

**General  
Dental  
Council**



**Oral Microbiology  
Specialty Training Curriculum**

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

## 1. 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 Specialist List for Oral Microbiology.

It also demonstrates how Oral Microbiology 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 Oral Microbiology 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 of Specialty Education. Successful completion of the relevant specialty training and assessment will lead to the award of a Certificate of Completion of Specialty Training (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 2023

## Acknowledgements

The Oral Microbiology Curriculum was written by the Oral Microbiology Curriculum Working Group of the Specialist Advisory Committee for the Additional Dental Specialties with input from the executive members of the Association of Clinical Microbiologists (ACOM):

- Deborah Lockhart
- Caroline Pankhurst
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- Noha Seoudi
- Melanie Wilson (Chair ACOM)

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## **SECTION A: PURPOSE STATEMENT FOR ORAL MICROBIOLOGY**

### **2. Introduction to the Oral Microbiology Specialty**

- The purpose of the GDC specialty of Oral Microbiology is the prevention and optimal management of infection throughout all areas of dentistry specifically, and healthcare in general.
- The specialty provides support for a range of health care professionals in the following areas the diagnosis of and treatment of infection of (primarily but not limited to) the mouth, face and neck regions, the prevention of the transmission of infection during treatment including the appropriate cleaning and sterilisation of equipment and the careful use of antibiotics to reduce the development of drug resistance.
- Oral microbiology specialists are involved in the management of laboratory services to ensure that high quality diagnostic reports are generated, and the specialists are available to liaise with clinicians in the interpretation of the reports.
- Accurate investigation of pus and other infected samples is essential for the optimal diagnosis and management of infections and is fundamental in the current context of increasing antimicrobial resistance.
- Data on the bacterium types and their sensitivity to drugs is collected and this helps in the management of the patient with the infection in addition to other patients since more information is available on the likely cause of similar infections and responses to treatment.
- Members of the specialty advise on or directly manage infections relating to the teeth, tongue, jaw bones, salivary glands and sinuses and the entire head and neck area for patients who are having surgery or radiotherapy for cancer.
- Infection prevention and control is a specialised area within dentistry and is a fundamental role of this specialty. Oral Microbiologists provide advice in hospital and community settings on risk assessment, policies for infection control, and management of exposure to infection.
- They are involved at regional and national levels in the development of guidelines and audit tools for the provision of optimal equipment cleaning and sterilisation services. They provide appropriate leadership and support to all health care professional and infection control teams to ensure proportionate responses to risks and check the adherence to infection control procedures for patient safety.

- Oral Microbiologists advise on antimicrobial prescribing policies and guidelines at local and national levels and are involved in the auditing of adherence to policies and the monitoring of antimicrobial use data. Such stewardship activities are critical in limiting the impact of antimicrobial resistance.
- The specialty has been closely linked with academic appointments and registrants are involved in the education and training of undergraduate and postgraduate dentists and members of the dental team in the understanding, prevention and optimal management of infection and are active researchers in these areas. The role is multi-professional, and specialists collaborate with experts from a range of other disciplines including infectious diseases, medical microbiology, infection control, biomedical scientists, occupational health, decontamination, ventilation engineers and public health.

### **3. 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 General Dental Council. It is desirable that during previous early years training the individual has experienced work in as many sectors of dental provision as possible with experience in Oral Surgery and/or Oral & Maxillofacial Surgery and Oral Medicine of particular relevance. Evidence of excellence in terms of attributes such as motivation, 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.

### **4. Outline of the training programme**

It is anticipated that 4 or 5 years would normally be required to satisfactorily complete the Oral Microbiology curriculum to the appropriate depth and breadth. This is because trainees cover the medical microbiology training curriculum in addition to specialist oral microbiology. There is scope to reduce the length of training if an individual has the required clinical background, for example, appropriate inpatient management experience. The ARCP process allows for adjustments to be made to this where appropriate.

The training programme can be arranged with flexibility to allow for local and trainee circumstances. The first one to two years cover both training in medical microbiology and oral microbiology with a minimum of one year in general medical microbiology, where trainees will participate fully in the activities and working practices of their medically qualified trainee colleagues including experience of the diagnostic laboratories and clinical hub. This overview experience of microbiology service provision will prepare trainees for FRCPATH Part 1.

