KING KHALID UNIVERSITY

College of Dentistry

THE UNIVERSITY DENTAL HOSPITAL

Dental Clinic Manual

Code: HQM_01(1)

TABLE OF CONTENTS

I.	**INTRODUCTION**	**PAGE**
	The University Dental Hospital Vision, Mission, Goals, & Values	
II.	**CLINIC OPERATIONS**	
	Organizational Structure of the University Dental Hospital	
	Distribution of Dental Units	
	Clinic Hours	
	Dress Regulations	
	Dental Ethics in Clinical Practice	
	Supporting Facilities, Equipment and Materials Management	
	• Central Sterilization and Supply Division (CSSD)	
	• Dental Radiology Department	
	• Technical Maintenance Department	
III.	**PATIENT CARE**	
	Standards of Care	
	• General Standards	
	• Department of Oral and Maxillofacial Surgery and Diagnostic Sciences (MDS) Standards of Patient Care	
	• Department of Preventive Dental Sciences (PDS) Standards of Patient Care	
	• Department of Restorative Dental Sciences (RDS) Standards of Patient Care	
	• Department of Prosthetic Dentistry (SDS) Standards of Patient Care	
	Patients' Rights and Responsibilities	
	Patient Records and Confidentiality	
	Patient Consent	
	Management of Patients	
	• Patient Management System Flowchart	
	• Waiting List Patients	
	• Patient Referrals	
	• Late Patients	
	• Missed Appointments	
	• Special Booking	
	Treatment Supervision	
	Special Needs and Special Assistance	
IV.	**INFECTION CONTROL**	
	Orientation	

General Procedures

- Immunizations
- Importance Of Current Medical Histories
- Universal Precautions
- Patient Treatment
- Injuries and Sharp Items
- Management of Injuries
- Disinfection Of Treatment Rooms
- Hand pieces
- Three-Way Syringe and High-Volume Evacuation Tips
- Dental Lights, Handles, Chair, Controls and Dental Delivery Units
- Burs And Mounted Diamond Stones
- Cotton Products
- Tray Setup
- Contaminated Waste
- Spills Of Chemical of Infectious Materials
- Impressions
- Shipping Of Contaminated Articles
- Monitoring Of Autoclaves and Chemicals

V. EMERGENCY PROCEDURES

Outdoor/Indoor Emergency

Management of Common Medical Emergencies

Other Emergency Procedures

I. INTRODUCTION

Based on the recommendation of the King Khalid University Board, the Supreme Council of Higher Education issued its approval on 4/2/2001 G (10/11/1421 H) for the establishment of a Dental College at King Khalid University.

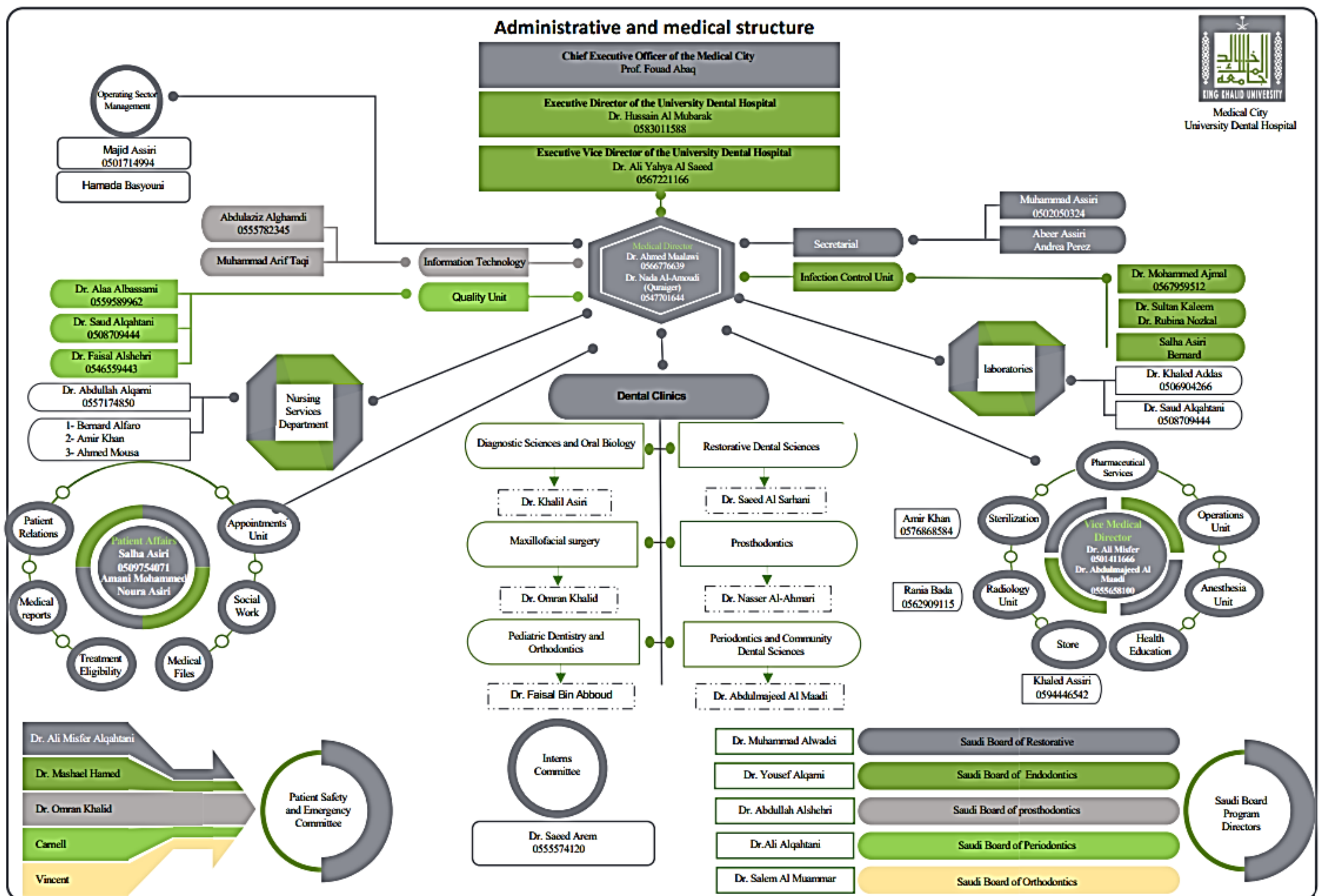
The University Dental Hospital Vision, Mission, Goals, & Values

Vision	A regionally leading hospital in the field of dentistry.
Mission	To provide the highest standards in clinical training, research, and community services.
Goals	1- To train future dentists and specialists to be fully compliant with all the national requirements. 2- To provide an integrated opportunity to explore new basic, clinical, and applied research. 3- To deliver high quality healthcare with high ethical and professional standards emphasizing patient safety. 4- To promote oral health awareness through community service, partnerships, and outreach programs.
Values	Professionalism Accountability Responsibility Commitment Respect Safety Excellence Transparency Integrity Flexibility

Beneficence

II. CLINIC OPERATIONS

ORGANIZATIONAL STRUCTURE OF THE UNIVERSITY DENTAL HOSPITAL



The major staff divisions in Clinic Operations include:

- **Patient Service Call Center/Reception**
  - This division mainly functions to make and receive patient-related calls. They respond to any patient’s inquiries regarding appointments, treatment procedures, clinic operations, and other pertinent information. They also perform other duties and assignments as directed by the management. The reception staff is also responsible for welcoming patients on their arrival at the reception desk. The receptionists provide answers to patients' inquiries related to clinics' services. They are also tasked to arrange patient schedules and record daily activities in the clinics. A designated quality control improver exists in the reception to monitor the daily activities of the receptionists making sure the patients are catered according to a First-in First-out basis. Each receptionist is assigned to a specific group of procedures to safeguard close monitoring of patient bookings and any other related clinical incidences.
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- **Dental Ancillary**
  - The clinical operations of the University Dental Hospital primarily work through the combined efforts of the dental ancillary staff which consists of the chief, assistant chief, clinical area leaders and section heads, and the dental nurses and various technicians. They deliver the major duties and responsibilities in the clinical areas. The ancillary staff is solely committed to helping in the operations of the clinics to be as efficient and impeccable as possible. Nurse leaders are being deployed throughout the clinical areas to ensure the smooth and well-organized delivery of patient services.

- **Medical Records**
  - This is where all patient files are maintained and retrieved for scheduled appointments. Medical records staff also photocopy records and documents if deemed necessary.
- **Central Supply and Sterilization Division (CSSD)**
  - The purpose of this CSSD is to prepare and furnish other departments with sterile equipment and supplies needed in the clinics and patients care. Installed in this CSSD unit are state-of-the-art sterilization equipment of the highest international standards. The operation accommodates the huge demand of patient care. Usual operations take into account verifiable infection control measures thus making sure patients, students and staff are well-protected.
- **Dental Radiology**
  - Oral radiographs are taken in the radiology units as per doctors’ request. The unit is equipped with a variety of the latest machines.
- **Patient Relations**
  - It is the responsibility of the patient relations officer to facilitate effective communication between the staff and patients. The officer maintains positive relations for dental patients and their families. It is his primary duty to make sure that the patients

fully understand the teaching environment of the hospital and that the patient deserves to demand and obtain a detailed description of his treatment.

