

CURRICULUM FOR SPECIALIST TRAINING

IN ENDODONTICS

JUNE 2010

DEVELOPMENT OF THE CURRICULUM

The revision of the curriculum for Endodontics was initiated by the SAC subsequent to recent guidance from the General Dental Council (GDC) and its Specialist Dental Education Board (SDEB) on dental specialty training, in line with principles outlined by PMETB and the Dental "Gold Guide".

This curriculum has been developed by a working party from the SAC in Restorative Dentistry, chaired by Prof. David Bartlett (curriculum lead for Endodontics, Periodontics and Prosthodontics for the SAC) and including Prof A W G Walls (SAC chair 2007-2010), Professor Kishor Gulabivala, Professor Phillip Lumley, Dr John Whitworth, Mr Mark Hunter (specialist practitioner representative) and Mr S Barclay. It has been discussed at the SAC, and has been sent for consultation to the relevant professional societies (the British Endodontic Society, the British Societies for Periodontology, Restorative Dentistry and the Study of Prosthetic Dentistry) and the Association of Consultants and Specialists in Restorative Dentistry. This consultation process has therefore involved individuals with expertise in curriculum development, Consultant and Specialist Trainers and trainees. The final version of the curriculum was also reviewed by the Joint Committee for Specialist Training in Dentistry

PURPOSE OF THE CURRICULUM

This curriculum is designed to guide the training and assessment of Specialty trainees in Endodontics. The training will produce dentists who will become specialists in Endodontics and be included on the GDC's specialist list in Endodontics. The curriculum is primarily intended for training leading to specialist status in Endodontics in the UK. In addition, those training in postgraduate (non-specialist) Endodontics in the UK or in EU or other countries may wish to compare or calibrate with UK standards for achieving specialist status. Bodies such as the Royal Colleges, Postgraduate Deaneries and education providers may use the curriculum as a guide for assessing individual applications for entry onto specialist lists.

CONTEXT OF THE CURRICULUM AND TRAINING

The specialist training period will follow as a continuum a minimum of 2 years basic dental foundation training post qualification as a dentist. Currently dental trainees are expected to complete vocational training during this period. It is desirable that during the early training years the individual has experienced work in as many sectors of dental provision as possible.

The training will provide a basis for the individual to develop into a life-long learner who is capable of self-reflection and self-directed learning. It will provide the basis of further ongoing development in the field of Endodontics at Specialist level.

ENTRY REQUIREMENTS

A specialty trainee must be registered with the General Dental Council prior to commencement of training. A minimum requirement for entry to specialist training is 2 years of post-graduate foundation training or

equivalent which may include a period of vocational training (VT) and may also include a period of training in secondary care in an appropriate specialist environment.

The essential and desirable criteria for specialty trainees will be included in the person specification for training posts in the specialty. Evidence of excellence in terms of attributes such as motivation, career commitment etc will be expected, as will an ability to demonstrate the competences required for entry to specialist training either by successfully completing a period of agreed dental foundation training or by demonstrating that those competences have been gained in another way.

Markers of completion of a 2 year foundation training period may include MJDF (Membership of Joint Dental Faculties RCS England) or MFDS (Membership of the Faculty of Dental Surgery RCSEd and RCPS Glasg) or MFD (Membership of the faculty of Dentistry RCSI). The SAC feel that successful completion of one of these quality assured membership diplomas of Royal College Dental Faculties in England, Scotland and Ireland remains a useful indicator that an individual has achieved the necessary level of competence for entry into specialist training. However it is recognised that this will not be essential and that candidates may be able to demonstrate such competence in different ways.

EQUALITY AND DIVERSITY

The SAC in Restorative Dentistry is committed to the principle of diversity and equality in employment, examinations and training. As part of this commitment we are concerned to inspire and support all those who work with us directly and indirectly.

Integral to this approach is the emphasis we place on our belief that everyone should be treated in a fair, open and honest manner. Our approach is a comprehensive one and reflects all areas, of diversity, recognising the value of each individual. We aim to ensure that no one is treated less favourably than another on the grounds of ethnic origin, nationality, age, disability, gender, sexual orientation, race or religion. Our intention is to reflect not only the letter but also the spirit of equality legislation.

Our policy will take account of current equality legislation and good practice. Key legislation includes:

- The Race Relations Act 1976 and the Race Relations Amendment Act (RRAA) 2000
- The Disability Discrimination Act 1995 and subsequent amendments
- The Sex Discrimination Act 1975 and 1986 and the 1983 and 1986 Regulations
- The Equal Pay Act 1970 and the Equal Pay (Amendment) Regulations 1983 and 1986
- The Human Rights Act 1998
- The Employment and Equality (Sexual Orientation) Regulations 2003
- The Employment and Equality (Religion or Belief) Regulations 2003
- Gender Recognition Act 2004
- The Employment Equality (Age) Regulations 2006.

The SAC collects information about the gender and ethnicity of trainees as part of their registration with their Deanery. This information is recorded nationally by the SAC and statistics are published on an annual basis. These data are collated along with the outcome of annual ARCP reviews for all trainees and the National Trainees survey to ensure that the principles of Equality and Diversity for all are being met.

CURRICULUM REVIEW AND UPDATING

This curriculum should be regarded as a “living document”. Formal review updating and revalidation of the curriculum, its structure and content will be undertaken by the relevant SAC on a 5-yearly rolling cycle.

TRAINING PERIOD

The usual training period will be 3 years (4500 hours) whole-time or agreed equivalent within the framework of a less than full time training programme. The programme content should be apportioned approximately as 60% Clinical, 25% academic and 15% research. This time allocation is flexible and will depend upon the capacity of the trainees to complete the curriculum to a competent level.

MODELS OF LEARNING IN ENDODONTICS

Practice of this specialty requires a range of skills (thinking, mental visualisation, knowledge, technical, manual dexterity, communication, inter-personal, investigative, management) which will need to be developed systematically through a number of suitably designed learning opportunities. Trainers will seek wherever possible to match learning styles with appropriate teaching methods. Depending upon the focus and philosophy of the host provider, the training may be flexibly delivered through a variety of methods including; structured, taught Masters/Doctorate Degree programme or through a work-place based programme (speciality practice or hospital based training). In either case, it will remain mandatory for the trainees to demonstrate certain minimum outcomes in the range and competence in requisite skills. Development of competence will usually take a systematic path progressively building on core skills. This will require expert tracking of the learning process and effective guidance in the steps to follow. Trainees may undertake their learning in the following ways:

- Guided theoretical learning during formal and timetabled periods, which may or may not be part of a structured Master’s degree in Endodontics. This should be geared towards developing an understanding of the subject by critical appraisal and synthesis of the classical and contemporary literature through individual and group activities, involving discussion and debate;
- Validated self-directed and independent study;
- Technical skills development through systematic simulation laboratory exercises, with development of a presentation portfolio, reflection and discussion of outcomes through peer presentation and trainer feed-back. There is merit in peer group learning in acquisition of technical skills in non-surgical and surgical endodontics, including the use of microscopes;
- Clinical skills development through supervised clinical practice. Pre-management case discussions may be used to facilitate development of independent decision-making in diagnosis, treatment planning, planning of treatment and treatment execution. Post-treatment case conferences may be used to facilitate group reflection and integration with theoretical knowledge. Clinical log maintenance with contemporaneous reflections from trainee and trainer, including quarterly summary appraisals will provide suitable tracking opportunities, an evidential record, as well as opportunities for guidance of progress in case-load and case-mix;
- As the progression from competence through proficiency to mastery involves work-place based training, it will be essential that foundational academic and technical skills development occur in parallel. This will imply an on-going process of assessing clinical performance that involves evaluation not merely of the technical aspects but also the theoretical knowledge underpinning clinical management and development of appropriate professional attitudes and behaviours. It will also mean an appropriate matching of case-mix with ability and skills;

- Research exposure through participation in a research project (clinical, experimental or literature research) which is reported formally in a thesis or equivalent written report, or as a manuscript prepared for submission or indeed as a published paper.

SUPERVISION AND FEEDBACK

Specialist training will take place in programmes approved by the relevant Post-graduate Deanery. These will be in a variety of geographic locations and within various healthcare organisations. Training locations may well evolve as health and social care structures change. Deaneries in which there is training in this discipline will have a Training Programme Director (TPD) who co-ordinates training together with all designated trainers. Each trainee will have a designated lead trainer (educational supervisor) who will co-ordinate the training throughout the training period. At each training site the specialty trainee will have a designated trainer appointed as part of the approval of the training programme by the Post-graduate Deanery. The detailed training programme description will be available from the TPD in the relevant Deanery.

All trainers will be expected to have undergone an appropriate personal education programme as a trainer (for example “Training the Trainers” or equivalent) and will be expected to maintain their skills as a trainer. Clinical trainers should be on the relevant GDC specialist list for their field of expertise. The majority will likely be specialists in Endodontics or in Restorative Dentistry. Training for trainers is a regular feature of the annual programme of the Association and Consultants and Specialists in Restorative Dentistry as well as the educators groups of various specialist societies and from the relevant Surgical Royal Colleges. Attendance at these external opportunities would be regarded as examples of good practice. The trainers will be subject to regular anonymous peer review by the trainees for whom they are responsible. Any deficiencies in training will be identified and addressed by the Training Programme Director and the relevant individuals from the Post-graduate Deanery.

