Orthodontic therapy

is a wonderful career

Sara Mohammed Saed,¹ Simon J. Littlewood² and Trevor Hodge³ describe the background to the introduction of orthodontic therapists and explain why this is a great development for orthodontics.

Orthodontic therapy is the newest grade of dental care professional (DCP) in the UK. The first cohort of students started their one-year course on the Yorkshire Orthodontic Therapy Course in Leeds in 2007. It is estimated there are now more than 400 registered orthodontic therapists in UK. This article provides a brief background to the introduction of orthodontic therapists, as well as the real-life experiences of a qualified orthodontic therapist, an orthodontic therapist in training and a workplace trainer.

The first discussions about orthodontic therapists, then referred to as ancillary orthodontic personnel, began in 1967. However, it was not until the early nineties with the Nuffield Enquiry into Ancillary Dental Personnel that the role was considered in more detail (by this stage it was being referred to as orthodontic auxiliaries) at which point evidence was also emerging that 50% of 11-year-old children had a defined need for orthodontic treatment and that there were fewer orthodontic specialists in the UK in comparison to other European countries. Furthermore, those who were working in UK specialist practices had caseloads of double that of European counterparts.^{1,2}

To provide evidence of the benefit of orthodontic therapists for the delivery of orthodontic healthcare, a pilot study was set

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up at Bristol Dental School to investigate this role.³ Dental nurses completed a four-week pilot training programme and on completion of the course it was found that the trainees demonstrated practical abilities which far exceeded the course organiser's expectations. Furthermore, the level of skills exceeded those of final year dental students and instead was closer to that of orthodontic postgraduate students. It was important to note, however, that the dental nurses took two to three times as long as an experienced orthodontist to carry out the same procedure. The results of this pilot were ground-breaking and formed the foundations for the current training models for orthodontic therapists throughout the UK.

- Taking occlusal records including orthognathic facebow readings
- Placement and removal of fixed appliances
- Identifying, selecting, preparing and placing auxiliaries
- Providing emergency orthodontic care
- Taking intra and extra-oral photographs
- Fitting tooth separators and bonded retainers.

Additional skills which an orthodontic therapist could develop:

- Applying fluoride varnish to the prescription of a dentist
- Repairing the acrylic component part of orthodontic appliances
- Measuring and recording plaque indices

outlines clearly when supervision is required. Recommendations have also been made that, where possible, the orthodontist should be 'on-site' when the therapist is working, as treatment plans may need to be revised during treatment. At a minimum, the orthodontist therapist should be following a written prescription.⁶ There have been increased incidents whereby orthodontic therapists are being left alone, which has led to increased concern.⁷ This can have adverse consequences both for the dental professionals involved and, most importantly, the safety of the patient.

It is also important to note that in orthodontic emergencies the guidelines do mention that the orthodontic therapist may be required to carry out 'limited treatment in the absence of the dentist' in order to relieve pain or make the appliance safe.⁵

It is very important for all those involved (orthodontic therapists and their supervisors) to follow the British Orthodontic Society guidelines on supervision.

'TRAINEES MUST BE EMPLOYED IN AN

ORTHODONTIC SPECIALIST PRACTICE OR

ORTHODONTIC DEPARTMENT IN A HOSPITAL...'

Being an orthodontic therapist

What is the role of an orthodontic therapist?

The duties that orthodontic therapists are permitted to perform are outlined in the General Dental Council (GDC) document *Scope of practice*.⁴ Here it confirms that they may carry out certain parts of orthodontic treatment under prescription from a dentist competent in orthodontics.

These include:

- Carrying out Index of Orthodontic Treatment Need (IOTN) screening either under the direction of a dentist or direct to patients
- Cleaning and preparing tooth surfaces ready for orthodontic treatment
- Placing brackets and bands
- Preparing, inserting, adjusting and removing archwires previously prescribed or, where necessary, activated by a dentist
- Taking impressions and pouring, casting and trimming study models
- Clinical record taking: intra and extra-oral photographs, dental impressions, occlusal records and face bow records where required
- Inserting passive removable appliances (such as space maintainers or retainers) and active removable appliances that have been adjusted previously by a dentist. This includes headgear and facebows that have been previously adjusted to fit by a dentist

- Removing sutures after the wound has been checked by a dentist.

What is not permitted?

Orthodontic therapists are not allowed to diagnose or provide any form of treatment plan for patients, and are not allowed to activate any part of a removable appliance. They are also not permitted to remove subgingival calculus, administer local anaesthesia, re-cement crowns, and place temporary dressings. They are also not allowed to undertake anything that is irreversible, such as interproximal reduction, which involves removal of enamel.

What about supervision?

There are specific guidelines that have been produced in 2012 by the British Orthodontic Society and the Orthodontic National Group (ONG) regarding the supervision of qualified orthodontic therapists.⁵ These guidelines clearly state that an orthodontic therapist 'should see a patient unsupervised only where the dentist writes a clear prescription in the notes and the orthodontic therapist should not change this'. The guidelines clarify this further by saying that 'in the event of any query then no treatment should be undertaken and a further appointment made to see the supervising dentist'.⁵ These guidelines also list which procedures they suggest require clear written prescription and no direct supervision. It also

Who can train?

