Specialist Advisory committee for Restorative Dentistry

Faculty of Dental Surgery (FDS) Royal College of Surgeons of England

Syllabus for Higher Specialist Training in Restorative Dentistry

Foreword

This clinical syllabus sets out the competence required for the attainment of the award of the Certificate of Completion of Specialty Training (CCST) and admission onto the Specialist List for Restorative and associates with the General Dental Council's (GDC) specialty training curriculum for Restorative Dentistry [1]. It was developed in collaboration with the RD-UK).

The focus of the syllabus is competence-based which refers to the trainee's capability to perform the specialist's responsibilities and is a move away from the previous task orientated delivery based on a competency framework focussing on the trainee's actual performance in a situation. This change in practice is aimed at meeting the standards expected of a specialist to deliver high quality patient care that is safe, and patient centred amid managing increasing demands and expectations of today's patients within United Kingdom-based provision of health care.

The syllabus aligns with the domains of the Intercollegiate Specialty Fellowship Examination (ISFE) of the Royal College of Surgeons in the UK[2].

Contents

1.0 Introduction

This clinical syllabus is underpinned by the generic professional content of the speciality curriculum as listed by the GDC[3], with all professionals expected to be cognisant and compliant with this framework throughout their training. It is assumed that trainees on entrance to specialty training have achieved the basic standard of knowledge and skills in dentistry and the emphasis of the training is becoming a Specialist in Restorative Dentistry which is a five-year full-time training programme. Although the focus of the clinical syllabus is Restorative dentistry, trainees involved in this training should be exposed to the range of specialities that underpin the discipline thus preparing them to meet the complex and integrated treatment needs of today's young as well as aging population.

Training providers will be expected to fulfil the quality standards established by the GDC[5] and trainers should be familiar with the contents of this clinical syllabus to ensure that the trainee achieves the necessary requirements. The essential components are outlined with an indication of the expected standards and capabilities from all providers. The domains are deliberately kept broad to allow for variation in training opportunities in different institutions whilst recognising the differing experience of trainees at the start of training.

The syllabus sets out a guide for training, encompassing the contents of the specialty curriculum, to ensure that the trainee progresses through a journey of progressive spiral development. Year 1 and 2 focuses on acquisition and understanding of core knowledge, skills and behaviours which form the foundations, essential for the development of the trainee's personal learning experience and growth. During year 3 and 4 this is consolidated and integrated into the acquisition of skills in analysis, application, adaptation and judgement gaining higher learning towards the end of the year. By year 5, the emphasis will be more on analytical synthesis and critical evaluation of information gathered to predict evidence-based treatment outcomes whilst excelling in clinical expertise underpinned by attributes and behaviours that foster lifelong learning beyond the completion of the training. The syllabus layout is aimed at making it user friendly for both trainees and trainers

with an indicative blueprint of assessments that demonstrate attainment of the capabilities described by generic and speciality specific higher learning outcomes.

2.0: Training Progression

Training progression will be monitored throughout the 5 years. The longitudinal evaluation will be undertaken using programmatic assessment with low and high stakes, thus enabling the development of trainee capabilities and learning experience to be monitored continually throughout training. Formative assessment tools will provide the supporting evidence showing trainee progression moving away from a skill-based approach to a trainee centred/trainee led capability/competence evaluation mentored by the trainer over training duration.

Portfolios incorporating clinical case, learning and reflective logs are mandatory for monitoring the trainees learning. Completed case, learning and reflective logs which contribute to the trainee's self-awareness will underpin their personal development plans and are essential for monitoring personal growth. Supervised Learning Events (SLEs) which highlight the gaps in learning supported with workplace-based assessments (WPBAs) are essential for tracking the trainee's progressive learning and may include the following:

- Mini Clinical Evaluation Exercise (Mini CEX)
- Case Based Discussions (CBD)
- Directly Observed Practice Skills (DOPS)
- Evaluation of Clinical Events (ECE)
- Care Assessment Tool (CAT)
- Multisource Feedback (MSF)
- Multiple Consultant Reports (MCR)
- Entrustable Professional activities (EPAs)

The summative assessment at the end of each year will be the Annual Review of Competence Progression (ARCP) with submission of the documentation required onto the Intercollegiate Surgical Curriculum Programme (ISCP). The end of training will be marked by the satisfactory completion of the Speciality Fellowship Examination of the Royal Colleges[4].

