

**JOINT COMMITTEE FOR SPECIALIST TRAINING IN DENTISTRY
SPECIALIST ADVISORY COMMITTEE IN ORTHODONTICS**

**GUIDELINES FOR THE UK THREE-YEAR TRAINING
PROGRAMMES IN ORTHODONTICS FOR SPECIALIST
REGISTRARS AND OTHER POSTGRADUATE TRAINEES**

December 2003

1. INTRODUCTION

This guidance is intended to be used by universities and hospitals seeking SAC approval for three year training programmes leading to a Certificate of Completion of Specialist Training (CCST) in Orthodontics and to guide trainees and trainers working with these programmes. These programmes are designed to equip the trainee to meet the regulations for the Memberships in Orthodontics (MOrth) of the Royal Surgical Colleges. This guidance should therefore be read in conjunction with the regulations for the diplomas of Membership in Orthodontics of the Royal Surgical Colleges of the U.K.

At entry to a training programme all trainees will be required to have an MFDS/MFD/FDS (or JCSTD approved equivalence) and will be given a Training Number (NTN/VTN) so that their training can be monitored by the Specialist Advisory Committee in Orthodontics together with the Postgraduate Dental Deans.

The training plan must be structured and training should take precedence over service provision. Few hospitals and clinics can provide complete training and hospital departments are expected to link with University Dental Schools or other approved academic centres and provide all aspects of training including clinical work and basic sciences. The training curriculum has been planned as a learning outcome programme, linked to various topics (see attachment).

2. THE PURPOSE OF THREE YEAR PROGRAMMES IN ORTHODONTICS

Training programmes should be designed to equip trainees to master the appropriate technical skills and to develop a level of diagnostic skill and understanding sufficient to obtain a qualification which will allow the award of a CCST and registration on the list of Specialists in Orthodontics of the General Dental Council.

2.1 Award of the Certificate of Completion of Specialist training

On satisfactory completion of the three year programme and the RITA process, and having passed the M.Orth, the dentist can apply to the General Dental Council for the award of a Certificate of Completion of Specialist Training and entry to the General Dental Council's list of Specialists in Orthodontics.

2.2 Access To Training Programmes

Access to all SAC approved specialist dental training programmes will be competitive. All training posts in orthodontics in the United Kingdom must be advertised in the *British Dental Journal*.

Training Programme Directors should consult with Postgraduate Dental Deans and Speciality Advisers in Orthodontics when planning these programmes. Additional advice on the arrangements for training programmes available in "*A Guide to Specialist Registrar Training*" (1998) – "The Orange Book" which incorporates (Appendix 3) the dental supplement. Dental graduates who are registered or eligible for registration with the General Dental Council may apply for entry to the 3 year training programme following a period of general professional training in primary and secondary care and after having passed the MFDS/MFD examination of one of the Royal Surgical Colleges. This examination commenced in 1998 and is specifically designed to be one of the entry requirements for those dentists who wish to enter speciality training and indicates the successful completion of general professional training. Trainees should have full GDC registration. Dentists with temporary registration with the GDC could not be awarded a CCST at the conclusion of training.

3. TYPES OF TRAINEES ON THREE YEAR POSTGRADUATE TRAINING PROGRAMMES IN ORTHODONTICS

The Specialist Registrar Grade was commissioned in the specialty on 1 July 1998. The General Dental Council opened its specialist list in the specialty on the same date.

3.1 Specialist Registrars

The following dentists may apply for specialist registrar posts leading to a CCST in Orthodontics (Type I training = see a *Guide to Specialist Registrar Training*). For details of Type II training see paragraph 3.4(i) below.

- (i) Dentists who benefit from European Community rights or who
- (ii) have overseas nationality but who have rights of indefinite residence or settled status in the UK.

Those dentists will be issued with a National Training Number (NTN)

NB. Dentists with temporary registration with the GDC would not be eligible for the award of a CCST.

3.2 Visiting Specialist Registrars

The following candidates may apply for an SpR post leading to a CCST in Orthodontics (Type I training).

- (i) Dentists who do not benefit from European Community rights or who
- (ii) do not have right of indefinite residence or settled status in the UK.

These dentists will be issued with a Visiting Training Number (VTN).

