

# **Endodontics Specialty Training Curriculum**

**Approved by GDC Registrar: 15 December 2022**

## Foreword

This specialty curriculum sets out the specialist knowledge, skills, and capabilities for the attainment of the award of the Certificate of Completion of Specialty Training (CCST) and admission onto the General Dental Council's (GDC) Specialist List for Endodontics.

It also demonstrates how endodontics meets the GDC's Principles and Criteria for Specialist Listing. This standards-driven, transparent approach protects patients, the public, employers and others through preparation of dentists to deliver high quality, safe, patient and public-centred care as specialists within the UK healthcare system.

The curriculum has been written by the Endodontics Specialty Advisory Committee (SAC), a constituent committee of the Advisory Board for Specialty Training in Dentistry (ABSTD). The SAC is responsible for and owns the specialty-specific content and learning outcomes of the relevant specialty curriculum. They are also responsible for the choice of assessment of both the generic and the specialty content of the curriculum.

The delivery of the curriculum via training and assessment providers is quality assured by the GDC using the Standards for Specialty Education. Successful completion of the relevant specialty training and assessment will lead to the award of a CCST and successful candidates will be eligible to apply for inclusion on the relevant GDC specialist list and be eligible to use the title of "Specialist".

This curriculum will take effect for new trainees from September 2024.

## Acknowledgements

The Endodontics curriculum was written by the Curriculum Working Group drawn from the membership of Restorative Dentistry SAC and one representative from the Specialist Registrars in Restorative Dentistry Group (SRRDG):

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The wider membership of Restorative Dentistry SAC was instrumental in the production of the curricula for restorative dentistry, endodontics, periodontics and prosthodontics. Many thanks to all members who provided expertise and representation from the associated UK specialist societies, UK Royal Colleges and Committee of Postgraduate Dental Deans and Directors (COPDEND).

## Section A: Purpose statement for Endodontics

### 1. Introduction to the Endodontics Specialty

Endodontics is concerned with the health of, injuries to, and diseases of the dental pulp (nerve) and surrounding structures (tooth root and bone) including prevention and treatment in the context of dental and patient well-being. The aim is to preserve a functional tooth and maintain or regenerate healthy supporting tissues.

Specialist endodontists provide care for patients requiring complex endodontic treatment which include, but are not limited to, complicated root canal treatment including failed treatment, management of traumatised and immature teeth, and surgical procedures to the tooth root and surrounding tissues.

Specialist endodontists can accept patients requiring complex endodontic care considered to be too challenging for management in primary care. They work principally in dental practice settings but can also be based in dental hospitals or university dental schools. Specialist endodontists may also refer to or collaborate with other dental or medical specialist colleagues when required.

Additionally, specialist endodontists can provide education, training, assessment, and conduct research in their field. They can provide advice and support to general dental practitioners locally and participate in and/or lead organisations involved in the delivery of dental services to the local population.

## 2. Entry to the training programme

Entry to a specialty training programme is through competitive entry and the recruitment process will ensure that applicants are assessed against the essential and desirable criteria contained within the person specification.

A specialty trainee must be registered with the GDC. It is desirable that during previous early years training the individual has experienced work in as many sectors of dental provision as possible. Evidence of excellence in terms of attributes such as motivation and career commitment will be expected, as will an ability to demonstrate the competences and capabilities required for entry to specialist training, either by successfully completing a period of agreed dental foundation/vocational and core training or by demonstrating that those competences have been gained in another way.

## 3. Outline of the training programme

It is anticipated that three years (full time) would normally be required to satisfactorily complete the Endodontics curriculum to the required depth and breadth. However, the Annual Review of Competence Progression (ARCP) process allows for adjustments to be made to this where appropriate.

Training programmes should include suitable placements/rotational arrangements to cover all the necessary areas of the curriculum and may include an appropriate balance between dental teaching hospitals/schools, district general hospitals and specialist clinical environments, such that each trainee gains the breadth of training required for satisfactory completion of the curriculum.

The training programmes are usually based around a training centre, normally comprising a dental teaching hospital/school together with other associated, recognised and validated training environments.

Many trainees in endodontics undertake academic training, either within the National Institute for Health and Care Research (NIHR) academic clinical fellow posts or by other routes. The proportion of time in training used to undertake research will be reviewed at ARCP. Please refer to the Dental Gold Guide.

## 4. Training specific to Endodontics

The distinctive identity of endodontology and practice of endodontics provides an academic and clinical focus for undergraduate and postgraduate education, research and scholarship. This supports advances in patient care through providing a framework for quality improvement and discovery, including expertise in endodontology to support fundamental science, translational research and clinical trials. The

Specialty, along with the cognate society, the British Endodontic Society (BES), acts as a focus and stimulus for further development in the UK, including through support and development of specialty trainees.

Training in endodontics normally takes up to three years to complete. Trainees must spend time in training working with a broad range of specialists including restorative dentistry, periodontics and prosthodontics and where appropriate other specialties in dentistry and medicine, delivering integrated restorative care of patients, gaining experience in the delivery of integrated care of patients, ensuring the curriculum requirements are met. The rest of training is devoted to specialty-specific training in endodontics. This is to ensure curriculum requirements are met and that as specialists, they deliver integrated care pathways for patients.

Successful completion of training will ensure trainees are ready and eligible to sit an accredited specialty summative assessment comparable to the Fellowship in Endodontics (F (Endo) College) toward the end of the final year in training, under the administration of one of the UK Royal Colleges.

## 5. Evidence and assessment

The purpose of assessment is to reassure the trainee, their employer and the public that they have achieved the required outcomes associated with their chosen specialty.

The Higher Learning Outcomes (HLOs) should not be demonstrated through singular assessments. A programmatic assessment approach should be used in the workplace in which there are multiple assessment points over time, undertaken by multiple assessors with a range of methodologies and sufficient evidence to ensure reliability.