3.0: Domains

The key clinical domains outline the standards and describe the capabilities a trainee is expected to achieve over the duration of the five-year period of training demonstrating a longitudinal spiral progression of learning and personal development in knowledge, skills and capabilities using an evidence-based approach.

The generic capabilities, which focus on professionalism, communication and leadership, underpin the specialty focussed clinical domains and the trainee must recognise and demonstrate an appreciation of their importance throughout their training. Trainees must also be familiar with the GDC's professionalism principles[5] and embed and abide by them in their day-to-day practice. Trainees should also remember that where possible all assessment and management plans and strategies undertaken at patient or professional level should be evidence based.

Each domain with the higher learning outcomes has descriptors that provide guidance on the expected minimum standard of attainment a trainee should be aiming to achieve by the end of Year 5. The descriptors are intentionally left broad to allow flexibility within the training catering for the range of skill sets and capabilities of trainees. During year 1, it is expected that trainees will be more at the competency level where they are acquiring the set of knowledge, skills and abilities understanding their application and consolidating these they progress into the subsequent years. During these years, it is expected that the trainee will gain competence in analysis and synthesis of information making judgements, decisions and evaluating outcomes, demonstrating that they are competent and capable by the end of their training to deliver services at the level of a specialist restorative dentist. The trainees learning journey should follow a spectrum of synchronous and asynchronous experiences to enrich their learning embedding the principles of lifelong learning into daily practice underpinned by professional attributes defined by the GDC's professionalism principles.

The trainer will support and guide the trainee throughout their training, moving from a trainer supported journey during year one to a trainee led journey by years 4 and 5.

At the end of the training, trainees will be proficient in the synthesis and analytical approach to the delivery of clinical patient care (figure 1):

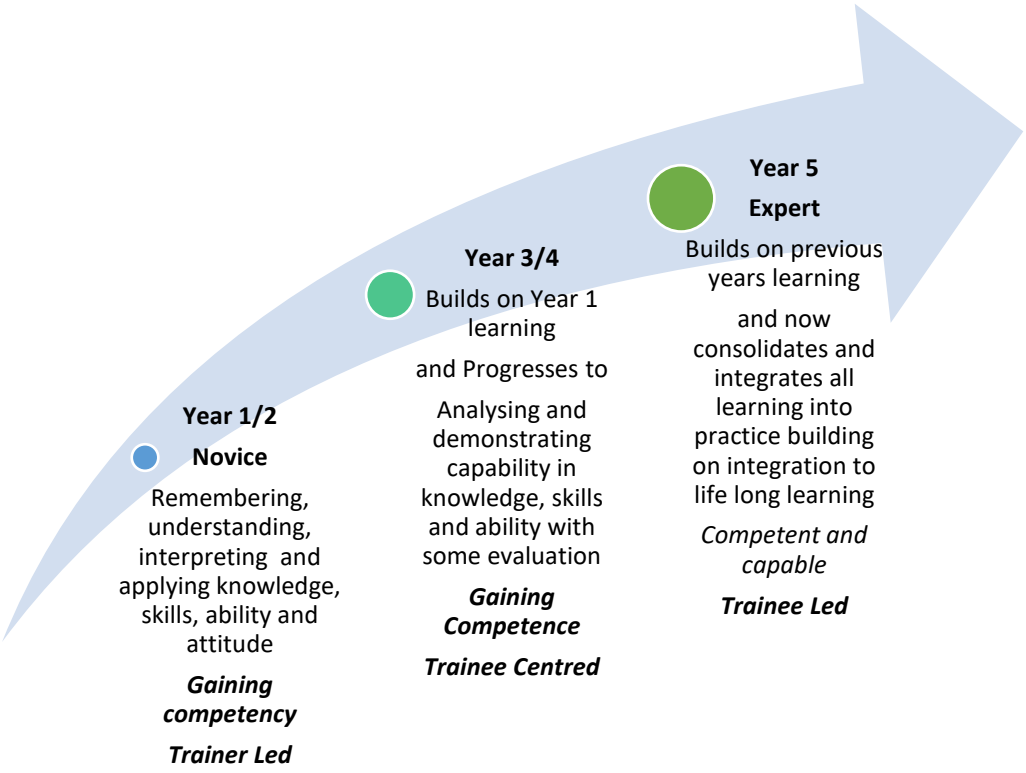

Figure 1: Diagrammatic representation of trainee progression through training

The syllabus should ideally be delivered using a combination of theoretical, simulated and clinical placements. The balance of this will vary by provider accepting these variances as long as the end-product of a specialist in Restorative dentistry with the requisite knowledge, skills, abilities and capabilities to manage patients with specialist treatment needs is achieved.