- **Specialty Clinics**
  - Utilized by specialist doctors in the accommodation of their scheduled patients to facilitate optimum dental care delivery.
- **Students Clinics**
  - Dental students provide services to their patients in these clinics and hasten their training in various fields of dentistry. All these clinics have been equipped with all modern tools.
- **Medical Emergency Clinics**
  - Provides basic medical emergency services to dental and non-dental patients.
- **Oral Diagnosis Clinics**
  - This is where the screening and examination of new patients transpire. Intern and Specialist doctors make sure to diagnose the patients comprehensively and initiate an appropriate treatment plan for them.
- **Maintenance**
  - This department is responsible for maintenance of all equipment including dental units, x-ray units and lab machines.

DISTRIBUTION OF DENTAL UNITS

The University Dental Hospital at King Khalid University, Alfaraa, presently has 260 dental units.

Dental units are distributed as follows:

182 clinics for students clinical training, 27 dental units for training of interns, the remaining clinics are reserved for consultant services and the Saudi Board Residency Programs.

CLINIC HOURS

Regular clinic hours of dental clinics are Saturday through Wednesday, from 8:00 AM – 12 Noon and from 1 PM – 5 PM.

Patient treatment beyond the scheduled clinic session is strictly not allowed.

DRESS REGULATIONS

Specialist doctors, students and working staff are expected to be dressed and groomed in a professional manner appropriate to the rotation situation.

- A neat, clean professional appearance while engaged in patient care is required.
- Appropriate (Personal Protective Equipment) PPE must be worn for clinical procedures.
- Clothing must be clean and neatly pressed.
- Shoes must be cleaned, well-maintained and appropriate.
- Examples of acceptable attire for men are shirts, pants, and clean shoes.

DENTAL ETHICS IN CLINICAL PRACTICE

Keeping in mind the definition of professional behavior as appropriate behavior to the circumstance, The University Dental Hospital expects all staff to be professional in their dealings with patients, colleagues, faculty and others and to exhibit caring and compassionate attitudes. This and other qualities will be evaluated during patient contacts and in other relevant settings.

CENTRAL STERILIZATION AND SUPPLY DIVISION

The Procedure

✓ **Issuance/Releasing and Receiving Back Materials, Instruments, Equipment and Machines**

- Head of Sterilization Department checks students and specialists' daily clinic schedules DQF15-01 prepared by Medical Director and received via the reception.
- Head of Sterilization Department and sterilization staff according to the daily clinic schedules, prepare, count, document and sign all the instruments, materials and machines needed for students' procedure AM or PM (Internship, Comprehensive, Endodontics, Operative, Periodontics, Orthodontics, Oral Surgery, Fixed Prosthesis, Removable Prosthesis & Diagnose) and Specialist clinics.
- Machines might include amalgamator, light cure with charger, endo motor, apex locator, BP apparatus, Glucometer, Thermafil and all handpieces. (high speed, low speed, ultrasonic, micromotor, coupling and straight handpiece).
- Instruments, equipment, materials and machines should be submitted and received back from the concerned clinics or clinic nurse assistant using appropriate forms.

✓ **Collection Of Soiled and Contaminated Instruments & Equipment**

- Protective attire must be worn (gown, mask, eye shield and gloves.) by all CSSD staff members.
- After every procedure the nurse arranges all the used instruments and hand pieces in the tray.
- The trolley of every procedure is checked by one sterilization staff and is then put for sterilization. Checking includes that the heavy instruments container is placed at the bottom of the trolley (DO NOT OVERLOAD).
- Contaminated instruments must be separated from reusable materials.
- All contaminated instruments should be secured prior to transport to CSSD.
- The nurse then endorses the towel clips & hand pieces to CSSD.
- The sterilization staff count/check if all released and returned hand pieces are equal.
- AII the contaminated instruments that the nurse returned goes to the decontamination area for proper washing.

✓ **Washing And Cleaning**

- Washing and cleaning should be carried out in a decontaminated area.
- Only staff trained in decontamination process are allowed to perform the washing and cleaning.
- The work is done according to the appropriate work instructions.

✓ **Packing And Sterilization**

- Only trained CSSD staff are involved in packing and sterilization work.
- Staff working in the packing and sterilization area must always wear the proper attire.
- Instruments are wrapped in kits prior to sterilization and packed according to department policy.
- The Head of Sterilization Department will ensure the order of production meets immediate patient priority where appropriate.
- Any item that is rejected due to evidence of residual blood and stains is returned to the washroom.
- Any item that is broken or damaged is given to the Head of Sterilization Department for repair.

- Sterilization and packing staff should:

- ➢ Ensure that the items to be processed are properly disinfected.
- ➢ Ensure that the instruments are correctly packed, sealed and ready for sterilization.
- ➢ Sterilization staff runs the sterilization machines according to Sterilization Machine Work Instruction.

✓ **Requisition Of Supply & Instruments from The Store**

- In case of lacking or damaging some instruments or materials, the Head of the Sterilization Department requests the needed ones from the college store using Material Request Form.
- If the requested materials or instruments were not available at stores, the Head of Sterilization Department raises a Purchasing Request Form to the purchasing Committee according to Purchasing Procedure.
- At the beginning of each academic year, Head of Sterilization Department checks all available materials and instruments (assisted by the storekeeper) and raises a Purchasing Request Form to the Purchasing Committee specifying the Sterilization Departments demands.
- After getting all the needed materials the sterilization staff checks the expiration date and suitability and puts them in the proper storage at the department applying First-In First-Out policy.

✓ **Malfunction in Equipment**

- When a defect in any machine, equipment or mechanical or electrical system or infrastructure occurs at the sterilization department, the Head of Sterilization Department puts a label DO NOT USE on the broken-down item and notifies the Maintenance Company, via the head of the maintenance affairs in the college, by sending a Maintenance Request Form.

✓ **Condemned Instruments**

- Damaged and condemned instruments would be reported to the Medical Director and properly documented using a Damaged Instruments & Materials Form. The damaged and condemned instruments would be returned to the store with the second copy of the Damaged Instruments & Materials Form after being approved by the Medical Director.

✓ **Physical Inventory of Stocks and Materials**

- The Head of the Sterilization Department should have a list of all equipment, instruments, hand pieces and material he\she keeps at the department, and he\she is responsible for weekly check and inventory of these hand pieces and materials.
- In case of missing hand pieces or instruments, the Head of Sterilization Department reports the incident to the medical director.

DENTAL RADIOLOGY DEPARTMENT

The Procedure

- ✓ When a patient needs an X-Ray, the doctor provides him/her with an X-Ray Request Form identifying the needs and specifications.
- ✓ When receiving the X-Ray request, the technician at the Unit registers the request at the Radiology Unit Register and prepares the patient for the X-Ray.
- ✓ The technician takes the X-Ray according to X-Ray Work Instruction.
- ✓ The technician processes the X-Ray according to Processing Work Instruction and sends it with the request to the clinic or sends the X-Ray via computer system to the clinic and handle the request to the clinic. The copy of the request is kept in the radiology record section and the original in the patient’s file.
- ✓ The technician runs the machines at the unit according to Operating Work Instructions given in User Manual of each X-ray unit.

- ✓ The technician records the results and number of shots.

- ✓ It is the responsibility of Radiology Unit Technician to check the workability and readiness of all equipment in the unit using appropriate checklists and record the result in the same forms.
- ✓ The technician is also responsible for checking the yearly maintenance and quality assurance work done by the contracted maintenance company.
- ✓ The technicians, doctors and all other staff who might be exposed to radiation at the radiology unit should be subject to regular inspection according to Radiation Monitoring Work Instruction.

MAINTENANCE DEPARTMENT

Periodical Maintenance

- ✓ The Coordinator of the Maintenance Affaires Section is responsible for enumerating all machines and equipment in all clinics, laboratories, units and facilities and rooms in the college with unique reference for each one according to Equipment's Coding Work Instruction.
- ✓ Because the maintenance in the college is contracted to a maintenance company, then this company should be evaluated periodically according to the Evaluation of Suppliers Procedure.
- ✓ The coordinator of maintenance affairs should prepare and keep a list of all machines, equipment and instruments and other mechanical and electrical apparatuses and infrastructures in the college which might affect quality service provision.
- ✓ The coordinator of maintenance affairs should show the codes of the machines, equipment, and instruments on the machines themselves.
- ✓ The coordinator of the maintenance affairs would cooperate with the maintenance company to prepare a periodical maintenance program for all the college's machines and instruments.
- ✓ The coordinator of the maintenance affaires would follow-up the periodical maintenance schedule and the maintenance done with the maintenance company until the college is satisfied with the results and the coordinator of the maintenance affairs has to show this on the periodical maintenance schedule.
- ✓ The coordinator of the maintenance affaires section should notify the heads of departments and sections with periodical maintenance dates after it is being approved by the maintenance company.
- ✓ The coordinator of maintenance affairs should record all information of the performed maintenance in Machine's Technical Record.

Breakdown Maintenance (Repairs)

- ✓ When a machine or any mechanical or electrical system or infrastructure breakdown, the person in charge in the related department would notify the Maintenance Company, via the coordinator of the maintenance affairs in the college, by sending a Maintenance Request to them.
- ✓ The coordinator of the maintenance affairs should record the request in the Maintenance Follow-Up Log.
- ✓ After the broken-down machine or system is repaired, the coordinator of the maintenance affairs and the head of the related department would be notified by receiving back the form from the maintenance company.
- ✓ If the test on the repaired machine or system does not satisfy the college's request, then more adjustments will be done by the company until it is approved by the head of the department and maintenance affairs.
- ✓ The coordinator of the maintenance affairs should record all information related to the problem and the reparations done in the maintenance follow-up log, as well as in the specific Machine's Technical Record.