The overall approach to assessment and provision of evidence of attainment in the curriculum is one of flexibility, as far as that is possible. Trainees should focus on 'quality over quantity', utilising assessments which are valid and appropriate to evidence the HLOs.

The principle of Workplace Based Assessments (WPBA) is that trainees are assessed on work that they undertake on a day-to-day basis and that the assessment is integrated into their daily work. The curriculum does not stipulate minimum numbers of assessments for WPBAs.

When there is a requirement by specialty, this can be found in the specialty assessment strategy at the Royal College of Surgeons' [Higher Specialist Training Documents and Curricula](#).

A full list of WPBAs can be found in the glossary of assessment terms. WPBA tools will include but are not limited to:

- clinical examination exercise

- case-based discussions
- direct observation of procedural skills
- procedure-based assessments
- multisource feedback
- patient/user feedback.

Training courses may be an effective way of gaining the underpinning knowledge and skills for some of the HLOs. However, attendance at a course will not normally be sufficient evidence of competence; assessors will be looking for evidence of competence and how the learning is applied in practice.

Continuous assessment throughout training will be undertaken by the educational supervisor, clinical supervisors and other educators involved in training, using a range of WPBAs. All assessments completed in the workplace have a formative function, with trainees given contemporaneous feedback on their performance, and these all contribute to the decision about a trainee's progress. The assessment process should be initiated by the trainee, who should identify opportunities for assessment throughout their training.

In sections C and D, a list of sources of evidence are provided against each of the HLOs. These are provided as a list of possible sources, and there is no expectation that the full list of sources would be used as evidence of attainment of a particular HLO. Some of the assessments in section D will be mandatory (for example Royal College examinations), but other forms of assessment should be tailored to the training programme/local circumstances/stage of training, and these should be agreed with the training provider(s) as part of the ARCP process and the education supervisor(s) as part of a learning agreement. All mandatory assessments are clearly indicated in section D.

In section C no individual assessment is mandated for all specialties. Further guidance will be provided in the specialty assessment strategy which highlight how the HLOs are best achieved within each programme. This will normally be through application in practice rather than summative assessment, although this may vary by specialty dependent on the range of workplace assessments.

An assessment blueprint is provided within sections C and D which illustrates the WPBAs that can be used to assess the HLOs.

Progress through training is assessed through the ARCP process and training is completed when all the curriculum requirements are satisfied and HLOs have been evidenced.

## 6. Research

Trainees may combine specialty training and academic development with an intention of becoming a clinical academic. The same curriculum outcomes for clinical training are required to be achieved as for any other trainee. Consideration of the required training time will need to be assessed depending on the proposed timetable.

### Section B: Delivering the curriculum against the GDC Standards for Specialty Education

The GDC sets [Standards for Specialty Dental Education](#) and assures that training commissioners and examination providers (collectively referred to as “providers”) meet these standards.

The standards relate to:

- patient protection (training commissioners only)
- quality evaluation and review
- specialty trainee assessment.

As part of the quality assurance process, the GDC will ensure that training and assessment is designed, delivered and reviewed within a quality framework, that patient safety is at the heart of programme delivery and that assessments are reliable, valid and clearly mapped to the specialty curriculum learning outcomes. Reports from GDC quality assurance activity are available on the [dental specialty training webpage](#).

### Section C – Generic professional content of the specialty curriculum

#### Domain 1: Professional knowledge and management

Outcome	Examples
1.1 Demonstrate they can communicate effectively and respectfully with patients and others and with colleagues	Effectively and respectfully communicate with patients, relatives, carers, guardians by: <ul style="list-style-type: none"><li>• consulting with patients and carers in a sensitive and compassionate way</li><li>• giving clear and accurate verbal/oral information with information the recipient wants</li></ul>

Outcome	Examples
	<p>and needs and avoiding unnecessary jargon</p> <ul style="list-style-type: none"> <li>• giving clear, accurate and legible written information in a form the recipient can understand, with information the recipient wants and needs and avoiding unnecessary jargon</li> <li>• making accurate and contemporaneous records of observations or findings in English</li> <li>• making information accessible and inclusive by adapting written and verbal communication and tone and adopting appropriate techniques and communication aids/resources to suit others as appropriate</li> <li>• assessing their communication support needs and implementing appropriate methods to reduce communication barriers. For example, by using email, video conferencing tools, or any other communication tools suitable for individuals with disabilities or impairments and specifically with patients, relatives, carers, guardians, and others</li> <li>• demonstrating ability to communicate effectively and sensitively when delivering bad news</li> <li>• recognising own limitations and works within limits of capabilities</li> <li>• competency in obtaining informed consent.</li> </ul> <p>Effectively and respectfully communicate with colleagues by:</p> <ul style="list-style-type: none"> <li>• promoting and effectively participating in multidisciplinary, interprofessional team working</li> <li>• communicate effectively with referrers regarding patient consultation and treatment</li> <li>• ensuring continuity and coordination of patient care and/or management of any ongoing care through the appropriate transfer of information demonstrating safe and effective handover, both verbally and in writing.</li> </ul>
1.2 Demonstrate that they can make decisions, while maintaining professional	<p>They should do this by:</p> <ul style="list-style-type: none"> <li>• maintaining appropriate situational awareness and sensitivity to the impact of their</li> </ul>