4.0: Specialty-Specific Higher Learning Objectives (HLOs) (Specialty Curriculum for Restorative Dentistry)

Higher Learning Objectives (HLOs)

A. Independently records and interprets information gathered from a detailed history and examination of patients with simple and complex conditions analysing it to formulate an accurate and comprehensive diagnosis and risk assessed management plan taking into consideration the need for relevant specialist clinical skills in endodontics, prosthodontics and periodontics. (HLO 5.1)

B. Synthesises gathered information in relation to oral health and makes informed judgements by critically evaluating and applying appropriate concepts validated by evidence for the management of patients with:
   - conservation of teeth (including restorations) including the worn dentition and endodontically treated teeth. (HLO 5.)
   - endodontic conditions (HLO 5.9), periodontal conditions (HLO 5.10) and fixed and removable prosthodontics (HLO 5.11) as outlined in the individual curricula for specialist training
   - tooth replacement with dental implants (HLO 5.14)

C. Analyses and critically appraises newer technologies and methodologies to evaluate their relevance and use including the application of digital dentistry to optimise patient care (HLO 5.13)

D. Demonstrates and appraises available clinical research and associated methodologies including innovation, establishing its relevance and application to optimise clinical patient outcomes

4.1: History Taking and Examination

4.1.1 Underlying and Applied Knowledge

Trainees should be able to:

- Describe, evaluate and analyse the biology, anatomy, histopathology, immunology and physiology of intra- and extra-oral structures and tissues in both health and diseased states, including:
    - Hard and soft tissues of the head and neck.
    - Tooth, enamel, root, and pulp-dentine complex.
    - Congenital and developmental defects of the dentition and supporting tissues.
    - Occlusion
    - Periodontal and peri-implant tissues and alveolar bone,
    - Oro-facial conditions affecting the oral cavity and teeth that influence the provision of integrated treatment eg lichen planus, bullous disorders
    - Congenital/acquired missing teeth, Hypoplastic/hypomineralised teeth,
    - Caries and all types of tooth wear
    - Spread of dentofacial infections (including endodontic lesions) and their mechanism
    - Metabolic and immune response to endodontic infections and periodontal infections
    - Pain and its presentation
    - Occlusion and associated disorders eg myofascial pain dysfunction

- Evaluate, analyse and assimilate the:
    - influence and impact of general and oral health and diseases on patient expectations, aesthetics and their effect on function and stability of the natural dentition and the provision of conventional fixed, removable and implant related prosthodontics.
    - sequelae of congenital, developmental and acquired conditions (caries, tooth wear and tooth loss) on the dentition and supporting tissues

- relevance and application of different investigations e.g. radiological and histopathological to the patients presenting complaints
- pain management theories in managing pain of odontogenic and non-odontogenic causes.
- Limitations, sensitivity and specificity of diagnostic tests and relevance value of other investigations.

- Interpret, critically evaluate and synthesise the underpinning basic sciences to the findings of extra and intraoral structures and tissues of health vs disease states

4.1.2 Clinical Skills

Trainees should be able to:

- Undertake and record a comprehensive patient history, reviewing and explaining the presenting complaint and its related history considering relevant dental, medical and social factors relating to the presenting concerns.
- Demonstrate skills and evaluate the need to complete a thorough examination of all extraoral and intraoral structures and tissues appraising the relevant findings to the presenting concerns
- Gather and analyse, systematically, intraoral findings, interpreting and evaluating these to judge the most appropriate way of managing the patient
- Recognise the relevance and make informed judgements on the need for and undertake a detailed occlusal analysis using analogue and digital technologies
- Assess and analyse existing fixed/removable conventional and/or implant retained prostheses appraising their biological, functional and aesthetic quality
- Judge the influence of the peri-oral structures on the stability, aesthetics and function of the dentition and/or prostheses
- Compose and derive a diagnosis, using the information gathered from the history and investigations including special tests to establish a prognosis for the overall restorative care plan
- Evaluate and analyse, from the information, gathered the prognosis of the teeth, restorations and prostheses using sound judgement in the context of the patients overall oral health status and its impact

- Assimilate, analyse and formulate a patient centred treatment plan using the information gathered differentiating between urgent and non-urgent care

4.2: Clinical Investigation and Imaging

4.2.1 Underlying and Applied Knowledge

Trainees should be able to:

- Apply knowledge from the information gathered eg history,anatomy to judge and evaluate the need for additional investigations such as radiology, blood tests
- Justify the choice of radiological and non-radiological investigations comparing their advantages and disadvantages.
- Analyse and critically appraise the role, relevance, and limitations of:
  - Periodontal and peri implant examinations
  - Periradicular tests.
  - Sensibility tests for pulp vitality
  - Techniques used for crack detection
  - Selective local anaesthesia.
  - Biological inflammatory markers.
  - Articulated study casts and occlusal analysis
  - Diagnostic wax ups (or equivalent digital techniques).
  - Clinical photography
  - Smile /aesthetic analysis
  - **Radiological imaging including 2D and 3D modalities.**
- Synthesise the information gathered from investigations including radiological imaging and critically evaluate their sensitivity and specificity taking into consideration the factors that may influence interpretation of these investigations
- Analyse and critically appraise the clinical, radiological, and histological presentation of odontogenic and non-odontogenic pathosis of the maxilla and mandible, including the histopathosis of lesions of endodontic origin.

4.2.2 Clinical Skills

Trainees should be able to:

- Synthesise information and make informed judgements by critically evaluating and applying appropriate concepts/arguments supported by valid evidence from the findings of the clinical and special investigations including:
  - Periodontal and periradicular tests: probing, palpation, percussion, tooth mobility
  - Pulp sensitivity tests: thermal and electric pulp testing.
  - Caries and tooth wear examinations with screening tools and indices
  - Occlusal examination
  - Examination and classification of the alveolar bone
  - Evaluation of existing prostheses
  - Special tests such as bite test, staining, transillumination, surgical exploration, and/or visualisation under Dental Operating Microscope (DOM) for crack propagation.
  - Radiographic investigations conventional and cone beam computed tomograms and magnetic resonance imaging
- Judge and apply coherence and detailed knowledge of the guidelines regarding the use of cone beam computed tomography.
- Demonstrate an ability to deploy accurately established techniques of analysis and enquiry for the purposes of diagnosis and patient centred care

4.3: Diagnosis and Development of Treatment Strategies

4.3.1 Underlying and Applied Knowledge

Trainees should be able to:

- Explain, evaluate and demonstrate a critical awareness of the disease processes and presenting features for prosthodontic, periodontic and endodontic conditions.
- Appraise and apply the classification systems for periodontal diseases, endodontic lesions, occlusal disorders, dental developmental disorders, tooth wear and dental trauma rating their relevance and limitations.
- Interpret and analyse the histopathology and microbiology of dental diseases.

- Judge and evaluate the relevance of risk factors when evaluating the prognostic outcomes for various treatment options, management strategies and possible complications.
- Make and justify decisions on the likely outcomes for different treatment options in relation to healthcare system and financial constraints.

4.3.2 Clinical Skills

Trainees should be able to:

- Assimilate and synthesise information gained from the history, examination, clinical and special tests including radiological imaging to arrive at diagnoses, based on knowledge of disease processes involved and presenting features.
- Construct and synthesise information when diagnosing and managing a case using a risk assessed approach that accounts for different patient and tooth related factors including medical history, patient compliance, and treatment complexity
- Critically evaluate and discuss alternative treatment options appraising their outcomes to the patient applying the relevant evidence justifying the most appropriate in line with the patient expectations
- Effectively communicate all the treatment options to the patient taking into consideration the impact of each on oral health, quality of life and need for future supportive care, prevention, and maintenance.
- Critically evaluate and justify the choice of dental materials, equipment and techniques utilising the available clinical evidence.
- Operate within a multi-disciplinary team demonstrating the ability to make informed judgements as a core team lead with other clinicians involved in the care of the patient.
- Demonstrate the use of reflection and self-directed learning, whilst showing an awareness of the recognition of personal limitations and seeking help when needed.
- Demonstrates and recognises the importance of contemporaneous and comprehensive record keeping on all aspects of data collected including the discussions on risk and benefits of treatment options and the agreed treatment plan.

5.0 Health Promotion

5.1 Underlying and Applied Knowledge

Trainees should be able to:

- Critically appraise preventive methods available to manage primary dental diseases making informed judgements supported by valid evidence about the most appropriate regime.
- Devise risk mitigating strategies to manage potential complications of primary diseases.
- Makes and justifies decisions about published local, national, and international guidelines on prevention of primary dental disease and management of medically compromised patients.
- Synthesise information and critically appraises the associations between oral and systemic diseases, including those with periodontal diseases and the connections between smoking, diet, and effective oral hygiene on the provision of specialist Prosthodontic care with stable and maintainable long-term outcomes.
- Identify, explore and interpret the impact of general health on the future prognosis of oral structures and survival of restorations, including knowledge of how future growth might impact on the restorative care for child patients.

