

**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
<b>4. CLINICAL SKILLS</b>
<b>4.1 Patient Assessment and Diagnosis</b>
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 extraoral 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.
<b>4.2 Comprehensive Treatment Planning</b>
4.2.1. Recognise the components of comprehensive treatment planning and delivery
4.2.2 Formulate a comprehensive dental treatment plan to address patient needs.
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.
<b>4.3 Management of Emergencies</b>
4.3.1 Recognise, assess, and manage medical emergencies in dental settings and 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
<b>4.4 Control of Pain and anxiety</b>

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.
<b>4.5 Periodontics</b>
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
<b>4.6 Paediatric Dentistry</b>
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.
<b>4.7 Orthodontics</b>
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, diagnosis, and treatment planning
4.7.3 Determine the index of orthodontic treatment need and manage or refer as appropriate
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.
<b>4.8 Restorative Dentistry and Endodontics</b>
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.
<b>4.9 Prosthodontics</b>
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.
<b>4.10 Oral Surgery and Oral Medicine</b>
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
<b>5.COMMUNICATION SKILLS</b>
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

<b>6. PROFESSIONALISM</b>
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