

## DOMAIN III: Patient-Centred Care

### Definition

This approach is becoming increasingly prominent within the literature and within policy documents, and is defined by the Institute of Medicine (2011) as “Providing care that is respectful of and responsive to individual patient preferences, needs and values, and ensuring that patient values guide all clinical decisions”.

### Description

Whilst working to an evidence-base is critical, dentists must also be aware of the scientific basis that underpins the treatment they provide. The evaluation process, which supports treatment planning, also requires dentists to be able to listen, collate and record pertinent information effectively. This synthesis of knowledge, evidence and experience will result in a practitioner who is responsive to patient needs and is therefore able to treatment plan for *patient-centred care* (Scambler 2016).

The major competences in this Domain are described below. They include:

- 3.1 Applying the Scientific Basis of Oral Health Care
- 3.2 Clinical Information Gathering
- 3.3 Diagnosis and Treatment Planning
- 3.4 Establishing and Maintaining Oral Health

### KEY CONCEPTS:

Behavioural science 3.1.4, 3.1.5, 3.1.16, 3.1.19, 3.3.4

Biomaterials 3.1.11, 3.3.7,

Diagnostics and other tests 3.1.13, 3.1.14, 3.2.6, 3.2.7, 3.3.8

Disease processes 3.1.1, 3.1.3, 3.1.8, 3.1.9, 3.1.17, 3.1.19, 3.3.5

History taking 3.2

Infection control 3.1.6

Neglect 3.1.20

Normal development 3.1.2, 3.1.3

Operative care 3.4

Patient-centred approaches 3.1.19, 3.3.3, 3.3.6, 3.3.9

Pharmacology 3.1.10, 3.1.18, 3.4.4

Quality of life 3.1.15

Referral pathways 3.3.9

Risk assessment 3.1.7

Science base 3.1, 3.3.7

Technology 3.1.12, 3.1.13

Treatment planning 3.3, 3.3.7

## **MAJOR COMPETENCE: 3.1: APPLYING the SCIENTIFIC BASIS of ORAL HEALTH CARE**

Sound scientific knowledge is critical for healthcare professionals to rationalise their treatment choices and offer patient-centred integrated oral healthcare. The scientific basis of dentistry is vast, and this document recommends that educators refer to specialist societies and the curricula, that they have published, in order to detail specific learning outcomes that map to individual areas of specialist practice (Table 1). ADEE also recommends that specialist societies and organisations are free to use this document as a basis from which to develop or formulate their own curricula. Notwithstanding the specific learning outcomes below, it is expected that curricula will cover:

- The scientific basis of oral and related biosciences, including the relevant biomedical sciences, the mechanisms of knowledge acquisition, scientific method and evaluation of evidence
- The biological processes in the body to a sufficient depth to be able to exploit new emerging biological technologies in clinical practice, especially in regenerative medicine
- The complex interactions between oral health, nutrition, general health, medications and disease

### **Learning outcomes:**

On graduation a dentist must be able to apply the scientific knowledge base relating to:

- 3.1.1 The aetiology, diagnosis and management of oral diseases and disorders including (but not exclusively): caries, tooth surface loss, gingivitis, periodontitis, pulpitis, temporomandibular joint dysfunction and occlusion disharmony, mucosal conditions and salivary pathology, craniofacial disorders, and dental and maxillofacial trauma.
- 3.1.2 Normal craniofacial growth and development from birth to adolescence
- 3.1.3 Normal and abnormal tooth development, tooth eruption and occlusal development of the primary, transitional and adolescent permanent dentition
- 3.1.4 Social and behavioural sciences, including factors that facilitate the delivery of oral health care
- 3.1.5 Communication and language development, specifically of children and adolescents and those with special needs
- 3.1.6 Sterilisation, disinfection and decontamination, and the core principles of infection prevention and control
- 3.1.7 The hazards of ionising radiation, and the regulations relating to its use
- 3.1.8 Disease processes such as acute and chronic infection, inflammation, disorders of the immune system, degeneration, neoplasia, metabolic disturbances and genetic disorders
- 3.1.9 The aetiology and pathological features of common disorders of the major organ systems, and their relationship with oral health
- 3.1.10 Pharmacology and therapeutics relevant to clinical practice
- 3.1.11 The science of dental biomaterials, their risks, benefits and limitations including environmental/political issues relevant to their use
- 3.1.12 Discuss the potential limitations, risks and benefits of dental technological procedures
- 3.1.13 Methods of imaging relevant to dentistry, including the principles that underlie dental radiographic and relevant imaging techniques
- 3.1.14 Clinical laboratory and other diagnostic procedures and tests