In the early stages of the training, trainees will be closely assessed to determine their competence base. The level of supervision initially will be close to ensure patient safety and allow the gauging of ability and potential for independent progression. As supervised tracking shows development of competence, the level of supervision may be tapered down in proportionate measure, ultimately leading to independent practice within the training period such that towards the end, the trainee will be primarily log-monitored for procedures appropriate to the competencies of the individual trainee.

The trainees should be exposed to a variety of philosophies within the discipline through multiple clinical supervisors who are based within a secondary / tertiary care environment as well as those providing specialist practice in primary care. This will inevitably require an organised approach in coordinating and correlating progress tracking from the different supervisory sources.

Flexibility should be encouraged for the provision of training in a variety of approved settings, including acute teaching hospitals, community clinics and NHS/Private practice, particularly during the later stages of the programme.

FEEDBACK ON LEARNING

Specialty trainees will have a learning needs assessment undertaken by their trainers at the beginning of the programme, to identify areas of previous experience and training. There will be a learning contract agreed for each training location and period, which will identify areas for learning and projects to be undertaken towards specified outcomes. Specialty Trainees will have 6 monthly appraisals which will include self-reflection on progress as well as trainer assessment leading to development of a personal development plan producing agreed time-based actions on the basis of each appraisal. There is standard paperwork for use in appraisal.

Attitudinal learning outcomes will be measured by the behaviour demonstrated relevant to that attitude. Behaviour is more readily measured in an objective manner than the underlying attitude.

Assessment of competence will be collated by multiple assessment methods through multiple assessors. Assessment methods will include mini clinical examination (mini-CEX), direct observation of procedural skills (DOPS), Case-based discussion (CBD), log book records (including regularly produced mini case reports) Multi-source Feedback (MSF) and reflective summaries. These systems will provide a regular review of progress towards desired outcomes and give a record of progress over time. Appraisal and assessment will in turn advise the Training Programme Director to make a recommendation to the Deanery ARCP (Annual Review of Competence Progression). This will in turn lead to confirmation of satisfactory progress or the need for increased supervision or increase in proposed length of training. Satisfactory progress in the ARCP process and success in an exit assessment by examination is required before award of Certificate of Completion of Specialty Training (CCST).

RECORD OF TRAINING

Specialty trainees will need to keep a record of training through the training period in a log book to inform the ARCP process and will need to keep copies of all ARCP paperwork. This will help trainers where there may be movement between training locations to be informed on an individual's current progress towards outcome development. A rolling PDP facilitating movement towards the desired outcomes will give a readily accessible summary (as above). The log will include treatment and case-mix summaries, outcomes and reflection by trainee and trainer on each major project. A record of all appraisals will be kept alongside the log book. During training all possibly relevant documents will be included to facilitate the ARCP process and moves between trainers and to inform the ARCP process. Keeping the log book and portfolio of cases completed and up to date is a trainee responsibility.

TRAINING LOCATIONS AND ORGANISATION OF TRAINING

Specialist training will take place in programmes approved by the Postgraduate Dental Deans. Currently, most training courses are established within Universities and Dental Hospitals and are linked with a Masters level qualification, however, completion of a masters level qualification will not be a requirement for satisfactory completion of training.

A Training Programme Director appointed by the Postgraduate Dental Dean will co-ordinate the programme and its formal management. Each trainee will have separate educational supervisors and clinical trainers who will organise and administer the day-to-day training. The programmes will be quality managed in line with the Dental Gold Guide. The local Postgraduate Dental Dean will be responsible for all aspects of quality management of the training.

SUMMATIVE EXAMINATION: SPECIALTY MEMBERSHIP DIPLOMA IN ENDODONTICS

Specialty trainees are required to be successful in the relevant Specialty Membership in Endodontics before being awarded their CCST. The award of a CCST is made by the GDC on the recommendation of the Deanery in

which the training programme is taking place. The regulations for this assessment are available from the examining body.¹

CONTENT OF LEARNING

CURRICULUM MILESTONES

These milestones will be used to record how the trainee moves from the “knows / knows how” to “shows” and “shows how” as training develops. These are based on the principles developed by Miller in 1961.

Attitudes will be measured by the behaviour demonstrated relevant to that attitude.

Level less well developed

- No or very limited knowledge and experience in subject area
- Attitude / value not well developed

Level 1

- Knowledge in subject area, a little practical experience and some skill
- Attitude / value developing

Level 2

- More extensive knowledge in subject area, and more practical experience
- Still requires supervision when working in subject area
- Attitude / values well developed

Level 3(Ready for completion of training)

- Ability to work in area unsupervised
- Knowledge in subject area as expected of a Specialist in Endodontics
- Skill in subject area as expected of a Specialist in Endodontics
- Performance of tasks and approach to tasks as expected of a Specialist in Endodontics
- Attitudes as expected of a Specialist in Endodontics

Appropriate documentation to record acquisition of these milestones is given in Annex 1

NB Generally these levels will correspond with number of years training undertaken. However, this will not always be the case as some Specialty trainees will enter the programme with extensive experience in some areas.

AIMS OF SPECIALIST TRAINING IN ENDODONTICS

¹ Note the specialty fellowship examinations from RCS Ireland whilst assessing competence in their identified discipline are NOT acceptable to the GDC in terms of assessing completion of training and eligibility for a CCST in this specialty

- a) The specialty trainee will exhibit an understanding and a breadth and depth of knowledge of Endodontics.
- b) The specialty trainee will acquire and become proficient in the skills required for specialist practice with an emphasis on practical skills, multidisciplinary treatment planning, disease prevention, and provision of specialist care in either primary or secondary care settings.
- c) The specialty trainee will be proficient in a full range of *technical and clinical skills* in Endodontics to undertake treatment planning, disease prevention, and provision of specialist care in either primary or secondary care settings.
- d) The specialty trainee will acquire and demonstrate *attitudes* necessary for the achievement and delivery of the highest standards of Endodontic care, in relation to the oral health needs of populations, the needs of patients under treatment and to his or her own personal development.
- e) The specialty trainee will develop the ability to collect relevant clinical information (biological, technical, psychological, social) from patients' history, examination and special tests and to integrate and analyse it to identify the nature of their problem, where necessary using differential and provisional lists, with further investigation and analysis to make a definitive diagnosis of the problem(s).
- f) Develop sufficient familiarity with available treatment options in order to discuss with patients and make an appropriate choice if necessary in conjunction with other specialists) and to formulate an overall integrated plan of management for each patient.
- g) Develop the ability to systematically plan the management of a clinical problem and the necessary practical and surgical skills.
- h) Develop the ability to communicate effectively and professionally with referring clinicians, in order to coordinate the efficient delivery of care.
- i) Develop sufficient understanding of research to critically assess classical or new research work.
- j) An ability and motivation to maintain the responsibilities related to continuing professional development and using a life-long learning philosophy.
- k) Full knowledge and practice of clinic governance issues.
- l) An appropriate attitude and understanding of ethical and societal issues and the place of their speciality in the overall healthcare spectrum.
- m) The specialty trainee will maintain the standards of practice in dentistry and Endodontics as determined by the GDC.

OUTCOMES OF SPECIALTY TRAINING IN ENDODONTICS

Upon completion of the programme a typical Specialty trainee will be able to:

- 1) Knowledge and Understanding
 - a) Demonstrate understanding of the anatomy and physiology of the oral and peri-oral tissues with particular emphasis on endodontic related tissues
 - b) Demonstrate understanding of the aetiology pathobiology and clinical presentation of diseases of the oral and peri-oral tissues
 - c) Demonstrate understanding of general and clinical epidemiology of oral diseases
 - d) Demonstrate understanding of biomaterial science relevant to endodontics
 - e) Demonstrate understanding of the impact of systemic diseases on oral tissues and of oral disease on systemic health
 - f) Demonstrate understanding of the behavioural, clinical and technical procedures involved in the treatment of patients requiring endodontic care
 - g) Communicate individually with patients and other professionals and in general educational and professional settings
 - h) Show evidence of the ability to assess research