Trainees will then spend the further 3-4 years in more advanced training in the full range of oral and medical microbiology specialties, to include but not limited to, virology, mycology, anaerobic, infection control and public health units, leading to FRCPATH part II.

Training programmes will 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 or acute medical teaching hospital/school together with other associated, recognised, and validated training environments.

Many trainees in Oral Microbiology undertake academic training, either within the 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.

## **5. Training specific to Oral Microbiology**

The specialty of Oral Microbiology has been closely linked with academic appointments. Specialists are involved in the education and training of undergraduate and postgraduate dentists and members of the dental team in the understanding, prevention and optimal management of infection and are active researchers in these areas. Registrants are clinical specialists undertaking the same FRCPATH training as medical microbiologists and these individuals contribute to the management and delivery of infection services within both medical and dental contexts in some centres. The specialty, along with the Association of Clinical Oral Microbiologists (the specialist society) acts as a focus for further research, in addition to the support and development of trainees.

Training in Oral Microbiology would normally take 4/5 years with training length being determined by trainee experience and progression. To fulfil the curriculum requirements, a significant proportion of training will be spent in medical microbiology and virology environments to gain experience in the diagnosis and management of infection in other systems. The role is multi-professional, and specialists collaborate with experts from a range of other disciplines including infectious diseases, medical microbiology, infection control, biomedical science, occupational health, decontamination, ventilation engineering and public health. The remainder of the training is devoted to Oral Microbiology with trainees gaining experience in applying diagnostic and management principles within the dental arena whilst maintaining collaborative links with other professionals.

The training programme includes opportunities for experience of research and development projects and critical assessment of published work to both add to the evidence and knowledge base of the specialty and/or contribute to the development of the service. As many of the training programmes are closely linked to academically active Head and Neck Services and trainees will collaborate with diversity of other professionals, medical and dental, a range of research and development opportunities are available for the trainee including case reports,

translational science projects, clinical trials etc. Outputs may include contributions to national guidelines, peer reviewed publications, presentations, and book chapters.

Trainees will be encouraged to be involved in educational development and will be supported in the provision of teaching in a range of programmes depending on local circumstances.

## **6. 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 Supervised Learning Events (SLEs) 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. As similar training programs stipulates a minimum number of 24 SLEs per year, with equal use of the assessment tools, this will also apply in Oral Microbiology training.

A full list of SLEs can be found in the glossary of assessment terms. Supervised Learning Event assessment tools will include but are not limited to:

- Case based discussions
- Direct observation of procedural skills
- Procedure based assessments
- Multisource feedback
- Patient/user feedback

In addition to SLEs, there is a minimum indicative of 6 Assessments of Performance (AOP) per year, but this is flexible. Ideally an AOP should be completed after each specialty placement but that depends on how the trainee's rota is set up in their local department. (A two-week specialty rota change would be over burdensome for undertaking AoPs at such frequency for example.) The Training Programme Director and local Educational Supervisor(s) should decide on frequency based on the rotations within the programme and therefore the frequency of AoPs.

One every six weeks or two months may be more realistic and reflective of the trainee's practice, with higher frequency during the general pathology rotations.

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 SLEs. 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 College examinations), but other forms of assessment should be tailored to the training program/local circumstances/stage of training, and these should be agreed with the Training Provider(s) as part of the RCP process and the Education supervisor(s) as part of a learning agreement. All mandatory assessments are clearly indicated in section D.

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

Progress through training is assessed through the Annual Review of Competence Progression (ARCP) process, and training is completed when all the curriculum requirements are satisfied, and HLOs have been evidenced.

## **7. 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 ([Dental Specialty training \(gdc-uk.org\)](http://gdc-uk.org)) 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 \(gdc-uk.org\)](http://gdc-uk.org) webpage.