NB. Dentists with temporary registration with the GDC would not be eligible for the award of a CCST.

NB. If the trainee's status changes during training they can convert to an NTN. It is anticipated that VTN will be abolished in the near future.

3.3 Type II Training

This is for overseas trainees spending time in existing approved training posts but for a period, which falls short of the minimum training period. Such trainees will normally return home. Unlike some specialties, such trainees are rare in orthodontics.

3.4 Postgraduate Students

Postgraduate students:

- are the responsibility of the University;
- must be made aware by the university that they are on a university course which will not lead to a CCST;
- must be made aware by the university that they are on a university course which will not lead to entry to the specialist list;
- do not come under the remit of the Postgraduate Dental Dean;
- do not come under the remit of the JCSTD or the SACs;
- will not undergo the RITA process

The presence of individual postgraduate students must be notified to the SACs by the heads of the academic departments in order that the SACs can know that the training capacity of each of the departments has not been exceeded.

Universities will be responsible for ensuring that all students are fully aware, before they commence training, that they will not be eligible for a CCST when they complete their course.

3.5 Funding of Substantive NHS Posts

The use of partly funded posts places serious financial and personal strain on trainees and their use is to be deprecated. All full-time trainees who hold NHS contracts should be in receipt of a full-time salary for their grade.

4. THE STRUCTURE OF TRAINING PROGRAMMES

4.1 The Objectives Of Three Year Training Programmes In Orthodontics

Those trainees who complete training programmes in orthodontics should be able to: -

1. Diagnose anomalies of the dentition.
2. Detect deviations of the development of the dentition, of facial growth and occurrence of functional abnormalities.
3. Formulate a treatment plan and predict its course.
4. Carry out interceptive orthodontic measures.
5. Execute simple and complex treatment procedures.
6. Understand the multi-disciplinary approach for the treatment of compromised (adult) patients, orthodontic surgical cases and cleft palate patients.
7. Evaluate the need for orthodontic treatment.
8. Understand psychological aspects relevant to orthodontics.
9. Develop a scientific attitude and an inquiring mind and the stimulation of professional curiosity.
10. Undergo training in scientific methodology.
11. Be capable of interpretation of literature.
12. Carry out research activities.
13. Prepare oral and written presentation of clinical and research findings.

All trainees will be expected to undertake a University higher degree, which includes a research component. If a higher degree is not undertaken trainees must be involved in the production of at least 2 papers based on their own research submitted to professionally refereed journals for publication.

Training programmes should provide a comprehensive education in all aspects of orthodontics although it is not expected that every programme will cover all features to the same degree.

4.2 Training Rotations

The preferred training pathway is a combined and integrated training between a dental teaching hospital and a single district general hospital. The following rotations will be possible: -

- a. in years one, two and three time is spent in both a dental teaching hospital and a district general hospital
- b. year one is spent mostly within the dental teaching hospital and a rotation is established in years two and three

All three years may be spent within the dental teaching hospital. It is important that several consultants are able to make a substantial contribution to training. In the first year close specific clinical supervision and teaching is essential.

In two centre programmes considerable emphasis is placed on the need for integration of the training programme between teaching hospital and district general hospital. This requires close communication, collaboration and a common philosophy and sense of purpose between trainers in the dental teaching hospital and the district general hospital.

It may be necessary to involve more than one district general hospital in the training programme. This is permissible provided a high degree of programme integration is maintained such as in the following circumstances: -

- where a consultant in a district general hospital main base visits peripheral hospitals and takes the trainee to the peripheral unit
- where a training centre has a part-time consultant and supervision cannot be adequately provided on the clinical sessions when the consultant is not present.
- Where a training centre has only one Consultant
- For other sound educational reasons.

All trainees must have access to formal teaching, tutorials and research supervision. They must have training in assessing new patients, investigation, diagnosis and treatment planning. Because of the diversity of training programmes, arrangements for aspects of training will vary. For trainees spending substantial sessions in a Dental Teaching Hospital most of this training can be provided on that site, with a more clinical emphasis at peripheral centres. For trainees spending most sessions in a District General Hospital there will be a need to forge a link with an academic centre to provide some aspects of training depending on the facilities and particular skills and qualifications of the trainers in the D.G.H.