- 2) Intellectual Skills
 - a) Demonstrate a broad and sound understanding of the evidence base in Endodontics
 - b) Show professional judgement to implement clinical solutions in response to problems by developing an evidence based treatment plan and taking an holistic approach to solving problems and designing treatment plans
 - c) Demonstrate the ability to critically assess scientific papers and available evidence such as guidelines using a variety of information sources
 - d) Evaluate critically the scope and limitations of the various techniques used in Endodontics balancing the risks and cost benefits of treatment demonstrating self-direction and autonomy
 - e) Develop an integrated insight into how the development and impact of their knowledge and skills is of value and relevance to the workplace
 - f) Appraise systematically current evidence in Endodontics and appreciate how research activity can inform practice
 - g) Demonstrate the ability to sustain a critical argument in writing and through oral presentations
 - h) Demonstrate a sound understanding of the importance of hypothesis-setting and the design of suitable projects to address questions relating to the practice of Endodontics
- 3) Practical Skills
 - a) Perform all appropriate clinical examinations proficiently, collecting biological, psychological and social information needed to evaluate the oral and related medical conditions for all patients
 - b) Provide clinical care to the highest ethical and technical standards in line with current knowledge and with the full and valid consent of patients
 - c) Demonstrate clinical proficiency in the delivery of preventive and interventional care as part of a holistic, comprehensive treatment plan
 - d) Recognise and manage behavioural and related social factors which affect oral health
 - e) Use clinical information to implement strategies that facilitate the delivery of oral health
 - f) Co-ordinate overall treatment and care of patients and appreciate when it is appropriate to refer to a specialist in another area or a dental care professional
 - g) Demonstrate the communication skills necessary to support patients and to translate changes in clinical practice informed by clinical audit and research to the commissioners of oral healthcare through critical analyses of published data from clinical and laboratory-based studies in Endodontics
- 4) Transferable Skills
 - a) Become an effective and efficient leader of a multi professional team practicing Endodontics
 - b) Undertake audit, peer review and continuing professional development guiding the learning of others
 - c) Learn independently in familiar and unfamiliar situations with open-mindedness and in a spirit of critical enquiry

ASSESSMENT

- The purpose of training is to promote patient safety by working to ensure that specialists have achieved the appropriate learning outcomes. The Royal Colleges and partner organisations in Restorative Dentistry aims to promote excellence in the practice of endodontics and to be responsible for maintaining standards through training, assessments, examinations and professional development.
- The purpose of the assessment system follows the guidelines of Surgical Royal Colleges (UK) and the principles laid down by the PMETB (*Principles for an assessment system for postgraduate medical training*). The purposes of the assessments include:
 - Indicate suitability of choice at an early stage of the chosen career path
 - Indicate the capability and potential of a trainee through tests of applied knowledge and skill relevant to the speciality

- Demonstrate readiness to progress to the next stage(s) of training having met the required standard of the previous stage
- Provide feedback to the trainee about progress and learning needs
- Support trainees to progress at their own pace by measuring a trainee's capacity to achieve competencies for their chosen career path
- Help to identify trainees who should change direction or leave the specialty
- Drive learning demonstrated through the acquisition of knowledge and skill
- Enable the trainee to collect all necessary evidence for the Annual Review of Competence Progression (ARCP)
- Gain Specialty Membership of one of the Surgical Royal Colleges (UK)
- Provide evidence for the award of the CCST
- assure the public that the trainee is ready for unsupervised professional specialist practice.
- Trainees will be assessed in a number of different ways during their training. Satisfactory completion of all assessments and examinations will be monitored as part of the ARCP process and will be one of the criteria upon which eligibility to progress will be judged. A pass in the Specialty Membership Examination in Endodontics is required as part of the eligibility criteria for the award of the CCST in Endodontics.

ASSESSMENT OF TRAINEES WILL TAKE TWO FORMS:

WORKPLACE-BASED ASSESSMENTS

The principal form of continuous assessment of progress and competence will be workplace-based assessments throughout the entire duration of training. The principle of workplace-based assessment is that trainees are assessed on work that they are doing on a day-to-day basis and that the assessment is integrated into their daily work.

The assessment process is also dependant upon the trainee, who should identify opportunities for assessment throughout their training. Assessments, if possible by a range of assessors, should cover a broad range of activities and procedures appropriate to the stage of training.

Some of the assessment methods currently available are:

- Directly observed practical skills (DOPS) (5 satisfactory outcomes will normally be required per year)
- Case-based discussion (CbD) (5 satisfactory outcomes will normally be required per year)
- Mini clinical evaluation exercises (Mini-CEX) (5 satisfactory outcomes will normally be required per year)
- Multi-source feedback (MSF) (annual). This must involve formal 360⁰ feedbacks at least twice during the period of training between times, feedback from trainers for an annual assessment by the Educational Supervisor to feed into the ARCP process
- Critical Incident Review (to be used as and when appropriate and recorded in the trainees' log book)

It is also expected that trainees will participate in individual or group tutorials which may also involve a degree of assessment and will take a full part in both audit and clinical governance activity within the training units. These may inform trainers when feeding back to the Educational Supervisor / Programme Directors as part of the MSF process.

EXAMINATION

Formal completion of training will be marked by satisfactory summative assessment and success in the Specialty Membership Examination in Endodontics organised by the Faculty of Dental Surgery of the Royal College of Surgeons of Edinburgh and jointly by the Dental Faculties of the Royal College of Surgeons of England and the Royal College of Physicians and Surgeons of Glasgow.²

The assessment methods are blueprinted to the curriculum in the tables that follow. It is not intended that each component of the curriculum is assessed by each method. The assessment methods are indicative of the methods that may be used for each subject area, and should be applied as appropriate to the stage of training and circumstances of the training environment. Trainees should note that the Royal College examinations are wide ranging and most subject areas covered in the curriculum may be formally examined.

LEARNING OUTCOMES

Tables 1-15 that follow define in detail the domains of competence and the related learning outcomes for Endodontic training.

² Note the specialty fellowship examinations from RCS Ireland whilst assessing competence in their identified discipline are NOT acceptable to the GDC in terms of assessing completion of training and eligibility for a CCST in this specialty.

Table I

1. EXAMINATION AND DIAGNOSIS

Upon completion of the subject the trainee should be able to

Objective	Knowledge of	Skills	Attitudes	Teaching and learning methods	Assessment
<ul style="list-style-type: none"> • Carry out a thorough and appropriate assessment and examination of the patient, their dental, pulpal, periradicular, periodontal, oral and peri-oral tissues in relation to the presenting complaints of the patient, arriving at an appropriate diagnosis of the condition from the information provided and examination and investigations undertaken; • Clearly appreciate the conditions confounding diagnosis of endodontic problems 	<p>Describe:</p> <ul style="list-style-type: none"> • Relevant biology, anatomy, physiology of normal and abnormal intra- and extra-oral structures and tissues; • Pain physiology and clinical presentations of relevant oro-facial conditions; • Sensitivity and specificity of diagnostic tests; • Dental, medical and social history factors likely to be relevant to the presenting condition and its previous management; • The influence of peri- 	<ul style="list-style-type: none"> • Complete a thorough examination of the patient’s: • oral mucosa and related structures, periodontium, dental hard tissues and make appropriate diagnoses • Take into account any systemic factors likely to have a bearing on the above. • Complete a thorough examination of any existing prosthesis and related tissues and structures and be able to evaluate the biological and aesthetic quality of the prosthesis • Use all appropriate investigations (e.g. radiographic, sensitivity and vitality tests, haematological and microbiological tests and appropriately articulated study casts) to diagnose oral 	<ul style="list-style-type: none"> • Embrace a holistic, unbiased and unprejudiced approach; • Recognise importance of biological aspects of the oral and peri-oral structures • Recognise urgency of patients requiring immediate assessment and treatment, and differentiates from non-urgent. • Recognise own limits and chooses appropriately when to ask for help. 	<ul style="list-style-type: none"> • Workplace (clinical) experience with appropriate trainers; specific new patient clinics to experience exposure to a wide range of presenting conditions; • Attend trainee seminars within department; • Journal club review; • Independent study; • Attend and present/actively engage in inter-disciplinary treatment planning and case review sessions; • Attendance at suitable courses and meetings; 	<ul style="list-style-type: none"> • DOPS • CBD • Patient surveys • Staff feedback from interdisciplinary planning and case review sessions • SPECIALTY MEMBERSHIP

	oral structures on the appearance of the patient and their potential influence on function and stability of the dentition or any prostheses.	problems			
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2. DEVELOPMENT OF TREATMENT STRATEGIES AND PLANS IN ENDODONTICS

Upon completion of the subject the trainee should be able to:

Objective	Knowledge of	Skills	Attitudes	Teaching and learning methods	Assessment
<ul style="list-style-type: none"> • Devise strategies and plans based on the likely prognosis and outcomes of the various treatment options, relating this to prognosis without treatment and establishing a resultant priority and sequence of treatment while considering the relevant ethical and fiscal issues • Develop a treatment strategy in conjunction with the patient producing a plan or plans according to their needs and preferences, including future need for further corrective or supportive therapy. 	<p>Describe:</p> <ul style="list-style-type: none"> • Dental, medical and social history factors relevant to proposed management; • Dental materials, equipment and technical requirements to achieve each treatment goal; • Current best evidence for effectiveness of various treatment modalities; • Prognostic and risk factors for various modalities; • Decision-making theory and contributory factors; 	<ul style="list-style-type: none"> • Weigh options against each other and succinctly describe pros and cons of each; • Communicate the facts in terms appropriate to the intellectual capacity of the patient; • Communicate clearly and succinctly the impact of oral status and proposed treatment on quality of life to the patient; • Advise on the possible and probable outcomes of the treatment options, as well as the need for future supportive care, prevention and maintenance; • Discuss the impact on proposed treatment of constraints of the political and financial systems; • Delineate strategies and plans according to the skills of other clinicians involved in the care of the patient; 	<ul style="list-style-type: none"> • Embrace a caring and patient-centred approach to treatment planning. • Express confidence, insight and empathy in formulating and presenting strategies & plans to patients and colleagues. • Present unwelcome information and manage unrealistic patient expectations. • Recognise limits of knowledge and experience. • Demonstrate ethical and non-self-interested outlook in treatment planning and patient communication; • Treat all patients 	<ul style="list-style-type: none"> • Workplace (clinical) experience with appropriate trainers; in particular New patient diagnosis and treatment planning clinics; • Attend trainee seminars within department; • Attendance at suitable courses; • Attendance at suitable meetings; • Independent study. 	<ul style="list-style-type: none"> • DOPS • CBD • MSF: dentists, patients and other team members • SPECIALTY MEMBERSHIP