Outcome	Examples
behaviour and judgement	<p>comments and behaviours on others (emotional intelligence)</p> <ul style="list-style-type: none"> <li>influencing, negotiating, continuously re-assessing priorities and effectively managing complex, dynamic situations and exploring and resolving diagnostic and management challenges.</li> </ul>
1.3 Demonstrate they can deal with complexity and uncertainty	<p>They should do this by:</p> <ul style="list-style-type: none"> <li>showing appropriate professional behaviour and judgement in clinical and non-clinical contexts</li> <li>demonstrating resilience</li> <li>managing the uncertainty of success or failure</li> <li>adapting management proposals and strategies to take account of patients' informed preferences, co-morbidities and long-term conditions</li> <li>supporting and empowering patient self-care and respecting patient autonomy</li> <li>recognising and managing dental emergencies.</li> </ul>
1.4 Recognise their legal responsibilities and be able to apply in practice any legislative requirements relevant to their jurisdiction of practice	<p>They should do this by:</p> <ul style="list-style-type: none"> <li>understanding, and adhering to, the principles of continuing professional development</li> <li>understanding relevant guidance and law including that relating to equality and diversity, employment, health and safety, data protection etc., with an appreciation that legislation may differ between England, Scotland, Wales and Northern Ireland</li> <li>understanding information governance, data protection and storage and the legal parameters relating to digital and written records in the context of their workplace</li> <li>recognising the need to ensure that publicly funded health services are delivered equitably.</li> </ul>

Outcome	Examples
1.5 Recognise and work within the context of a health service and healthcare systems	<p>They should do this by:</p> <ul style="list-style-type: none"> <li>• understanding the structure and organisation of the wider health and social care systems, including how services are commissioned, funded and audited</li> <li>• understanding that systems may differ between England, Scotland, Wales and Northern Ireland</li> <li>• demonstrating an appreciation of how services are deemed to be clinically effective, cost effective or restricted such as on a 'named patient' basis</li> <li>• understanding how resources are managed, being aware of competing demands and the importance of avoiding waste</li> <li>• having an awareness of how services are held publicly accountable through political and governance systems, public scrutiny and judicial review</li> <li>• recognising and working towards achieving carbon neutrality within the context of understanding the importance of sustainability in design and delivery of services and demonstrating application of these principles in practice.</li> </ul>
1.6 Recognise and demonstrate their role in health promotion, disease prevention and dental population health	<p>They should do this by:</p> <ul style="list-style-type: none"> <li>• understanding the factors affecting health inequalities as they relate to the practise of dentistry</li> <li>• being willing and able to work to reduce health inequalities relevant to the practise of dentistry</li> <li>• understanding national and local population oral health needs</li> <li>• understanding the relationship of the physical, economic and cultural environment to health and its impact on patients and patient outcomes</li> <li>• understanding the role of national and local public health organisations and systems and how the role of a dental specialist supports these organisations in improving the</li> </ul>

Outcome	Examples
	public's dental health.
1.7 Recognise the importance of, and demonstrate the ability to practise, person- centred care (PCC), including shared decision making (SDM)	<p>They should do this by:</p> <ul style="list-style-type: none"> <li>• understanding that patients are partners with their health care providers: <ul style="list-style-type: none"> <li>○ providing balanced information about treatment options</li> <li>○ eliciting the patient's concerns, values and preferences</li> <li>○ offering support to the patient to help them to reach a decision and making that final decision together</li> </ul> </li> <li>• being able to articulate personal values and principles yet show understanding of how these may be different to those of others, patients and colleagues</li> <li>• valuing, respecting and promoting equality and diversity.</li> </ul>

## Domain 2: Leadership and teamworking

Outcome	Examples
2.1 Demonstrate understanding of the importance of personal qualities within leadership (focus on self)	<p>They should do this by:</p> <ul style="list-style-type: none"> <li>• understanding a range of leadership principles and styles and being able to apply and adapt them in practice in a way that is relevant to the work context</li> <li>• understanding team dynamics, behaviours and personalities with insight and awareness of own behaviours and their effect on others. Please also see the NHS Leadership Academy's <a href="#">Healthcare Leadership Model</a>.</li> </ul>
2.2 Demonstrate understanding of the importance of working with others both within	<p>They should do this by:</p> <ul style="list-style-type: none"> <li>• being able to seek out the views of others in maintaining and improving specialist</li> </ul>

Outcome	Examples
their specialty and the wider healthcare system (working with others)	<p>services</p> <ul style="list-style-type: none"> <li>• being able to effectively lead/chair multidisciplinary and interprofessional meetings</li> <li>• undertaking safe and effective patient handover, both verbally and in writing</li> <li>• demonstrating an understanding of leadership responsibilities as a clinician and why effective clinical leadership is central to safe and effective care</li> <li>• showing awareness of clinical leadership responsibilities and why effective clinical leadership is central to safe and effective care</li> <li>• being confident about challenging and influencing colleagues and the orthodoxy where appropriate</li> <li>• being able to lead the process of exploring and resolving complex diagnostic and management challenges</li> <li>• leading the formal appraisal process for their teams.</li> </ul>
2.3 Demonstrate the importance of planning and an understanding of managing dental specialist services	<p>They should do this by:</p> <ul style="list-style-type: none"> <li>• understanding and being able to work effectively within the relevant being NHS funding, structures and pathways in their local healthcare system in relation to specialist dental services and the healthcare services they interface with</li> <li>• understanding how to identify, mitigate and manage risk, including understanding local and national risk reporting structures.</li> </ul>

### Domain 3: Patient safety, quality improvement and governance

Outcome	Examples
3.1 Recognise a professional and statutory duty of candour and act accordingly within	<p>They should do this by:</p>