New methods of teaching are being developed including I.T. and Web based training. These must be carefully assessed when built into programmes.

The pastoral care of trainees is important, especially if they are a single trainee in the specialty in a D.G.H. There are benefits of meeting trainers in other medical specialties, but Training Programme Directors must ensure that meeting, studying and working with other Orthodontic trainees can take place.

Programmes for part-time trainees and those who visit another training programme for academic and research training can work well but require extra effort on the part of district general hospital and teaching centre to avoid deficiencies in the programme. The programme at the dental teaching hospital must achieve **full integration** of the part-time trainee into the academic timetable.

4.3 Full-time Training

The period of full-time training will be not less than three continuous years in a clinical training programme in orthodontics approved by the SAC in Orthodontics. Locum experience will not normally be accepted.

4.4 Flexible Training Programmes and Part-time Training Programmes

Flexible training is permitted for Specialist Registrars. The arrangements for such training are given in "*A Guide to Specialist Registrar Training*" (1998). To be eligible for such training individuals will have to show that "training on a full time basis would not be practicable for well-founded individual reasons". Full-time trainees can apply to become flexible trainees and flexible trainees can apply to revert to full-time training at any time.

Part-time educational programmes will be similar to flexible training schemes, and involve competitive entry.

The total length of flexible and part-time training should not be less than that of full-time training. Current advice is that flexible and part-time training programmes must be for a minimum of six sessions per week and the training period will be four years.

Approval must be obtained in advance from the SAC in Orthodontics for periods of detachment from training programmes and for clinical experience abroad in other centres for both full-time and part-time trainees.

4.6 Out of Programme Training

Approval must be obtained in advance from the Postgraduate Dean and the SAC in Orthodontics for periods of detachment from training programmes, for training in other centres, either abroad or in the U.K.

4.7 Distribution of Time within Training Programmes

In full-time Specialist Registrar and other SAC approved training posts, the trainee should spend at least six sessions per week involved in patient contact with at least five of these sessions devoted to personal treatment sessions (see Tables 1 and 2 overleaf).

A balanced programme will, for all trainees, allow personal treatment sessions, diagnostic sessions, review clinics, formal and informal teaching, research and reading time.

The time devoted to the dissertation for a higher university degree will depend upon university regulations and how the sessions are dispersed over two or three years of the training programme. The number of sessions on average should not exceed two per week.

Part-time trainees should be given a timetable for a minimum of six sessions per week which should include at least three personal treatment sessions.

See Tables 1 and 2 overleaf

SESSIONAL DISTRIBUTION TABLES FOR THE THREE YEAR TRAINING PROGRAMMES IN ORTHODONTICS

TABLE 1

The table below gives details of Training Times and Clinical Sessional distribution:

GRADE	Training Time	Weekly sessions	Total Clinical Sessions	Personal Treatment	Other - New patient, Joint Clinics and Review
Full time specialist registrar or postgraduate	3	10	6	5	1
Part time specialist registrar or postgraduate	4	6	4	3	1

TABLE 2

The table below gives details of the Sessional Distribution within Non-Clinical Sessions

GRADE	Total Sessions	Total Clinical Sessions	Total Non-Clinical Sessions	Non-Clinical being Taught	Non-Clinical Research, Study, Audit	Non-Clinical Management Administration
Full time specialist registrar or postgraduate	10	6	4	1.5	2	0.5
Part time specialist registrar or postgraduate	6	4	2	1.5	0.5	0

4.8 Facilities

At each training unit there should be: -

- a. a fully equipped surgery accommodation at each centre with an appropriate range of appliance systems and instruments.
- b. qualified dental nursing support with reasonable continuity of personnel.
- c. adequate secretarial support within the department.
- d. adequate access to a full range of relevant diagnostic facilities including radiography and photography.
- e. access to a full range of high quality laboratory services associated with orthodontics.
- f. desk space for personal study by the trainee during the time they spend in the unit, and access to personal computer facilities.
- g. ready access to a range of relevant journals and text books within the department.
- h. computerised facilities for the storage, analysis and retrieval of cephalometric data, the collection and analysis of audit data, maintenance of the trainee's logbook and routine business functions such as word processing.

