in dentistry as a filling material.

- **BMPs**: practices carried out to assist dental clinics to reduce the amount of contaminants (such as mercury and silver) discharged to the environment, to comply with regulations, and to improve overall waste management operation
- **Contact Amalgam**: is the amount of amalgam that has been in contact with a patient such as the amalgam found in the trap/filter, extracted tooth contains amalgam and amalgam sludge.
- **Non-contact Amalgam:** it is the leftover amalgam after dental procedure. Such as: unused capsules, broken or expired capsules, excess amalgam not used during restoration procedure

4. Policy Statement

- All DHCP should be educated and trained on safe disposal of amalgam.
- To eliminate chances of mercury spill, elemental mercury is not used in RAKCODS. Only amalgam intended for dental procedures is used in the dental clinics which is the pre-capsulated amalgam alloy.
- All Amalgam waste shall be disposed safely and shall not be disposed through general, medical or sharps waste.
- Protective gowns and covers including protective eye wear for the dentist, dental personnel, and the patient should be in place during placing or removal of amalgam filling.
- During removal of amalgam filling, the use of rubber dam, high volume evacuator and proper coolant is mandatory. Amalgam filling should be sectioned into chunks and removed in as large pieces as possible using a small diameter carbide drill.
- All dental chairs should have amalgam Capture Device (Amalgam separators that comply with ISO 11 143 shall be used). Amalgam-containing vacuum system is flushed with disinfecting line solution that causes minimal dissolution of amalgam (i.e. cleaners that do not contain chlorine or bleach).
- Non-contact amalgam is handled as hazardous waste. It should be placed in special container (air tight and break resistant) labeled as “Hazardous waste: Non-contact Amalgam”.
- After mixing amalgam, place the empty capsules in a wide-mouthed, airtight container that is marked “Amalgam Capsule Waste for Recycling.” Capsules that cannot be emptied

should likewise be placed in a wide-mouthed, airtight container that is marked "Amalgam Capsule Waste for Recycling".

- Contact amalgam is handled as biohazardous waste. It should be placed in special container (air tight and break resistant) labeled as "Bio-Hazardous waste: Contact Amalgam".
- Amalgam waste container should be send for disposal when its ¾ filled. Amalgam container should not be stored near rough surfaces. Record of amalgam waste shall be maintained and monitored annually.

5. Procedures and Responsibilities

Educate all DHCP on safe amalgam disposal	Clinic management
Check amalgam capsules expiry date on monthly basis	Dental Assistant/ Store Keeper
Stock amalgam capsules in different sizes and ensure proper selection of the size of amalgam capsules to minimize the amount of amalgam waste.	Dental Assistant
Place amalgam capture device to collect amalgam waste.	Clinic management
Collect contact amalgam in a special container labeled with hazardous waste.	Dental Assistant / DHCP
Collect non-contact amalgam in a special container labeled with biohazard symbol	Dental Assistant / DHCP
Transport amalgam containers to disposal room safely when they are ¾ filled and label the container of the date and type of the amalgam.	Dental Assistant
Maintenance of records includes: Disposal Records	Dental Assistant / DHCP

6. References

6.1. Australian Dental Association (ADA). ADA Guidelines for Clinical Handling of Dental Amalgam. Australian Dental Association; 2024.

6.2. American Dental Association (ADA). Amalgam Separators and Waste Best Management Practices. ADA Library & Archives; updated January 6, 2026.

7. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form:

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Clinical Practice Guidelines**	**Prepared by:** **Dr. Mohamed Helal** **Dr. Shaza Bishti**
Title:	**Crown**	
Policy Number:	**CPG.04**	**Reviewed by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	
Edition Number	**3**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. **Purpose and Goals**
   - **1.1** To restore form, function and appearance of teeth which are badly broken down to the extent that simpler forms of restorations can fail if done.
   - **1.2** To standardize the dental implement procedure clinical wide.
2. **Scope**
   - **2.1** Clinic wide
3. **Definitions and abbreviations**
   - **3.1** RAKCODS: RAK College of Dental Sciences
4. **Criteria for including in this guidelines**
   - **4.1** Badly broken, fractured or worn teeth.
   - **4.2** Endondically treated teeth which need to be crowned for proper function.
   - **4.3** To reduce the risk of fractures occurring on extensively restored tooth.
   - **4.4** Rarely to alter shape, size and inclination of teeth as treatment for malocclusion associated TMJ problems or functional purposes.
   - **4.5** To crown dental implants

4.6 Use as a retainer for fixed bridge

5. Excluding Criteria from this guideline

5.1 Patient with a compromised medical history (as mentioned in 'Contra-indications for crowns)

5.2 When oral hygiene is not maintained

5.3 When the tooth can be restored with fillings or other restorations.

5.4 Uncooperative patient.

6. Guidelines:

6.1 Preoperative radiograph

6.1.1 A preoperative radiograph showing at least the full root(s) and approximately 2–3 mm of periapical region, must be examined prior to crown preparation.

6.2 Local anesthesia

6.2.1 The need for local anesthesia should be considered and given as appropriate.

6.3 Preliminary Alginate impression

6.3.1 Can be used to make study models or for custom tray fabrication to make final impression, this minimizes errors and reproduce fine details.

6.4 Matrix for temporary crown

6.4.1 Before the crown preparation an index for temporary crown is made

6.4.2 The matrix for temporary crown is made with putty silicone material of the tooth which is going to be prepared along with the entire quadrant using a sectional tray.

6.5 Shade selection

6.5.1 Select the shade before tooth preparation, preferably before dehydration, under suitable natural or standardized colour-corrected lighting.

6.6 Preparation of tooth for crown

6.6.1 The preparation should be based on fundamentals of tooth preparation as

6.6.1.1 The dentist will use burs in a high-speed hand piece to reduce and shape teeth. Simultaneously the dental assistant will use the high velocity evacuation system to maintain a clear path of vision for the dentist.

6.6.1.2 Maintain effective water cooling according to the handpiece manufacturer's recommendations. Use sharp burs and controlled pressure to minimize heat generation.

6.6.1.3 Total occlusal convergence (TOC) of 10° to 20°, while maintaining adequate retention and resistance form. Excessive convergence (more than 30°) and undercuts should be avoided.

6.6.1.4 All internal line angles should be smoothly rounded, without sharp edges, to facilitate proper restoration adaptation and minimize stress concentration.

6.6.1.5 Select an appropriate chamfer, rounded shoulder, or other finish-line design according to the restorative material and clinical circumstances.

6.6.1.6 Minimal dentine removal to conserve tooth structure and vitality

6.6.1.7 Tooth reduction should be sufficient for the selected restorative material, generally ranging from 1 – 2mm occlusally/incisally and 0.5 – 1mm axially. Excessive reduction compromising tooth structure or pulpal vitality should be avoided.