- 3.1.15 The impact of oral health on the quality of life
- 3.1.16 Behaviour change
- 3.1.17 Medical emergencies and their immediate management
- 3.1.18 The role of and indications for the use of sedation in the management of adult and young uncooperative patients, including those with systemic disease
- 3.1.19 The effects of substance abuse, including smoking and vaping, on general and oral health, and appropriate methods of intervention within the oral health-care environment
- 3.1.20 Non-accidental injury and the management of vulnerable individuals, including appropriate referral mechanisms

## **MAJOR COMPETENCE: 3.2: CLINICAL INFORMATION GATHERING and DIAGNOSES**

It is common for educators to deliver the scientific knowledge base as a disease framework (symptoms, signs, investigations and pathophysiology). Often, however, students become pre-occupied with recording their findings and being efficient in making a diagnosis. The graduating dentists should appreciate the illness framework, as perceived by the patient (ideas, concerns, expectations and feelings). Information should be gathered and recorded comprehensively and contemporaneously, but at the same time appreciating that the patient requires information that they can understand, freedom of choice, respect, and adequate time for discussion (Field 2015). Information gathering is about a dynamic exchange of information and should result in shared decision-making between the dentist and their patient. In order to facilitate recording the patient's presenting condition and reaching a diagnosis, educators are encouraged to refer to indices and screening tools championed by specialist societies (Table I).

### **Learning Outcomes:**

On graduation a dentist must be able to effectively gather and record information relating to:

- 3.2.1 Patient presenting complaints, including a comprehensive history
- 3.2.2 Patient concerns, ideas and expectations
- 3.2.3 Medical, family, social and dental history
- 3.2.4 Extra-oral and intra-oral examination of the soft and hard tissues of the oro-facial region
- 3.2.5 Caries, tooth surface loss, gingivitis, periodontitis, pulpitis, temporomandibular joint dysfunction and occlusion disharmony, mucosal conditions and salivary pathology, craniofacial disorders, and dental and maxillofacial trauma- and the reason for the occurrence
- 3.2.6 Dietary and behavioural analysis, identifying risk factors for oral health
- 3.2.7 Appropriate special investigations and diagnostic tests

### **MAJOR COMPETENCE: 3.3: TREATMENT PLANNING**

After successfully diagnosing the patient's condition, a graduating dentist should be capable of writing a logical and comprehensive treatment plan that systematically addresses the patient's oral health care needs. It is important to account for any relevant biological, psychosocial or temporal factors that may impact on the timely delivery of safe and effective patient-centred care.

#### **Learning outcomes:**

On graduation a dentist must be able to:

- 3.3.1 Select and prioritise treatment options that are sensitive to each patient's individual needs, goals and values, compatible with contemporary methods of treatment
- 3.3.2 Identify relevant psychological and social factors that may complicate treatment and treatment planning
- 3.3.3 Consider patient expectations, desires and attitudes when considering treatment planning, and during treatment
- 3.3.4 Use behaviour and lifestyle analysis, identifying risk factors for oral health to develop a comprehensive prevention programme to maintain good oral health
- 3.3.5 Consider the implications of systemic disease
- 3.3.6 Consider the needs of the very young or anxious patient, the elderly patient, or any other patient with special needs
- 3.3.7 Appropriately prescribe direct, fixed and removable restorations, implants, and occlusal splints
- 3.3.8 Evaluate the results of various therapies, establishing a monitoring and maintenance programme in co-operation with the wider dental team where appropriate
- 3.3.9 Participate in the prompt and proper referral and coordination of patients with life-threatening conditions, such as oral cancer

### **MAJOR COMPETENCE: 3.4: ESTABLISHING and MAINTAINING ORAL HEALTH**

In order to establish the highest standard of oral health, graduating dentists must be competent to operatively manage dental trauma and disease and to develop appropriate behaviour change with patients. This means communicating effectively with patients at all stages of their lives, including children, adolescents, adults, and the ageing population. Current concepts of prevention, risk assessment and treatment should be implemented using materials and techniques that maintain pulp vitality, soft tissue health, and restore tooth form, function and appearance in a way that is acceptable to the patient. For discipline-specific learning outcomes, educators are encouraged to make reference to existing agreed curricula, published by specialist societies (Table I). In relation to prescribing, educators are directed to the NICE (National Institute for Health & Care Excellence) guidelines, and associated e-learning resources, on Antimicrobial Stewardship. This is increasingly important in order to slow the emergence of antimicrobial resistance and ensure that antimicrobials remain an effective treatment option for infection (NICE 2017).

