

LEARNING OUTCOMES: Doctor of Dental Medicine Qatar University

1 SCIENTIFIC KNOWLEDGE

- 1.1. Recognise the anatomy of the head and neck region with a focus on oral and maxillofacial region, oral cavity, and teeth; and demonstrate and understanding of relevance applied anatomy to clinical dental care.
- 1.2 Recognise the stages of human development with a focus on oral and maxillofacial structures and implications for patient management.
- 1.3 Recognise the physiology of human body systems and relevance to clinical dental care.
- 1.4 Recognise the properties, uses, adverse effects of drugs, relevant drug interactions and implications for clinical dental care.
- 1.5 Recognise correlations between systemic and oral health and how these impact on clinical dental care.
- 1.6 Recognise the aetiology, and pathogenesis of oral diseases.
- 1.7 Recognise the properties and use of dental materials and biomaterials used in clinical dentistry.

2. DISEASE PREVENTION AND POPULATION HEALTH

- 2.1 Provide comprehensive and individualised preventive education and advice to patients and the community.
- 2.2 Demonstrate competency in providing chairside preventive care and treatments in dental surgery.
- 2.3 Incorporate preventive care in treatment planning and long-term care to improve oral and general health.
- 2.4 Recognise and advise patients regarding the risks with eating habits and diet, recreational drugs, and addiction with tobacco, alcohol and recreational drugs and refer appropriately for specialist counselling.
- 2.5 Recognise frameworks of health, illness, quality of life, and behavioural changes and its relevance to oral health promotion
- 2.6 Recognise the scientific principles of epidemiology and their application to population health
- 2.7 Recognise the burden of oral disease in Qatari population and identify risk factors related to demographics and lifestyle.
- 2.8 Recognise the organisation, delivery of dental services and usage of planning cycle of oral health promotion materials and programs in Qatar

3. EVIDENCE-BASED PRACTICE

- 3.1 Demonstrate an evidence-based approach to professional practice and decision-making.
- 3.2 Recognise design of research studies and critically appraise literature to inform clinical decision-making
- 3.3 Recognise the impact of technology and new scientific developments on dental care.
- 3.4 Evaluate new materials, drugs, equipment, and interventions for application in clinical dentistry

- 3.5 Recognise the risks of clinical environments to safeguard health and safety of professionals, patients, and public
- 3.6 Implement evidence-based infection control protocols and procedures in clinical dental settings including vaccinations, personal protective equipment, sterilisation and disinfection, and safe disposal of clinical waste etc.
- 3.7 Implement guidelines on ionizing radiation protection in clinical dental facilities using diagnostic x-ray equipment.
- 3.8 Maintain personal health and wellbeing.
- 3.9 Recognise occupational risks to self and team members and take appropriate preventive measures to prevent injuries, infection, and ill health.
- 3.10 Recognise and comply with national and local clinical governance and health and safety requirements
- 3.11 Demonstrate an understanding of clinical audit to improve the quality of clinical services

4. CLINICAL SKILLS

4.1 Patient Assessment and Diagnosis

- 4.1.1 Obtain and record a comprehensive patient history.
- 4.1.2 Interpret the implications of medical conditions and medications on clinical dental care.
- 4.1.3 Undertake clinical examination of extra oral and intraoral hard and soft tissues and record findings accurately.
- 4.1.4 Advise and undertake appropriate investigations.
- 4.1.5 Demonstrate competency in undertaking intraoral dental radiographs using contemporary techniques and equipment
- 4.1.6 Interpret and report on intra oral as well as panoramic radiographs
- 4.1.7 Recognize patients who need additional investigations and refer them to relevant specialists
- 4.1.8 Interpret and synthesise findings to develop patient diagnosis/diagnoses.