6.6.1.8 Adequate occlusal, axial and proximal clearance for proper emergence profile and sufficient crown material thickness

6.7 Making of temporary crowns

6.7.1 The index obtained before crown preparation is used as a template to fill in temporary crown material (e.g. pro-temp) which is positioned back intra-orally till the temporary material sets.

6.7.2 The set temporary crown is removed and the margins trimmed to check for marginal adaptation and fit

6.7.3 Any apparent voids must be repaired immediately using light-cured flowable composite resin

6.7.4 Non-set superficial layer of temporary crown material, if any, is wiped off with an alcohol gauze.

6.7.5 Occlusal evaluation is done to check for high points using articulating paper

6.7.6 Integrity of proximal contacts is checked

6.7.7 A non-eugenol temporary luting agent is used to lute the temporary crown until the permanent crown is fabricated by the lab.

6.7.8 Temporary cement residues must be removed clean particularly from the gingival sulcus.

6.8 Tissue management/Final Impression making

6.8.1 The objective of gingival retraction is to enable proper fluid control and differentiation of the finish line in the impression and cast so that the dental technician fabricating the crown is able to clearly visualize the crown margin.

6.8.2 Using the gingival cord packing instrument the retraction cord is gently placed within the sulcus exposing the finish line. A piece of the retraction cord is kept sticking above the gingival margin for easy removal this enables the technician to prepare a crown with good marginal integrity.

6.8.3 Just prior to impression the retraction cord is removed and the selection of impression material is on dentist preference. A combination of medium, heavy or putty along with wash type impression (light-bodied) can be used with two step technique. The impression is made with silicone impression material for accuracy of upper and lower arch. Total set of the impression material is ensured by following the manufacturer's instruction. After removal from mouth the impression is disinfected and examined if all necessary details are captured.

6.9 Registration of occlusal relationship

6.9.1 Polymeric high viscosity elastomeric impression material can be used to capture inter-occlusal relation record.

6.9.2 Record MIP for routine crown treatment when appropriate. Record another jaw relationship only when clinically indicated.

6.9.3 After the material attains final rigidity cut away excess material that touches soft tissues

6.9.4 Verify the inter-occlusal record in the mouth for accuracy.

6.9.5 Disinfect the inter-occlusal record

6.10 Provisional restoration delivery

6.10.1 Temporaries protect the teeth and maintain the prepared space for the final crown.

6.10.2 The provisional restoration can be custom made or preformed.

6.10.3 The prepared temporary crown is luted using a temporary luting agent for ease of removal later when the permanent crowns are ready from the lab.

6.10.4 The fit and occlusion is checked with an articulating paper for proper occlusal contact.

6.10.5 After cement has set the gingival margins are examined and floss passed inter-proximally to remove excess cement. Patient instruction as oral hygiene measures and diet control are instructed.

6.11 Try in

6.11.1 To evaluate the final restoration in case of ceramic fused to metal or all ceramic a bisque/metal framework trial is done to check for marginal fit, stability, rocking, appropriate thicknesses, proximal contacts, occlusion and esthetics. This is done after removing the temporary.

6.11.2 Once the bisque/metal framework trial is satisfactory the temporary is placed back and the permanent crown is sent back to the lab for finishing.

6.12 Check fit of final restoration

6.12.1 The objectives of the final restoration are to maintain form, function and esthetics.

6.12.2 The temporary crown is removed and the abutment tooth is cleaned of all remaining cement better by using pumice slurry and prophy cups or bristle brushes mounted on low-speed hand piece. The preparation is carefully rinsed and dried gently. The fit of the crown, marginal adaptation, proximal contacts, occlusion and esthetics are rechecked.

6.13 Luting of final restoration

6.13.1 The objectives of final restoration are proper function and comfort in all centric and eccentric movements.

6.13.2 The crown is luted using zinc phosphate, glass ionomer or resin based luting cements depending on the clinical judgment of the dentist.

6.13.3 Proper isolation of the tooth to be luted is done with cotton roles, saliva ejector while the luting agent is being manipulated by dental assistant

6.13.4 Prepare the crown and tooth according to the material-specific protocol. Apply cement, seat the crown, and remove excess cement according to the manufacturer's instructions.

7. References:

7.1 Shillingburg HT Jr, Sather DA, Wilson EL Jr, Cain JR, Mitchell DL, Blanco LJ, et al. Fundamentals of Fixed Prosthodontics. 4th ed. Hanover Park, IL: Quintessence Publishing Co., Inc.; 2012.

8. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form:

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Clinical Practice Guidelines**	**Prepared by:** **Dr. Dusan Surdilovic** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Title:	**Extraction In Pediatric Dentistry**	
Policy Number:	**CPG.05**	**Reviewed by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	
Edition Number	**3**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. Purpose and Goals

1.1. To perform dental extractions effectively

1.2. To standardize the treatment procedure clinic wide.

2. Scope

2.1. Extractions in pediatric dentistry are mainly aimed towards prevention of onset of malocclusion. Pediatric dental extractions are also at times performed to prevent the spread of infections in cases where the tooth cannot be treated by less invasive procedures.

3. Definitions and abbreviations

3.1. RAKCODS- RAK College of Dental Sciences

4. Criteria for including in this guidelines

4.1. Radiological findings suggesting infection or abscesses which cannot be treated otherwise

4.2. Teeth beyond the age of normal exfoliation

4.3. Informed consent from parents should be obtained

5. Excluding Criteria from these guidelines

5.1. Uncooperative patient

5.2. Tooth with healthy periodontium

5.3. Patient is medically compromised

6. Guidelines:

6.1. Pre-operative radiograph

6.1.1. A pre-operative radiograph suggesting that the tooth is extensively infected and is indicated for extraction

6.2. Local Anesthesia

6.2.1. The need for anesthesia should be given as considered appropriate for the patient

6.2.2. Local anesthesia in terms of Local infiltration or Nerve block should be given after the application of topical anesthesia

6.3. Extraction of tooth

6.3.1. After adequate anesthesia is achieved the tooth can be luxated using a muco-periosteal elevator. Care should be taken to not inflict injuries on sound tissues of adjacent teeth or any other parts.

6.3.2. Once the tooth is sufficiently luxated the forceps can be used to deliver the tooth out of the alveolar socket.

6.3.3. After the extraction it needs to be ensured that there are no fractured roots or remaining tooth within the alveolar socket.

6.3.4. Appropriate post-operative instructions should be provided after the procedure

7. References:

7.1. Nowak AJ, Christensen JR, Geneser M, Townsend JA, Wells MH, eds. Pediatric Dentistry: Infancy through Adolescence. 7th ed. Elsevier Saunders; 2026.

7.2. Kaban LB, Troulis MJ. Pediatric Oral and Maxillofacial Surgery. Philadelphia, PA: Saunders; 2004.

8. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form:

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

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Policy Type:	**Clinical Practice Guidelines**	**Prepared by:** **Dr. Md. Sofiqul Islam**
Title:	**Operative Dentistry**	
Policy Number:	**CPG.06**	**Reviewed by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	
Edition Number	**3**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. Purpose and Goals

1.1. Diagnosis: To determine the nature of disease, injury, or other defect by examination, test and investigations.

1.2. Prevention: To prevent any recurrence of the causative disease and their defects. It includes the procedure done for prevention before the manifestation of any sign and symptom of the disease.