III. PATIENT CARE

STANDARDS OF CARE

(These standards of care documents are currently subject to amendment to ensure they remain up to date with policy and other requirements. Kindly share your valuable inputs accordingly.)

"*Our philosophy of comprehensive patient care is to deliver high quality, total patient care in a humane and timely manner taking into consideration patients' concerns, beliefs and interest'*.

Six Standards of Care:

1. Quality of Treatment
2. Credentials
3. Patients' rights and responsibilities
4. Time management
5. Records
6. Public Health and Preventive Services

1. Quality of Treatment:

a. Patients will receive the best treatment possible within the purview of the University Dental Hospital services.
b. Treatment will be provided regardless of the patient's gender, ethnicity, religion, age, or disability.
c. All patients will be registered in the hospital registration system and receive a detailed treatment plan based on chief complaint, Oral examination, medical/dental history, and diagnostics.
d. All patients will be offered comprehensive care.
e. Patient-specific limited care will be provided based on patients' preferences and needs.
f. Dental and medical emergency services will be provided during clinic working hours with after-hours emergency care provided at designated hospitals.
g. Quality control procedures for confidentiality, Infection Control, Radiation Monitoring, Biohazard waste disposal will be followed in all areas of clinical practice.
h. Auditing of records and treatment quality will be done twice a year.

2. Credentials

a. At all stages of treatment, patients will receive care from trainees working under direct supervision of faculty.
b. Faculty working in specialty clinics will have appropriate qualifications in their area of specialization.

c. All support staff, students, interns, and faculty involved in patient care will be trained /certified in basic life support.

3. Patients’ Rights and Responsibilities

a. Patient's rights and responsibilities will be prominently displayed in Clinic Reception and waiting area.
b. Before treatment is started Patients/guardians will be informed of their responsibilities and obligations and a copy will be provided on demand.
c. Patients/guardians will be adequately informed of risks and benefits of treatment and consent obtained before initiation of the treatment.
d. Patients will be treated with respect and dignity in a clean, safe environment and adequate privacy maintained.
e. Appropriate follow-up care will be offered.
f. Patient confidentiality will be maintained.

4. Time Management

a. Treatment will progress in a reasonable and timely manner consistent with the treatment plan.
b. Patients will be rescheduled as soon as possible based on patient oral health needs, clinical schedule, care providers’ availability with due consideration for patients’ convenience.

5. Records

a. All records are the sole property of the University Dental Hospital.
b. The hospital will maintain patients’ records and ensure its confidentiality.
c. All records will be used for treatment, teaching and research purposes and will not be used otherwise without prior permission of the patient and the hospital.
d. Patients may be provided with a report about his/her treatment upon written request.
e. Treatment completion certificate will be issued to all patients if appropriate.

6. Dental Public Health and Preventive Services

a. College out-reach programs will be based on local patient data and demographics.
b. Community partnerships will be created to raise the level of oral health in the local areas.
c. The community and patients will receive information on oral health risk assessment and treatment modalities available.
d. The community and patients will be instructed on the importance of disease prevention and the need for maintenance of oral health.
e. The patients who need urgent/emergency care will be referred to the dental hospital to receive the optimal medical care.

ORAL AND MAXILLOFACIAL

1. Patients reporting to oral and maxillofacial surgery clinics will undergo diagnosis related to the surgical treatment. The diagnosis shall be documented and will include the patient's chief complaint, relevant history, clinical examination and investigation/s to reach definitive diagnosis. Medical conditions which would necessitate alteration in the treatment plan are also identified.
2. Prior written consent will be obtained from the patient/guardian before the start of treatment.
3. The anesthetic technique to be employed for the surgical procedure will be explained to the patient and the same will be duly documented in the patient's file.
4. Chair-side oral & maxillofacial surgical treatment would include extraction of non-restorable teeth, fractured teeth, teeth associated with pathologies like cysts, tumors and odontogenic infections, orthodontic extractions, mobile teeth and impacted teeth indicated for extraction.
5. The entire surgical procedure along with the prescribed medications will be documented in the patient's file. Tissue specimens excised from pathological lesions will be sent for histopathology examination and definitive diagnosis.
6. Detailed post-surgical instructions will be given to the patient verbally and in a written format. In the event of post-surgical complication/emergency, the patient is advised to report to the hospital emergency dental clinics during clinical hours and to the ministry of health facilities thereafter.
7. Temporomandibular joint and maxillofacial deformities should be managed at a conservative level.

ORAL DIAGNOSIS, ORAL MEDICINE & ORAL RADIOLOGY

1. All patients will initially complete a health history questionnaire, examined in the diagnosis clinic to formulate an overall treatment plan. If required, the patient will be referred for medical consultation prior to dental treatment.
2. All radiographs shall be prescribed in writing by a qualified dentist according to American Dental Association guidelines and comply with the ALARA (As Low As Reasonably Achievable) standard.
3. All intraoral radiographs will be mounted, dated and labeled with the patient's file number. Digital radiographs will be stored in the clinic's computer system.

4. Radiographic procedures shall be carried out in accordance with the hospital's Infection Control Policy.
5. Patients diagnosed with oro-facial pain, oral lesions and TMJ disorders will be managed through an interdisciplinary approach in which all concerned areas will coordinate alongside each other to create a setting with aims of solving the problem.
6. Patients will be referred to other specialties based on the overall treatment plan.

ORAL PATHOLOGY

1. Biopsy specimen shall be submitted along with prescribed request form duly completed and signed by the clinician.
2. Biopsy specimens submitted to oral pathology laboratory along with relevant request form will be processed for histopathology reporting.
3. Appropriate staining and other adjunctive procedures will be performed to reach a definitive diagnosis.
4. Patients may be called for clinical correlation in order to make accurate final diagnosis.
5. Oral Pathology laboratory reports will be produced by two oral pathologists within four working days, except for specimens requiring special processing.
6. Reports with color picture/s of the relevant area and histological fields will be placed in the patient's file.

DEPARTMENT OF PREVENTIVE DENTAL SCIENCES (PDS)

PEDODONTICS

1. Pedodontics diagnosis and treatment planning include prevention and treatment of dental disease in children.

2. Treatment is discussed and initiated in the presence of and with the consent of parent /guardian.

3. Diagnosis will be based on chief complaint, dental and medical history, complete intra- and extra- oral examination, stage of dentition and appropriate radiographs. The treatment plan will be formulated on the following lines:

- Emergency Phase
- Systemic Phase
- Preventive Phase
- Preparatory phase
- Corrective Phase

4. Appropriate behavior modification techniques may be employed to manage the pediatric patient. These may also include appropriate premedication and use of topical and local anesthetics.

5. Suitable preventive therapy will be advised and may include:

- Simple Instructions regarding the etiology of dental disease
- Basic oral hygiene instructions
- Appropriate fluoride therapies.
- Pit and fissure Sealants
- Minimal intervention Restorations
- Diet assessment and/or counseling.

6. Management of developing occlusion may include:

- Diagnostic case evaluation

- Treatment of deleterious Oral Habits
- Space maintenance and regaining
- Minor orthodontic corrections

7. Pulp therapy for primary and/or permanent teeth is based on extent of pulp exposure and stage of root development. This will include indirect and direct pulp capping, pulpotomy and pulpectomy, Apexification and Apexogenesis. Stainless steel crowns will be the final restoration for endodontically treated primary teeth when required.

8. Minor surgical procedures and extractions will be done after proper evaluation of individual cases.

9. Post-surgical instructions will be given to all patients, parents or guardians.

10. Details of procedures and all anesthetics and/or medications used and/or prescribed for the patient will be appropriately written in the patient's file.

ORTHODONTICS

1. The treatment will aim to achieve the best possible and stable occlusal relationship within the limits of normal facial aesthetics.

2. Orthodontic records will be made before the start of treatment and will include:

- Chief Complaint
- Medical and dental history
- Clinical examination
- Orthodontic evaluation
- Diagnostic models
- Photographs
- Appropriate radiographs
- Cephalometric analysis, if required

3. Subsequent to clinical examination, diagnosis and evaluation of orthodontic records, an orthodontic treatment plan is made.

4. The treatment plan is discussed with the patients, parents and/or guardian and treatment options explained.

5. The patient or guardian signs an informed consent form which contains details of the chosen treatment option.

6. At the conclusion of treatment, all final records are made.

7. At the end of treatment, the patient is provided with a retention appliance if required and likelihood of relapse explained if there is patient's non-compliance with post treatment instructions.

PERIODONTICS

1. Periodontal diagnosis and treatment will be based on the patient's history, clinical examination and use of appropriate diagnostic aids.

2. Periodontal therapy will be performed in a properly sequenced manner.

3. Comprehensive periodontal treatment will aim at eliminating and/or controlling etiologic factors to create optimal periodontal health.