In at least one unit there should be: -

- a. a fully equipped Postgraduate Centre with an active dental programme
- b. full library facilities including the facility for borrowing from other libraries and computerised literature searches
- c. facilities for medical illustration such as the production of diagrams, poster material and slides
- d. an on-site dental laboratory employing orthodontic technicians

4.9 Treatment Experience and Caseload

Clinical training should include exposure to new patient clinics, record collection and treatment planning sessions, clinical appliance management to effect treatment changes and some supervision of the retention phase of orthodontic care. Trainees should work with their trainers to gain the skills of assessing malocclusions and associated conditions within a reasonable time.

The objective of a training programme is to equip the trainee at the end of a 3 year programme to provide specialist service outside of a hospital or teaching environment. Whilst it is appreciated that the clinical practices will vary from institution to institution, there should be some degree of uniformity in the quantity and quality of training achieved. This objective should be met by seeing a sufficient number of new patients and treating a sufficient number of patients to a high standard under supervision over the 3 years.

The following case-mix is suggested for patients undergoing active treatment as a basis for postgraduate training. There must be some flexibility in these numbers which can only act as guidance.

a. Total Case Numbers

If the trainee has treated a large spectrum of malocclusion it would be reasonable to expect 80-120 cases to have been treated. The trainee should have acquired expertise in a specific appliance technique which could be utilised in all cases. An objective of 60-90 cases with the primary appliance system might be appropriate.

b. Trainees Should Also Have Knowledge of Other Techniques

The use of secondary appliance system in 5 to 10 cases would provide a basis from which expertise could be developed for future practice.

c. Growth Modification

As a specialist practitioner is inevitably involved in a number of patients acquiring the use of functional or orthopaedic appliance, it would be expected that 10-25 cases have the use of such appliances as an integral part of treatment.

d. Interdisciplinary Care

A trainee should be equipped to deal with straightforward interdisciplinary cases involving restorative dentistry and paediatric dentistry and 5 to 10 cases of this nature might be anticipated.

e. Orthognathic Treatment

A detailed knowledge and experience of orthognathic planning could not be expected within 3 years. Nevertheless the trainee should be exposed to a number of orthognathic clinics, and in particular to be involved in case conferences. The trainee might therefore participate in the planning for 5 to 10 cases.

f. Transfers

Inevitably a service element exists in all training and a specialist should be able to deal with cases treated by other Specialists. It would be undesirable however if more than 25% of a case load involved case transfers in which the trainee had not been involved in the planning process.

g. Supervision of Retention

Some of this experience should be gained at diagnostic clinics and in the transfer of patients.

It is not intended that the numbers should be prescriptive in any way, but rather helpful as guidelines. All trainees would be expected to have a logbook available for inspection as part of the assessment process.

4.10 Supervision

Close supervision of the training programme is essential. Training programme arrangements should ensure: -

- a. That a Training Programme Director is appointed, who is responsible for the organisation and day to day management of the training programme. The Training Programme Director should have sessions at the dental teaching hospital and be a consultant involved in the training scheme who has undergone a period of hospital training in orthodontics.
- b. Supervisors are appointed for the dissertation who have academic training or proven academic ability.
- c. A trainer (tutor) is appointed for each trainee, who is responsible for monitoring the trainee's progress and ensuring that any difficulties are identified and resolved as rapidly as possible. The tutor should be a person who works frequently with the trainee and is closely involved in their training. For rotations involving a district general hospital, the most suitable person will often be the consultant at the district general hospital most involved in the particular training programme.
- d. Each clinical session should have a named supervisor who is available for the majority of the time to provide direct clinical supervision and who will endeavour to arrange cover when unavailable. The case notes for unsupervised clinics should be discussed with the trainee prior to planned leave of the supervisor.
- e. Formal appraisal meetings between trainers and individual trainees, arranged by the tutor, should take place to monitor and advise on a trainee's progress and training needs. A record which is confidential between the trainer and trainee should be kept of these meetings which should occur at twice a year. These appraisal meetings are distinct, and serve a different function from the annual RITA assessments carried on behalf of the Deanery. The SAC requires that Assessment forms from these latter assessments are returned to the Secretary of the SAC.