## SECTION C – GENERIC PROFESSIONAL CONTENT OF THE SPECIALTY CURRICULUM

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 and needs and avoiding unnecessary jargon</li><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></ul>



	<ul style="list-style-type: none"> <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, inter-professional 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>
<p>1.2. Demonstrate that they can make decisions, while maintaining professional behaviour and judgement</p>	<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 comments and behaviours on others (emotional intelligence)</li> <li>• influencing, negotiating, continuously re-assessing priorities and effectively managing complex, dynamic situations and exploring and resolving diagnostic and management challenges</li> </ul>
<p>1.3. Demonstrate they can deal with complexity and uncertainty</p>	<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>

<p>1.4. Recognise their legal responsibilities and be able to apply in practice any legislative requirements relevant to their jurisdiction of practice</p>	<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>
<p>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</p>	<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>• 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>• recognise and work 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>
<p>1.6. Recognise and demonstrate their role in health promotion, disease prevention and dental population health</p>	<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> </ul>

	<ul style="list-style-type: none"> <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 public’s dental health</li> </ul>
1.7 Recognise the importance of, and demonstrate the ability to practise, person-centred care (PCC), including shared decision making (SDM)	<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>
<b>Domain 2: Leadership and teamworking</b>	
<b>Outcome</b>	<b>Examples</b>
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. Relevant model: <a href="#">NHS Leadership Academy: the nine leadership dimensions</a></li> </ul>
2.2. Demonstrate understanding of the importance of working with others both within their specialty and the wider healthcare	<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 services</li> <li>• being able effectively to 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> </ul>

<p>system (working with others).</p>	<ul style="list-style-type: none"> <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>
<p>2.3. Demonstrate the importance of planning and an understanding of managing dental specialist services</p>	<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>
<p><b>Domain 3: Patient safety, quality improvement and governance</b></p>	
<p><b>Outcome</b></p>	<p><b>Examples</b></p>
<p>3.1. Recognise a professional and statutory duty of candour and act accordingly within established governance, legal and regulatory systems, including equality and diversity</p>	<p>They should do this by:</p> <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>
<p>3.2. Recognise the impact of human factors on the individual, teams,</p>	<p>They should do this by:</p> <ul style="list-style-type: none"> <li>• understanding of effects of teamwork, tasks, equipment, workspace, culture and organisation on human behaviour and abilities and the application of that knowledge in clinical settings</li> </ul>

organisations and systems	<ul style="list-style-type: none"> <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 understanding 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> <li>working with others to effectively measure and evaluate the impact of quality improvement interventions and their impacts on the wider systems</li> <li>demonstrate knowledge of additional challenges related to oral health inequalities in minority ethnic populations and other groups with protected characteristics in the UK, assess and recognise 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	Demonstrate competency and undertake annual training in Immediate Life Support
<b>Domain 4: Personal education, training, research and scholarship</b>	
Outcome	Examples

<p>4.1. Demonstrate that they can plan and deliver effective education and training activities</p>	<p>They should do this by:</p> <ul style="list-style-type: none"> <li>• providing safe clinical supervision of learners</li> <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 inter-professional 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>
<p>4.2. Demonstrate that they can critically appraise and interpret scientific/academic literature and keep up to date with current and best practice</p>	<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>
<p>4.3. Understand what is required to participate in research</p>	<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

HLO	Patient feedback / MSF	SLEs	Reflective reports	Training course or qualification (incl PG degrees)	Critical incidents / complaint reviews	Research or QI/ audit projects	Logbook	Specialty specific summative assessment	Other	CS / ES reports
<b>Domain 1: Professional knowledge and management</b>										
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	
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)										
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HLO	Patient feedback / MSF	SLEs	Reflective reports	Training course or qualification	Critical incidents/ complaints review	Research or QI / audit projects	Logbook	Specialty specific summative assessment	Other	CS/ ES reports
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**Domain 2: Leadership and teamworking**

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	*

HLO	Patient feedback / MSF	SLEs	Reflective reports	Training course or qualification	Critical incidents/ complaints review	Research or QI / audit projects	Logbook	Specialty specific summative assessment	Other	CS/ ES reports
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**Domain 3: Patient safety, quality improvement and governance**