4. Oral hygiene instructions will be given to all patients attending periodontal clinics.

PREVENTIVE DENTAL CARE

1. Standards for Preventive Dental Care will focus on maintenance of function and prevention of disease at the level of the individual patient.
2. Patients will have preventive dental care explained to them in simple and clear terms.
3. Preventive dental care will be included in a patient's comprehensive treatment plan.
4. These services include, but will not be limited to oral prophylaxis, plaque control, mechanical debridement, oral health counseling, caries control, appropriate use of fluorides, sealants and diet counseling.
5. Follow-up and recall examination dates, properly documented in patient's progress record, will be arranged to minimize the risk or recurrence of further oral disease.

OPERATIVE DENTISTRY

1. The process of reaching a definitive diagnosis (includes patient's chief complaint, relevant history, clinical examination, and investigation/s) will be documented.
2. Based on the diagnosis, treatment plan will be formulated and explained to the patient along with treatment options.
3. Restorative procedures will be performed to restore the tooth form, function and esthetics.
4. The aim of conservative treatment will be to ensure prevention of recurrent caries, retention of restorative materials and resistance to tooth fracture and/or restorative material.
5. Measures will be taken to protect the pulp. These may involve use of cavity liners, medicated bases, pulp capping – direct and indirect.
6. Restorative procedures will be performed under local anesthesia, if required.
7. All patients are given post-operative instructions.

ENDODONTICS

1. The process of reaching a definitive diagnosis (includes patient's chief complaint, relevant history, clinical examination and investigation/s) will be documented.
2. Before deciding for root canal treatment, the restorability and functional role of tooth will be ascertained.
3. Dental caries and defective restorations will be removed from teeth meant for endodontics.
4. Debridement, enlargement, disinfection and obturation of all root canals are carried out after application of rubber dam to isolate the relevant tooth.
5. Well-designed access cavity is prepared to enhance localization, cleaning, shaping, disinfection and obturation of root canals.

6. Obturation using non-absorbable semisolid, or solid core root canal filling material will be carried out to ensure proper apical seal.
7. The form, function and esthetics of the tooth crown will be restored using appropriate restorative material.
8. Radiographs after completion of treatment should show proper filling of root canals without gross overextension, under-filling, ledges or perforations.
9. Patients should show no adverse clinical signs or symptoms following treatment.
10. Follow-up radiographs should demonstrate progressive resolution of periapical disease.

PROSTHODONTICS

1. The process of reaching a definitive diagnosis (includes patient's chief complaint, relevant history, clinical examination and investigation/s) will be documented.
2. Based on the diagnosis, treatment plan will be formulated and explained to the patient along with treatment options.
3. The primary goal of treatment will be to replace missing teeth, re-establishing function, form and esthetics whilst ensuring good prognosis.
4. Proper evaluation of periodontal support, including hard and soft tissues, will be carried out before crown and bridge fabrication.
5. Crown and bridge will be fabricated on teeth with healthy pulp or optimal endodontic conditions.
6. Crowns are indicated for endodontically treated teeth, teeth with large restorations, insufficient remaining tooth structure, correction of contours and occlusion.
7. Replacing missing teeth with fixed partial denture will be considered depending on clinical findings, oral hygiene and occlusal considerations.
8. Removable partial denture should function passively, fit natural teeth accurately, be well adapted to soft tissues, restore esthetics and provide adequate masticatory function.
9. Complete denture treatment will be recommended for the completely edentulous patient and for patients whose remaining teeth have very poor prognosis.
10. Fabricated complete denture will demonstrate adequate stability and retention during rest and function.

PATIENTS’ RIGHTS AND RESPONSIBILITIES

This describes patients’ rights and responsibilities to enable them to receive high quality oral health care in comfort and safety. The treatment services at the University Dental Hospital play an important role in the prevention and treatment of oral diseases in various segments of our society. However, the hospital is an educational institution and dental treatment may require longer period of time than normally expected in general dental practice.

PATIENT’S RIGHTS

Every patient has the right to:

1. Receive treatment that meets national and international standards.
2. Receive information necessary for informed consent prior to the start of any procedure and/or treatment.
3. Receive dental care in a safe and secure environment including X-ray radiation protection.
4. Expect adherence to infection control protocol in all clinic and laboratory procedures.
5. Be treated respectfully and courteously by faculty, staff and students.
6. Receive a thorough assessment of his/her oral health status, comprehensive treatment plan with treatment options.
7. Total confidentiality of all his/her data.
8. Receive information about his/her oral condition in a language the patient understands.
9. Know the approximate timeline for treatment to be completed.
10. Be referred to relevant oral and medical care professionals whenever needed.
11. Request appropriate assistance from the treatment provider whenever there is a communication barrier.
12. Appropriate oral health education and post treatment instructions.
13. Request for report of his/her dental condition as per hospital regulations.
14. Submit complaints or suggestions about the care and service provided by the University Dental Hospital.
15. Discontinue treatment at any time, after informing the clinic reception.
16. Be informed of the medical and dental consequences should he/she decide to discontinue treatment.
17. Emergency treatment during clinic hours (after clinic hours, emergency care is available through your local hospital).
18. Special facilities and reserved car parking spaces, if categorized as special needs patients.

PATIENT'S RESPONSIBILITIES

the University Dental Hospital expects every patient to fulfill the following responsibilities:

1. Provide accurate bio-data and complete information about his/her health status.
2. Give informed consent prior to the start of any procedure and/or treatment.
3. Report any changes in health status during subsequent visits.
4. Be respectful and considerate of clinic personnel and other patients.
5. Follow oral health education and comply with post treatment instructions.
6. Keep scheduled appointments and give at least 24 hours' advance notice, should a change of appointment be required.
7. Submit complaints or suggestions about the care and service provided by the hospital.
8. Parents or guardians accompanying patients who cannot provide informed consent should:
    - give informed consent prior to the start of any procedure and/or treatment.
    - be present to complete the medical and dental history.
    - stay in the dental clinic area during the treatment.
    - follow oral health education and comply with post treatment instructions.
9. Understand that he/she will be treated by students under faculty supervision.
10. Understand that there are limits to the success or permanence of dental treatment.
11. Abide by clinic rules and policies.

DENTAL TREATMENT CONSENT FORM

Please read each paragraph carefully and sign in the appropriate area afterwards.

1. I understand that the University Dental Hospital at King Khalid University is an educational body and that a supervised student might be the prime treating dentist or part of the treating team.

2. My student and/or dentist responsible for my care will thoroughly brief me about any operation, procedure, technique or taking of any clinical x-ray related to the proposed treatment and that I may ask questions concerning it. I further understand that multiple visits are required by students to complete the examination and treatment plan.

3. I am aware that it is important to keep my dental appointment for failure to do so will cause loss of credit to the student and may result in depriving me from any further treatment in the hospital.

4. I understand that my proposed treatment should involve taking of intra-oral and extra-oral radiographs which enables the dentists to view dental cavities, abnormalities, development and eruption of teeth necessary for proper diagnosis and evaluation purposes.

5. I give my permission to make any/all changes and additions deem necessary because of conditions found while working on the teeth that were not discovered during examination.

6. I am aware that all records, radiographs (X- Ray films), photographs, casts…etc are the property of the University Dental Hospital at King Khalid University, and may be used for teaching purposes and/or scientific publication without additional consent.

7. I hereby state that I have read and understand this consent form, that I have been given an opportunity to ask questions and that all my questions have been answered to my satisfaction.

Name of Patient: ____
Signature of Patient/Parent/Guardian: ______________________________
Date: ___________________

PATIENT CONFIDENTIALITY AGREEMENT

The University Dental Hospital at King Khalid University understands that information about the patients and their dental health is personal. The hospital recognizes that it is both an ethical and legal duty to keep patient information confidential. It is obligatory for the dental care providers and ancillary staff to hold in strict confidence the medical records, results of tests, diagnoses and other materials under the possession of the hospital. Confidentiality is central to the relationship of trust between the dentist and the patient so safeguarding the patient information has vital effect in the desire of the patient to continue his care.

Maintaining or protecting the privacy of patient information at the University Dental Hospital is an utmost priority and everyone has to comply with its policy. Non-compliance will result in unfavorable consequences.

Thereby, as a faculty member, student /intern, or staff, I acknowledge and understand that:

- Patient information must be held in strict confidence. It should only be disclosed to those who would be unable to provide effective care and treatment without that information and on a need-to-know basis.
- Permitted conversations concerning confidential information must take place such that the information remains confidential. Do not discuss confidential information in areas where it may be overheard (elevators, halls and cafeteria).
- Information must be kept confidential even after a patient dies.
- Only persons with written permission from appropriate authorities can copy or remove the dental records from the hospital facilities.
- Patient schedules must not be exposed publicly. Patient lists, charts, and confidential papers are kept out of patient view. Computer screens must always be cleared when left unattended.
- The same principles must be applied to a circumstance wherein a fellow faculty, student or staff is being seen as a patient.
- Breach of confidence, or any act that can be considered as a violation of this agreement, will result in disciplinary action, which may lead up to termination of employment, in accordance with the hospital policies, and possible legal penalties.

I have read, understood and agreed to the statements set out above.