		<ul style="list-style-type: none">• Explain, motivate engage, assure and assess the patient's participation and compliance in their own oral care.	with dignity and respect		
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3. HEALTH PROMOTION & PREVENTION OF DISEASES, INCLUDING INFECTION CONTROL

Upon completion of the subject the trainee should be able to:

Objective	Knowledge of	Skills	Attitudes	Teaching and learning methods	Assessment
<ul style="list-style-type: none"> • Advise each patient on appropriate preventive methods especially in relation to oral hygiene, smoking cessation and home use of preventive chemical agents • Be able to use and deploy all methods to prevent occurrence and recurrence of dental diseases in individual patients • Develop a care strategy in conjunction with the patient, producing a plan according to their needs and preferences • Advise other health care professionals on methods and technologies to prevent infection during dental treatment procedures, between patients and staff and during transport of materials and prostheses between the laboratory and the clinic 	<p>Describe:</p> <ul style="list-style-type: none"> • Relevant biology, anatomy, physiology, pathology and microbiology; • Infection control measures in dentistry and the value of appropriate vaccinations for self and other staff; • Dental materials, equipment and technical requirements to achieve this. 	<ul style="list-style-type: none"> • Communicate in lay terms appropriate to the intellectual capacity of the patient; • Communicate with patients on the impact of their oral status and the proposed advice on their quality of life; • Advise on the possible outcomes of non-compliance and the need for supportive care, prevention and maintenance; • Use appropriate methods and technologies to prevent infection during treatment procedures, between patients and staff and during transport of materials and prostheses between the laboratory and the clinic. 	<p>Recognise:</p> <ul style="list-style-type: none"> • The impact of the patient's oral and general health status and the proposed advice on their quality of life • The need for supportive care, prevention and maintenance. • The need to work with other clinicians and DCPs in provision of the treatment and of skill base and role and in achieving the end result 	<ul style="list-style-type: none"> • Workplace (clinical) experience with appropriate trainers; • Attend trainee seminars within department; • Attendance at suitable courses; • Attendance at suitable meetings; • Independent study. 	<ul style="list-style-type: none"> • MCQs, • OSCE, • DOPs, • MSF; dentists, patients and other team members • SPECIALTY MEMBERSHIP

INTERDISCIPLINARY INTERFACES

Upon completion of the subject the trainee should be able to:

Objective	Knowledge of	Skills	Attitudes	Teaching and learning methods	Assessment
<ul style="list-style-type: none"> • To understand the importance and implications of the inter-relationship between Endodontics and other clinical disciplines, particularly prosthodontics and periodontics • Carry out periodontics and prosthodontics at the level of a skilled general dental practitioner; • Assess the prosthodontic and periodontic status of teeth relevant to the restoration of the tooth 	<p>Describe:</p> <ul style="list-style-type: none"> • Relevant biology, anatomy, physiology, pathology and microbiology, including appropriate antimicrobial prescription where necessary; • The evidence and mechanisms by which oral microorganisms may be dispersed and cause disease in distant sites; • The factors which make a tooth unrestorable; • The adverse effects of treatment procedures on tooth structure; • The principles and practice of restoring root canal treated teeth; • Occlusion and its 	<ul style="list-style-type: none"> • Use appropriate knowledge and clinical techniques to diagnose related clinical problems from first principles; • Manage combined periodontal and endodontic lesions; • Co-ordinate management of patients requiring endodontic and/or prosthodontic treatment before, during and after periodontal treatment; • Demonstrate treatment planning and management skills in dealing with medically compromised and special needs patients; • Demonstrate treatment planning and management skills in assessing teeth for root canal treatment and restoration, or extraction and replacement with an implant. • Demonstrate treatment planning and practical skills 	<ul style="list-style-type: none"> • Integrate knowledge, and practical expertise in the assessment of multidisciplinary cases; • Act on limitations of knowledge and practical experience in the assessment and management of interdisciplinary cases; • Act ethically in seeking the best interdisciplinary care for patients. 	<ul style="list-style-type: none"> • Workplace (clinical) experience with appropriate trainers • Workplace (skills laboratory) training in the execution and evaluation of clinical techniques • Appropriate range of clinical assessments • Attend trainee seminars within department • Attendance at suitable courses • Attendance at suitable meetings • Independent study 	<ul style="list-style-type: none"> • ARCP Case reports • CBD DOPS • Mini -CEX • MSF • SPECIALTY MEMBERSHIP

	<p>influence on endodontic practice;</p> <ul style="list-style-type: none"> • Soft tissue management in restorative practice; • The diagnosis and management of perio-endo lesions; • Dental materials, equipment and technical requirements to provide relevant treatment 	<p>necessary for restoring endodontically treated teeth using a range of techniques;</p> <ul style="list-style-type: none"> • Apply knowledge of occlusion in the assessment and management of endodontically involved teeth. • Demonstrate the ability to assess when the input of specialist colleagues is required in the planning and execution of integrated care (eg: orthodontic movement of a fractured or resorbed tooth) • Communicate clear treatment plans to colleagues including other dental specialists, primary care practitioners and DCPs, where appropriate 			
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4. PULP THERAPY

Upon completion of the subject the trainee should be able to:

Objective	Knowledge of	Skills	Attitudes	Teaching and learning methods	Assessment
<ul style="list-style-type: none"> • Recognise potential dangers to pulp health • Assess the condition of the pulp and recognise the limitations of diagnostic tests; • Understand the rationale for vital pulp therapies; • Perform vital pulp therapies, including, caries management, indirect and direct pulp caps, pulpotomies, regeneration / revascularisation procedures; • Implement suitable recall schedules and plan further therapy when required; • Provide treatment plans for colleagues including primary care practitioners and DCPs in relation to provision of vital pulp management 	<p>Describe:</p> <ul style="list-style-type: none"> • Relevant biology, anatomy, physiology, pathology, microbiology and technical requirements in relation to vital pulp management; • Procedures for pulp diagnosis and their limitations; • The response of dental tissues to operative procedures, dental materials & microleakage; • Procedures for vital pulp management and their expected outcome; • Procedures for tissue regeneration/engineering; • The features of an appropriate recall schedule; 	<ul style="list-style-type: none"> • Judge when vital pulp therapies are indicated; • Execute the various clinical procedures with efficiency and skill; • Communicate effectively with patients (and parents/carers in the case of minors), and clinical colleagues, including the need for post-operative monitoring; • Assess the outcome of vital pulp therapies; • Assess the need for further intervention in the face of an uncertain outcome; 	<ul style="list-style-type: none"> • Embrace an ethical, holistic approach to vital pulp management; • Manage young patients with confidence and efficiency; • Manage diagnostic uncertainty and act in the patient's best interests; • Communicate information to patients and carers with patience and empathy 	<ul style="list-style-type: none"> • Workplace (clinical) experience with appropriate trainers • Workplace (skills laboratory) training in the execution and evaluation of clinical techniques • Appropriate range of clinical cases for observational and personal treatment • Attend trainee seminars within department • Attendance at suitable courses • Attendance at suitable meetings • Independent study 	<ul style="list-style-type: none"> • ARCP Case reports • CBD • DOPS • Mini - Patient survey • SPECIALTY MEMBERSHIP

	<ul style="list-style-type: none">• The features of a successful outcome in vital pulp therapy;• Management options in the face of treatment failure or uncertainty				
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5. NON-SURGICAL ROOT CANAL TREATMENT

Upon completion of the subject the trainee should be able to:

Objective	Knowledge of	Skills	Attitudes	Teaching and learning methods	Assessment
<ul style="list-style-type: none"> • Diagnose and manage irreversible pulp and periradicular diseases of endodontic origin with appropriate non-surgical techniques. • Work effectively with the operating microscope • Appropriately seal and protect root canal treated teeth before discharge of the patient • Implement suitable recall schedules and plan further therapy when required. • Communicate in an effective and timely manner with primary and secondary care clinicians and with patients on prognosis, appropriate restoration and the need for monitoring/supportive therapy. 	<p>Describe:</p> <ul style="list-style-type: none"> • The treatment procedures and options in non-surgical root canal treatment. • Procedures to optimise the working field (restoration removal, caries control, banding, buildup, rubber dam isolation). • The benefits of enhanced lighting and magnification in endodontic practice • The anatomy of the pulp space • The nature of endodontic infections and strategies for their removal/ disruption • Physical, chemical and biological properties of endodontic instruments and materials • Methods of working length determination and their limitations • Conventional and contemporary techniques for endodontic imaging 	<ul style="list-style-type: none"> • Demonstrate proficiency in general patient management. • Organise and manage the working environment and schedule. • Demonstrate proficiency in the controlled manipulation of hand and automated instruments and materials, selecting appropriately for the clinical circumstances and with all effort to minimise procedural error. Assess the restorative needs of the remaining tooth tissue. • Design and execute appropriate foundational restorations to safeguard coronal seal, tooth protection, occlusal stability and aesthetics. • Communicate clearly and effectively with clinical colleagues and patients on matters of prognosis, appropriate restoration, supportive care and monitoring. 	<p>Demonstrate:</p> <ul style="list-style-type: none"> • A conscientious and ethical approach to all aspects of patient management and clinical treatment. • A caring and attentive approach during patient treatment. • Respectful team working with clinical colleagues (including DCPs) • A reflective and contemporaneous approach in seeking educational feedback. • An organised, responsible outlook in managing patient correspondence 	<ul style="list-style-type: none"> • Workplace (clinical) experience with appropriate trainers and essential armamentarium, including operating microscopes, • Workplace (skills laboratory) training in the execution and evaluation of clinical techniques. Laboratory facilities, equipment/materials and natural teeth should be available to trainees throughout the programme • Appropriate range of clinical cases for observational and personal treatment • Attend trainee seminars within department • Attendance at suitable courses • Attendance at suitable meetings • Independent study 	<ul style="list-style-type: none"> • ARCP Case reports • CBD DOPS • Mini -CEX Patient survey • SPECIALTY MEMBERSHIP

	<ul style="list-style-type: none"> • Current and historic methods for on-surgical root canal treatment. • Controversies in endodontic practice (eg the single visit/ multiple visit debate. Different outcome measures in non-surgical root canal treatment and their assessment • The need for further intervention in the case of failure or uncertainty 				
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6. NON-SURGICAL ROOT CANAL RETREATMENT

Upon completion of the subject the trainee should be able to:

Objectives (additional to 6)	Knowledge of	Skills	Attitudes	Teaching and learning methods	Assessment
<ul style="list-style-type: none"> • Diagnose and manage post-treatment endodontic disease. • Understand the decision-making process in assessing teeth with post-treatment endodontic disease. • Justify the management strategies including observation, non surgical retreatment, surgical treatment and extraction for teeth affected by post-treatment endodontic disease. • Assess prognosis and confounding factors and appropriately select cases for non-surgical endodontic retreatment. 	<p>Describe:</p> <ul style="list-style-type: none"> • Different outcome measures in endodontics and their assessment • The procedures and materials which may currently or historically have been used in the root canal treatment and restoration of teeth • Materials and procedures for coronal disassembly, removal of materials and objects from root canals, identifying previously untreated anatomy, re-negotiation, management of procedural accidents including perforations, blockages and ledges) • The risks and limitations associated with non-surgical and surgical re-treatment procedures • Factors which may be 	<ul style="list-style-type: none"> • Show a specialist level skill in the planning of non-surgical endodontic re-treatment • Inform patients of the risks and limitations of procedures for coronal disassembly and non-surgical retreatment • Communicate clearly and effectively with patients on issues which may emerge during the course of non-surgical re-treatment, including the discovery of an untreatable fracture or perforation • Demonstrate proficiency in the application of materials, instruments and techniques for managing post-treatment disease • Exercise decisive and sound judgement in the face of unfavourable findings or setbacks, including the 	<p>Demonstrate:</p> <ul style="list-style-type: none"> • Discipline and patience in the management of complex and technical procedures • Wisdom and decisiveness in aborting procedures where progress is limited and continuation may cause more harm than good. 	<ul style="list-style-type: none"> • Workplace (clinical) experience with appropriate trainers • Workplace (skills laboratory) training in the execution and evaluation of clinical techniques. Laboratory facilities, equipment/materials and natural teeth should be available to trainees throughout the programme • Appropriate range of clinical cases for observational and personal treatment • Attend trainee seminars within department • Attendance at suitable courses • Attendance at suitable 	<ul style="list-style-type: none"> • ARCP Case reports • CBD • DOPS • Mini -CEX • Patient survey • SPECIALTY MEMBERSHIP

	<p>associated with the success and failure of non-surgical retreatment procedures</p> <ul style="list-style-type: none"> • The features of an appropriate recall strategy • The need for further intervention in the case of failure or uncertainty 	<p>decision to abort treatment</p>		<p>meetings</p> <ul style="list-style-type: none"> • Independent study 	
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7. SURGICAL ROOT CANAL TREATMENT

Upon completion of the subject the trainee should be able to:

Objectives in addition to those listed in 6 and 7	Knowledge of	Skills	Attitudes	Teaching and learning methods	Assessment
<ul style="list-style-type: none"> • Understand the need for investigative and corrective surgery in the management of endodontic disease. • Understand the need for proper pre-operative assessment, inter-speciality and patient communication in the planning of surgical care. • Manage the special patient anxieties which may be associated with surgical care • Appropriately manage endodontic disease surgically • Communicate effectively with pathology laboratories • Provide appropriate adjunctive care • Implement a appropriate post-surgical recall schedule 	<p>Describe:</p> <ul style="list-style-type: none"> • Surgical anatomy: gross and fine dental relevant to investigative and reparative procedures. • Principles of surgical soft and hard-tissue management • Support of the surgical patient before, during and after the procedure. • Dental materials, equipment and procedures to provide surgical treatment • The features of an appropriate recall programme 	<ul style="list-style-type: none"> • Show a specialist level skill in the planning of investigative and corrective surgery • Exhibit specialist-level refinement in surgical hard and soft-tissue management. • Appropriately select and manipulate materials, instruments and techniques for all stages of investigative and corrective endodontic surgery • Manage all aspects of peri-operative care for patients undergoing surgical treatment • Exchange clearly and appropriately laboratories handling biopsy specimens 	<ul style="list-style-type: none"> • Use empathy and care in the peri-operative management of surgical patients • Recognise limitations of experience in complex surgical management and calls for interdisciplinary help as needed • Take responsibility in the formal pathological examination of surgical biopsy specimens • Use empathy and care in the timely and clear communication of pathological findings with patients 	<ul style="list-style-type: none"> • Workplace (clinical) experience with appropriate trainers • Workplace (skills laboratory) training in the execution and evaluation of clinical techniques. Laboratory facilities, equipment/materials and natural teeth /animal jaws or analogues should be available to trainees throughout the programme • Appropriate range of clinical cases for observational and personal treatment • Attend trainee seminars within department • Attendance at suitable courses • Attendance at suitable 	<ul style="list-style-type: none"> • ARCP Case reports • CBD DOPS • Mini -CEX • SPECIALTY MEMBERSHIP

				meetings • Independent study	
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8. DENTAL TRAUMATOLOGY

Upon completion of the subject the trainee should be able to:

Objective	Knowledge of	Skills	Attitudes	Teaching and learning methods	Assessment
<ul style="list-style-type: none"> • Understand the nature and consequences of different soft and hard tissue wound healing/reaction patterns after trauma and their consequences for the oral tissues • Appropriately triage trauma patients • Communicate clearly and effectively with medical and dental specialists to safeguard patient safety and ensure continuity of care • Use guidelines appropriately (especially in the case of complex or multiple trauma) • Understand the need for confident and efficient patient management and the need for clear and effective communication with patients and their parents/guardians where children are involved. 	<p>Describe:</p> <ul style="list-style-type: none"> • The biology of wound healing and tissue reaction patterns following trauma and emergency trauma management • Limitations of tissue repair following severe trauma and sub-optimal early management • Current best evidence on the expected outcomes of dental trauma after optimal and sub-optimal management • Dental materials, equipment and techniques for the optimal management and monitoring of dental trauma 	<ul style="list-style-type: none"> • Demonstrate specialist-level efficiency and confidence in the management of dental trauma • Undertake procedures to facilitate primary wound healing following trauma • Manage the psychological (as well as the physical) well-being of the patient and accompanying person(s) during acute trauma management and its subsequent follow-up • Communicate clearly and effectively on the patterns of tissue reaction and consequences following trauma 	<p>Demonstrate:</p> <ul style="list-style-type: none"> • Calm confidence and efficiency in the management of patients who have suffered trauma • Sensitivity and empathy in managing often young patients and their anxious carers. • Responsibility in promoting information on immediate trauma care to professional colleagues and community organisations (sports clubs, schools etc) • A non-judgemental approach to the management of patients who may 	<ul style="list-style-type: none"> • Workplace (clinical) experience with appropriate trainers, including interdisciplinary rotations, such as dental emergency clinics, access centres, paediatric and oral surgery clinics • Workplace (skills laboratory) training in the execution and evaluation of clinical techniques including splinting, management of open apices and restorative exercises • Appropriate range of clinical cases for observational and personal treatment • Attend trainee seminars within department 	<ul style="list-style-type: none"> • ARCP Case reports • CBD • DOPS • Mini -CEX • Patient survey • SPECIALTY MEMBERSHIP