4.2 Comprehensive Treatment Planning

- 4.2.1 Recognise the components of comprehensive treatment planning and delivery.
- 4.2.2 Formulate a comprehensive dental treatment plan to address all treatment needs of the patients holistically.
- 4.2.3 Discuss alternate treatment options, benefits, risks, and financial costs with the patient.
- 4.2.4 Recognise the impact of pre-existing medical conditions and current medications, identify risks with dental and oral surgical interventions and plan appropriate modifications to the treatment plan including specialist referral/advice
- 4.2.5 Consider patient's expectations from dental treatment and involve them in decision-making.
- 4.2.6 Obtain an informed and valid patient consent before commencing treatment.
- 4.2.7 Refer to relevant dental and medical specialists as and when needed.

4.3 Management of Emergencies

- 4.3.1 Recognise, assess, and manage medical emergencies in dental settings and take appropriate measures to prevent medical emergencies
- 4.3.2 Recognise, assess, and manage acute dental pain and make appropriate follow-up arrangements
- 4.3.3 Recognise, assess, and provide emergency management of dental trauma including specialist referral when appropriate and contribute to prevention of dental trauma
- 4.3.4 Recognise and assess oral and maxillofacial trauma and refer appropriately.
- 4.3.5 Recognise, and assess dental and maxillofacial infections and refer appropriately

4.4 Control of Pain and anxiety

- 4.4.1. Demonstrate competency in effective and safe administration of dental local anaesthesia using contemporary techniques, drugs and equipment.
- 4.4.2 Recognise manage, and prevent complications associated with local anaesthesia in dentistry.
- 4.4.3 Recognise the role of behavioural techniques in the management of patients with dental phobia.
- 4.4.4 Recognise contemporary techniques in conscious sedation for dental treatment of anxious patients.
- 4.4.5 Recognise the benefits, and risks of dental treatment under general anaesthesia.

4.5 Periodontics

- 4.5.1 Assess periodontal health and recognise risk factors for periodontal disease.
- 4.5.2 Undertake screening and diagnosis of periodontal disease in line with contemporary professional guidelines.
- 4.5.3 Demonstrate competency in performing non-surgical periodontal treatments to remove hard and soft deposits and stains on teeth
- 4.5.4 Monitor and record changes in periodontal health
- 4.5.5 Monitor health of peri-implant tissues and recognise signs of peri-implantitis and refer appropriately
- 4.5.6 Recognise the need for advanced periodontal care and refer appropriately

4.6 Paediatric Dentistry

- 4.6.1 Recognise the importance of behavioural management of children to allay anxiety and fear associated with dental treatment
- 4.6.2 Provide preventive oral health education and advice to children and their parents.
- 4.6.3 Provide preventive treatments such as fissure sealants and in-office fluoride applications.
- 4.6.4 Assess and manage dental caries and its sequelae in infants, children, and adolescents.
- 4.6.5 Diagnoses and manage pulp disease in infants, children, and adolescents.
- 4.6.6 Demonstrate competency in paediatric restorative and endodontic procedures, using contemporary techniques, equipment and materials
- 4.6.7 Perform non-surgical extractions of deciduous teeth.

4.7 Orthodontics

- 4.7.1 Recognise normal and abnormal growth patterns affecting the physical and mental development with a focus on dentofacial structures and occlusion
- 4.7.2 Undertake an orthodontic assessment,
- 4.7.3 Determine the index of orthodontic treatment need and refer appropriately
- 4.7.4 Recognize principles of interceptive orthodontics and refer in a timely manner
- 4.7.5 Recognise the merits, risks and costs of contemporary orthodontic treatment options and advise patient appropriately,
- 4.7.6 Undertake limited orthodontic appliance emergency procedures.

4.8 Restorative Dentistry and Endodontics

- 4.8.1 Assess and manage caries, occlusion, and tooth wear.
- 4.8.2 Able to assess and diagnose damage to teeth due to dental caries, developmental defects, acquired tooth surface loss, and trauma
- 4.8.3 Demonstrate competency in undertaking restoration of defective or missing tooth structure to restore function, aesthetics using minimally invasive techniques.
- 4.8.4 Assess and diagnose diseases of dental pulp and peri radicular disease using appropriate tests and investigations
- 4.8.5 Demonstrate competency in undertaking conventional endodontics on single and multirooted teeth
- 4.8.6 Recognise and manage complications of root canal treatment
- 4.8.7 Refer complex cases of endodontics to specialists
- 4.8.8 Recognise the indications, benefits and risks of surgical endodontics and refer appropriately.