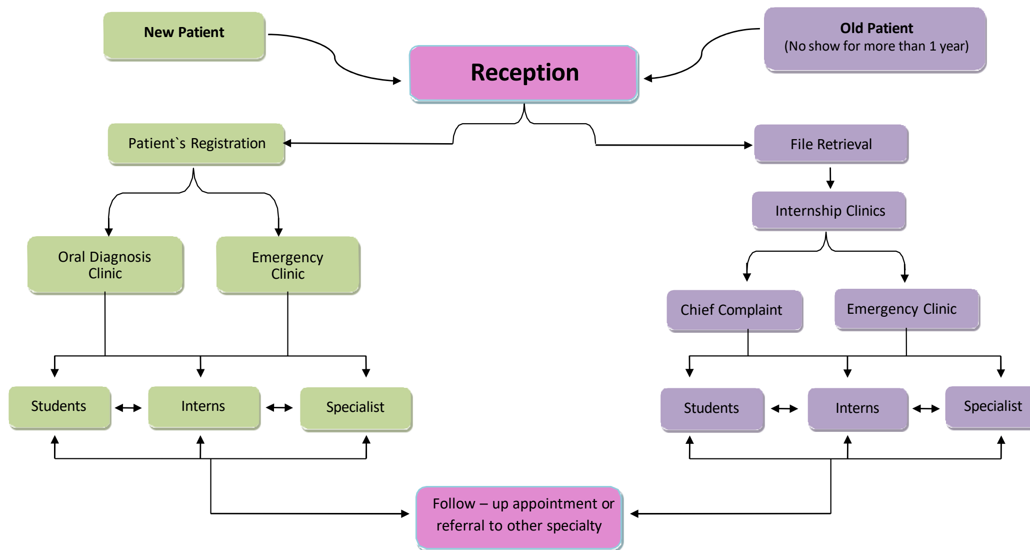
SIGNATURE…………………………………………………..….

PRINTED NAME……………………………………………...

DATE SIGNED…………………………………………………

MANAGEMENT OF PATIENTS

PATIENT MANAGEMENT SYSTEM FLOWCHART



- Patients fall into two major categories:
  1. New patients
     - ➢ New patients are evaluated at an initial screening in the Oral Diagnosis and Emergency Clinics after the routine procedural registration in the reception. Throughout the initial assessment, an intern or specialist doctor determines a patient's overall dental condition and establishes his/her medical status. The appropriateness for provision of treatment by either a student, intern or specialist doctor is assessed as well. Prior to referral for treatment phase, patients must undergo the preliminary examination.
     - ➢ Patients may be referred for a radiographic examination following the screening in the Diagnosis Clinics. Patients may provide the hospital with dental radiographs taken elsewhere, but radiographs taken elsewhere will be assessed for their diagnostic quality and relevance.
     - ➢ Records of patients after diagnosis will be reviewed by the reception and assigned to the determined treatment provider by giving appointments as per the availability of the doctor. The assignment will be made based upon the comprehensive assessment completed during the diagnosis stage and the educational needs of the students.
     - ➢ A complete and thorough treatment plan must be arranged for all patients following screening.

- A sequential treatment plan must be completed prior to initiating any treatment except for emergency care.
- All planned treatment must be entered into the file and signed by the diagnostician.
- Patients with emergency needs will be provided with initial treatment depending on the severity of the case. They are prioritized and given emergency attention in the Diagnosis Clinics.
- Patients are made sure that they do not leave the clinic's premises without being treated or without any appointment for treatment. Running courses in the Students Clinics will accept patients from the Diagnosis Clinics at once. Internship Clinics are also available for immediate treatments.

2. Old Patients

- Previously registered patients who failed to show themselves for at least a year are categorized as old patients.
- Upon visit, the receptionists retrieve their files in the Medical Records and examine their validity. Then, they will forward these cases to Internship Clinics. An intern doctor attends to the needs of the patients and ascertains the dental status of the patient. Treatment is to be provided at once, may it be emergency or customary.

1. Waiting List Patients

Waiting list of patients is only applicable during examination weeks of students. They will not be clinically available in these occurrences. New and old patients with referral to Students Clinics are forwarded to the reception desk. The receptionists book the patients according to the corresponding procedure in the referral form. The patients are given a specific date and time when to come for their treatment.

2. Patient Referral

During or after the treatment, if the patient needs further treatment/consultation at a different specialty, the treatment provider refers the patient using the Interspecialty Referral with reasons for referral. In the Students Clinics, the student doctors should obtain countersignature in the well-written Interspecialty Referral Form from their supervisors to refer the patient accordingly.

In cases where the treating doctor is no longer available, the patients are distributed to other treatment providers as it should be. If the patient needs further treatment/consultation outside the hospital, the Course Supervisor refers the patient using the Medical Referral Form.

3. Late Patients

Patient with an appointment to any department, may it be Students Clinics, Intern or Specialist, is given 15 minutes grace period allowance to come, failure to do so, next patient with an appointment will be served.

4. Missed Appointments

Patients are only allowed to have 3 (three) consecutive or non-consecutive missed appointments unless they notify the reception of their cancellation and they have justifiable reasons for their failure to come, no less than 24 hours before the appointment.

5. **Special Booking**
   Only specialist doctors are permitted to book patients on special occasions or circumstances within the regular working hours of the clinics. These special bookings should be arranged in reception at least 48 hours before the appointment. The doctors are required to completely fill out a Special Booking Form.

TREATMENT SUPERVISION

Each clinical procedure performed on a patient by a student provider must be supervised by a qualified course coordinator. It is strictly against clinics regulation for student providers to provide unsupervised dental care.

A course coordinator's presence and permission are required to initiate a clinical procedure on a patient. He must be present in the clinics until all work is completed and the patient has been dismissed from the clinics. Students must comply with regular clinics hours at all times to allow for proper course supervision.

All clinical procedures should be planned to permit adequate time at the conclusion of the clinic's session to complete all necessary documentation and data entry. In general, care is recommended to be completed approximately fifteen (15) minutes prior to the end of the clinic's session.

SPECIAL NEEDS AND SPECIAL ASSISTANCE

For non-Arabic speaking patients or for patients or visitors with hearing impairments, the patient relation officer has the responsibility of this need. Handicapped parking spaces are available in the patient parking lot.

IV. INFECTION CONTROL

ORIENTATION

Dental patients and dental health care providers are exposed to get infected with many pathogenic microorganisms which might be blood borne or originating from oral or respiratory tract infections including cytomegalovirus (CMV), HIV, HBV, HCV, Mycobacterium tuberculosis, staphylococci, streptococci.

The mode of transmission of these infections include:

- Direct contact with patient blood, oral fluids, or other contaminated secretions like saliva or serum exudates.
- Indirect contact with contaminated instruments objects or surfaces.
- Droplet infection from spattered material of the patients e.g. coughing or sneezing that might come into contact with the conjunctiva or a non-intact nasal, or oral mucosa.
- Inhalation of airborne microorganisms from the aerosol in the surroundings of the dental theatre.

Conditions for getting an infection include:

- Sufficient dose of virulent pathogenic organism.
- A medium or reservoir for the organism to survive and multiply like blood.
- A mode of transmission allowing a portal of entry from the source to the host.
- A susceptible host who is not immune or resistant to the invading pathogen.

Effective infection-control procedures prevent infection by cutting one or more links in this chain.

Standard precautions should be considered during contact with:

- All body fluids & secretions e.g. blood, mucous secretions & saliva.
- Non-intact skin & mucous membranes.

Dental Infections Control should be checked randomly every day before, during and after patient treatments in all hospital clinics by an infection controller.

IMMUNIZATIONS

All dental clinical staff and students are urged to have appropriate immunizations before engaging in the treatment of patients. All dental staff and students are afforded the opportunity to be immunized against Hepatitis-B.

IMPORTANCE OF CURRENT MEDICAL HISTORIES

Patient medical histories should be updated whenever the patient comes for treatment. Chair-side Assistants should review pertinent information with the doctor before patient treatment. Patient charts should reflect that a history review has occurred prior to any administration of medication or invasive procedure.

Infectious diseases often can be present without overt symptoms. Further, some patients are reluctant to divulge facts about certain medical conditions; therefore, all patients are to be treated as being potentially infectious by observing and employing "Universal Precautions".

UNIVERSAL PRECAUTIONS

Use approved protective attire and barrier techniques when contact with body fluids or mucous membranes (oral cavity) are anticipated. Remove all jewelry, with the possible exception of a thin smooth wedding band and wristwatch. Wash hands (antimicrobial hand-wash) before and after each patient contacts. Wear gloves (exam, surgical, vinyl). Wear protective eyewear or goggles. Wear uniforms, laboratory coats, or gowns which are not to be worn out of the clinic's environment.

Personal Hygiene:

Hair: hair should not be so long and should be kept away from the face to prevent contamination from spray or spatter produced during dental procedures.

Facial hair: Male students are to wash and clean facial hair with suitable disinfectant and cover it with the face mask during patient treatment to prevent contamination from spray or spatter produced during dental procedures.

Jewellery: Remove all jewellery, with the possible exception of a thin smooth wedding band and wristwatch. Any jewellery that interferes with patient care should not be worn in the clinics.

Nails: Nails must be maintained in a short, clean, and healthy fashion as it harbours the majority of microorganisms on the hand.

PATIENT TREATMENT

During patient treatment, all procedures should be performed in a manner that minimizes the formation of droplets, spatter, and aerosols. This can be accomplished by using high-volume evacuation and proper patient positioning.

Dental personnel should limit the field of contamination by avoiding contact with objects such as charts, telephones, and cabinets during treatment.