<ul style="list-style-type: none"> • Diagnose and manage dental trauma using appropriate clinical techniques • Understand the associated medico-legal issues, especially if trauma inflicted by a third party 	<ul style="list-style-type: none"> • The clinical features which may indicate an unfavourable tissue response to trauma management 		<p>have suffered injury under the influence of drugs, alcohol or when indulging in other risk-taking behaviours</p>	<ul style="list-style-type: none"> • Attendance at suitable courses • Attendance at suitable meetings • Independent study 	
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9. PAIN CONTROL & MANAGEMENT(ACUTE & CHRONIC), ANALGESIA,-SEDATION AND ANAESTHESIA

Upon completion of the subject the trainee should be able to:

Objective	Knowledge of	Skills	Attitudes	Teaching and learning methods	Assessment
<ul style="list-style-type: none"> • Provide appropriate pain and anxiety control for patients attending for non-surgical and surgical treatment on a planned or emergency basis • Diagnose and provide appropriate emergency dental treatment for the relief of acute pain • Advise on appropriate peri-operative analgesia • Recognise the need for interdisciplinary care in the management of pain and anxiety conditions 	<p>Describe:</p> <ul style="list-style-type: none"> • The basic and clinical science of acute and chronic peri-oral pain conditions • The mechanisms of failed local anaesthesia • Primary and supplementary techniques for local anaesthesia of the pulp • Procedures for the emergency management of acute dental pain and sepsis • Pharmacology and therapeutics related to analgesic use • Features of non-dental and chronic pain conditions 	<ul style="list-style-type: none"> • Confidently and efficiently assess patients presenting with painful conditions. • Appropriately manage the use of all standard local anaesthetic and analgesic regimes • Identify patients requiring specialist or interdisciplinary care for the management of non-dental and chronic pain conditions 	<p>Demonstrate:</p> <ul style="list-style-type: none"> • An empathetic and holistic approach to patients attending with pain conditions • Confidence and efficiency in the management of acute dental pain • A listening and non-judgemental approach to the management of patients with long-standing and difficult-to-diagnose pain conditions • Confidence to withhold operative dental interventions in the absence of a clear dental diagnosis • Openness in the management of patients without a 	<ul style="list-style-type: none"> • Workplace (clinical) experience with appropriate trainers including attendance at appropriate multidisciplinary pain clinics, sedation and general anaesthetic clinics, and dental emergency clinics • Appropriate range of clinical cases for observational and personal treatment • Attend trainee seminars within department • Attendance at suitable courses • Attendance at suitable meetings • Independent study 	<ul style="list-style-type: none"> • ARCP Case reports • CBD • DOPS • Mini -CEX •

			clear pain diagnosis		
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10. MANAGEMENT & ADMINISTRATION

Upon completion of the subject the trainee should be able to:

Objective	Knowledge	Skills	Attitudes	Teaching and learning methods	Assessment
<ul style="list-style-type: none"> • Plan and discuss management of a dental clinic/practice • Deal with complaints / grievances especially from patients • Deal effectively with other members of the dental team • Manage time effectively and adopt strategies for coping with stress • Demonstrate a working knowledge of employment and health and safety at work regulations • Discuss best practices in management and administration and contrast these with those in the training institution • Manage people in accordance with the law on equality and diversity 	<p>Describe:</p> <ul style="list-style-type: none"> • Local and national NHS and corporate organisational and administrative structures relevant to one’s sphere of practice • Appropriate Health and safety (including cross-infection control) and employment / equality and diversity legislation • Appropriate employment legislation • The law pertaining to equality and diversity <p>Have:</p> <ul style="list-style-type: none"> • IT knowledge 	<ul style="list-style-type: none"> • Utilise appropriate communication / presentation / negotiation / counselling/ appraisal / mentoring skills • Communicate effectively and empathically with colleagues at all levels and to utilise appropriate negotiating and listening skills to achieve the desired result • Treat patients, carers, colleagues and other members of the workplace team fairly and in line with the law and promote equal opportunities for all • Handle complaints sympathetically and efficiently • Manage time and delegate as appropriate • Use appropriate computer 	<p>Recognise:</p> <ul style="list-style-type: none"> • How to work effectively as part of a team and manage delegate appropriately • Methods of communication / administration used by others and adapt to these in order to achieve an appropriate outcome • A non-discriminatory approach to patients, carers, colleagues and other members of the workplace team 	<ul style="list-style-type: none"> • Workplace (administrative) experience with appropriate trainers including attendance at suitable committees and management sessions at a relevant stage in training • Appropriate range of opportunities for observational and personal administration within the organisation • Attend trainee seminars within department • Attendance at suitable courses • Independent study 	<ul style="list-style-type: none"> • ARCP feedback • MSF • Case studies

	equivalent to the ECDL	hardware and software to facilitate administration and clinical practice			
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11. CLINICAL GOVERNANCE

Upon completion of the subject the trainee should be able to:

Objective	Knowledge	Skills	Attitudes	Teaching and learning methods	Assessment
<ul style="list-style-type: none"> • Understand the principles of clinical effectiveness and clinical audit both locally and nationally and contribute where possible. • Demonstrate awareness of epidemiologically based needs assessments and systematic reviews of research evidence. • Contribute to peer review and the appraisal process. • Carry out critical/adverse incident reports and demonstrate an awareness of the ways in which this process can be used to improve clinical care. • Show in-depth awareness of clinician's medico-legal responsibilities particularly those related to the speciality of Endodontics. • Understand quality assurance in the delivery of clinical care. • Show knowledge of equality of 	<p>Describe:</p> <ul style="list-style-type: none"> • Evidence based clinical practice including cost effectiveness. • The development and application of clinical guidelines and standards. • The process of risk assessment as relevant to clinical practice • Multi-disciplinary clinical care pathways and appropriate integration of other disciplines. • The process of revalidation and the assessment of individual clinical performance. • The role of the GDC/GMC, Royal 	<ul style="list-style-type: none"> • Utilise appropriate communication / presentation skills • Show the necessary skills of self-reflection and self-appraisal used to identify continuing professional development needs • Utilise critical appraisal skills and be able to apply to research evidence • Organise and undertake a clinical audit project including implementation of outcomes and re-audit • Produce and update patient information material • Construct, analyse and use patient surveys. • Use procedures to ensure consumer involvement and consultation. 	<p>Recognise:</p> <ul style="list-style-type: none"> • Importance of maintaining professional and personal standards • The need to constantly appraise and evaluate clinical practice and procedures 	<ul style="list-style-type: none"> • Workplace (administrative) experience with appropriate trainers including attendance at suitable governance sessions • Appropriate range of opportunities for observational and personal involvement in governance within the organisation • Attend trainee seminars within department • Attendance at suitable courses • Independent study 	<ul style="list-style-type: none"> • ARCP feedback • Audit reports • Clinical governance reports

<p>access issues for minority groups requiring clinical care.</p> <ul style="list-style-type: none"> • Show an understanding of medical records administration 	<p>Colleges, Specialist Societies and Universities in the process of professional self-regulation.</p> <ul style="list-style-type: none"> • Procedures for reporting concerns over the level of competency and fitness to practice of professional colleagues. 				
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12. TEACHING AND COMMUNICATION

Upon completion of the subject the trainee should be able to:

Objective	Knowledge	Skills	Attitudes	Teaching and learning methods	Assessment
<ul style="list-style-type: none"> • Communicate effectively both orally and in writing with peers, practitioners, staff, patients and the public. • Develop and present instructional sessions. • Differentiate between appraisal and assessment and have a working knowledge of the advantages and disadvantages of each. • Inspire, motivate and engage students and colleagues • Recognise the role of both verbal and non-verbal aspects of communication. 	<p>Describe:</p> <ul style="list-style-type: none"> • The responsibilities of a clinical teacher and service lead as a professional role model • The features of effective formative feedback 	<ul style="list-style-type: none"> • Utilise appropriate communication / presentation skills. 	<p>Demonstrate:</p> <ul style="list-style-type: none"> • Sensitivity and awareness in communicating with patients and colleagues • Care and awareness in exercising both verbal and non-verbal communications. • An open, patient and non-judgemental outlook in answering questions • A habit of treating all with dignity and respect 	<ul style="list-style-type: none"> • Workplace experience (teaching and communication) with appropriate trainers including attendance at suitable learning and teaching sessions at a relevant stage in training • Appropriate range of opportunities for observational and personal teaching and communication within the organisation • Attend trainee seminars within department • Attendance at suitable courses / conferences / symposia/ workshops • Independent study 	<ul style="list-style-type: none"> • ARCP feedback • MSF

13. CLINICAL IMAGING

Upon completion of the subject the trainee should be able to:

Objective	Knowledge of	Skills	Attitudes	Teaching and learning methods	Assessment
<ul style="list-style-type: none"> • Demonstrate an understanding and competence in intra-oral radiography, sufficient to be able to train future specialists • Demonstrate an n understanding and competence in intra-oral photography 	<p>Describe:</p> <ul style="list-style-type: none"> • The relevant biology and anatomy of the oro-facial region necessary for the interpretation of radiographic images • the principles of radiographic quality assurance and the practice of applied quality control 	<ul style="list-style-type: none"> • Interpret radiographic images and write an accurate radiographic report • Produce a standard set of photographs illustrating progress through a course of treatment 	<p>Recognise:</p> <ul style="list-style-type: none"> • The relevance of clinical photographs in treatment planning • The medico-legal importance of photographic records • The relevance of minimising the radiation dose for each patient when undertaking a radiological examination 	<ul style="list-style-type: none"> • Workplace (clinical) experience with appropriate trainers • Appropriate range of clinical cases for observational and personal treatment • Attend trainee seminars within department • Attendance at suitable courses • Attendance at suitable meetings • Independent study 	<ul style="list-style-type: none"> • ARCP Case reports • CBD • DOPS • Mini-CEX

14. RESEARCH

Upon completion of the subject the trainee should be able to:

Objective	Knowledge	Skills	Attitudes	Teaching and learning methods	Assessment
<ul style="list-style-type: none"> • Understand research methodology, including study design, research governance, data management and report preparation • Understand different hierarchies of evidence • Understand the process of peer review in scientific publications 	<p>Describe:</p> <ul style="list-style-type: none"> • Different types of research investigation • The role of governance in research • The hierarchy of research evidence • The process of peer review in appraising grant submissions and scientific manuscripts 	<ul style="list-style-type: none"> • Produce written reports / articles, including preparing and altering manuscripts, where appropriate, under supervision • Present research work to professional colleagues or at specialists' meetings 	<p>Demonstrate:</p> <ul style="list-style-type: none"> • Integrity in the design, conduct and criticism of research • A careful and ethical approach to the preparation of research reports • Professionalism in the light of adverse feedback 	<ul style="list-style-type: none"> • Personal workplace experience with appropriate trainers including attendance at suitable research sessions • Appropriate range of opportunities to undertake personal supervised research within the organisation • Attend trainee seminars within department • Attendance at suitable courses / conferences / symposia/ workshops • Independent study 	<ul style="list-style-type: none"> • ARCP feedback • MSF • Dissertations or publications • SPECIALTY MEMBERSHIP

ANNEX 1 CURRICULUM MILESTONE DOCUMENTATION

Please review the section on content of learning and curriculum milestones before using this documentation see pages 5-9

CURRICULUM MILESTONES

These milestones will be used to record how the trainee moves from the “knows / knows how” to “shows” and “shows how” as training develops. These are based on the principles developed by Miller in 1961.

Attitudes will be measured by the behaviour demonstrated relevant to that attitude.

Level 0 (less well developed)

- No or very limited knowledge and experience in subject area
- Attitude / value not well developed

Level 1

- Knowledge in subject area, a little practical experience and some skill
- Attitude / value developing

Level 2

- More extensive knowledge in subject area, and more practical experience
- Still requires supervision when working in subject area
- Attitude / values well developed

Level 3(Ready for completion of training)

- Ability to work in area unsupervised
- Knowledge in subject area as expected of a Specialist in Endodontics
- Skill in subject area as expected of a Specialist in Endodontics
- Performance of tasks and approach to tasks as expected of a Specialist in Endodontics
- Attitudes as expected of a Specialist in Endodontics

ASSESSMENT OF PERFORMANCE PROFILE – ENDODONTIC SPECIALTY TRAINEE

Reporting Period:		(Date)	To:		(Date)
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PERFORMANCE OF TASKS- DEMONSTRATES THE ABILITY TO UNDERTAKE THE FOLLOWING AT AN APPROPRIATE STANDARD

What the Specialty trainee is able to do?	<i>(Less well Developed)</i>	CIRCLE THE APPROPRIATE NUMBER IN EACH ROW	<i>(To Level of Specialist)</i>
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CLINICAL DENTISTRY PROCEDURES

Examination and Diagnosis

Carry out a thorough and appropriate assessment and examination of the patient, their dental, pulpal, periradicular, periodontal, oral and peri-oral tissues in relation to the presenting complaints of the patient, arriving at an appropriate diagnosis of the condition from the information provided and examination and investigations undertaken;	0	1	2	3	
Clearly appreciate the conditions confounding diagnosis of endodontic problems	0	1	2	3	

Development of treatment strategies and plans in endodontics

Devise strategies and plans based on the likely prognosis and outcomes of the various treatment options, relating this to prognosis without treatment and establishing a resultant priority and sequence of treatment while considering the relevant ethical and fiscal issues	0	1	2	3	
Develop a treatment strategy in conjunction with the patient producing a plan or plans according to their needs and preferences, including future need for further corrective or supportive therapy	0	1	2	3	

Health promotion, prevention including infection control

Advise each patient on appropriate preventive methods especially in relation to oral hygiene, smoking cessation and home use of preventive chemical agents	0	1	2	3	
Be able to use and deploy all methods to prevent occurrence and recurrence of dental diseases in individual patients	0	1	2	3	
Develop a care strategy in conjunction with the patient, producing a plan according to their needs and preferences	0	1	2	3	
Advise other health care professionals on methods and technologies to prevent infection during dental treatment procedures, between patients and staff and during transport of materials and prostheses between the laboratory and the clinic	0	1	2	3	

Interdisciplinary

To understand the importance and implications of the inter-relationship between Endodontics and other clinical disciplines	0	1	2	3	
Carry out periodontics and prosthodontics at the level of a general dental practitioner; Plan and arrange treatment prior to, and during, periodontic and prosthodontic care	0	1	2	3	
Assess the prosthodontic and periodontic status of teeth	0	1	2	3	

Pulp therapy

Recognise potential dangers to pulp health	0	1	2	3	
Assess the condition of the pulp and recognise the limitations of diagnostic tests;	0	1	2	3	
What the Specialty trainee is able to do?	<i>(Less well Developed)</i>	CIRCLE THE APPROPRIATE NUMBER IN EACH ROW			<i>(To Level of Specialist)</i>

Understand the rationale for vital pulp therapies;	0	1	2	3	
Perform vital pulp therapies, including, caries management, indirect and direct pulp caps, pulpotomies, regeneration / revascularisation procedures;	0	1	2	3	
Implement suitable recall schedules and plan further therapy when required;	0	1	2	3	
Provide treatment plans for colleagues including primary care practitioners and DCPs in relation to provision of vital pulp management	0	1	2	3	
Non surgical RCT					
Diagnose and manage irreversible pulp and periradicular diseases of endodontic origin with appropriate non-surgical techniques.	0	1	2	3	
Work effectively with the operating microscope	0	1	2	3	
Appropriately seal and protect root canal treated teeth before discharge of the patient	0	1	2	3	
Implement suitable recall schedules and plan further therapy when required.	0	1	2	3	
Communicate in an effective and timely manner with primary and secondary care clinicians and with patients on prognosis, appropriate restoration and the need for monitoring/supportive therapy.	0	1	2	3	
Non surgical retreatment RCT					
Diagnose and manage post-treatment endodontic disease.	0	1	2	3	
Understand the decision-making process in assessing teeth with post-treatment endodontic disease	0	1	2	3	
Justify the management strategies including observation, non surgical retreatment, surgical treatment and extraction for teeth affected by post-treatment endodontic disease	0	1	2	3	
Assess prognosis and confounding factors and appropriately select cases for non-surgical endodontic retreatment.	0	1	2	3	
Surgical treatment					
Understand the need for investigative and corrective surgery in the management of endodontic disease.	0	1	2	3	
Understand the need for proper pre-operative assessment, inter-speciality and patient communication in the planning of surgical care.	0	1	2	3	
Manage the special patient anxieties which may be associated with surgical care	0	1	2	3	
Appropriately manage endodontic disease surgically	0	1	2	3	
Communicate effectively with pathology laboratories	0	1	2	3	
Provide appropriate adjunctive care	0	1	2	3	
Implement a appropriate post-surgical recall schedule	0	1	2	3	
Trauma					
Understand the nature and consequences of different soft and hard tissue wound healing/reaction patterns after trauma and their consequences for the oral tissues	0	1	2	3	
Appropriately triage trauma patients	0	1	2	3	
Communicate clearly and effectively with medical and dental specialists to safeguard patient safety and ensure continuity of care	0	1	2	3	
Use guidelines appropriately (especially in the case of complex or multiple trauma)	0	1	2	3	
Understand the need for confident and efficient patient management and the need for clear and effective communication with patients and their parents/guardians where children are involved.	0	1	2	3	
Diagnose and manage dental trauma using appropriate clinical techniques	0	1	2	3	
Understand the associated medico-legal issues, especially if trauma inflicted by a third party	0	1	2	3	
What the Specialty trainee is able to do?	<i>(Less well Developed)</i>	<i>CIRCLE THE APPROPRIATE NUMBER IN EACH ROW</i>			<i>(To Level of Specialist)</i>