## Learning outcomes:

On graduation a dentist must be able to:

- 3.4.1 Develop strategies to predict, prevent and correct deficiencies in a patient's oral hygiene regime and provide patients with strategies to control adverse oral habits
- 3.4.2 Perform preventive and restorative procedures that prevent hard tissue disease and promote soft tissue health
- 3.4.3 Manage the deterioration and failure of restorations in clinical practice
- 3.4.4 Select and prescribe drugs for the management of preoperative, operative and postoperative pain and anxiety, whilst acting as a responsible antibiotic guardian
- 3.4.5 Administer infiltration and block local anaesthesia in the oral cavity for restorative and surgical procedures and manage potential complications
- 3.4.6 Perform supra-gingival and sub-gingival scaling and root debridement including stain removal and prophylaxis, using both powered and manual instrumentation
- 3.4.7 Perform procedures designed to preserve the vitality and repair mechanisms of the pulp/dentine complex
- 3.4.8 Perform procedures designed to alter the colour of teeth
- 3.4.9 Perform vital pulp therapy and non-surgical root canal treatment of single rooted and multi-rooted teeth
- 3.4.10 Manage dental emergencies of the primary and permanent dentition including those of pulpal, periodontal or traumatic origin
- 3.4.11 Provide direct, fixed and removable restorations, and occlusal splints
- 3.4.12 Design appliances and prescribe laboratory procedures, being able to make appropriate chair-side adjustments.
- 3.4.13 Plan and restore dental implants, with a view to being able to place straightforward implants following suitable postgraduate training
- 3.4.14 Perform extractions of erupted teeth including surgery for the straightforward removal of fractured or retained roots, and partially erupted teeth
- 3.4.15 Design, insert and adjust space maintainers and active removable appliances to move a single tooth or correct a cross-bite
- 3.4.16 Manage the failing dentition using techniques appropriate to the patient and the healthcare setting
- 3.4.17 Develop a programme to monitor and maintain restorations in clinical practice
- 3.4.18 Manage medical emergencies that may occur in the course of dental practice

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Table I - Papers that have been published since the publication of the Profile and competences for the graduating European dentist update in 2009

Periodontology	2010	Sanz M, Chapple I. <i>Consensus statement</i>
	2010	Sanz M, Meyle J. <i>Consensus statement</i>
	2016	Madianos P, Papaioannou W, et al <i>Delphi study</i>
	2016	Schoonheim-Klein M, Ong T, et al <i>Competency paper</i>
Cariology	2011	Schulte A, Pitts N, et al <i>Curriculum paper</i>
	2011	Anderson P, Beeley J, et al <i>Curriculum paper</i>
	2011	Splieth C, Innes N, et al <i>Curriculum paper</i>
	2014	Martignon S, Marín L, et al <i>Curriculum paper</i>
	2016	Fontana M, Guzmán-Armstrong S, et al <i>Curriculum paper</i>
Prosthodontics	2014	Hey J, Stimmelmayer M, et al <i>Curriculum paper</i>
Dental Technology	2013	Evans J, Henderson A, et al <i>Curriculum paper</i>
Implant Dentistry	2009	Mattheos N, Nattestad A. <i>Curriculum paper</i>
	2009	De Bruyn H, Koole S, et al <i>Curriculum paper</i>
	2010	Mattheos N, Ivanovski S, et al <i>Curriculum paper</i>
	2014	Mattheos N. <i>Narrative paper</i>
Gerodontology	2009	Kossioni A, Vanobbergen J, et al <i>Curriculum paper</i>
	2016	León S, Araya-Bustos F, et al <i>Curriculum paper</i>
Oral Surgery	2011	Stelzle F, Farhoumand D, et al <i>Curriculum paper</i>
	2011	Macluskey M, Hanson C, <i>Curriculum paper</i>
	2012	Christensen J, Matzen L, et al <i>Curriculum paper</i>
	2012	Carbone M, Manno E. <i>Curriculum paper</i>
Oral Medicine	2010	Kragelund C, Reibel J, et al <i>Consensus statement</i>

	2015	Steele J, Hadleigh J, et al <i>Competency paper</i>
Dental Public Health	2011	Holmes R, Waterhouse P, et al <i>Curriculum paper</i>
Special Care Dentistry	2014	Dougall A, Thompson S, et al <i>Curriculum paper</i>
Continuing Professional Development (CPD)	2011	Heiderman D, Harzer W. <i>Curriculum paper</i>
	2013	Cowpe J. <i>Reference manual</i>
	2013	Suomalainen K, Karaharju-Suvanto T, et al <i>Curriculum document</i>
Pre-clinical skills (hopefully!)	2017	Field J, Stone S, et al <i>Curriculum paper</i>
Dental Hygiene	2015	Sunell S, Asadoorian J, et al <i>Delphi study</i>
General Dental Education	2011	Hugger A, Hugger S, et al <i>Curriculum paper</i>
	2012	Kadagad P, Tekian A, et al <i>Curriculum paper</i>
	2017	Harzer W, Tausche E, et al <i>Narrative review</i>
Curriculum design	2014	Mumghamba E. <i>Curriculum paper</i>
	2016	Bridges S, Yiu C, et al <i>Curriculum paper</i>