INJURIES AND SHARP ITEMS

Safety precautions are to be taken to protect hands from injuries and disease-causing pathogens. Wash hands (antimicrobial hand wash) before gloving and after de-gloving. Change gloves between each patient. Discard gloves that are torn, cut, or punctured. Avoid injury with sharp instruments and needles. Report all injuries, no matter how small, to your nurse leader/supervisor

in a clear, written format. Handle sharp items carefully. Haemostats or pliers may be used to handle sharp items. When it is necessary to recap needles, recap with a needle shield using a one-handed recapping technique to avoid accidental needle sticks. Place sharp items in appropriate containers (1 container in each dental unit) labeled and designated for that purpose.

A container for disposal of sharp items is located either in each operatory or in that area of the sterilization room which is designated for the disassembling of trays after patient treatment.

MANAGEMENT OF INJURIES

Stop patient treatment. Excuse yourself from the patient. Wash the wound area with antiseptic soap and water. Do not scrub (wash around). Bleed the wound. Cover the injured area. Report the injury to your clinical/practical supervisor. Document injuries. Bring the patient's chart with you. Go to the emergency room for further injury management and fill out the incidence report.

This incidence report, which explains in detail how the incidence transpired and what are the necessary investigations and measures taken, will be forwarded to the office of the medical director. The medical director will provide the concerned patient, treatment provider or ancillary staff with a referral letter to Aseer Central Hospital along with a copy of the incidence report and also requesting a feedback statement.

A copy of the incident report, referral letters and feedback reports should be kept in a confidential file in the file storage room.

DISINFECTION OF TREATMENT ROOMS

After patient treatment, all surfaces not protected with disposable barriers are to be decontaminated with an acceptable disinfectant.

This disinfectant is to remain in contact with the environmental surfaces for the period of time recommended by the disinfectant's manufacturer. Protective attire (gloves, eyewear, and clothing) is to be used when performing this procedure.

HAND PIECES

The handpiece is one of the most challenging items to decontaminate. *Decontamination should be accomplished in the following manner:*

Following patient treatment, remove all blood and visible debris with an approved disinfectant.

Flush handpiece by running for 20-30 seconds (60 seconds after a long weekend) discharging water into a sink or container.

Heat sterilize all hand-pieces, contra-angles, ultrasonic scaling tips and prophy angles between each patient and lubricate as suggested by the manufacturer. Currently acceptable methods of heat sterilization include autoclaving and chemiclaving.

THREE-WAY SYRINGE AND HIGH-VOLUME

Saliva and debris will contaminate the 3-way syringe tip and high-speed evacuation tips.

3-way syringe tips are to be heat sterilized. Disposable syringe tips are available and may also be used (discard after use).

Wipe the 3-way syringe handle, saliva ejector coupling and hoses with an acceptable disinfectant

after use (plastic sleeve type barriers may be used as an alternative).

Evacuation tips are heat sterilized after each use unless they are the disposable variety, in which case they are to be disposed of after each use.

Flush the high-volume evacuation system with water, then with an acceptable disinfectant solution (1 gallon of a 1:10 solution of chlorine bleach to water) at the end of each working day.

DENTAL LIGHTS, HANDLES, CHAIR, CONTROLS,

Dental units, chairs, lights, and controls are to be wiped thoroughly with an acceptable disinfectant after each patient unless these surfaces have been covered with a plastic or fluid resistant paper barrier, in which case the underlying surfaces must be wiped with a disinfectant at the beginning of each day.

BURS AND MOUNTED DIAMOND STONES

Burs and diamonds are to be heat sterilized after use. The debris must be removed before they are placed in the ultrasonic cleaner. After all burs and diamonds are dried, they are placed in a bur block and sterilized in an autoclave.

COTTON PRODUCTS

Cotton rolls and gauze are sterilized in individual packages or on a procedure tray for individual patient use. The store opened packages of gauze, cotton rolls and cotton pellets in covered containers. Use clean forceps for dispensing supplies for immediate use.

TRAY SETUP

When possible, use tray setups so entering drawers and cabinets can be minimized. Think ahead when preparing for the procedures. When cabinet drawers must be entered during a procedure to secure an instrument or supplies it must be accomplished with sterile forceps or barrier to prevent contamination of the contents of the drawer.

CONTAMINATED WASTE

Refuse determined to be considered "infectious" shall be separated from all other and placed into covered containers having red or orange plastic liners or liners clearly labelled as biohazard to alert personnel of possible danger.

Limit materials which are red bagged to gauze and cotton balls soaked with blood, saliva and blood-stained paper goods, teeth or excised soft tissue. Sharps are to be tightly sealed in puncture resistant containers to preclude loss of contents.

All contaminated waste is collected from each container marked "**bio-hazardous materials"** at the end of each day.

The dental personnel must wear gloves when performing this job.

All bags are placed in a large red bag and taken to the designated holding areas within the clinics where it is deposited for removal by a contracted special waste hauler.

Full sharps containers which have been taped shut are to be taken to the aforementioned holding area and deposited in infectious waste containers in a similar manner.

SPILLS OF CHEMICAL OR INFECTIOUS

Should any blood, infectious fluids or materials be spilled on the floor or any work surface, the spilled material should be wiped up using an absorbent material in gloved hands and dispensed in the appropriate waste container.

The area should then be thoroughly wiped down with a hospital grade, high level disinfectant or a solution of 1:10 household bleach and water and allowed to remain wet for 30 seconds before wiping dry.

Clinics should also maintain a mercury spill kit in the event that dental mercury should spill.

IMPRESSIONS

Polyether impressions should be sprayed with a 1:10 dilution of 5.25% sodium hypochlorite (bleach) solution, allowed to remain wet for 2-3 minutes only, and then rinsed with water before sending to laboratory.

Vinyl Polysiloxane impressions should be immersed in a 1:10 dilution of 5.25% sodium hypochlorite (bleach) solution, soaked for 10 minutes, rinsed and sent to laboratory.

Alginate impressions should be rinsed with water immediately after removal from mouth to remove blood and saliva. They should then be sprayed with a 1:10 dilution of sodium hypochlorite (bleach) solution, sealed in a plastic bag for 10 minutes and then poured immediately.

SHIPPING OF CONTAMINATED ARTICLES

Any laboratory cases (impressions, models, prosthetic devices, etc.) and any contaminated equipment being shipped for processing or repair must be decontaminated before packaging with a disinfectant solution appropriate for the item being shipped.

MONITORING OF AUTOCLAVES AND CHEMICALS

Dental clinics shall monitor each sterilization cycle with heat sensitive colour change tapes or strips. These trips only indicate that an adequate heat level was attained and do not assure sterilization.

In addition to the heat strips a biological monitoring device or spore monitor shall be cultured by an independent staff at the medical city facilities on a weekly basis to assure that an adequate pressure was achieved and that the bacterial spore was killed by the sterilization process.

In the event that the monitoring indicates that adequate sterilization was not achieved, the dental clinics must do the following:

Immediately culture another spore indicator to determine if the first positive sampling was flawed.

Discontinue use of the sterilizer which is suspect until it is repaired, or it is determined that the original test was in error.

Review all patient records of patients who have been treated to determine if medical histories reveal any serious infectious disease, e.g. AIDS, Hepatitis B, etc.

If other patients have possibly been treated with instruments which did not undergo adequate sterilization, immediately notify the medical director for further directions regarding patient notification procedures.

If no patients with serious infectious disease have been treated with instruments in question no patient notification is required.

V. EMERGENCY PROCEDURES

OUTDOOR/INDOOR EMERGENCY

- **Outdoor Emergency**
  - When an outdoor emergency patient arrives at the dental hospital, he\she would be received and accompanied by a member of the reception staff to the Emergency Room.
  - If the patient is anxious (or if his\her lead could be asked), the receptionist opens a file for him\her according to Reception, Filing and Patient records Procedure, otherwise, file opening could be postponed until the patient arrives to the Emergency Room.
  - Once the patient is at the Emergency Room, the nurse in charge calls the responsible doctor to the emergency room giving him a brief of the case.
  - The nurse in charge realizes the needed emergency equipment and tools.
  - If the case is critical, the nurse in charge fills a Police Notification Form (three copies):
    - One copy to the reception desk to call police and to be submitted later to them after being stamped by the hospital stamp.
    - One be saved in the patient's file, and
    - One be saved in a special file in the Emergency Room.
  - In all cases, the doctor in charge should provide the patient with all emergency treatments and medicines and records these in the patient's file.
  - If the required emergency treatments are behind the ability of the emergency room in the hospital, the doctor in charge refers the patient to an approved dental hospital using the Emergency Referral & Consultation Form.
- ✓ **Indoor Emergency**
  - If a patient in a clinic needs an emergency medicine or emergency treatments, the clinician should provide him\her with all possible treatments and first aids before transferring him\her, via the reception desk, to the Emergency Room accompanied with the clinic's nurse and an Internal Emergency Treatment Form.
  - If the emergency treatments required are behind the ability of the emergency room in the hospital, the doctor in charge refers the patient to an approved dental hospital using the Emergency Referral & Consultation Form.

MANAGEMENT OF COMMON MEDICAL EMERGENCIES

The best management of dental related medical emergencies is prevention. Dentists and staff must be aware of the pathophysiologic factors regulating disease processes and the pharmacodynamics of drug action and interaction. Patients frequently experience physical reactions, and this places considerable responsibility on the dentists to meet emergencies quickly, efficiently and competently with adequate resuscitative procedures.