3.1 Recognise a professional and statutory duty of candour and act	*	*		*		*		*	*2	*
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accordingly within established governance, legal and regulatory systems, including equality and diversity										
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	
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				*						

HLO	Patient feedback / MSF	SLEs	Reflective reports	Training course or qualification	Critical incidents / complaints review	Research or QI / audit projects	Logbook	Specialty specific summative assessment	Other	CS/ ES reports
<b>Domain 4: Personal education, training, research and scholarship</b>										
4.1 Demonstrate that they can plan and deliver effective education and training activities		*	*	*				*	*2,3,4,5	

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	

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 eg OSDPHA

## SECTION D - SPECIALTY-SPECIFIC CONTENT OF THE SPECIALTY CURRICULUM FOR ORAL MICROBIOLOGY

Section D - Specialty-Specific Content of the specialty curriculum for Oral Microbiology	
Domain 5: The scientific basis of microbiology	
Outcome	Examples
Demonstrate knowledge and understanding of the scientific basis of medical microbiology, virology and infectious diseases which underpin clinical practice	<p>They should do this by:</p> <ul style="list-style-type: none"> <li>• explain basic biology (structure, genetics, taxonomy, epidemiology) of major bacterial, viral, fungal, parasitic and prion agents.</li> <li>• explain the basis of the immune response to infection.</li> <li>• use knowledge of host pathogen interactions to analyse clinical presentations of infection.</li> <li>• outline the principles of epidemiology, presentation, diagnosis, and management of clinical infection syndromes.</li> <li>• explain the basic principles of diagnostic microbiology and virology.</li> </ul>

	<ul style="list-style-type: none"> <li>demonstrate knowledge and understanding of the treatment and preventative strategies available for infection.</li> </ul>
<b>Domain 6 Key Clinical Skills</b>	
<b>Outcome</b>	<b>Examples</b>
Demonstrate these key clinical skills when direct patient contact required	<p>They should do this by:</p> <ul style="list-style-type: none"> <li>taking a relevant patient history including patient symptoms, concerns, priorities, and preferences</li> <li>performing accurate clinical examinations</li> <li>showing appropriate clinical reasoning by analysing physical and psychological findings</li> <li>formulating an appropriate differential diagnosis</li> <li>formulating an appropriate diagnostic and management plan, taking into account patient preferences, and the urgency required</li> <li>explaining clinical reasoning behind diagnostic and clinical management decisions to patients, carers, guardians and/or other colleagues</li> <li>appropriately selecting, managing and interpreting investigations (e.g., reviewing results)</li> <li>understanding the challenges of safe prescribing for people at extremes of age, which includes neonates, children and frail or elderly people</li> <li>assessing a clinical situation to recognise a drug reaction</li> <li>managing adverse incidents and therapeutic interactions appropriately</li> <li>accessing the current product literature to ensure medicines or products are prescribed and monitored according to most up to date criteria</li> </ul>
<b>Domain 7 Diagnosis and management of infection</b>	
<b>Outcome</b>	<b>Examples</b>
Demonstrate knowledge and understanding of diagnosis and management of infection	<ul style="list-style-type: none"> <li>Know the signs and symptoms of infection and understand the range of special investigations available to support diagnoses.</li> <li>Understand the reasoning behind investigational and diagnostic microbiological procedures and be able to communicate this clearly to clinicians, laboratory staff, legal professionals, and lay persons.</li> <li>Recommend and, if required, undertake appropriate sampling for microbiological investigations and advise on optimal specimen transport requirements.</li> <li>Undertake or oversee specimen processing.</li> <li>Effectively interpret microbiological findings in the clinical context and produce informative reports for communication to clinicians.</li> <li>Recognise how microbiology reports may affect management pathways.</li> </ul>