5.2 Clinical Skills

Trainees should be able to:

- Effectively communicate information about preventative advice for primary diseases including oral hygiene instruction, diet, parafunctional habits, and smoking cessation, with particular relevance to their effect on oral health disease prevention and long-term survival and maintenance of treatment provided.
- Synthesize information and engage patients to understand and make informed judgements about the impact oral health on the quality of life following effective prevention through supportive care and maintenance.
- Communicate effectively and empathetically the consequences of non-compliance on disease progression and ultimately tooth loss.

- Analyse, evaluate and apply the relevant guidelines in the management of medically compromised and special care patients synthesising information gathered to derive integrated treatment plans underpinned with preventive measures within the multidisciplinary team
- Evaluate and analyse the effect of ethnicity, diversity and inclusivity when making patient centred decisions about oral health promotion and care plans to manage oral disease
- Implement evidence-based decision making and, where necessary, discuss with the patient the relevant guidelines on prevention of dental disease and management of medically compromised patients.

6.0 Dental Implants

6.1 Underlying and Applied Knowledge

Trainees should be able to:

- Describe and demonstrate an understanding of the importance of prosthodontically led implant planning and surgical placement.
- Analyse and discuss the evolution of dental implants including endo-osseous implants and compare and contrast the range of systems and their differences including materials, topography, design, configuration and components
- Explain, describe and discriminate between the anatomy, biology and histopathology at the cellular level of peri-implant tissues and periodontal tissues
- Describe and demonstrate an understanding of the concept of osseointegration and differentiates between the factors affecting osseointegration and evaluates their impact on outcome
- Describe and illustrate an understanding of and analyses the soft tissue healing around dental implants and their transmucosal components.
- Recognise and classify different surgical and prosthetic implant components and justify their rationale and application
- Describe comprehensively and discriminate between aspects of medicine and systemic disease relevant to periodontal and peri-implant diseases and vice versa
- Demonstrate, explain and evaluate the interactions at macroscopic, microscopic and cellular level between periodontal and peri-implant health and systemic disease
- Formulate appropriate treatment plans for implant retained or supported fixed and removable prostheses, including working as part of a multi- disciplinary team to achieve optimum outcomes for the patient.
- Consider and apply the relevant theoretical and clinical techniques and principles in common with conventional prosthodontics including materials

science, occlusion, laboratory techniques and communication as outlined in the relevant sections.

- Demonstrate and evaluate the maintenance and cost implications of treatments involving implants communicating these clearly with the patient
- Analyse and judge the application of current guidelines to the provision of such treatment assessing the limitations and risks.
- Discuss the practical use of conventional and digital surgical planning and use of guides to assist in optimal surgical implant placement
- Demonstrate an understanding of the different outcome measure and the factors that may affect the gathering of this information
- Describe different outcome measures following implant prosthodontics, an appropriate recall schedule to monitor outcomes and further intervention in the case of failure or uncertainty.

6.2 Clinical Skills

Trainees should be able to:

- Apply knowledge and demonstrate competence in the provision of fixed and removable implant procedures safely and effectively recognising potential risks
- Perform a detailed implant assessment taking into consideration the patient-related, tooth-specific and implant site factors to formulate a risk assured management plan to obtain predictability
- Collate, analyse and assimilate the information collected to establish the overall prognosis and treatment plan aimed at achieving the intended outcome.
- Communicate with clarity explaining the options, indications, techniques involved along with the risks and challenges of the implant treatment to the patient and the short and long term expected treatment outcome.
- Discuss with the patient all the alternative options for tooth replacement including extraction without replacement, conventional fixed and removable prosthodontics and their associated risks and consequences.
- Prescribe, justify, and interpret plain radiographic and CBCT imaging, including the design and construction of radiographic guides to aid planning of number, position of fixtures and the reporting and interpretation of the images acquired.