Outcome	Examples
established governance, legal and regulatory systems, including equality and diversity	<ul style="list-style-type: none"> <li>• understanding how to raise safety concerns appropriately through local and national clinical governance systems</li> <li>• understanding how to raise concerns where there is an issue with patient safety, dignity or quality of care</li> <li>• demonstrating a commitment to learn from patient safety investigations and complaints</li> <li>• understanding the process of root cause analysis for investigating and learning from patient safety incidents</li> <li>• demonstrating honesty and candour regarding errors in patient care</li> <li>• demonstrating familiarity with relevant patient safety directives</li> <li>• understanding the importance of sharing and implementing good practice.</li> </ul>
3.2 Recognise the impact of human factors on the individual, teams, organisations and systems	<p>They should do this by:</p> <ul style="list-style-type: none"> <li>• understanding the effects of teamwork, tasks, equipment, workspace, culture and organisation on human behaviour and abilities and the application of that knowledge in clinical settings</li> <li>• protecting patients and colleagues from risks posed by problems with personal health, conduct or performance</li> <li>• demonstrating an understanding of the learning by reporting and sharing these experiences locally and widely.</li> </ul>
3.3 Design and employ quality improvement measures that improve clinical effectiveness, patient safety, care or experience	<p>They should do this by:</p> <ul style="list-style-type: none"> <li>• using a range of quality improvement methodologies to improve dental services and improve patient care</li> <li>• demonstrating an understanding of the importance of patient and public involvement in decision-making when changes to services are proposed</li> <li>• engaging with all relevant stakeholders in the planning and implementation of change</li> </ul>

Outcome	Examples
	<ul style="list-style-type: none"> <li>• working with others to effectively measure and evaluate the impact of quality improvement interventions and their impacts on the wider systems</li> <li>• demonstrating knowledge of additional challenges related to oral health inequalities in minority ethnic populations and other groups with protected characteristics in the UK, assessing and recognising the impact of cultural and language and other barriers and strategies for oral health promotion.</li> </ul>
3.4 Act to safeguard patients, particularly children, other young people and vulnerable adults in accordance with the requirements of appropriate equality and diversity legislation	<p>They should do this by:</p> <ul style="list-style-type: none"> <li>• recognising the individual oral health needs of patients with physical, sensory, intellectual, mental, medical, emotional or social impairments or disabilities, or with a combination of these factors</li> <li>• understanding the responsibilities and needs of carers as they play an increasing role in healthcare provision</li> <li>• recognising and taking responsibility for safeguarding vulnerable patients</li> <li>• understanding when it is appropriate and safe to share information on a patient.</li> </ul>
3.5 Immediate life support	<p>they should do this by:</p> <ul style="list-style-type: none"> <li>• demonstrating competency and undertake annual training in immediate life support.</li> </ul>

#### Domain 4: Personal education, training, research and scholarship

Outcome	Examples
4.1 Demonstrate that they can plan and deliver effective education and training	<p>They should do this by:</p> <ul style="list-style-type: none"> <li>• providing safe clinical supervision of learners</li> </ul>

Outcome	Examples
activities	<ul style="list-style-type: none"> <li>• providing effective educational supervision of learners, including giving supportive, developmental feedback to learners</li> <li>• seeking and respecting patients' wishes about whether they wish to participate in the education and training of learners</li> <li>• evaluating and reflecting on the effectiveness of their educational activities and changes to improve practice</li> <li>• promoting and participating in interprofessional learning (including with members of the wider healthcare team in dentistry and in other healthcare professions)</li> <li>• demonstrating an ability to use a range of teaching methods for individual and group teaching, including face to face and online teaching and the use of simulation and other technology enhanced learning methods.</li> </ul>
4.2 Demonstrate that they can critically appraise and interpret scientific/academic literature and keep up to date with current and best practice	<p>They should do this by:</p> <ul style="list-style-type: none"> <li>• demonstrating an ability to critically appraise evidence</li> <li>• interpreting and communicating research evidence and data to support patients and colleagues in making informed decisions about treatment</li> <li>• appreciating the role of both qualitative and quantitative methodological approaches in scientific enquiry</li> <li>• demonstrating an understanding of the strengths and limitations of different approaches to gathering research evidence</li> <li>• conducting literature searches and reviews to inform their professional practice</li> <li>• locating and using clinical guidelines appropriately</li> <li>• demonstrating an understanding of stratified risk and personalised care.</li> </ul>
4.3 Understand what is required to participate in research	<p>They should do this by:</p> <ul style="list-style-type: none"> <li>• demonstrating understanding of clinical research design, ethics processes and research governance (GCP).</li> </ul>

## Generic learning outcomes assessments blueprint

### Domain 1: Professional knowledge and management

HLO	Patient feedback / MSF	WPBAs	Reflective reports	Training course or qualification (inc. PG degrees)	Critical incidents or complaint reviews	Research or QI / audit projects	Logbook	Specialty specific summative assessment	Other (see list 1-9 below)	CS / ES reports
1.1 Demonstrate they can communicate effectively and respectfully with patients and others and with colleagues	*	*	*	*			*	*	*1	*
1.2 Demonstrate that they can make decisions, while maintaining professional behaviour and judgement	*	*	*	*	*			*		*
1.3 Demonstrate they can deal with complexity and uncertainty	*	*	*	*	*			*		
1.4 Recognise their legal responsibilities and be able to apply in practice any legislative requirements relevant to their jurisdiction of practice				*		*		*	*9	



HLO	Patient feedback / MSF	WPBAs	Reflective reports	Training course or qualification (inc. PG degrees)	Critical incidents or complaint reviews	Research or QI / audit projects	Logbook	Specialty specific summative assessment	Other (see list 1-9 below)	CS / ES reports
1.5 Recognise and work within the context of a health service and healthcare systems, understanding that systems may differ between England, Scotland, Wales and Northern Ireland		*	*	*		*		*		
1.6 Recognise and demonstrate their role in health promotion, disease prevention and population health	*	*				*		*		
1.7 Recognise the importance of, and demonstrate the ability to practise, person-centred care (PCC), including shared decision making (SDM)	*	*	*			*		*		*

## Domain 2: Leadership and teamworking

HLO	Patient feedback / MSF	WPBAs	Reflective reports	Training course or qualification (inc. PG degrees)	Critical incidents or complaint reviews	Research or QI / audit projects	Logbook	Specialty specific summative assessment	Other (see list 1-9 below)	CS / ES reports
2.1 Demonstrate understanding of the importance of personal qualities within leadership (focus on self)		*	*	*		*		*		*
2.2 Demonstrate understanding of the importance of working with others both within their specialty and the wider healthcare system (working with others)	*	*	*	*	*	*		*		
2.3 Demonstrate the importance of planning and an understanding of managing dental specialist services		*	*	*	*	*		*	*9	*