1.3. Interception: To prevent disease from developing into a more serious or full extent. This includes the procedures done after signs and symptoms of disease have appeared.

1.4. Preservation: To preserve the pulp vitality and the periodontal support of the remaining tooth structure through prevention and interception.

1.5. Restoration: To restore form, function, phonetics, and esthetics.

1.6. Maintenance: To maintain the service of the restoration for longer period.

2. Scope

Operative dentistry consists of all procedures including preventive measures by which teeth may be conserved and thus maintain the natural masticating mechanism in such a state that the general health will not be endangered. The detailed scope of operative dentistry are:

2.1. To know the condition of the affected tooth and other teeth

2.2. To examine not only the affected tooth but also the oral and systemic health of the patient.

2.3. To diagnose the dental problem and the interaction of problem area with other tissues

2.4. To provide optimal treatment plan to restore the tooth to return to health and function, and increase the overall well-being of the patient.

2.5. To maintain the pulp vitality and prevent occurrence of pulpal pathology

3. Definitions and abbreviations

3.1. RAKCODS: RAK College of Dental Sciences

3.2. Operative dentistry: The subject which includes diagnosis, prevention and treatment of defects of the natural teeth, both vital and non-vital, so as to preserve the natural dentition and restore it to the best state of health, function and esthetics.

4. Criteria for including in this guidelines

4.1. Restoration of dental caries or other tooth defects.

4.2. Aesthetic restoration of anterior teeth, including tetracycline pigmentation teeth, dental fluorosis, discolored pulpless teeth, malformed teeth, rotated teeth etc.

4.3. Closure of the small space between anterior teeth.

4.4. Core buildup for foundational restoration.

4.5. Replacement or repair of existing restorations.

4.6. Small pit and fissure caries, e.g. preventive resin restoration, ultra-conservative sealed restoration.

5. Excluding Criteria from these guidelines

5.1. Tooth with inadequate periodontal support.

5.2. Uncooperative patient.

5.3. Patient with a compromised medical history

5.4. Restoring functional cusps

5.5. Heavy occlusal forces

5.6. Excessive occlusal wear caused by grinding and clenching

5.7. Where a posterior tooth cannot be isolated to obtain moisture control

5.8. High-risk caries patients with multiple caries or tooth demineralization, show poor oral hygiene and poor compliance with daily oral hygiene, and where maintenance is considered unlikely

5.9. Allergy to resin-based materials

6. Guidelines

6.1. Preoperative preparations

6.1.1. Preoperative preparations

6.1.2. Diagnosis of the compromised tooth, full mouth examination, instructions regarding oral hygiene, primary oral care and treatment plans should have been completed.

6.1.3. Common dental problems such as gingival bleeding should be well-controlled.

6.1.4. Patients have no objections to the treatment plan.

6.2. Tooth preparation

6.2.1. Occlusion check: Determine the extent of the lesion and draft an outline form for tooth preparation.

6.2.2. Protection of the normal oral tissues: Accidental injuries should be prevented. Make sure that the dental burs and devices are in a normal state and the cooling system is effective. Always be cautious to prevent damage to normal pulp tissue, periodontal tissue and dental hard tissue during preparation.

6.2.3. Local anesthesia: Local anesthesia reduces pain and anxiety. It should be used on teeth with vital pulp or whenever the patient requires.

6.2.4. Removal of infected dental tissue:

6.2.4.1. Carious tissues, especially in the enamel-dentinal junction region, should be removed, in order to stop caries progression and guarantee effective bonding to normal dental tissues.

6.2.4.2. Outer margins of the cavosurface should be free of carious tissue, in order to avoid micro-leakage and ensure bonding strength.

6.2.4.3. For the purpose of vital pulp protection, tiny bits of softened dentin could remain under indirect capping material, or removed by a stepwise excavation.

The softened dentin might remineralize as expected. By any means, records and follow-up checks are suggested. When signs of pulp damage are apparent, endodontic treatment should be prescribed.

6.2.5. **Retention form and resistance form:** Proper tooth preparation helps the restoration to gain reliable retention and resistance. The following circumstances need to be considered carefully.

6.2.5.1. Retention of direct adhesive restoration mainly relies on the bonding strength. The bonding strength would increase with the bonding surface area.

6.2.5.2. Supplementary retention forms could help to ensure longer-lasting retention, but extra loss of healthy tooth structure might be a drawback for resistance. Pros and cons should be carefully considered.

6.2.5.3. Proper thickness of composite resin at loadbearing areas could be important to avoid fracture of the restoration.

6.2.5.4. The overhanging enamel from the load-bearing areas could remain.

6.2.5.5. Cusp coverage by restorations is recommended for the endodontically treated teeth.

6.2.6. Extension for prevention could be reduced or avoided by better oral health behaviors, application of fluoride, minimal invasive managements, regular oral examinations and through other means. On the other hand, it should be well-understood that most of the restorative materials per se are not anti-caries. Secondary caries could only be prevented by comprehensive caries management.

6.3. **Field Isolation**

A dry working field is essential for direct adhesive restoration. The bonding failure, also a common reason of secondary caries, may result from contamination of saliva, blood or water bonding to interfaces. Therefore, effective field isolation is suggested for resin restoration. The rubber dam technique is recommended. Alternatively, simple isolation could use cotton roll, saliva ejector and tongue plate. If the cavosurface is beneath the gingival margin, gingival retraction cords are recommended for controlling gingival contamination and for exposing the cavosurface margin. The operation should only be started when the gingival inflammation and bleeding have been well-treated or controlled.

6.4. **Placement of matrix band**

6.4.1. A matrix band with matrix retainer and wedge should be used in the restoration of proximal contours and contacts. If the gingival wall is covered by extra gingival tissue or if gingival contamination cannot be avoided, a gingivectomy could be prescribed.

6.4.2. Sectional matrix system, wedges and separating rings are recommended for posterior restoration. The system helps to obtain good proximal contours and contacts.

6.4.3. Polyester films with wedges can be used in anterior restoration.

6.5. **Pulp protection: For vital pulps, in addition to the aforementioned protective measures, the following are well-recognized.**

6.5.1. Self-etch bonding agents, with little stimulation on vital pulp tissue, can be directly applied on dentine, closing the pulp.

6.5.2. The incremental layering technique can reduce polymerization contraction stress.

6.5.3. Applying indirect pulp capping materials such as calcium hydroxide promotes formation of tertiary dentin, but with weak bonding strength to dental tissue, therefore, the coverage area should be as small as possible to ensure enough reliable bonding area

6.6. **Selection of composite resin**

6.6.1. Shade selection: A variety of composite resin shades could be selected. A matched shade guide should be used in shade selection. The shade selection should be under natural light, after complete removal of carious tissues, and before field isolation. The shade of the material should match the shade of the tooth.