	<ul style="list-style-type: none"> <li>• Interpret reports from related clinical disciplines in the light of microbiology findings, mindful of the pitfalls of interpretation.</li> <li>• Liaise with clinical colleagues to interpret findings.</li> <li>• Liaise effectively with other specialty services and request appropriate supplementary investigations.</li> <li>• Escalate/refer findings to relevant colleagues when appropriate.</li> <li>• Recommend appropriate treatment ensuring adherence to the principles of antimicrobial stewardship.</li> <li>• Recommend and undertake follow up investigations.</li> </ul>
<b>Domain 8 Surveillance of infection</b>	
<b>Outcome</b>	<b>Examples</b>
Demonstrate knowledge and understanding of the importance of surveillance of infection and antimicrobial resistance	<ul style="list-style-type: none"> <li>• Understand how sampling of infection benefits the individual patient in addition to providing surveillance data for monitoring of clinical outcomes and antimicrobial resistance.</li> <li>• Know how to collate relevant surveillance data for local and national purposes.</li> </ul>
<b>Domain 9 Provision of diagnostic services</b>	
<b>Outcome</b>	<b>Examples</b>
Develop the necessary management, communication, and leadership skills to run a laboratory and deliver a high-quality service.	<ul style="list-style-type: none"> <li>• Be familiar with the structure, resources and legislation surrounding laboratory practice.</li> <li>• Describe and explain laboratory information management systems and other healthcare systems including understanding the information governance legislation.</li> <li>• Demonstrate awareness of developments, scientific and managerial that may affect the organisation and delivery of microbiology services (e.g., commissioning).</li> <li>• Participation in management projects relevant to service delivery for example writing of business cases and to appreciate the importance of drawing upon the expertise and opinions of others in this process.</li> <li>• Demonstrate the use of Internal Quality Control and External Quality Assurance information to diagnose and resolve analytical problems.</li> </ul>
<b>Domain 10 Infection Prevention and Control</b>	
<b>Outcome</b>	<b>Examples</b>
Demonstrate knowledge and understanding of the principles of infection prevention and	<ul style="list-style-type: none"> <li>• Knowledge and understanding of the routes and transmission of infection and methods for the prevention of nosocomial and community spread of microorganisms.</li> </ul>

control and implementation within clinical practice.	<ul style="list-style-type: none"> <li>• Recognise the role of surveillance in identification of outbreaks and incidents and the use of routine and enhanced surveillance.</li> <li>• Understand the implementation of standard and transmission-based precautions depending on nature of infectious challenge.</li> <li>• Ability to undertake risk assessment of infectious threats based on specific microorganisms and clinical situations.</li> <li>• Ability to initiate proportionate and prudent risk mitigations and evaluate their effectiveness.</li> <li>• Lead effectively on infection control advice, training, and policy development at local and national levels.</li> <li>• Liaise effectively with other specialists including CDCC, IPC and Public Health teams.</li> </ul>
<b>Domain 11 Partner specialties</b>	
<b>Outcome</b>	<b>Examples</b>
Demonstrate broad experience and understanding of related specialties such as infectious diseases, health protection, mycology, parasitology, and virology.	<ul style="list-style-type: none"> <li>• Knowledge and understanding of the diagnostic and management principles of related specialties to facilitate appropriate referral and liaison with other specialist teams.</li> </ul>
<b>Domain 12 Policy and guidance development</b>	
<b>Outcome</b>	<b>Examples</b>
Appreciate the process for national policy and guidance development including the requirement for wide consultation with stakeholders.	<ul style="list-style-type: none"> <li>• Experience at some level of influencing, development or implementation of policy or strategy as a specialty and in collaboration with partners: -</li> <li>• For example, in the prevention and management of infection; standard operating procedures in the processing of microbiological samples; quality assurance protocols; surveillance of antimicrobial resistance; prescribing guidelines; audit toolkits.</li> </ul>
<b>Domain 13 Working in a multidisciplinary team</b>	
<b>Outcome</b>	<b>Examples</b>
Contribute effectively to a multi-disciplinary team.	<ul style="list-style-type: none"> <li>• Liaise and communicate effectively with clinicians, laboratory staff, medical microbiologists, Infectious Disease Physicians, Infection Prevention and Control teams and Occupational Health staff.</li> <li>• Demonstrate effective management and team working skills including influencing, negotiating, continually re-assessing priorities and being involved in complex dynamic situations.</li> </ul>