Trainees should be exposed to the clinical and academic views of more than one consultant; this will normally happen through the linked appointments between teaching hospital and district general hospital. Most direct supervision should be provided by a consultant. However, some supervision by a trainee in a Fixed Term Training Appointment (FTTA), an experienced specialist practitioner in orthodontics, or by a person of similar experience and seniority is also permitted. A balance should be struck in which different approaches are presented so that the trainee has a solid core of knowledge against which to make judgements and gains perspective of the range and effectiveness of contemporary orthodontic therapy.

To run effective programmes, dental teaching hospitals ideally require at least two WTE consultants (including the Training Programme Director), preferably at a senior academic level, with a significant teaching input to run effective programmes. These posts should not be split between more than three people. Where the training programme has more than four trainees at any one time, additional staff will be required.

4.11 Trainer Training

The quality and ability of the trainers is an important element in successful training. Trainers must undertake Continuing Professional Education and have been on a Training Course for Trainers.

4.12 Training Capacity of the Programme

The SAC has introduced the following guidelines to indicate the total number of trainees that can be enrolled on a SAC approved training programme. In a unit with adequate physical and human resources the training capacity is limited principally by the staff: student ratio.

Any course which **exceeds 2 or more** of the guidelines below may be seen to have gone beyond the ability of its resources to deliver an acceptable quality of training and such programmes will not be approved by the SAC.

Clinical Training

In Regional Units chairside teaching is usually on a 1:1 basis. In Dental Hospitals there may be more students per member of staff. The Erasmus Report recommends that this ratio **should not exceed 1:6** and this should apply.

Didactic Teaching

It is beneficial for student interaction that groups should not be smaller than 3. The maximum number in a seminar to permit interaction with the tutor **should be no more than 8**. It may be appropriate, however, to accommodate larger numbers in a lecturing/Journal Club format.

Research Degree dissertations

It is debatable how many theses an individual staff member are able to supervise as this depends to some extent on the individual's weekly timetable. In the atmosphere of a busy dental school/hospital **a maximum of 5 per supervisor** at any one time would seem reasonable.

4.13 Documentation

4.13.1 Course Documentation

Clear documentation of the training programme is essential. All trainees should have written information detailing: -

- a. background information about the course
- b. the course syllabus
- c. the course timetable
- d. details of supervision
- e. educational guidance. This should include a core list of recommended text books, journals, keynote papers in the literature, audio and video tapes.
- f. taught course material which is not readily available from textbooks
- g. an educational agreement.

4.13.2 Trainee Documentation

Trainees should maintain records of the patients they have under treatment. This should ideally be done through the SAC approved computerised patient database programme or other computerised spreadsheet or database. The records should include all patients who are under or have completed treatment. Each patient record should contain relevant data about:

- demographic information about the patient
- diagnosis
- indices
- treatment
- adjunctive treatment from other disciplines
- outcomes including complications
- retention

While most of the record entries will relate to cases requiring active orthodontic treatment, it should also represent the full range of the trainee's clinical activity.

It should also be possible to demonstrate in a graphical or statistical manner: -

- the distribution of data
- the relationships between or associations between sets of data (e.g. cross-referencing diagnosis and treatment method)
- the significance of these findings

4.14 The Training Plan

The SAC would like training to be defined year by year by each training centre. Years 1 to 3 should be structured such to give general orthodontic experience and equip trainees for independent practice. Transfer from one training year to the next should be regarded as a promotion and be evidence of a satisfactory and completed year of training.

It will facilitate training and the examination process if the training year commenced at the beginning of October each year.

The modular structure will create the characteristics of a National Curriculum and will in certain circumstances facilitate transfer between training centres.

Annual holiday entitlement must be allocated in accordance with contracts of employment or other agreements arranged prior to commencement of the course.

4.15 Curriculum

A curriculum for the three year postgraduate training programme in orthodontics has been approved by the General Dental Council. The curriculum includes all the features of the European Erasmus training programme (November 1991) and fulfils the requirements of the Draft Proficiencies of the Advisory Committee on the Training of Dental Practitioners (European Commission XV/E/8385/4/94-EN Orig.). The full curriculum is available from the SAC in Orthodontics. A summary of the curriculum is shown at Appendix A.