- Design, construct and deliver provisional and definitive implant-retained or -supported prostheses for optimal aesthetic and functional restoration of implants.
- Discuss the need for additional procedures such as managing the soft tissues around implants with the use of provisional restorations and abutments and evaluate the need for soft tissue augmentation procedures.
- Assimilate and select the appropriate implant components, instruments, techniques, and dental materials based on clinical and radiological findings, for laboratory and clinical stages to minimise the risk of procedural errors and optimise the outcome of implant Prosthodontics.
- Perform surgical implant placement and simple grafting techniques including soft tissue management, obtaining accurate impressions of implants, and hard and soft tissues to achieve optimal fit of restorations
- Discriminate between and understands the different surgical protocols used for the placement of dental implants considering the various patient-related and clinical factors influencing choice
- Recognise the main different types of implant systems and their indications, and the surgical protocols used
- Identifiy and formulate a surgical plan that takes into consideration the patient-related and clinical factors affecting surgical outcomes and the need for augmentation
- Systematically evaluate and justify the approach considered for the surgical placement of implants considering the bone and soft tissue as well as restorative factors
- Differentiate between the types of augmentation, devising a plan that reflects knowledge and understanding of the predicted outcome
- Formulate and undertake the agreed surgical treatment along with augmentation taking into consideration the patient-related factors
- Prepare for and have the foresight and ability to manage unforeseen complications during surgical placement
- Interpret and draw a mitigation plan and manages post-surgical complications

- Recognise and explain the anatomical limitations of, and shows an understanding of, the need for sinus augmentation to facilitate implant placement and the associated risks
- Recognise and execute the appropriate non-surgical and surgical interventions to manage peri-implant disease
- Demonstrate knowledge and application of extra-alveolar implants e.g. zygomatic implants in the oral rehabilitation of patients
- Effective monitoring and evaluation of the effectiveness of implant rehabilitations, including appropriate maintenance regimes and management of peri-implantitis and complications associated with restorations
- Communicate in an effective and timely manner with relevant clinicians and with patients, including describing the advantages and disadvantages of implant treatment including the possible alternatives and potential complications, maintenance and cost implications.

7.0: Multidisciplinary Management

The trainee should be able to:

A. Recognise and explain their role and responsibility as a multidisciplinary team member amongst others in the team and have the knowledge and understand the relevance of the academic and clinical presentation of other medical and related conditions and their influence on the overall management of the patient

B. Demonstrate and evidence their role as the Restorative Lead within the multidisciplinary team engaging and contributing to short- and long-term clinical decision– making and patient management implementing the need for holistic restorative intervention within the context of overall patient care taking the patients preferences into account.

C. Demonstrate an ability to deploy accurately established techniques of analysis and enquiry to assess and manage the needs of patients with conditions described below

D. Judge and apply coherent and detailed knowledge engaging with a range of medical and dental specialists when undertaking the management of patients with multidisciplinary treatment needs (HLO 5.2)

E. Recognise and evaluate the role of the General Dental Practitioner in the integral management of the patient and communicates information with them to ensure patient centred care.

7.1 Hypodontia (HLO 5.3)

7.1.1 Underlying and Applied Knowledge

Trainees should be able to:

- Synthesize the published evidence base and critically appraise its relevance topatients with hypodontia
- Describe and explain the relevance of clinical findings in patients with hypodontia when considering their restorative management options
- Judge and evaluate the appropriateness and timing of restorative intervention within the context of other medical and non-medical care needed and the importance of engaging with dental care professionals
- Synthesize information and agree treatment plans demonstrating subject specific knowledge when planning the stages of treatment and the anticipated timelines from start to finish
- Make informed decisions about the implications of planned care on the long term and life-long preventive and supportive care needed taking into consideration access

7.1.2 Clinical skills

Trainees should be able to:

- Demonstrate clinical skills and capability to manage and provide the optimal care taking into consideration the broad range of options care for these patients by collecting, analysing and assimilating information gathered from history, clinical examination and investigations jointly with the MDT ensuring a patient centred treatment strategy using a shared care model.

- Analyse and critically appraise the presence and presentation of Hypodontia with other commonly associated developmental disorders (see section 6.4)

- Execute and deliver a full range of treatment including autotranplantation and conventional restorations, fixed and removable prosthodontics, periodontal and endodontic intervention taking into consideration the long-term implication of the chosen option and associated maintenance care needed which may include implant retained prosthesis

7.2 Head and Neck Cancer (HLO 5.4)

7.2.1 Underlying and Applied Knowledge

Trainees should be able to:

- Synthesize the published evidence base and critically appraise its relevance to this group of patients
- Describe and explain the relevance of clinical findings in patients with head and neck cancer when considering their restorative management options
- Judge and evaluate the appropriateness and timing of restorative intervention within the context of other medical and non-medical care needed and the importance of engaging with dental care professionals
- Analyse and evaluate the implementation of presurgical intervention considering future post cancer dental treatment needs and access to dental care
- Synthesise information and agreed treatment plans demonstrating subject specific knowledge when planning the stages of treatment and the anticipated timelines from start to finish
- Rationalise the staging of treatment for these patients (before, during and after) integrating this with other forms of treatment such as chemotherapy, radiotherapy and surgery
- Make informed decisions about the implications of planned care on the long term and life-long preventive and supportive care needed taking into consideration access

7.2.2 Clinical skills

Trainees should be able to:

- Demonstrate clinical skills and capability to manage and provide optimal care taking into consideration the broad range of options for these patients by collecting, analysing and assimilating information gathered from history, clinical examination and investigations jointly with the multidisciplinary team when available ensuring a patient centred treatment strategy using a shared care model.
- Analyse and critically appraise the importance of presurgical and pre oncology assessments and integrate the required care at the appropriate timing considering the planned treatment for cancer management as well as demonstrating an awareness of the potential effects cancer surgery, radiotherapy and chemotherapy.
- Execute and deliver a full range of treatment (intraoral and extraoral) communicating information clearly to patients including the full range of conventional restorations, fixed and removable prosthodontics, periodontal and endodontic intervention taking into consideration the long-term implication of the chosen option and associated maintenance care needed which may include implant retained prosthesis
- Critically evaluate appropriate non-surgical and surgical interventions aimed at optimising patient wellbeing
- Effectively communicate information about the pre and post cancer treatment risks and long-term side effects communicating information to patients clearly and with empathy

7.3 Dentofacial Trauma (HLO 5.6)

7.3.1 Underlying and Applied Knowledge

- Synthesize the published evidence base and critically appraise its relevance to patients with dentofacial trauma
- Describe and explain the relevance of clinical findings, both extraoral and intraoral, in particular the biology, biomechanics and anatomy of the orofacial

region and dentition when assessing patients with dental trauma and their management

- Demonstrate, analyse and apply the principles of wound and root fracture healing, and tooth recognising the limitations of tissue repair following severe trauma and/or sub-optimal management.
- Judge and evaluate the appropriateness and timing of restorative intervention within the context of other medical and non-medical care needed and the importance of engaging with dental care professionals
- Analyse and evaluate the short term and long-term consequences of dental trauma on the teeth and its management in the immediate, short and long-term taking into consideration the emotional impact of these on the patient and the effect of this on the pulp dentine complex
- Apply and evaluate the appropriate classification for facial fractures, soft tissue, dentoalveolar and tooth injuries, and dental resorption taking into consideration its application when managing traumatised teeth and assessing the biomechanics of fracture fixation and limitations of non-physiological tooth movement and splinting.
- Analyse and evaluate the implications of effective short-term management and the consequences of poor first line management on the long-term outcome
- Synthesise information and agreed treatment plans demonstrating subject specific knowledge when planning the stages of treatment and the anticipated timelines from start to finish
- Rationalise the staging of treatment for these patients (before, during and after) following trauma with other forms of interdisciplinary intervention eg orthodontic treatment
- Describe the pathogenesis of internal and external resorption including surface, inflammatory and replacement types.

7.3.2 Clinical Skills

Trainees should be able to:

- Demonstrate clinical skills and capability to advise on the immediate emergency treatment for traumatised teeth whilst taking into consideration the post immediate management needs
- Analyse and critically appraise the options for providing optimal care taking into consideration the broad range of alternatives for these patients by collecting, analysing and assimilating information gathered from history, clinical examination and investigations including radiographs ensuring a patient centred treatment strategy
- Manage the acute phase of trauma, including repositioning of avulsed/traumatised teeth, provision of an appropriate stabilizing splint, provisional restorations, and endodontic skills recognising and taking into consideration the possible sequelae
- Analyse and critically appraise the importance of pre and post trauma assessments and integrate the required care at the appropriate timing considering the possible long-term option demonstrating an awareness of the potential effects of the trauma on the patient s wellbeing and emotional status and its implication to consent.
- Execute and deliver a full range of treatment (intraoral and extraoral) communicating information clearly to patients including the full range of conventional restorations, fixed and removable prosthodontics, periodontal and endodontic intervention taking into consideration the long-term implication of the chosen option and associated maintenance care needed which may include implant retained prosthesis
- Critically evaluate appropriate non-surgical and surgical interventions aimed at optimising patient wellbeing
- Effectively communicate information about the pre and post trauma treatment risks and long-term side effects communicating information to patients and/or their carers clearly and with empathy