6.6.2. Resin types: Types of composite resins should be selected according to location and function of the teeth. More consideration of color distribution should be taken for anterior teeth. Mixed use of different shades is acceptable. For posterior restoration, a combination of different types of materials can help to achieve a better clinical effect.

6.6.3. Tooth color correction Opaque resins could be applied in the restoration of severe discoloration. During pre-restoration, internal bleaching technique could be used when applicable.

6.7. **Key points to reliable adhesion**

6.7.1. Core of adhesion

6.7.1.1. Acid etching: demineralize the hard tissues of the tooth, modify smear layer and increase bonding surface area.

6.7.1.2. Priming: promote penetration of resin.

6.7.1.3. Bonding: adhesives penetrate into the demineralized dentin and form a hybrid layer, during the bonding mechanism. Different adhesive systems complete these steps by different mechanisms, so, the product instructions should be read carefully before use.

6.7.2. **Adhesives:** Two types of adhesive systems: etch-and-rinse (also called total etch) and self-etch. Either individual or combined application of the two systems depends on location and extent of the dental defect. Etching with phosphoric acid is recommended for uncut enamel, but not for dentin close to the vital pulp.

6.7.3. **Key points for etch-and-rinse system**

6.7.3.1. Etching Demineralize and remove the smear layer: phosphoric acid (15% to 37%) is usually applied as the etchant. Etching time can be 15 to 60 s depending on the characteristics of different dental tissue, for example on dentin, less time is required.

6.7.3.2. Rinsing and drying Excess acid should be thoroughly eliminated by water rinse and the water should be eliminated by air blowing. Over-drying may dehydrate the dentin, inducing postoperative dentin sensitivity. Thorough drying or a little moisture (see in wet bonding) is required by a certain adhesive system, therefore, reading the instructions carefully is mandatory.

6.7.3.3. In ‘wet bonding’, the acid-etched dentin is kept hydrated before applying primer. Thus, the resin-containing primer can infiltrate more easily. The excess water will volatilize with the solvent, with no obligation to bonding.

6.7.3.4. For ‘wet bonding’, the adhesives should be preserved and applied properly. The product instructions should be followed in practice.

6.7.3.5. Priming and bonding Classic etch-and-rinse technique includes three steps: Firstly, etch with phosphoric acid to demineralize the bonding area; secondly, rinse and dry for primer use, to modify the hydrophilic dentin and allow infiltration of the resin agent; and finally, apply bonding agent to form a hybrid layer. For the contemporary two-step system; the first step involves phosphoric

acid etching, rinsing and drying; and the second step involves applying bonding agent (which consists of primer and bonding agent). After light curing, the composite resin could be placed.

6.7.3.6. Photo-polymerization: Enough light curing time and the correct angle are recommended for sufficient curing.

6.7.4. **Key points for the self-etch system:**

6.7.4.1. Preparation of bonding area: After caries removal, cavity preparation and field isolation, the treatment of the bonding area should follow the manufacturer's instruction.

6.7.4.2. Etching, priming and bonding: There are two systems, which involve either two steps or one step. For the two-step system, etching and priming are mixed in one step, and bonding in another. After the first step, the excess water is removed and smear layer is dispersed by air blowing. For the one-step system, etchant, primer and bonding agents are applied in one step. The clinical outcomes depend very much on the performer's understanding of the use of adhesives. Therefore, a careful study of the product introduction section is essential.

6.7.4.3. Photo-polymerization: Enough light curing time and the correct angle are recommended for sufficient curing.

6.7.5. **Combination of etch-and-rinse and self-etching techniques**

As the bonding strength of self-etching adhesive with uncut enamel is weak, etch-and-rinse technique is recommended for enamel bonding. For teeth with vital pulp, the etch-and-rinse system is suggested for use on enamel and a one-step self-etch system is suggested for use on dentin.

6.7.6. **Regular inspection and maintenance of light curing units**

To guarantee the clinical light curing outcomes, the power output of light curing units should be checked and cleaned regularly. The light guide should be as close as possible to the material being cured, to make light available for all curing materials.

6.8. **Placement of composite resin**

6.8.1. The amount of composite resin for one increment: The curing depths of light cure units are usually 2 to 3 mm, which is not deeper than 3 mm. Therefore, the depths of composite resin material placed into the cavities should be limited to this range. Always try to take a whole piece of the material and gently press it, in order to adopt the cavity walls.

6.8.2. Combined use of multiple types of resins: The combined use of multiple types of composite resins is recommended in restoring deep cavities of the posterior teeth. Flowable composite resins or glass ionomers could be applied as the first layer. Resins with good fracture resistance could be used for core buildup, while condensable resin could be used for restoration of the biting part. Many aesthetic items should be considered, for example, the shade differences between dentin and enamel, the color transition from incisal to cervical, and the cohesion between the existing restoration and residual dental tissue. For large defects, layering technique and the combined use of various composite resins can achieve better clinical effects.

6.8.3. Placement method: The placement of composite resins should follow the anatomical morphology of the teeth and should be in proper increments to avoid time costs. The thickness of composite resin in load-bearing areas should be more than 1 mm to prevent fracture of the material. A bulk filling is suggested for cavity depths which are less than 2 mm. An oblique or vertical layering technique is recommended to reduce the polymerization stress.

6.8.4. Light-curing: The light guide should be held as close as possible to the material, to make sure a reliable light source is irradiated to all material placed. To complement insufficient polymerization, supplemental curing in the bucco-lingual direction is suggested after initial polymerization and removal of matrix bands.

6.9. **Finishing and polishing**

6.9.1. Formation of anatomical morphology: The focus on anatomical morphology includes cusps, fissures, the convexity of the crown and embrasures.

6.9.2. Removal of excess material: After placement and polymerization of composite resin, excess material should be trimmed under the guidance of the biting test. Excess material may be harmful to dental and periodontal health.

6.9.3. Biting adjustment: The cusp of elongated teeth could be adjusted according to actual situations, to regain the balance of occlusion. The patient's informed consent should be obtained before adjustment.

6.9.4. Sequence of finishing: The finishing process should be initiated with coarse diamond burs for the rough formation of contours, followed by fine diamond burs, for texture and microanatomy. The correct use of finishing burs increase the speed and accuracy of finishing.

6.9.5. Polishing: Polishing is the next step after finishing. Polishing disks, polishing cups and polishing pastes could be used during this step. Polishing strips can be used at the proximal surface. More attention should be paid on the region near the gingiva. The polishing process could be done immediately after restoration or arranged in a separate visit.