4.9 Prosthodontics

- 4.9.1 Recognise options for replacement of missing teeth and restoration of occlusion using a wide range of removable and fixed prostheses including implants
- 4.9.2 Advise patients on the advantages, disadvantages, risks and complications of various options for replacement of teeth
- 4.9.3 Demonstrate competency in the design, prescription and provision of partial and complete dentures utilising contemporary techniques, equipment and materials.
- 4.9.4 Demonstrate competency in the design, prescription and provision of crowns and bridges using contemporary techniques, equipment, and materials
- 4.9.5 Refer complex cases of prosthodontics to specialists.

4.10 Oral Surgery and Oral Medicine

- 4.10.1 Recognise hard and soft tissues disorders of the oral and maxillofacial region
- 4.10.2 Recognise oral mucosal diseases including potentially malignant and malignant disorders
- 4.10.3 Refer patients appropriately to specialists from timely diagnosis, treatment, and follow-up

- 4.10.4 Recognise conditions associated with orofacial pain and refer appropriately
- 4.10.5 Recognise disorders of the temporomandibular joints and masticatory muscles and refer appropriately
- 4.10.6 Recognise risks and complications associated with oral surgical procedures
- 4.10.7 Undertake preoperative assessment for tooth extractions and provide post-operative care
- 4.10.8 Demonstrate competency in undertaking uncomplicated tooth extractions and removal of roots
- 4.10.9 Recognise and manage complications associated with tooth extractions and refer to specialists when required
- 4.10.10 Identify and assess impacted and unerupted teeth and refer appropriately.
- 4.10.11 Refer complex cases of oral surgery to specialists

5.COMMUNICATION SKILLS

- 5.1 Communicate with patients and their representatives in an effective and sensitive and professional manner
- 5.2 Recognise barriers to communication with patients and their representatives from diverse backgrounds and address them effectively
- 5.3 Recognise and respect Qatari culture and social values when discussing sensitive issues such as addiction, abuse, and neglect
- 5.4 Communicate bad news to patients and their representatives in a sensitive and professional manner
- 5.5 Communicate effectively with dental colleagues as well as colleagues from the wider healthcare teams

6. PROFESSIONALISM

- 6.1 Demonstrate honesty, and integrity in all actions
- 6.2 Act in the best interests of the patients at all times and ensure patient safety
- 6.3 Treat patients with empathy and compassion
- 6.4 Respect patient's choices and consider their cultural, religious, and social values
- 6.5 Demonstrate a responsible and respectful behaviour in all environments including social media
- 6.6 Act without discrimination and manage conflicts in a professional manner
- 6.7 Demonstrate a commitment to lifelong learning through accredited continuing professional development (CPD) activities for self and other members of the dental team
- 6.8 Use multisource feedback and self- reflection for professional development of self and team members
- 6.9 Recognise own scope of practice /limitations and refer when appropriate
- 6.10 Protect patient confidentiality

- | | |
|------|--|
| 6.11 | Record and maintain accurate and contemporaneous clinical notes |
| 6.12 | Undertake regular CPD activities as required by the DHP guidelines for dentists in Qatar |
| 6.13 | Recognise abuse or neglect of vulnerable individuals and report appropriately |
| 6.14 | Raise concerns if colleagues, patients or public are at risk |
| 6.15 | Recognise and comply with MOPH health and safety policies |
| 6.16 | Demonstrate team-working skills in professional dental environments |
| 6.17 | Demonstrate leadership skills to develop and manage an efficient dental team |
| 6.18 | Manage time and resources effectively in all clinical and management activities |
| 6.19 | Recognise the knowledge and business skills required to set-up and manage a dental practice in compliance with Qatari laws and regulations |