	<ul style="list-style-type: none"> <li>• Identify and support effective continuity and co-ordination of patient care through the appropriate transfer of information.</li> <li>• Recognise the importance of prompt and accurate information sharing with the team primarily responsible for the care of the patient.</li> <li>• Able to work effectively with “external” agencies such as GDC, GMC, RCS RCPATH, Education bodies and international diagnostic and research networks.</li> </ul>
<b>Domain 14 Promotion of health and safety</b>	
<b>Outcome</b>	<b>Examples</b>
Demonstrate the appropriate knowledge and background skills relevant to clinical practice for the general advancement of oral and general health, the management of the specialty patient and safety of patients and members of the dental team.	<ul style="list-style-type: none"> <li>• Demonstrate a knowledge base in pathological and medical sciences to underpin safe, effective, and prudent clinical practice.</li> <li>• Contribute to undergraduate and postgraduate education of healthcare professionals.</li> <li>• Provide microbiology expertise to support clinical trials and research in infection prevention and management.</li> </ul>

## Oral Microbiology Assessments Blueprint

HLO Domain	College examinations FRCPPath	ES reports	Logbook	CPD record and reflections	AOPs DOPs	CBDs	Quality improvement activity	MSF	Service user/patient feedback
5 The scientific basis of microbiology	*	*	*	*		*			
6 Key clinical skills	*	*	*	*	*	*			
7 Diagnosis and management of infection	*	*	*	*	*	*	*	*	*
8 Surveillance of infection	*	*	*	*		*	*		
9 Provision of diagnostic services	*	*	*	*			*		
10 Infection prevention and control	*	*	*	*		*			
11 Partner specialties	*	*	*	*		*			
12	*	*	*	*			*		

Policy and guidance development									
13 Working in a multi-disciplinary team	*	*	*	*		*	*	*	*
14 Promotion of health and safety	*	*	*	*	*	*			

NB: Assessments in red are mandatory. Assessments in black are flexible and the trainee may choose whether they wish to use them to evidence their training. However, a balanced portfolio of evidence should be provided.



## **SECTION E: GLOSSARY OF TERMS AND REFERENCES**

### **Glossary**

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 Competence 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
CPE	Continuing Professional Education
DDMFR	Diploma in Dental and Maxillofacial Radiology
DOP/DOPS	Direct observation of procedure/procedural skills
EPA	Entrustable professional activities
ES	Educational Supervisor
ESR	Educational Supervisor's Report
FDS(DPH)	Fellowship in Dental Surgery in Dental Public Health

FDS(OM)	Fellowship in Dental Surgery in Oral Medicine
FDS(OS)	Fellowship in Dental Surgery in Oral Surgery
FDS(Orth)	Fellowship in Dental Surgery in Orthodontics
FDS(PaedDent)	Fellowship in Dental Surgery in Paediatric Dentistry
FDS(RestDent)	Fellowship in Dental Surgery in Restorative Dentistry
FRCPath	Fellowship of the Royal College of Pathologists
GDC	General Dental Council
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
MEndo	Membership in Endodontics/Membership in Restorative Dentistry
MPaedDent	Membership in Paediatric Dentistry
MSCD	Membership in Special Care Dentistry
MSF	Multi-source feedback
MOralSurg	Membership in Oral Surgery
MOrth	Membership in Orthodontics
MPerio	Membership in Periodontics/Membership in Restorative Dentistry
MPros	Membership in Prosthodontics/Membership in Restorative Dentistry
NES	NHS Education for Scotland
NHS	National Health Service

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
OSCE	Objective Structured Clinical Examination
OSDPHA	Objective Structured Dental Public Health Assessment
OoT	Observation of teaching
PBA	Procedure-Based Assessments
PGDD	Postgraduate Dental Deans and Directors
PDP	Personal Development Plan
QA	Quality Assurance
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
SLE	Supervised Learning Event
SOP	Standard Operating Procedure

STC	Specialty Training Committee
StR	Specialty Training Registrar* <i>note, the interchangeable term Specialty Trainee is used in the Dental Gold Guide</i>
TPD	Training Programme Director
VTN	Visitor Training Number
WBA	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 2021 - [Dental Gold Guide 2021 - COPDEND](#)