6.10. **Postoperative instructions, maintenance and follow-up (For complete list and further details please refer to the post-operative instructions provided by RAKCODS)**

6.10.1. Avoid hard biting and trauma.

6.10.2. See a dentist when postoperative pain develops.

6.10.3. Insist on good oral hygiene habits to prevent dental caries and periodontitis.

6.10.4. Insist on annual oral examination for the general dental health, including the existing restorations.

7. References

7.1. Ritter AV, Boushell LW, Walter R, editors. Sturdevant's Art and Science of Operative Dentistry. 8th ed. St. Louis, MO: Elsevier; 2025.

7.2. Hilton TJ, Ferracane JL, Broome JC, editors. Summitt's Fundamentals of Operative Dentistry: A Contemporary Approach. 4th ed. Chicago, IL: Quintessence Publishing Co., Inc.; 2013.

8. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form:

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Clinical Practice Guidelines**	**Prepared by:** **Dr. Dusan Surdilovic** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Title:	**Pediatric Operative Dentistry**	
Policy Number:	**CPG.07**	**Reviewed by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	
Edition Number	**3**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. Purpose and Goals

1.1. Diagnosis: To determine the nature of disease, injury, or other defect by examination, test and investigations.

1.2. Interception: To prevent disease from developing into a more serious or full extent. This includes the procedures done after signs and symptoms of disease have appeared.

1.3. Preservation: To preserve the pulp vitality and the periodontal support of the remaining tooth structure through prevention and interception.

1.4. Restoration: To restore form, function, phonetics, and esthetics.

2. Scope

2.1. Clinic of Pediatric Operative dentistry RAKCODS consists of all procedures including preventive measures by which teeth may be conserved and thus maintain the natural masticating mechanism in such a state that the general health will not be impaired and also will allow for a comfortable exchange of dentitions.

3. Definitions and abbreviations

3.1. RAKCODS- RAK College of Dental Sciences

4. Criteria for including in this guidelines

4.1. Restoration of dental caries or other tooth defects.

4.2. Aesthetic restoration of anterior teeth, including intrinsic and extrinsic pigmentations of teeth.

4.3. Replacement or repair of existing restorations.

4.4. Small pit and fissure caries, e.g. preventive resin restoration, ultra-conservative sealed restoration.

5. Excluding Criteria from this guideline

5.1. Tooth with inadequate periodontal support.

5.2. Uncooperative patient.

5.3. Patient with a compromised medical history

5.4. High-risk caries patients with multiple caries or tooth demineralization, show poor oral hygiene and poor compliance with daily oral hygiene, and where maintenance is considered unlikely

5.5. Allergy to resin-based materials

6. Guidelines:

6.1. Preoperative preparations

6.1.1. Preoperative preparations

6.1.2. Diagnosis of the compromised tooth, full mouth examination, instructions regarding oral hygiene, primary oral care and treatment plans should have been completed.

6.1.3. Common dental problems such as gingival bleeding should be well-controlled.

6.1.4. Patients/parents should have no objections to the treatment plan.

6.2. Tooth preparation

6.2.1. Cavity design: Determine the extent of the lesion and draft an outline form for tooth preparation.

6.2.2. Protection of the normal oral tissues: Accidental injuries should be prevented. Make sure that the dental burs and devices are in a normal state and the cooling system is effective. Always be cautious to prevent damage to normal pulp tissue, periodontal tissue and dental hard tissue during preparation.

6.2.3. Local anesthesia: Local anesthesia reduces pain and anxiety. It should be used on teeth with vital pulp or whenever the patient requires.

6.2.4. Removal of infected dental tissue: Carious tissues, especially in the enamel-dentinal junction region, should be removed, in order to stop caries progression and guarantee effective bonding to normal dental tissues.

6.3. **Field Isolation**

A dry working field is essential for direct adhesive restoration. The bonding failure, also a common reason of secondary caries, may result from contamination of saliva, blood or water bonding to interfaces. Therefore, effective field isolation is essential for resin restoration. The rubber dam technique is recommended. Alternatively, simple isolation could use cotton roll, saliva ejector and tongue plate. If the cavosurface is beneath the gingival margin, gingival retraction cords are recommended for controlling gingival contamination and for exposing the cavosurface margin. The operative procedure should only be started when the gingival inflammation and bleeding have been well-treated or controlled.

6.4. **Pulp protection: For vital pulps, in addition to the aforementioned protective measures, the following are well-recognized.**

6.4.1. Self-etch bonding agents, with little stimulation on vital pulp tissue, can be directly applied on dentine, closing the pulp.

6.4.2. The incremental layering technique can reduce polymerization shrinkage stress.

6.4.3. Applying indirect pulp capping materials such as calcium hydroxide promotes formation of tertiary dentin, but with weak bonding strength to dental tissue, therefore, the coverage area should be as small as possible to ensure enough reliable bonding area

6.4.4. The use of Calcium hydroxide or dycal in primary teeth should be well thought of else it can result in internal resorption.

6.4.5. Materials being used in pediatric operative dentistry should be used only after making sure that there will be no untoward effects towards the primary teeth or the successors.

6.5. **Selection of Restorative material**

6.5.1. Shade selection: A variety of composite resin shades could be selected. A matched shade guide should be used in shade selection. The shade selection should be under natural light, after complete removal of carious tissues, and before field isolation. The shade of the material should match the shade of the tooth. However, when Glass ionomer cements are used then shade selection is not a priority.

6.6. **Placement of composite resin**

6.6.1. The amount of composite resin for one increment: The curing depths of light cure units are usually 2 to 3 mm, which is not deeper than 3 mm. Therefore, the depths of composite resin material placed into the cavities should be limited to this range. Always try to take a whole piece of the material and gently press it, in order to adopt the cavity walls.

6.7. **Postoperative instructions, maintenance and follow-up (For complete list and further details please refer to the post-operative instructions provided by RAKCODS)**

6.7.1. Avoid hard biting and trauma.

6.7.2. See a dentist when postoperative pain develops.

6.7.3. Insist on good oral hygiene habits to prevent dental caries and periodontitis.

6.7.4. Insist on annual oral examination for the general dental health, including the existing restorations.

7. References

7.1. American Academy of Pediatric Dentistry (AAPD). Pediatric Restorative Dentistry. The Reference Manual of Pediatric Dentistry. Chicago, IL: American Academy of Pediatric Dentistry; 2026–2027. (Latest revision: 2022).

7.2. Nowak AJ, Christensen JR, Geneser M, Townsend JA, Wells MH, editors. Pediatric Dentistry: Infancy through Adolescence. 7th ed. Elsevier; 2026.

8. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	Revised

Authorization Form:

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Clinical Practice Guidelines**	**Prepared by:** **Dr. Dusan Surdilovic** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**
Title:	**Pulpectomy in Pediatric Dentistry**	
Policy Number:	**CPG.08**	**Reviewed by:** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	
Edition Number	**3**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. **Purpose and Goals**

   1.1 To perform Pulp treatment effectively

   1.2 To standardize the treatment procedure clinic wide

2. **Scope**

   2.1. Clinic of RAKCODS

3. **Definitions and abbreviations**

   3.1. RAKCODS- RAK College of Dental Sciences

4. **Criteria for including in this guidelines**

   4.1. Radiological or clinical findings suggesting inflammation of radicular pulp

   4.2. Radiological findings suggesting involvement of the furcation area

5. **Criteria for Excluding from these guidelines**

   5.1. Uncooperative patient

   5.2. Tooth with unhealthy periodontium

   5.3. Patient is medically compromised

6. **Guidelines:**

   6.1. Preoperative radiograph

   6.1.1. A pre-operative radiograph suggesting that the tooth is not extensively infected

6.2. Local anesthesia

6.2.1. The need for anesthesia should be considered and given as considered appropriate for the patient

6.3. Preparation of tooth

6.3.1. All caries and defective restorations should be removed and if necessary occlusion should be adjusted so as to make sure there is no unsupported tooth structure which can result in fracture.

6.4. Isolation of tooth

6.4.1. Pulp therapy procedures should be carried out under adequate isolation so as to prevent salivary and bacterial contamination, prevent inhalation and ingestion of instruments and prevent escape of irrigating solutions into the oral cavity.

6.5. Access cavity preparation

6.5.1. The objectives of the access cavity preparation are: removing all caries when present, un-roofing pulp chamber completely, locating all canal orifices, achieving straight line access, enabling root canal instruments to be introduced into the root canals without undue bending.

6.6. Determination of working length

6.6.1. The objective of working length is to enable the root canal to be prepared as close to the root apex as possible, preferably 1 mm short of the apical openings to pace with physiological root resorption.

6.6.2. Radiographic method is the chosen method of estimating working length.

6.7. Preparation of the root canal system

The objectives of preparation are to: remove remaining pulp tissue, eliminate microorganisms, remove debris and shape the root canal system so that the root canal system can receive a hermetic obturation.

6.8 Inter-appointment medication

6.8.1 The objectives of inter-appointment medication are to prevent growth and multiplication of colonies of microorganisms.

6.9 Filling of the root canal system

6.9.1. The objectives are: to prevent the passage of microorganisms and fluid along the root canal and to fill the whole canal system with consideration to the open apices

in most of the pediatric cases. Materials used to fill the root canal system should be: Biocompatible, dimensionally stable, able to seal, should be unaffected by tissue fluids, should resorb at a similar or faster rate than the roots themselves, should be easily removable if necessary.

6.10 The quality of the root canal filling should be checked with a radiograph. The prepared root canal should be filled adequately. Ideally no void or dead pace should be seen between the prepared and filled canal.

6.11 The tooth should be adequately restored after root canal filling to prevent bacterial recontamination of the root canal system or fracture of the tooth.

7. References:

8.1 American Academy of Pediatric Dentistry (AAPD). Pulp Therapy for Primary and Immature Permanent Teeth. In: The Reference Manual of Pediatric Dentistry. Chicago, IL: American Academy of Pediatric Dentistry; 2025.

8.2 Dean JA, editor. McDonald and Avery's Dentistry for the Child and Adolescent. 11th ed. St. Louis, MO: Elsevier; 2022.

9. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**

Authorization Form:

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Clinical Practice Guidelines**	**Prepared by:** **Dr. Nada Tawfig Hashim** **Asssitant Prof. RAKCODS** **Dr. Muhammad Albush**
Title:	**Non-Surgical Periodontal Therapy**	
Policy Number:	**CPG.09**	**Reviewed by:** **Dr. Muhammed Mustahsen Rahman** **Prof. Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	
Edition Number	**3**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. Purpose and Goals

1.1 To perform non-surgical periodontal therapy in patients with periodontal diseases.

1.2 To render roots free of microbial plaque, calculus and other contributing factors.

1.3 To provide supportive periodontal therapy to maintain the health of the periodontium around natural dentition and peri-implant tissues.

2. Scope

2.1. Periodontal therapy aims to control periodontal inflammation, maintain health, function, and esthetics of all the supporting structures and tissues (gingiva, periodontal ligament, cementum and alveolar bone)

3. Definitions and abbreviations

3.1 RAKCODS- RAK College of Dental Sciences

4. Criteria for including in this guidelines

4.1 Complete history and medical history

5. Excluding Criteria from these guidelines

5.1. In Medically compromised patients; Necessary precautions should to be taken as per the condition (Immunosuppression from disease or chemotherapy, Hormonal imbalance, uncontrolled diabetes mellitus, Cardiac, kidney and liver diseases).

5.2. Precautions for ultrasonic instrumentation

5.2.1. Unshielded pacemakers

5.2.2. Infectious diseases (active stages): human immunodeficiency virus, hepatitis, tuberculosis.

5.2.3. Chronic pulmonary disease: asthma, emphysema, cystic fibrosis, pneumonia. Cardiovascular disease with secondary pulmonary disease

5.2.4. Demineralized tooth surface

5.2.5. Exposed dentin (especially associated with sensitivity)

5.2.6. Restorative materials (porcelain, amalgam, gold, composite)

5.2.7. Titanium implant abutments unless using special insert (e.g.,Quixonic SofTip Prophy Tips)

5.2.8. Children (primary teeth)

5.2.9. Swallowing difficulty (dysphagia)

6. Guidelines:

6.1. Periodontal Evaluation

6.1.1. A comprehensive assessment of a patient's current health status, history of disease, and risk factors is essential to determine the periodontal diagnosis and prognosis of the dentition.

6.1.2. Examination of teeth and periodontium to evaluate the topography of the gingiva and related structures, measure probing depths, gingival recession, attachment level, bleeding on probing and suppuration, to assess clinical furcation status; and to detect endodontic–periodontal lesions.

6.1.3. Assess the presence, degree, and/or distribution of plaque/biofilm, calculus, and gingival inflammation.

6.1.4. Dental examination including caries assessment, proximal contact relationships, the status of dental restorations, prosthetic appliances, and other tooth- or implant-related problems.

6.1.5. An occlusal examination that includes, but may not be limited to, determining the degree of mobility of teeth and dental implants, occlusal patterns and discrepancy, and determination of fremitus.

6.1.6. Interpretation of current and comprehensive diagnostic-quality radiographs to visualize each tooth and/or implant in its entirety and assess the quality/quantity of bone and establish bone loss patterns.

6.1.7. Evaluation of potential periodontal–systemic interrelationships.

6.1.8. Determination and assessment of patient risk factors such as age, diabetes, smoking, cardiovascular disease, and other systemic conditions associated with development and/or progression of periodontal disease.

6.2.Establishing a Diagnosis, Prognosis and Treatment plan

6.2.1. Clinical findings together with a diagnosis and prognosis should be used to develop a logical comprehensive plan of treatment to eliminate or alleviate the signs and symptoms of periodontal diseases and related structures, thereby arresting or slowing further disease progression.