GENERAL PRINCIPLES OF EMERGENCY CARE

Most life-threatening emergencies are caused by the patient's inability to withstand physical or emotional stress or the patient's reaction to drugs. Emergencies also can be caused by a complication of a pre-existing systemic disease. Cardiopulmonary systems can be involved, thus requiring some emergency supportive therapy.

In all emergencies, the following must be performed:

1. Place the patient in supine position if possible; if still conscious, the patient may prefer a more up-right position.
2. Give the patient the basics of life support (Cardio Pulmonary Resuscitation CPR)
    A. Air passage opened and cleared if necessary.
    B. Breathing ensured (By artificial respiration if necessary)
    C. Carotid pulse checked as a way of ensuring circulation, CPR administered if no carotid pulse and blood pressure checked if carotid pulse is present.

Once the emergency has been diagnosed, proper treatment in most cases includes:

1. Emergency medical system activated.
2. Administering of oxygen.
3. Use of IV line (for rapid drug administration).
4. Administering of CPR.
5. Treating with drugs.

Key Points:

1. Quick recognition and diagnosis of signs and symptoms.
2. Early response time (4 to 6 minutes without oxygen leading to irreversible brain damage)
3. Airway clearance (circulation is meaningless if without oxygen)
4. Proper monitoring of vital signs.
5. Continued monitoring of patient status.
6. Assurance that patient receives proper medical care.

Type of Emergencies and Their Treatment

(UNCONSCIOUSNESS)

Syncope and Psychogenic Shock

Cause:

- Cerebral hypoxia (reduced blood flow to the brain)

Symptoms:

1. Early
   - ✓ Pallor
   - ✓ Sweating
   - ✓ Nausea
   - ✓ Anxiety
2. Late
   - ✓ Pupillary dilation
   - ✓ Yawning
   - ✓ Decreased blood pressure.
   - ✓ Bradycardia (slow pulse)
   - ✓ Convulsive movements
   - ✓ Unconsciousness

Treatment:

- ✓ Lower head slightly and elevate legs and arms (for pregnant women, roll on left side)
- ✓ Administer oxygen at 10L flow/min.
- ✓ Administer spirituous of ammonia.
- ✓ Apply cold compress to forehead.
- ✓ Monitor and record vital signs.
- ✓ Reassure the patient.

Cardiac Arrest

Signs and Symptoms:

- ✓ No pulse or blood pressure
- ✓ Sudden cessation of respiration (Apnea)
- ✓ Cyanosis
- ✓ Dilated pupils

Treatment

- ✓ Airway - (head tilt-chin lift) clear airway if necessary and observe for breathing.
- ✓ Breathing – inflate the lungs with mouth-to-mouth resuscitation, give 2 initial breaths.
- ✓ Circulation – check for carotid pulse; if pulse is absent, activate EMS and start CPR (use the guidelines in BLS and ACLS training in performing CPR)
- ✓ Drugs IV – start 5% dextrose lactated ringers.
    - Epinephrine .5 -1 ml 1:1000, repeat every 5 minutes prn.

- Sodium Bicarbonate 1 meq/kg initially and initial dose every 10 minutes until circulation is restored.
- Atropine Sulfate indicated if pulse is less than 60/minute and systolic blood pressure is below 90 – initial dose of .5 mg repeats every 5 minutes, but not to exceed 2 mg total dose.

✓ Other drugs used in cardiac arrest.
- Lidocaine (anti arrhythmic agent)
- Calcium Chloride (increase myocardial contractility)
- Morphine sulfate (for pain relief)

NOTE: All drug administration needs an order of the physician.

Diabetic Coma vs Insulin Shock

Diagnostic Factors	Diabetic Coma (No Insulin)	Insulin Shock
History		
Food Intake	Normal or Excessive	Maybe insufficient
Physical Exam		
Appearance	Extremely ill	Very weak
Skin	Dry and flushed	Moist and pale
Fever	Frequent	Absent
GI Symptoms		
Mouth	Dry	Drooling
Thirst	Intense	Absent
Hunger	Absent	Occasional
Vomiting	Common	Rare
Abdominal pain	Frequent	Absent
Breath	Acetone Odor	Normal
Blood Pressure	Low	Normal
Pulse	Weak and Rapid	Full and Bounding
Tremor	Absent	Frequent
Convulsions	None	In Late stage

Treatment

1. Place patient in supine position
2. Administer oxygen.
3. Check the capillary blood glucose.
4. If the patient is conscious, give the patient a high sugar containing drink such as glucola or orange juice.
5. If the patient is unconscious, a glucose paste can be applied to the buccal mucosa. A dentist can also order to give dextrose 50% in 50 ml IV and should be given as fast as possible.
6. Monitor and record vital signs.
7. Activate EMS
8. Transport patient to the hospital, if necessary,

NOTE: If in doubt, treat the patient as insulin shock

Cerebrovascular Accident (CVA / Stroke)

Signs and Symptoms

1. Early Warning Signs
   a. Dizziness (patient may fall)
   b. Vertigo and vision changes
   c. Nausea and vomiting
   d. Transient paresthesia
   e. Unilateral weakness or paralysis
2. General Symptoms
   a. Headache
   b. Nausea
   c. Vomiting
   d. Convulsions, Coma

NOTE: Blood pressure and pulse are generally normal. Increased blood pressure and body temperature and low pulse and respiration indicate increased intra cranial pressure.

Treatment

- ✓ Activate EMS
- ✓ Position patient in reclining; semi sitting position with the head elevated.
- ✓ Provide following support:
  - Oxygen at 10L flow/min
  - No sedative use.
  - Airway and breathing maintenance.
- ✓ Monitor and record vital signs.
- ✓ Keep patient quiet and still.
- ✓ Rapid transfer to hospital

Convulsions

Cause

1. Syncope
2. Drug reactions
3. Insulin shock
4. Cerebrovascular accident
5. Convulsive seizure disorder

Signs and Symptoms

1. Aura- flash of light or sound
2. Mental confusion
3. Excessive salivation
4. Tonic contractions and tremors
5. Convulsive movements of extremities
6. Rolling back of eyes
7. Loss of consciousness

Treatment

1. Protect patient from personal damage.
2. After convulsion, make sure airway is open.
3. Dispense oxygen at 10L/min flow.
4. For status epilepticus, administer diazepam 5-20 mg IV.
5. Monitor and record vital signs.
6. Support respiration (Patient may have respiratory arrest)

Local Anesthesia Drug Toxicity

Cause

1. Too large dose of a local anesthetic per body weight
2. Rapid absorption of drug or inadvertent IV injection
3. Slow detoxification or elimination of drug

Signs and Symptoms

1. Early
   - ✓ Talkative, restless, apprehensive, excited manner
   - ✓ Convulsions
   - ✓ Increase in blood pressure and pulse rate.

2. Late
   - ✓ Convulsion followed by depression.
   - ✓ Drop in blood pressure.
   - ✓ Weak, rapid pulse or bradycardia
   - ✓ Apnea
   - ✓ Unconscious, death

Treatment

1. Protect patient during the convulsive period (Consider administration of 5-15 mg Valium IV if convulsive period is prolonged)
   - ✓ Monitor and record vital signs.
   - ✓ Provide supportive therapy.
   - ✓ Keep patient in supine position.
3. Maintain oxygen at 10L/ min flow.
4. Maintain blood pressure.
5. Treat bradycardia
6. Transport to hospital

NOTE: If patient becomes unconscious, maintain the airway, administer CPR and call for emergency medical service

(RESPIRATORY DIFFICULTY)

Hyperventilation

Cause

1. Excess loss of CO2
2. Respiratory

alkalosis Symptoms

1. Rapid, shallow breathing
2. Confusion
3. Dizziness
4. Paresthesia
5. Carpal-pedal spasms

Treatment

1. Explain the problem to the patient and reassure the patient.
2. Instruct the patient to be calm and breathe slowly.
3. Have patient breath slowly into a paper bag.
4. Reappoint for pre sedation.

Aspiration or Swallowing a Foreign Object

Cause

Foreign body in larynx or pharynx

Signs and Symptoms

1. Coughing or gagging is associated with the loss of a foreign object; inability to speak.
2. Possible cyanosis from airway obstruction
3. Violent respiratory effort
4. Suprasternal retraction
5. Rapid pulse

Treatment

1. Keep patient supine if unconscious; keep standing or sitting leaning forward if conscious.
2. Establish airway (open and evaluate breathing)
3. Apply Heimlich maneuver.
4. Administer oxygen.

Bronchial Asthma

Signs and Symptoms

1. Sense of suffocation
2. Pressure in chest
3. Non-productive cough
4. Expiratory wheezes
5. Prolonged expiratory phase
6. Increase respiratory effort.
7. Chest distention
8. Thick, stringy mucous sputum
9. Cyanosis (in severe cases)

Treatment

1. Use Beta-2 agonist inhaler (e.g. Isuprel Mistometer) 1-2 deep inhalations.
2. Activate EMS
3. Dispense oxygen at 10L/min flow.
4. If unresponsive, administer epinephrine (0.3-0.5 ml, 1:1000 SC; repeat every 20 minutes PRN) as ordered by the dentist.
5. Dispense Theophylline ethylenediamine (Aminophylline) 250-500 mg slowly by IV over a 10-minute period as ordered by the dentist.
6. Administer Hydrocortisone Sodium Succinate (Solu Cortef) 100 mg IV as ordered by the dentist.
7. Monitor and record vital signs.
8. Rapid transport of patient to hospital

Mild Allergic Reaction

Symptoms

1. Mild pruritus (itching) – slow appearance
2. Mild urticaria (rash) – slow appearance

Treatment

1. Administer Dipenhydramine (Benadryl) 25-50 mg orally, IV or IM as ordered by the dentist.
2. Repeat dose up to 50 mg every 6 hours orally for 2 days as ordered by the dentist.
3. If suspected of allergy to medication, withdraw drug administration.