### Domain 3: Patient safety, quality improvement and governance

HLO	Patient feedback / MSF	WPBAs	Reflective reports	Training course or qualification (inc. PG degrees)	Critical incidents or complaint reviews	Research or QI / audit projects	Logbook	Specialty specific summative assessment	Other (see list 1-9 below)	CS / ES reports
3.1 Recognise a professional and statutory duty of candour and act accordingly within established governance, legal and regulatory systems, including equality and diversity	*	*		*		*		*	*2	*
3.2 Recognise the impact of human factors on the individual, teams, organisations and systems		*	*	*					*2	
3.3 Design and employ quality improvement measures that improve clinical effectiveness, patient safety, care or experience	*	*		*	*	*		*	*2	

HLO	Patient feedback / MSF	WPBAs	Reflective reports	Training course or qualification (inc. PG degrees)	Critical incidents or complaint reviews	Research or QI / audit projects	Logbook	Specialty specific summative assessment	Other (see list 1-9 below)	CS / ES reports
3.4 Act to safeguard patients, particularly children, other young people and vulnerable adults in accordance with the requirements of appropriate equality and diversity legislation		*	*	*			*	*	*2	
3.5 Immediate life support				*						

#### Domain 4: Personal education, training, research and scholarship

HLO	Patient feedback / MSF	WPBAs	Reflective reports	Training course or qualification (inc. PG degrees)	Critical incidents or complaint reviews	Research or QI / audit projects	Logbook	Specialty specific summative assessment	Other (see list 1-9 below)	CS / ES reports
4.1 Demonstrate that they can plan and deliver effective education and training activities		*	*	*				*	*2,3,4,5	

HLO	Patient feedback / MSF	WPBAs	Reflective reports	Training course or qualification (inc. PG degrees)	Critical incidents or complaint reviews	Research or QI / audit projects	Logbook	Specialty specific summative assessment	Other (see list 1-9 below)	CS / ES reports
4.2 Demonstrate that they can critically appraise and interpret scientific/academic literature and keep up to date with current and best practice		*		*		*		*	*6,7,8	
4.3 Understand what is required to participate in research		*		*		*		*	*2,6,7	

Other methods of assessment are:

1. Case presentation
2. CPD
3. Education feedback
4. Conference presentation
5. Observation of teaching
6. Journal clubs
7. Publications
8. Developing protocols
9. Objective structured assessments.

## Section D - Specialty-specific content for Endodontics

### Domain 5: Key Clinical Skills

Outcome	Examples
<p>5.1 History taking and examination</p> <p>Demonstrates competence to carry out history taking and a thorough examination of the patient</p>	<ul style="list-style-type: none"><li>• Demonstrating an understanding of the biology, anatomy and physiology of intra- and extra-oral structures and tissues in both health and diseased states and is able to complete a thorough examination of these, considering any relevant dental, medical and social factors.</li><li>• Being sufficiently conversant in pain physiology, clinical and radiographic presentations of relevant oro-facial conditions, the limitations, sensitivity and specificity of diagnostic tests and the value of other relevant investigations in order to make appropriate diagnoses.</li><li>• Having the necessary knowledge and skill to evaluate the influence of perioral structures on the aesthetics, function and stability of the dentition and/or prostheses.</li><li>• Being able to differentiate urgency of patients requiring immediate assessment and treatment from non-urgent.</li></ul>
<p>5.2 Clinical investigation and imaging</p> <p>Demonstrates an understanding and competence in relevant investigations and imaging</p>	<ul style="list-style-type: none"><li>• Having knowledge and understanding of the value, relevance, and limitations of pulp testing, clinical and radiographic imaging, and other relevant tests.</li><li>• Must have an understanding of the related biology, anatomy, and/or physiology to know when to request/perform these investigations and be able to interpret the findings.</li><li>• Having knowledge of selection and justification of appropriate investigation and imaging.</li><li>• Being able to produce detailed radiographic reports and adhere to the relevant guidelines.</li></ul>
<p>5.3 Diagnosis and development of treatment strategies</p> <p>Demonstrates competence to synthesise information and arrive at the relevant diagnosis. They should be able to devise</p>	<ul style="list-style-type: none"><li>• Being able to assimilate and synthesise information gained from the history, examination and clinical tests/imaging to arrive at a diagnosis/es, based on knowledge of disease processes involved and presenting features.</li><li>• Being to interpret special tests and understands sensitivity and specificity.</li><li>• Having an understanding of probable outcomes for various treatment options and being able to compare and communicate these to the patient effectively, including their effect on oral health, quality of life, and the need for future supportive care, prevention and maintenance, with regard</li></ul>

Outcome	Examples
evidence-based treatment strategies in conjunction with the patient according to their needs and preferences whilst accepting the need to liaise with other specialists	<p>to the relevant healthcare system and financial factors.</p> <ul style="list-style-type: none"> <li>• For each treatment/procedure, being able to choose the most appropriate dental materials, equipment and technical requirements based on current best evidence, understanding prognostic and risk factors for the various treatment modalities, and planning ahead in accordance with the skills of other clinicians involved in the care of the patient.</li> <li>• Being capable of communicating unwelcome information and managing unrealistic patient expectations.</li> <li>• Recognising personal limits, choosing appropriately when to ask for help.</li> </ul>
<p>5.4 Health promotion</p> <p>Demonstrates competence to apply knowledge to develop a tailored care strategy related to oral and general health and prevention of diseases</p>	<ul style="list-style-type: none"> <li>• Having the relevant knowledge to advise patients on appropriate preventive methods to manage primary dental diseases and the impact on their oral status and quality of life, including possible outcomes of non-compliance and the need for supportive care, prevention and maintenance.</li> <li>• Being capable of implementing methods to prevent infection during treatment procedures between patient and staff and during transport of pathology specimens, materials and prostheses to the laboratory.</li> <li>• Having knowledge of the evidence and mechanisms by which oral microorganisms may be dispersed and cause disease in distant sites and appreciating, implementing and, where necessary, discussing with the patient the relevant guidance.</li> <li>• Having knowledge and skill to plan treatment and managing medically compromised and special care patients as part of a multi-disciplinary team and/or in conjunction with a specialist in special care dentistry.</li> <li>• Being aware of unconscious bias of clinicians when treating a diverse population and ways in which they are able to address and mitigate against the widening health inequalities within the UK population.</li> </ul>