6.2.2. Consent should be obtained prior to the commencement of therapy. Complete records of the periodontal examination (including full charting), diagnosis, treatment, and recommended follow-up are essential and should be maintained

6.3.Treatment procedures

6.3.1. Patient education and motivation. Training in oral hygiene, and counseling on control of risk factors (e.g., stress, medical status, smoking, etc.) with appropriate referral if needed.

6.3.2. Management of periodontal–systemic interrelationships, when appropriate.

6.3.3. Use universal infection control procedures (PPE; a mask, gloves, gown and safety glasses with side protection or face shield)

6.3.4. Removal of supra- and subgingival bacterial plaque/biofilm and calculus by comprehensive, meticulous periodontal scaling and root planing.

6.3.4.1. Appropriate selection of instruments either hand instruments (scalers and curettes) and/or ultrasonic instruments depending on the case.

6.3.4.2. Sickle scalers are mainly used for debridement/ scaling supragingivally or at tooth sites with shallow pockets.

6.3.4.3. Curettes are instruments used for debridement, scaling, and root planing both supra- and sub-gingivally.

6.3.5. Chemotherapeutic agents may be used as appropriate to reduce, eliminate, or change the quality of microbial pathogens, or to alter the host response through local or systemic delivery.

6.4. Hand Instrumentation

6.4.1. The instrument is held in a modified pen grasp and the blade inserted into the periodontal pocket with the face of the blade parallel to and in contact with the root.

6.4.2. It is important that instrumentation is performed with a proper finger rest. This implies that one finger – the third or the fourth – must act as a fulcrum for the movement of the blade of the instrument. The finger rest must be secured as close as possible to the site of instrumentation to facilitate controlled use of the instrument.

6.4.3. Strokes must be made in different directions to cover all aspects of the root surface (cross-wise, back and forth) but, as stated above strokes should always start from an apical position and be guided in a coronal direction.

6.4.4. Frequent sharpening of the cutting edge of the instrument is necessary to obtain efficient calculus removal.

6.5. Ultrasonic instrumentation

6.5.1. Administer an antiseptic pre-procedural mouth rinse (Povidone Iodine or Chlorhexidine Gluconate) for 1 to 2 minutes prior to debridement to reduce infectious agents

6.5.2. Use high-speed evacuation device either by a dental assistant or attached to the instrument being used.

6.5.3. Hold the hand piece lightly in a modified pen grasp, establish a finger rest with extraoral fulcrum. Adapt the side of the working end to the calculus or tooth.

6.5.4. Activate the foot control. With smooth, light and constantly overlapping strokes, allow the vibrations and high pressure water to fragment and flush away debris.

6.5.5. Avoid placing the toe perpendicular to the tooth – it's ineffective and may damage the tooth surface.

6.5.6. Release the foot control occasionally to allow for aspiration of the water and comfort of the patient

6.5.7. Periodic switching off for evacuation with oral evacuator

6.5.8. Examine (visual and tactile) the tooth surfaces frequently for cleanliness.

6.6.Post-operative instructions

6.6.1. ORAL HYGIENE; Meticulous oral hygiene should be resumed in all areas of your mouth. The cleaner your mouth is kept, the quicker and more comfortable the healing will be. Use of Mouthwash or warm saline rinses to be done if recommended by the doctor.

6.6.2. TOOTH SENSITIVITY; Teeth may be sensitive to hot/cold and/or sweets after scaling and root planing. The sensitivity may be experienced in the first several days and it usually diminishes quickly. If sensitivity persists, please use desensitizing toothpastes available in the market and continue tooth brushing.

6.6.3. DISCOMFORT; Discomfort or dull pain should subside in a few hours. Any discomfort due to brushing should get better in one to several days.

6.6.4. BLEEDING; Some slight bleeding may occur during the next several brushings but the bleeding should steadily decrease after two or three days.

6.6.5. APPEARANCE; Root surfaces may be more exposed as the swelling of the inflamed gum tissue goes away. This may result in more space between the teeth.

6.7.Evaluation of Therapy

6.7.1. Upon completion of phase I therapy, the patient has to be recalled for follow up after 4-8 weeks to evaluate the response of the patient to therapy and evaluate patients' oral hygiene maintenance and their management of their personal risk factors and to determine if all the treatment objectives have been met.

7. Periodontal Supportive/ Maintenance therapy

7.1. Patient should be followed up regularly for supportive/ maintenance therapy during and after completion of active periodontal treatment. This should also include professional management of risk factors associated with development and/or progression of periodontal disease including but not limited to, smoking and diabetes.

8. References:

8.1. Newman MG, Klokkevold PR, Elangovan S, Kapila Y, Carranza FA, Takei HH. Newman and Carranza's Clinical Periodontology and Implantology. 14th ed. St. Louis, MO: Elsevier; 2023.

8.2. Lang NP, Berglundh T, Giannobile WV, Sanz M, editors. Lindhe's Clinical Periodontology and Implant Dentistry. 7th ed. 2 vols. Hoboken, NJ: Wiley-Blackwell; 2021.

8.3. Sanz M, Herrera D, Kebschull M, Chapple I, Jepsen S, Berglundh T, et al. Treatment of stage I–III periodontitis—The EFP S3 level clinical practice guideline. Journal of Clinical Periodontology. 2020;47(Suppl 22):4–60. doi:10.1111/jcpe.13290.

8.4. George MD, Botbyl D, Donley TG, Preshaw PM. Ultrasonic Periodontal Debridement: Theory and Technique. 2nd ed. Hoboken, NJ: Wiley-Blackwell; 2023.

9. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**

Authorization Form:

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	

RAK MEDICAL AND HEALTH SCIENCES UNIVERSITY

RAK COLLEGE OF DENTAL SCIENCES

Policy Type:	**Clinical Practice Guidelines**	**Prepared by:** **Dr. Muhammad Albush** **Dr. Nada Tawfig Hashim**
Title:	**Surgical Periodontal Therapy**	
Policy Number:	**CPG.10**	**Reviewed by:** **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences** **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**
Ownership:	**RAKCODS**	
Effective (Issue) Date:	**Sep 2019**	
Edition Number	**3**	**Approved by:** **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**
Next Review Date	**30 Sep 2028**	

1. Purpose and Goals

1.1. To perform periodontal surgical procedures effectively.

1.2. To standardize the treatment procedure clinic wide.

2. Scope

2.1. Surgical Periodontal therapy aims to eliminate or reduce periodontal pockets, preprosthetic preparation for the patient, correct mucogingival deformities and maintain health, function, and esthetics of all the supporting structures and tissues (gingiva, periodontal ligament, cementum and alveolar bone)

3. Definitions and abbreviations

RAKCODS- RAK College of Dental Sciences

4. Criteria for including in this guidelines

4.1 Complete history and medical history.

4.2 Informed consent should be obtained prior to the commencement of therapy.

4.3 Comprehensive periodontal examination and radiographic findings suggestive of periodontal disease.

4.4 Establishing a diagnosis, prognosis, and treatment plan.

4.5 Completion of phase I therapy with appropriate follow up and evaluation of patient's response to non-surgical therapy and analyze the necessity for surgical therapy.