Pain control and analgesia and sedation					
Provide appropriate pain and anxiety control for patients attending for non-surgical and surgical treatment on a planned or emergency basis	0	1	2	3	
Diagnose and provide appropriate emergency dental treatment for the relief of acute pain	0	1	2	3	
Advise on appropriate peri-operative analgesia	0	1	2	3	
Recognise the need for inter-disciplinary care in the management of pain and anxiety conditions	0	1	2	3	
MANAGEMENT AND ADMINISTRATION					
Plan and discuss management of a dental clinic/practice	0	1	2	3	
Deal with complaints / grievances especially from patients	0	1	2	3	
Deal effectively with other members of the dental team	0	1	2	3	
Manage time effectively and adopt strategies for coping with stress	0	1	2	3	
Demonstrate a working knowledge of employment and health and safety at work regulations	0	1	2	3	
Discuss best practices in management and administration and contrast these with those in the training institution	0	1	2	3	
Manage people in accordance with the law on equality and diversity	0	1	2	3	
CLINICAL GOVERNANCE					
Understand the principles of clinical effectiveness and audit both locally and nationally and contribute where possible.	0	1	2	3	
Demonstrate awareness of epidemiologically-based needs assessments and systematic reviews of research evidence.	0	1	2	3	
Contribute to peer review and the appraisal process.	0	1	2	3	
Carry out critical/adverse incident reports and demonstrate an awareness of the ways in which this process can be used to improve clinical care.	0	1	2	3	
Show in-depth awareness of clinician's medico-legal responsibilities particularly those related to the speciality of endodontics.	0	1	2	3	
Understand quality assurance in the delivery of clinical care.	0	1	2	3	
Show knowledge of equality of access issues for minority groups requiring clinical care.	0	1	2	3	
Show an understanding of medical records administration	0	1	2	3	
TEACHING AND COMMUNICATION					
Communicate effectively both orally and in writing with peers, practitioners, staff, patients and the public.	0	1	2	3	
Develop and present instructional sessions.	0	1	2	3	
Recognise the role of both verbal and non-verbal aspects of communication.	0	1	2	3	
CLINICAL IMAGING					
Demonstrate an understanding and competence in intra-oral radiography,	0	1	2	3	
Demonstrate competence in intra-oral photography	0	1	2	3	
What the Specialty trainee is able to do?	(Less well Developed)	CIRCLE THE APPROPRIATE NUMBER IN EACH ROW			(To Level of Specialist)
RESEARCH					

Understand research methodology, including study design, research governance, data management and report preparation	0	1	2	3	
Understand different hierarchies of evidence	0	1	2	3	
Understand the process of peer review in scientific publications	0	1	2	3	
HOW THE TRAINEES APPROACHES THEIR PRACTICE?					
Approach to tasks – Demonstrates the following:					
Appropriate decision making judgement	0	1	2	3	
Evidence-based approach	0	1	2	3	
Appropriate prioritisation	0	1	2	3	
Coping with uncertainty	0	1	2	3	
Political awareness	0	1	2	3	
Appropriate attitudes, ethical understanding and legal responsibilities					
Attitudes are focused on patient	0	1	2	3	
Understanding of ethical principles and acts ethically	0	1	2	3	
Understanding of legal responsibilities	0	1	2	3	
Respect for colleagues	0	1	2	3	
Respects diversity	0	1	2	3	
DEVELOPMENT OF THE SPR AS A PROFESSIONAL					
Professionalism – Demonstrates the following:	0	1	2	3	
<u>Role within the Health Service</u>					
Understanding healthcare and dental education systems	0	1	2	3	
Acts as a role model, mentor, teacher and researcher	0	1	2	3	
Demonstrates responsibility for enhancement of dental service quality	0	1	2	3	
• Able to act as a dental leader	0	1	2	3	
• Well developed dental networks	0	1	2	3	
PERSONAL DEVELOPMENT					
Self directed learner capable of reflective practice and able to satisfactorily measure self performance	0	1	2	3	
Self awareness	0	1	2	3	
- Reflective of own competence	0	1	2	3	
- Identifies own emotions and prejudices and understands how these may affect their judgement and behaviour	0	1	2	3	
Acts according to clearly articulated values and principles	0	1	2	3	
Self confidence	0	1	2	3	
Acts on Feedback	0	1	2	3	
Self regulation	0	1	2	3	
Personal time management	0	1	2	3	
Adaptability to change	0	1	2	3	
Able to manage and be managed	0	1	2	3	
- Stress management	0	1	2	3	
What the Specialty trainee is able to do?	(Less well Developed)	CIRCLE THE APPROPRIATE NUMBER IN EACH ROW			(To Level of Specialist)
Able to make difficult and unpopular decisions	0	1	2	3	
Motivation	0	1	2	3	
Achievement	0	1	2	3	
Drive	0	1	2	3	
Commitment	0	1	2	3	

Initiative	0	1	2	3	
Advocacy	0	1	2	3	
Compliance with GDC / Deanery / Trust quality systems	0	1	2	3	
Builds and maintains relationships	0	1	2	3	
Supports innovation	0	1	2	3	
Good communicator	0	1	2	3	
- With public	0	1	2	3	
- With healthcare professionals	0	1	2	3	
- With Trust / PCT/ SHA	0	1	2	3	
- Written	0	1	2	3	
- Oral	0	1	2	3	
- Non verbal	0	1	2	3	
- Able to develop and communicate clear, cogent arguments	0	1	2	3	
Active listener	0	1	2	3	
Able to manage conflict	0	1	2	3	
Able to negotiate	0	1	2	3	

GLOSSARY OF TERMS

ARCP	Annual Record of Competence Progression (the formal annual assessment of progress for StRs under the <i>Gold Guide</i> governing training for all trainees from October 2009. Trainees enrolled prior to October 2009 may opt to transfer to the new curriculum structure and be assessed using ARCP rather than RITA)
CBD	Case Based Discussion (a form of work-place based assessment)
CCST	Certificate of Completion of Specialty Training (the outcome of training for individuals who are managed using the “Gold Guide” and the ARCP process)
COPDEND	The Committee of Postgraduate Dental Deans and Directors, the national body for postgraduate dental deans. The Deans have the responsibility to recognise and quality-assure training programmes and to recommend to the GDC that a trainee should be awarded a CCST to mark the end of their training programmes and their right to access the specialist list. (www.copdend.org.uk)
DOPS	Direct Observation of Practical Skill (a form of work-place based assessment)
GDC	The General Dental Council, the “sole competent authority” to regulate basic and specialist training in dentistry. The GDC has the statutory responsibility to regulate the specialist lists in dentistry.
ISFE	Intercollegiate Specialty Fellowship Examination, this is an assessment which is taken at the end of the 5-year programme of specialty training in Restorative Dentistry which is run as a single assessment by all four surgical colleges. Successful completion of the ISFE is a requirement for the issue of a CCST in Restorative Dentistry by the GDC
JCPTD	The Joint Committee for Postgraduate Training in Dentistry which is the overarching intercollegiate body which coordinates the work of the SACs across all disciplines and interfaces between the Surgical Royal Colleges, COPDEND and the GDC
MFDRCSI	Membership of the Faculty of Dentistry of the Royal College of Surgeons of Ireland
MFDSRCS/RCPS	Membership of the Faculty of Dental Surgery (available from the Faculty of Dental Surgery of the Royal College of Surgeons of Edinburgh, the Faculty of Dental Surgery of the Royal College of Physicians and Surgeons of Glasgow)
Mini CEX	Mini Clinical Evaluation Exercise (a form of work-place based assessment)
MJDF	Membership of the Joint Dental Faculties of the Royal College of Surgeons of England
MSF	Multi-Source Feedback (otherwise known as 360 degree appraisal, a tool to help trainees identify how they are perceived / performing in the eyes of the other members of the dental team)
RITA	Record of In Training Assessment (the formal annual assessment of progress for SpRs under the <i>Orange Guide</i> governing training for all trainees enrolled prior to October 2009.)
SAC	The Specialist Advisory Committee which is an intercollegiate committee involved in curriculum and governance of the specialty under the auspices of the JCPTD

- SDEB The Specialist Dental Education Board is charged with advising the GDC on the quality-assurance of training leading to specialist listing
- Specialty Membership Membership diploma specific to the specialty concerned blueprinted against the specialty curriculum from the Faculty of Dental Surgery of the Royal College of Surgeons of Edinburgh, the Faculty of Dental Surgery of the Royal College of Surgeons of England and the Faculty of Dental Surgery of the Royal College of Physicians and Surgeons of Glasgow. This is an assessment which is taken at the end of the 3-year programmes of specialty training in Endodontics, Successful completion of the Specialty Membership is a requirement for the issue of a CCST in Endodontics, (**Note the specialty fellowship examinations from RCS Ireland whilst assessing competence in their identified discipline are NOT acceptable to the GDC in terms of assessing completion of training and eligibility for a CCST in this specialty.**)
- Surgical Royal Colleges There are three Surgical Royal Colleges in Dentistry in the UK (one each in England, Edinburgh and Glasgow). They work in close accord with the Surgical Royal College in Ireland (Dublin) to assist with the governance of specialty training (through the JCPTD and its SACs) and to provide external quality assured assessments of “milestones” in training by examination.