Outcome	Examples
<p>5.5 Pain control and management</p> <p>Demonstrates an understanding of pain and pain control mechanisms, can provide pain and anxiety control and recognises the need for interdisciplinary care</p>	<ul style="list-style-type: none"> <li>• Having sufficient knowledge concerning the basic and clinical science of acute and chronic peri-oral pain conditions, including features of non-dental and chronic pain, and be skilled in confidently and efficiently assessing patients presenting with pain.</li> <li>• Being familiar with procedures for emergency acute dental pain management and infection, having knowledge on the pharmacology and therapeutics, understanding the mechanisms of failed local anaesthesia and having the skills to deliver primary and supplementary techniques for local anaesthesia of the pulp and surrounding tissues, and managing any associated complications.</li> <li>• Being able to manage patient anxiety that may be associated with non-surgical and surgical care, providing support and empathy to the patient before, during and after the procedure, and where necessary, providing appropriate adjunctive care such as sedation with the appropriate training or assistance from appropriately trained persons.</li> <li>• Being capable of identifying patients requiring specialist or interdisciplinary care for the management of non-dental and chronic pain conditions and has confidence to withhold operative dental interventions in the absence of a clear dental diagnosis.</li> </ul>
<p>5.6 Pulp therapy</p> <p>Demonstrates deep understanding of the structure and function of the pulp, appreciates the causes and effects of pulp disease and is competent to carry out vital pulp therapies</p>	<ul style="list-style-type: none"> <li>• Being able to demonstrate the relevant knowledge in oral anatomy, physiology, pathology and microbiology related to pulp disease.</li> <li>• Being able to assess pulp status and recognise the limitations of diagnostic tests and the impact to pulp health from operative procedures, dental materials and microleakage.</li> <li>• Understanding the indications, managing options and expected outcome for vital pulp therapies and having sufficient knowledge and skill to efficiently perform procedures involving caries management, indirect and direct pulp caps, pulpotomies and regenerative endodontic procedures (or revascularization).</li> <li>• Being able to restore teeth after pulp therapy treatment to function and aesthetics, taking into account patients' wishes, medical and dental health, monitor treatment outcome and manage complications.</li> </ul>



Outcome	Examples
	<ul style="list-style-type: none"> <li>Where necessary, must communicate and liaise effectively with general dental practitioners, specialist colleagues and/or dental care professionals (DCPs) regarding provision of vital pulp therapy including provision of treatment plans and recall schedules.</li> </ul>
<p>5.7 Non-surgical endodontic treatment</p> <p>Demonstrates competence to carry out endodontic treatment at a standard expected of a specialist using the appropriate diagnostic aids and operative equipment</p>	<ul style="list-style-type: none"> <li>Should be able to assess, diagnose and manage pulp and peri-radicular disease and provide non-surgical treatment as appropriate. They must be familiar with current and historic techniques for non-surgical root canal treatment, conventional and contemporary methods for endodontic imaging, and controversies in endodontic practice.</li> <li>Should be sufficiently knowledgeable and skilled in a variety of treatment procedures and techniques used during non-surgical endodontic treatment, including optimisation of the working field, tooth restorability and pulp space anatomy assessment, removal/disruption of endodontic infection, working length determination, radiographic imaging, obturation and sealing of the treated tooth and restoration to safeguard the coronal seal, occlusal stability and aesthetics.</li> <li>Being able to manage the technical challenges whilst undertaking complex endodontic treatment and have the expertise to provide management of these teeth.</li> <li>Being able to work effectively with the operating microscope, selecting techniques and instruments to minimise the risk of procedural errors and optimise the outcome.</li> <li>Understanding the need for outcome monitoring, and further intervention in the case of failure or uncertainty.</li> <li>Must communicate in an effective and timely manner with relevant clinicians and with patients on prognosis, appropriate restoration and the need for monitoring/supportive treatments.</li> </ul>
<p>5.8 Non-surgical endodontic retreatment</p> <p>Demonstrates competence to diagnose and manage post-treatment endodontic disease by justifying the decision-making</p>	<ul style="list-style-type: none"> <li>Should be able to assess, diagnose and manage post-treatment endodontic disease.</li> <li>Should be able to justify the most appropriate treatment option for the patient to manage post-treatment endodontic disease including monitoring, non-surgical retreatment, surgical treatment or extraction taking into account the risks and limitations associated with each option.</li> <li>Should have the ability to assess prognosis and appropriately select and plan patient care for non-surgical endodontic retreatment.</li> <li>Demonstrating knowledge of current and historic techniques and materials for non-surgical</li> </ul>