4.6 Resective procedures are designed to reduce or eliminate periodontal pockets and create an acceptable gingival form that will facilitate effective oral hygiene and periodontal maintenance treatment.

4.7 Periodontal regenerative procedures include soft tissue grafts, bone replacement grafts, root biomodification, guided tissue regeneration, and combinations of these procedures for osseous, furcation, and recession defects.

4.8 Periodontal plastic surgical procedures.

4.9 Pre-prosthetic periodontal procedures.

5. **Excluding Criteria from these guidelines**

5.1. Heavy smoker

5.2. Non-compliant patients

5.3. Medically compromised patients; Necessary precautions should to be taken as per the condition.

5.3.1. Patient cooperation

5.3.2. Cardiovascular disease

a. Uncontrolled hypertension

b. Angina pectoris

c. Myocardial infarction

d. Anticoagulant therapy

e. Rheumatic endocarditis, congenital heart lesions and heart vascular implants.

5.3.3. Organ transplant

5.3.4. Blood disorders

5.3.5. Hormonal disorders

a. Uncontrolled diabetes

b. Adrenal dysfunction

5.3.6. Heamatological / blood disorders

5.3.7. Central Nervous system disordres

a. Multiple sclerosis and parkinson's disease

b. Epilepsy

6. **Guidelines:**

6.1. **Clinical/radiographic evaluation and surgical consent**

6.1.1. Clinical evaluation after phase 1 therapy is essential before posting a patient for periodontal surgery. Appropriate radiographs if necessary should be taken (Periapical radiographs or Orthopantomogram (OPG)

6.1.2. Surgical consent should be obtained prior to any surgical procedure.

6.1.3. Pre-operative vitals like blood pressure and blood sugar levels (if indicated) should be recorded prior to surgery.

6.2. **Preparation of Instruments**

6.2.1. The station and the necessary instruments have to be prepared before the procedure.

6.3. **Local Anesthesia**

6.3.1. Local anesthesia in terms of Local infiltration or Nerve block should be given after the application of topical anesthesia.

6.4. **Surgical procedure**

6.4.1. After adequate anesthesia is achieved the necessary procedure (resective, regenerative or pre-prosthetic periodontal surgery) is performed.

6.4.2. Adequate sutures should be given whenever necessary.

6.4.3. Periodontal dressing should be placed if indicated.

6.5. **Post-operative instructions**

6.5.1. Take the pain medications as prescribed to you for the first 24 hours as per instructions. Discontinue the medication when there is no pain. Do not take aspirin as this may increase bleeding.

6.5.2. Periodontal dressing is placed over your gums to protect them from irritation, prevents pain, helps with healing, and enables you to carry on most of your usual activities. The dressing will harden in a few hours; after which it can withstand most of the forces of chewing without breaking off. It may take a little while to get accustomed to it.

6.5.3. The dressing should remain in place until it is removed in the clinic at the next appointment. If particles of the dressing chip off during the week, do not be concerned as long as you do not have pain. If a piece of the dressing breaks off and you are in pain, or if a rough edge irritates your tongue or cheek, please call the clinic.

6.5.4. For the first 3 hours after the surgery, avoid hot foods to permit the dressing to harden. It is also convenient to avoid hot liquids during the first 24 hours. You can eat anything you can manage, but try to chew on the non-operated side of your mouth. Semisolid or finely minced foods are suggested. Avoid citrus fruits or fruit juices, highly spiced foods, and alcoholic beverages; these will cause pain. Food supplements or vitamins are generally not necessary.

6.5.5. Do not brush over the dressing. Brush and floss the areas of the mouth not covered by the dressing as you normally would do. Use oral rinses after brushing as prescribed.

6.5.6. During the first day, apply ice intermittently to your face over the operated area. It is also beneficial to suck on ice chips intermittently during the first 24 hours. These methods will keep tissues cool and reduce inflammation and swelling.

6.5.7. Do not smoke. The heat and smoke will irritate your gums, will delay healing and prevent a completely successful outcome of the procedure that was performed.

6.5.8. You may experience a slight feeling of weakness or chills during the first 24 hours. This should not be cause for alarm but should be reported at the next visit.

6.5.9. Follow your regular daily activities, but avoid excessive exertion of any type. Golf, tennis, skiing, bowling, swimming, or sunbathing should be postponed for a few days after the operation.

6.5.10. Swelling is not unusual, particularly in areas that required extensive surgical procedures. The swelling generally begins 1 to 2 days after the operation and subsides gradually in 3 or 4 days. If this occurs, apply moist heat over the operated area and call the clinic.

6.5.11. Occasionally, blood may be seen in the saliva for the first 4 or 5 hours after the operation. This is not unusual and will correct itself. If there is considerable bleeding beyond this, take a piece of gauze, form it into the shape of a letter U, hold

it in the thumb and index finger, apply it to both sides of the dressing, and hold it there under pressure for 20 minutes. Do not remove it during this period to examine it. If the bleeding does not stop at the end of 20 minutes, please contact the clinic. Do not rinse with water.

6.5.12. After the dressing is removed, the gums most likely will bleed more than they did before the operation. This is perfectly normal during the early stage of healing and it will gradually subside. Do not stop cleaning because of it.

6.6. **Suture removal**

6.6.1. The patient is recalled after 7-10 days for suture removal.

7. **Periodontal Supportive/ Maintenance therapy**

7.1. Patient should be followed up regularly for supportive/ maintenance therapy during and after completion of active periodontal treatment. This should also include professional management of risk factors associated with development and/or progression of periodontal disease including but not limited to, smoking and diabetes.

8. **References:**

8.1. Newman MG, Klokkevold PR, Elangovan S, Kapila Y, Carranza FA, Takei HH. Newman and Carranza's Clinical Periodontology and Implantology. 14th ed. St. Louis, MO: Elsevier; 2023.

8.2. Lang NP, Berglundh T, Giannobile WV, Sanz M, editors. Lindhe's Clinical Periodontology and Implant Dentistry. 7th ed. Hoboken, NJ: Wiley-Blackwell; 2021.

8.3. Sanz M, Herrera D, Kebschull M, Chapple I, Jepsen S, Berglundh T, et al. Treatment of stage I–III periodontitis—The EFP S3 level clinical practice guideline. Journal of Clinical Periodontology. 2020;47(Suppl 22):4–60. doi:10.1111/jcpe.13290.

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9. Document Change Record:

Edition Number	Review Date	Description of Change	
		Current	**Revised**

Authorization Form:

Compiled by: **Dr. Vivek Padmanabhan** **Chairperson, Clinical Sciences**	
Reviewed by: **Dr. Muhammed Mustahsen Rahman** **Dean, RAKCODS**	
Approved by: **Mr. Hassan Muhammad Khan** **CEO, RAKCODS**	