7.4 Developmental Disorders (HLO 5.7)

7.4.1 Underlying and Applied Knowledge

Trainees should be able to:

- Synthesize the published evidence base and critically appraise its relevance to patients with developmental disorders affecting the dentition eg dentinogenesis imperfecta, amelogenesis imperfecta
- Describe and explain the relevance of clinical findings in these patients when considering their restorative management options
- Judge and evaluate the appropriateness and timing of restorative intervention within the context of other medical and non-medical care needed and the importance of engaging with dental care professionals
- Synthesise information and agreed treatment plans demonstrating subject specific knowledge when planning the stages of treatment and the anticipated timelines from start to finish
- Rationalise the staging of treatment for these patients ensuring the best long-term outcomes
- Make informed decisions about the implications of planned care on the long term and life-long preventive and supportive care needed taking into consideration access

7.4.2 Clinical Skills

Trainees should be able to:

- Demonstrate clinical skills and capability to manage and provide optimal care taking into consideration the broad range of options for these patients by collecting, analysing and assimilating information gathered from history, clinical examination and investigations jointly with the MDT when available ensuring a patient centred treatment strategy using a shared care model.
- Analyse and critically appraise the presence and presentation of Hypodontia with other commonly associated developmental disorders (see section 7.1)
- Execute and deliver a full range of treatment including conventional restorations, fixed and removable prosthodontics, periodontal and endodontic intervention taking into consideration the long-term implication of the chosen

option and associated maintenance care needed which may include implant retained prosthesis

- Critically evaluate appropriate minimally invasive treatment modalities (bleaching, microabrasion and resin infiltration systems) taking into consideration the patients age, expectations and long-term outcomes

7.5 Cleft Lip and Palate, Craniofacial Conditions, Congenital Defects

7.5.1 Underlying and Applied Knowledge

Trainees should be able to:

- Synthesize the published evidence base and critically appraise its relevance in the management of these patients
- Describe and explain the relevance of clinical findings in these patients when considering their restorative management options
- Judge and evaluate the appropriateness and timing of restorative intervention within the context of other medical and non-medical care needed and the importance of engaging with dental care professionals
- Synthesise information and agreed treatment plans demonstrating subject specific knowledge when planning the stages of treatment and the anticipate timelines from start to finish
- Makes informed decisions about the implications of planned care on the long term and life-long preventive and supportive care needed taking into consideration access

7.5.2 Clinical Skills

Trainees should be able to:

- Demonstrate clinical skills and capability to manage and provide the optimal care taking into consideration the broad range of options care for these patients by collecting, analysing and assimilating information gathered from history,

clinical examination and investigations jointly with the multidisciplinary team when available ensuring a patient centred treatment strategy using a shared care model.

- Analyse and critically appraise the presence and presentation of Hypodontia with other commonly associated developmental disorders (see section 6.1)
- Execute and deliver a full range of treatment including conventional restorations, fixed and removable prosthodontics, periodontal and endodontic intervention taking into consideration the long-term implication of the chosen option and associated maintenance care needed which may include implant retained prosthesis

8.0: Endodontics

The domains and descriptors listed in the endodontics syllabus are the key areas that the trainee will be expected to have covered during the 5 years of their training. For details of these, the trainee should access the full individual speciality syllabus of Endodontics by clicking this link (insert link to endodontic syllabus).

9.0 Prosthodontics

The domains and descriptors listed in the prosthodontics syllabus are the key areas that the trainee will be expected to have covered during the 5 years of their training. For details of these, the trainee should access the full individual speciality syllabus of Endodontics by clicking this link (insert link to prosthodontic syllabus).

10.0 Periodontics

The domains and descriptors listed in the periodontics syllabus are the key areas that the trainee will be expected to have covered during the 5 years of their training. For details of these, the trainee should access the full individual speciality syllabus of Endodontics by clicking this link (insert link to periodontics syllabus).

11.0: References

1. General Dental Council Restorative Dentistry Specialist Training Curriculum https://www.gdc-uk.org/education-cpd/dental-education/quality-assurance/specialty-curricula/restorative-dentistry
2. The intercollegiate specialty fellowship examination of the Royal College of Surgeons ISFE Restorative Dentistry (rcpsg.ac.uk)
3. General Dental Council Standards for Specialty Education standards-for-specialty-education_201957938ec311144e9ba74d9565d7b1b118.pdf (gdc-uk.org)
4. General Dental Council Principles for Professionalism Principles of professionalism (gdc-uk.org)