Outcome	Examples
<p>process and assess relevant treatment complexity and prognostic factors</p>	<p>endodontic retreatment.</p> <ul style="list-style-type: none"> <li>• Having the knowledge and technical skill required for complex non-surgical retreatment procedures involving coronal disassembly, removal of materials and objects from root canals, identifying previously untreated anatomy, re-negotiation, management of procedural errors and is proficient in the use of materials, instruments and techniques for non-surgical retreatment.</li> <li>• Being able to effectively communicate to the patient the risks and limitations of non-surgical retreatment and issues that might emerge, such as an untreatable fracture or perforation.</li> <li>• Being able to exercise decisive and sound judgement in the face of unfavourable findings or setbacks during non-surgical retreatment, including the decision to abort treatment and discuss alternative treatment options with the patient.</li> <li>• Should be able to demonstrate knowledge of the different outcome measures in endodontics and their assessment and be capable of formulating an appropriate recall strategy or plan for further intervention/investigation in the case of failure or uncertainty.</li> </ul>
<p>5.9 Endodontic surgery</p> <p>Demonstrates understanding of the need for investigative and corrective surgery in the management of peri-radicular disease and competence to provide the appropriate surgical and soft tissue management</p>	<ul style="list-style-type: none"> <li>• Must be knowledgeable of the normal and diseased states of the oral structures and demonstrate surgical soft and hard-tissue management, dental materials, equipment and procedures related, but not limited, to peri-radicular surgery, crown lengthening surgery, perforation repair, tooth hemisection, root resection, tooth burial, soft and hard tissue augmentation, socket preservation, resorption repair and management, decompression, intentional replantation and transplantation.</li> <li>• Understanding the need for thorough pre-operative assessment, inter-speciality and patient communication related to the planning of endodontic surgery and the importance of a recall programme.</li> <li>• Recognising the limitations of their expertise and understand when to refer to specialist colleagues appropriately.</li> </ul>

Outcome	Examples
	<ul style="list-style-type: none"> <li>• Being able to manage patient anxiety that may be associated with surgical care, provide support and is empathetic to the surgical patient before, during and after the procedure and provide appropriate adjunctive care.</li> <li>• Should be able to communicate effectively with pathology laboratories regarding the management of biopsy specimens and communicate pathological findings to patients in a timely, clear and empathetic manner.</li> </ul>
<p>5.10 Dental traumatology</p> <p>Demonstrates an understanding of the nature and consequences of soft and hard tissue wound healing after trauma and is competent to diagnose and manage dental trauma</p>	<ul style="list-style-type: none"> <li>• Can demonstrate appropriate knowledge and skills in the management of dental trauma, in line with the relevant guidelines, including appropriate triaging, performing procedures to facilitate primary wound healing and scheduling further management and recalls.</li> <li>• Having relevant knowledge concerning wound healing and tissue reaction patterns following trauma, limitations of tissue repair following severe trauma and/or sub-optimal management and expected outcomes of dental trauma following optimal and sub-optimal management.</li> <li>• Understanding the need for timely management and effective communication with patients and parents/guardians including providing advice and information on consequences following dental trauma.</li> <li>• Should be capable of managing the psychological (as well as the physical) well-being of the patient and accompanying person/s during acute trauma management and at subsequent recalls.</li> <li>• Recognising their role in promoting information on the immediate management of acute dental trauma to medical and dental colleagues, schools and community organisations.</li> </ul>
<p>5.11 Restoration of the root-filled tooth</p> <p>Demonstrates understanding of the knowledge and skills necessary to assess teeth for root canal treatment and their subsequent restoration</p>	<ul style="list-style-type: none"> <li>• Demonstrating the knowledge and skills necessary to assess teeth for restorability and endodontic treatment.</li> <li>• Should be familiar with the principles and practice of restoring root canal treated teeth and the adverse effects of endodontic and restorative treatment procedures on tooth structure.</li> <li>• Demonstrating an understanding of restoring root-filled teeth including aesthetic, occlusal, periodontal and prosthodontic factors.</li> <li>• Having the necessary clinical skills to restore endodontically treated teeth using various techniques and materials.</li> </ul>

Outcome	Examples
	<ul style="list-style-type: none"> <li>• Understanding and managing instances where root canal treatment is indicated for teeth of poor restorability.</li> </ul>
<p>5.12 Interdisciplinary interfaces</p> <p>Demonstrates understanding of the importance and implications of the interrelationship between Endodontics and other clinical disciplines</p>	<ul style="list-style-type: none"> <li>• Being able to co-ordinate and manage patients requiring the input of other dental and/or medical specialist colleagues in the planning and execution of integrated care.</li> <li>• Being able to assess the prosthodontic and periodontal status of teeth relevant to the endodontic management.</li> <li>• Being able to understand patient and endodontic management for medically compromised patients; liaising with medical colleagues where appropriate.</li> <li>• Should have the knowledge and understanding of the endodontic-orthodontic interface and its management.</li> <li>• Can communicate clear care plans to colleagues including other dental specialists, primary care practitioners and DCPs, where appropriate.</li> <li>• Should demonstrate holistic planning and management skills in dealing with teeth that are unrestorable and/or with uncertain prognosis, assessing teeth for endodontic treatment and restoration or extraction and replacement with appropriate removable, fixed or implant retained prosthesis.</li> <li>• Should understand the biological rationale and indications for dental implants and planning. Use the appropriate knowledge and clinical techniques to the procedures for placement, restoration and maintenance of dental implants.</li> </ul>

## Endodontics assessments blueprint

\*Assessments in red are mandated.

\*Assessments in black are flexible, and the trainee can choose whether they wish to use them to evidence their learning.

WPBAs are mandated (see section 5) but the individual tools are not. However, a balanced portfolio of WPBA evidence should be provided.