5 VISITATION AND APPROVAL

Every orthodontic department running a training programme will be visited by at least two members of the Specialist Advisory Committee, *before* approval is granted, to ensure that the conditions in this guidance can be met and to discuss with the trainers the training programme and difficulties in implementing these requirements.

The visitors will wish to see items from the Course Documentation. For approved training programmes, where a reinspection becomes due, trainee interviews will be conducted. Each trainee should bring an up to date curriculum vitae, a copy of their personal timetable and their clinical logbook with a summary of caseload cross-referenced by diagnosis and treatment method. Trainees will normally be interviewed at least once during their training period.

The departments will be revisited at least once every 6 years for purposes of inspecting the facilities available for training, with trainee interviews at 3 years, or at the SAC's discretion. The S.A.C. will work closely with the postgraduate deaneries in agreeing the programmes.

Applications for approval should be made to the Secretary, the Specialist Advisory Committee in Orthodontics, at the Royal College of Surgeons of England, 35-43 Lincoln's Inn Fields, London WC2A 3PN.

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OUTCOME GRID FOR THE SPECIALIST IN ORTHODONTICS

What the Specialist is able to do			How the Specialist approaches clinical Practice						The Specialist as a professional	
Clinical information gathering	Treatment Planning	Treatment Procedures	Application of basic clinical sciences	Clinical reasoning and judgement	Communication	Health Promotion	Attitudes, Ethical Stance and Legal Responsibilities	Information handling	The role of the dentist within the Health Service	Personal development
<ul style="list-style-type: none"> • Take a history • Undertake an intra and extra-oral examination of the head and neck • Examine the occlusion • Obtain and interpret relevant clinical, radiological and laboratory investigations 	<ul style="list-style-type: none"> • General Principles • Integrated Restorative Care • Malocclusion and medical problems • Appliances: Removable Functional Extra-oral Fixed Retention 	<ul style="list-style-type: none"> • Guiding the developing occlusion • Adult orthodontics • Cranio-mandibular dysfunctions • Interface with Oral & Maxillofacial Surgery • Interface with Restorative Dentistry including Implantology • Interface with Paediatric Dentistry 	<ul style="list-style-type: none"> • General Principles • Cell and molecular biology • Genetics • Craniofacial embryology • Somatic and craniofacial growth • Physiology of breathing, swallowing, mastication and speech • Psychology • Dental materials 	<ul style="list-style-type: none"> • General Principles • Growth and treatment analysis • Long term effects of orthodontic treatment • Iatrogenic effects of orthodontic treatment 	<ul style="list-style-type: none"> • Demonstrate active listening skills • Demonstrate appropriate communication skills with a range of patients • Demonstrate appropriate communication skills (verbal and written) with other professional colleagues • Demonstrate appropriate communication skills with others in the dental team in order to ensure efficient and effective working • Demonstrate appropriate case presentation skills, give appropriate advice and information to promote learning in others 	<ul style="list-style-type: none"> • Take into consideration the impact of social, cultural and behavioural factors on dental health • Keep up to date with strategies for prevention of disease in different settings e.g. primary prevention, screening, public awareness campaigns • Collaborate with other professionals in health promotion and disease prevention • Apply the knowledge principles and methods of health promotion so as to include an appropriate health promotion dimension to most clinical contacts 	<ul style="list-style-type: none"> • Demonstrate an understanding of patient psychology in relation to health education • Demonstrate an ethical and moral approach (to patients, their relatives, colleagues and staff, and research undertaken) • Demonstrate confidentiality, integrity, truthfulness and respect, without discrimination towards patients and colleagues • Demonstrate an appropriate approach and response to complaints about performance • Recognise and respond to legal responsibilities • Recognise and respond appropriately to colleagues whose professional conduct gives cause for concern 	<ul style="list-style-type: none"> • General Principles • Computer based technology • Critical evaluation of literature 	<ul style="list-style-type: none"> • General • Health and safety • Legislation and ethics • Surgery Management • Personnel Management • Finance • Audit • Health service structures 	<ul style="list-style-type: none"> • Self-awareness • Continuing professional development • Personal growth • Self-care • Career development • Development of additional experience in areas of efficiency or special interest

This grid is a summary of “Learning Outcomes for the Specialist Registrar in Orthodontics” 2003