Severe Allergic Reaction

Symptoms

1. Skin reactions – rapid appearance
    a. Severe pruritus (itching)
    b. Severe urticaria (rash)
2. Swelling of lips, eyelids, cheeks, pharynx and larynx (angioneurotic edema)
3. Anaphylactic shock
    a. Cardiovascular fall in blood pressure
    b. Respiratory – wheezing, choking, cyanosis, hoarseness
    c. Central nervous system – loss of consciousness, dilation of pupils

Treatment

1. Call EMS
2. Administer epinephrine 0.3 – 0.5 mg 1:1000 SQ or IM (contraindication: severe hypertension) or IV repeat every 5-10 minutes as ordered by the dentists.
3. Administer Theophylline Ethylenediamine (Aminophylline) 250 – 500 mg IV over 10 minutes (contraindication: severe hypotension) as ordered by the dentist.
4. Dispense steroids – Hydrocortisone Sodium Succinate (Solu Cortef) 100 mg SC, IM or IV as ordered by the dentist.
5. Administer oxygen.
6. Monitor and record vital signs.
7. Perform CPR if needed.
8. Use crichothyrotomy if needed.
9. Ensure rapid transfer of patients to hospital.

Respiratory Arrest

Cause

1. Physical obstruction of airway (tongue or foreign object)
2. Drug induced

apnea Signs and Symptoms

1. Cessation of breathing
2. Cyanosi

s Treatment

1. Place patient in supine position
2. Keep airway open by tilting head back and removing obstruction if possible; if not possible, remove it by Heimlich maneuver
3. Activate EMS
4. Ventilate patient 12-15 times per minute.
5. If apnea secondary to narcotic, give 0.4 mg Naloxone Hydrochloride (Narcan) IV, IM or SC as ordered by the dentist and administer oxygen as
6. If apnea secondary to sedative barbiturate or diazepam overdose, the following should be performed:
    - ✓ Administer oxygen.
    - ✓ Keep patient awake.
    - ✓ Support blood pressure through position of patient
    - ✓ Take patient to hospital if necessary.

(CHEST PAIN)

Angina Pectoris

Cause

1. Blood supply to the cardiac muscle is insufficient (atherosclerosis or coronary artery spasm) and precipitated by stress, anxiety and physical activity.

Signs and Symptoms

1. Substernal pain or pain referred to arms, neck or abdomen.
2. Pain lasting less than 15 minutes and possibly radiating to the left shoulder.
3. Positive response to nitroglycerine
4. Patients usually have a history of the condition.

Treatment

1. Place patient in semi reclining or sitting up position with head elevated.
2. Administer nitroglycerin 0.3 mg tablet sublingual or spray amyl nitrate bud (3 tablets, 1 tablet every 5 minutes up to a total of 3 tablets)
3. Administer oxygen at 10L/min flow.
4. Put the patient at rest and give reassurance.
5. Monitor and record vital signs.

NOTE: If any doubt exists about whether angina or myocardial infarction, Call EMS or transport patient to hospital emergency room.

Myocardial Infarction

Cause

1. Most commonly occlusion of coronary vessels occurs. Anoxia, ischemia and infarct are present.

Signs and Symptoms

1. Crushing chest pain
2. More severe than angina, possibly radiating to neck, shoulder, jaw.
3. Longer than 15 minutes
4. Not relieved by nitroglycerine tablets
5. Squeezing of heavy feeling
6. Cyanosis, pale or ashen appearance
7. Weakness
8. Cold sweat
9. Nausea, vomiting
10. Air hunger and fear of impending death
11. Increased, irregular pulse beat of poor quality and containing palpitations.
12. Feeling of impending doom

Treatment

1. Place patient in most comfortable position
2. Administer oxygen at 10L/ min flow.
3. Activate EMS
4. Monitor and record vital signs.
5. Reassure the patient.

Response to Unknown Cause

When a cause for the patient's response cannot be rationally identified, a period of observation is justified.

1. Place patient in supine position
2. Activate EMS
3. Support airway respiration and administer oxygen.
4. Monitor and record vital signs.
5. Start IV 5% dextrose with lactated ringers.
6. Keep patient of all medication
7. Transfer to hospital if serious

EMERGENCY KIT

Review contents, expiration date and clarity of all drugs periodically

1. Oxygen setup
2. Blood pressure cuff
3. Stethoscope
4. Pulse oximeter
5. Syringes (in different sizes)
6. Butterflies / IV catheter (in different sizes)
7. Tourniquet
8. IV tubing set
9. Disposable airway / ET tube (in different sizes)
10. IV solutions (Plain Lactated Ringers, .9 NaCl, D5LR)
11. Tape (Micropore, Transpore, Leukoplast)
12. Sterile Gloves (in different sizes)
13. Laryngoscope
14. Laryngoscope blades (in different sizes)
15. Padded tongue blade.
16. External defibrillator
17. Drugs
    a. Atropine 0.4 mg ampoule 1 cc
    b. Benadryl (Dipenhydramine) 50 mg tablets or 50 mg / 1 ml ampoule
    c. Aminophylline (TheophyllineEthylenediamine) 250 mg / ml ampoule
    d. Hydrocortisone Sodium Succinate (Solu Cortef) 100 mg / 2 c vial
    e. Epinephrine 1:100 / 1 ml ampoule
    f. Narcan (Naloxone Hydrochloride) 0.4 mg / ml ampoule
    g. Nitroglycerine 0.3 mg tablet
    h. Ammonia inhalant buds
    i. Orange juice, Glucola, glucose powder or Dextrose 50% in 50 ml
    j. Sodium Bicarbonate 50 ml of 7.5 % solution
    k. Isuprel mistometer (Isoproterenol Hydrochloride) puff
    l. Diazepam (Valium) 5 mg / ml
    m. Lidocaine 2% in 2 ml ampule

OTHER EMERGENCY PROCEDURES

The main purpose of this procedure is to ensure the safety of the faculty, students, visitors and paramedical staff when an unforeseen emergency occurs. To calm down the people and try to get them out to safe areas.

Types of emergency

1. Fire accident
2. Chemical spill

- The clinics are equipped with smoke detectors and fire extinguishers and Hose reels at specific points in accordance with the rules and regulations of Saudi fire safety.
- The emergency team is assigned in the college for coordinating and evacuating the people in case of emergency.
- The emergency and fire equipment are maintained in the building by the central King Khalid University in accordance with the rules and regulations of the Saudi fire safety.

The University Dental Hospital, Emergency Dental Clinics Evacuation Procedure

- In the event of an emergency situation, the building plan for emergency exits should be followed.
- The emergency evacuation diagrams are posted on the walls at specific points.
- The Dental clinics Building has available emergency exits.
- The University Dental Hospital emergency team coordinates in case of unforeseen emergencies to evacuate the people.
- If you hear a fire alarm
- Never assume the fire alarm is a false alarm.
- If a fire breaks out in the dental suite or elsewhere in the building, immediately notify the emergency coordination team or the campus security.
- The Campus security /emergency team will inform the civil defense team by calling 997.

RACE

R eact to the situation – Call 997/emergency team – Stay calm and answer all the questions
A ctivate nearest fire alarm pull station.
C lose doors behind you as you leave
E xit building using nearest, safe exit. **DON'T USE ELEVATORS!**

1. After you hear the fire alarm in your area, proceed to the closest exit indicated by the highlighted areas on the evacuation map.
2. Use the stairs to exit the building. Never use an elevator during a fire emergency.
3. Meet with the other people from your team or work area so that the supervisor may take a head count.
4. If someone is missing, immediately report their name and last location to the coordinating committee.
5. If you are mobility-limited and cannot use stairs, ask your coordinator for assistance.

IF YOU DISCOVER A FIRE OR SMOKE

1. Remove anyone from immediate danger. Visitors and patients who are unfamiliar with escape routes may need guidance in order to evacuate.
2. If you are in a laboratory and hear the fire alarm, shut down any hazardous equipment or processes as you exit, unless doing so presents a greater hazard.
3. Confine the fire by closing doors as you leave the area.
4. Activate the closest fire alarm to alert building occupants.
5. Call or use a campus emergency phone.
   Give the following information:
   Building Name: College of Dentistry,
   The University Dental Hospital
   Floor or Room Number
   Size or type of fire
   Your location
6. Attempt to put the fire out with a portable fire extinguisher **ONLY** when:
   You have been properly trained.
   The fire is small (wastebasket size)
   You are not alone.
   A safe escape route is present.

If this is not true, simply close the door and evacuate.
-Evacuate by the nearest exit or exit stairwell.
-Do not block/wedge exit doors in an open position
- The doors must remain closed to keep smoke out and keep stairwells safe for evacuation and fire personnel.

The emergency team coordinates to evacuate the people till the civil defense team reaches the site.