HLO	Patient feedback	MSF	DOPs	CBD	CEX	College examination	Logbook / clinical competency record	Reflective reports	ES/CS reports
5.1 History taking and examination Demonstrates competence to carry out history taking and a thorough examination of the patient	*	*	*	*	*	*	*	*	*
5.2 Clinical investigation and imaging Demonstrates an understanding and competence in relevant investigations and imaging	*	*	*	*	*	*	*	*	*
5.3 Diagnosis and development of treatment strategies Demonstrates competence to synthesise information and arrive at the relevant diagnosis. They should be able to devise evidence-based treatment strategies in conjunction with the patient according to their needs and preferences whilst accepting the need to liaise with other specialists	*	*	*	*	*	*	*	*	*

HLO	Patient feedback	MSF	DOPs	CBD	CEX	College examination	Logbook / clinical competency record	Reflective reports	ES/CS reports
5.4 Health promotion Demonstrates competence to apply knowledge to develop a tailored care strategy related to oral and general health and prevention of diseases	*	*	*	*	*	*	*	*	*
5.5 Pain control and management Demonstrates an understanding of pain and pain control mechanisms, can provide pain and anxiety control and recognises the need for interdisciplinary care	*	*	*	*	*	*	*	*	*
5.6 Pulp therapy Demonstrates deep understanding of the structure and function of the pulp, appreciates the causes and effects of pulp disease and is competence to carry out vital pulp therapies	*	*	*	*	*	*	*	*	*
5.7 Non-surgical endodontic treatment Demonstrates competence to carry out endodontic treatment at a standard expected of a specialist using the appropriate diagnostic aids and operative equipment	*	*	*	*	*	*	*	*	*

HLO	Patient feedback	MSF	DOPs	CBD	CEX	College examination	Logbook / clinical competency record	Reflective reports	ES/CS reports
5.8 Non-surgical endodontic retreatment Demonstrates competence to diagnose and manage post-treatment endodontic disease by justifying the decision-making process and assess relevant treatment complexity and prognostic factors	*	*	*	*	*	*	*	*	*
5.9 Endodontic surgery Demonstrates understanding of the need for investigative and corrective surgery in the management of peri-radicular disease and competence to provide the appropriate surgical and soft tissue management	*	*	*	*	*	*	*	*	*
5.10 Dental traumatology Demonstrates an understanding of the nature and consequences of soft and hard tissue wound healing after trauma and is competent to diagnose and manage dental trauma	*	*	*	*	*	*	*	*	*
5.11 Restoration of the root-filled tooth Demonstrates understanding of the knowledge and skills necessary to assess teeth for root canal treatment and their subsequent restoration	*	*	*	*	*	*	*	*	*

HLO	Patient feedback	MSF	DOPs	CBD	CEX	College examination	Logbook / clinical competency record	Reflective reports	ES/CS reports
5.12 Interdisciplinary interfaces Demonstrates understanding of the importance and implications of the interrelationship between Endodontics and other clinical disciplines	*	*	*	*	*	*	*	*	*

## Section E: Glossary of terms and references

ABFTD	Advisory Board for Foundation Training in Dentistry
ABSTD	Advisory Board for Specialty Training in Dentistry
ACAT	Acute Care Assessment Tool
ACF	Academic Clinical Fellow
AoA	Assessment of Audit
ARCP	Annual Review of Competency Progression
CAT	Critically Appraised Topic
CBD	Case-based discussion
CCST	Certificate of Completion of Specialty Training
CEX/mini CEX	Clinical evaluation exercise
CPA	Competence in practice assessment
COPDEND	Committee of Postgraduate Dental Deans and Directors
CPD	Continuing Professional Development
DDMFR	Diploma in Dental and Maxillofacial Radiology



DDPH	Diploma in Dental Public Health
DOP/DOPS	Direct observation of procedure/procedural skills
DSFE	Dental Specialty Fellowship Examinations
EPA	Entrustable professional activities
ES	Educational Supervisor
ESR	Educational Supervisor's Report
F(DPH) College	Fellowship in Dental Public Health
F(Endo) College	Fellowship in Endodontics
F(Orth) College	Fellowship in Orthodontics
F(OS) College	Fellowship in Oral Surgery
F(OM) College	Fellowship in Oral Medicine
F(Paed Dent) College	Fellowship in Paediatric Dentistry
F(Perio) College	Fellowship in Periodontics
F(Pros) College	Fellowship in Prosthodontics
F(RD) College	Fellowship in Restorative Dentistry
F(SCD) College	Fellowship in Special Care Dentistry
FRCPATH	Fellowship of the Royal College of Pathologists
FRCR	Fellowship of The Royal College of Radiologists
GDC	General Dental Council
HcAT	Healthcare Assessment and Training
HEIW	Health Education and Improvement Wales
HEE	Health Education England
ISCP	Intercollegiate Surgical Curriculum Project
ISFE	Intercollegiate Specialty Fellowship Examination
JCPTD	Joint Committee for Postgraduate Training in Dentistry

MSF	Multi-source feedback
NES	NHS Education for Scotland
NHSE	National Health Service England
NIHR	National Institute for Health and Care Research
NIMDTA	Northern Ireland Medical and Dental Training Agency
NTN	National Training Number
OoP	Out of Programme
OoPC	Out of Programme: Career Break
OoPE	Out of Programme: non-training Experience
OoPR	Out of Programme: Research
OoPT	Out of Programme: Training
OoT	Observation of teaching
OSCE	Objective Structured Clinical Examination
PBA	Procedure-Based Assessments
PGDD	Postgraduate Dental Deans and Directors
PDP	Personal Development Plan
QA	Quality Assurance
RCP	Review of Competency Progression
RCS Ed	Royal College of Surgeons of Edinburgh
RCS Eng	Royal College of Surgeons of England
RCPSG	Royal College of Physicians and Surgeons of Glasgow
RCR	Royal College of Radiologists
SAC	Specialty Advisory Committee
SCRT	Specialty Curriculum Review Team
STC	Specialty Training Committee

StR	Specialty Training Registrar* note, the interchangeable term Specialty Trainee is used in the Dental Gold Guide
TPD	Training Programme Director
VTN	Visitor Training Number
WPBA	Workplace Based Assessment
WR	Written report
WTE	Whole Time Equivalent

#### References:

- GDC Principles and Criteria for Specialist Listing incorporating the [Standards for Specialty Education 2019](#) and [GDC principles of specialist listing](#)
- [Dental Gold Guide 2023](#) – COPDEND