It is essential that the applicant has one of the following qualifications:

- The National Examining Board for Dental Nurses [NEBDN] National Certificate examination, plus 24 months' experience
- The S/NVQ Level 3 in Oral Healthcare: Dental Nursing awarded by an approved NVQ or SVQ provider
- A Certificate of Proficiency in Dental Nursing awarded by a recognised dental hospital
- The Certificate of Higher Education in Dental Nursing offered by the School of Professionals Complementary to Dentistry, at the University of Portsmouth
- BTEC National Diploma Dental Technology
- SQA Higher National Certificate in Dental Technology
- Degree in Dental Technology
- City and Guilds Final Certificate in Dental Technology
- BTEC National Diploma in Science [Dental Technology]
- BTEC Diploma in Dental Technology
- SCOTVEC Higher National Certificate in Dental Technology
- Edexcel BTEC Higher National Certificate
- Army – Levels 1, 2 and 3 [Dental Technology]
- Qualifications awarded by Technicians Education Council or Scottish Technicians Education Council
- Any qualification determined by the GDC to entitle the holder to register as a dental hygienist or dental therapist.

Table 1 Comparison of the different orthodontic therapy courses across the UK

Centre	Fee	Examination	Duration	Intake
University of Central Lancashire (UCLan)	£13,500	Internal exam at UCLan	1 year An initial 2-week training block in July at UCLan, 3-week training block in September followed by 12 study days throughout the year Workplace training in an approved orthodontic practice or department	16
Yorkshire	£13,000	FDS RCS (England) Diploma in Orthodontic Therapy	1 year (or 18 months part time) An initial 4-week training block at Leeds Dental Institute followed by 8 study days Workplace training in an approved orthodontic practice or department	12
Manchester	£12,000	RCS (Edinburgh) Diploma in Orthodontic Therapy	1 year 1 week preliminary induction in June, 3-week core training programme in August, followed by 10 additional study days Workplace training in an approved orthodontic practice or department	10
University of Bristol	£13,000	RCS (Edinburgh) Diploma in Orthodontic Therapy	1 year Initial 4-week core course then 12–15 study day's at University of Bristol Dental Hospital Workplace training in an approved orthodontic practice or department	12
King's Health Partners (Guy's and St Thomas' Hospital NHS Foundation Trust, King's College Hospital NHS Foundation Trust and King's College London)	£13,000	RCS (Edinburgh) Diploma in Orthodontic Therapy	1 year 4-week intensive core teaching programme (first two weeks will be spent at Guy's Hospital and the second two weeks at King's Hospital) Thereafter, students return to the training centre 2 days a month Workplace training in an approved orthodontic practice or department	8
University of Warwick	£12,670	Internal exam at the University of Warwick	1 year Initial 20-day core course over 8 weeks 12 additional teaching days over the next 30 weeks Workplace training in an approved orthodontic practice or department	10
Edinburgh Postgraduate Dental Institute	£8,000 for student orthodontic therapists working within the NHS in Scotland and £12,500 for any students working outwith NHS Scotland.	RCS (Edinburgh) Diploma in Orthodontic Therapy	1 year Initial 20-day core course over 4 weeks 10 additional teaching days (approximately one day per month) Workplace training in an approved orthodontic practice or department	8

Trainees must be employed in an orthodontic specialist practice or orthodontic department in a hospital as the majority of their training will be carried out in their workplace. It is important to also have manual dexterity, good communication and team-working skills and good basic IT skills. Professionalism is also paramount, having a compassionate nature towards patients, being hard-working and having the ability to work under pressure. Although it is not essential, most courses feel it is desirable to have a minimum of two years' experience in clinical orthodontics.

What are the requirements of your trainer?

It is essential that the trainer is registered on the Specialist List of the GDC in Orthodontics. This is a usual requirement of the course indemnifiers. They need to undertake appropriate training and be physically available to supervise the trainee for every patient of every visit. There is also a need to provide appropriate nursing and administrative support.

The training pathway

Training takes place in both a teaching centre and in the workplace. There are currently seven orthodontic therapy courses recognised by the GDC in the UK (Table 1).⁸

The courses are 12 months and are usually full time although there is some scope to offer part-time training over a longer period pro-rata. It comprises of an initial four-week core course at the teaching centre followed by 8–20 additional study days throughout the year. Concurrently, workplace-based training will be carried out at an approved practice. The process differs for each course, but usually involves completing defined modules, end-of-module assessments, a variety of work based assessments, a portfolio and a project before being eligible to apply for the Diploma in Orthodontic Therapy examination (usually after at least 80% of the training has taken place).

The trainer must be on the orthodontic specialist list and has certain obligations that must be fulfilled to ensure indemnity requirements and GDC regulations are met. It goes without saying that the trainer must have high clinical and ethical standards and provide a wide range of treatment. The trainers need to undertake Training the Trainers courses, teaching them how to teach on the course and be familiar with the learning outcomes and methods of assessment for the students on the courses.

Case reports

We interviewed three people involved in orthodontic therapy: Jodie Welsh (qualified orthodontic therapist), Kerryll Chadwick (student orthodontic therapist) and Matthew Clare (specialist orthodontic practitioner and trainer on the Yorkshire Orthodontic Therapy Course). They share their experiences of orthodontic therapy.

process in the past. What was a relief as well was that I financially was not affected as I was still being paid whilst I was training.

At first I wasn't so sure whether I was capable of achieving where I am today. I am so glad that I took the jump because it is so rewarding being here thinking I've done this, I've played a part in changing her smile. To be given the honour of treating your own patients and seeing the end result is so worthwhile.'

Qualified orthodontic therapist Jodie (left) with her consultant Simon Littlewood, a patient and colleague

1. Qualified orthodontic therapist Jodie Welsh

Jodie Welsh, a dental nurse, became one of the first in Leeds to qualify as an orthodontic specialist. She currently works at St Luke's Hospital in the orthodontic department and is one of the graduates of the Yorkshire Orthodontic Therapy Course run at the Leeds Dental Institute.

'I found the training brilliant, hard but brilliant! I must admit though, I found the academic side challenging but there is so much support that I can't think of anything negative to say about the course. I have to also add that you meet great friends on the course that I still talk to today. What's even greater now is that there are a lot more orthodontic therapists who are now teaching the course which really helps as they gives you tips and you can relate to them as they have been through the same

Orthodontic therapist trainee Kerryll with her trainer, Matthew

2. Orthodontic therapist trainee Kerryll Chadwick

Kerryll Chadwick is an orthodontic therapist trainee who started the Yorkshire Orthodontic Therapy Course in July 2015 and is currently training at Lincoln Orthodontics.

'I used to be a dental nurse and one day the practice principal suggested the idea of doing the orthodontic therapist course. At first what worried me the most was whether I had the dexterity to be able to put my hands

into someone else's mouth! I only had a dental nursing background so I've never been exposed to this. It's such an intricate procedure that I've never done before and they make it look so effortless. I was also worried about the commitment that it involved and the studying that came with it; I thought I'm too old for this! But I plucked up the courage and I can tell you that the four-week course we did at the beginning was amazing. It's like you go in as a dental nurse and you literally come out of it as an orthodontic therapist. There's just so much

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support and help. It's crazy when I look back and see how far I've come. We used to go in every day and had loads of practice, including on the phantom heads. We had to live together for a month so it was a great experience and we bonded so well. The structure of the course is brilliant because they test us regularly so it's like they drill the information into you and you build so many new skills – doing presentations, working with IT, and generally building your confidence. Then after this month is over you go back to your practice and put everything you learnt into practice. You get longer time slots at first, which is really helpful because you gradually settle in and what's great is that my trainer also had a lighter diary at first. So you constantly feel he's around to support you.

To be honest, the transition was quite smooth and a lot better than I thought it would be. The patients appreciate what you are doing so much because you are spending extra time with them, which they love! They feel they are getting more care this way. They are always so interested and constantly ask how I'm getting on with my training, which is lovely.

I would say what I enjoyed the most was being a student again; learning new things and getting that extra patient contact. I would encourage anyone and everyone to do this.'

3. Trainer Matthew Clare

Matthew Clare is a specialist orthodontist and a practice owner. He is also currently training Kerryl at his practice.

'Training is great. You get to know your student better, spend longer with patients and expand your techniques. Everything you do, you try to do it at an exemplary standard so that you are a great example to your trainee so it not only benefits them but me as well. And it's great in the long run; patients absolutely love getting that extra time spent on them. Your overall communicated message is that you are investing in patient care. So it's a fantastic opportunity for everybody – practice, patients and therapists. I would recommend trainers to go for it because it's worked so well for me in the long run. I would also say to those who want to take this leap and thinking of becoming an orthodontic therapist then you've got to be brave, keen to learn, open and honest to yourself. It's definitely worth it.'

All in all, orthodontic therapy is currently the newest and one of the most exciting dental roles. It has been around for nearly ten years in which time it has significantly increased the orthodontic workforce and in many areas has led to a specialist led orthodontic service.⁹ More research is required to quantify exactly what the impact has been in introducing orthodontic therapists into the workforce.¹⁰

It must be noted though that this change has also allowed specialist orthodontists to concentrate their time on diagnosis, treating more complex malocclusions, whilst still maintaining a specialist led service for more routine cases. By a better use of skill mix, the introduction of orthodontic therapists has

ultimately created the possibility of improved patient care within existing resources, which is the drive for every dental professional.

Furthermore, in some areas where there has been a historical shortage of specialists, it has improved access to a specialist led orthodontic service.¹⁰ The introduction of orthodontic therapists has given a definitive career pathway for dental nurses with an interest in orthodontics, which is a valuable asset to this speciality.

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