The dental therapist's role in a 'shared care' approach to optimise clinical outcomes

Zuzanna Sadura,¹ Sally Hanks,¹ Christopher Tredwin¹ and Ewen McColl¹ demonstrate the scope of practice of dental therapists and examine their role in a team approach to clinical cases.

CPD questions

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Abstract

Introduction Dental therapists have a key role to play in the provision of dentistry in the UK. The Dental Workforce Advisory Group has reported this is relevant in multiple areas, including prevention and care in young children, and to support dentists in providing advanced and routine treatment for complex adult patients within the wider collaborative dental team. There remain diverse and multiple barriers and challenges to utilising the optimal scope of the dental therapist in general practice. In 2013, the General Dental Council introduced direct access (DA) legislation in the UK. By utilising the potential of dental therapists, some of the above challenges could be overcome and the DA approach optimised.

Aims The purpose of this article through presenting clinical cases is to demonstrate the full scope of practice of the dental therapist and highlight how clinical outcomes can be optimised for patients when a 'shared care' approach is followed.

Conclusions Notwithstanding the complexities of the financial implications practice owners face, through knowledge and understanding of the role and scope of the dental therapist within the wider dental team, optimal treatment of dental patients in the UK can be encouraged.

Introduction

Dental therapy training was first introduced in the early 1960s, in New Cross South East London Hospital. The school was shut in 1983 but had trained 60 dental therapy students each year. Following this closure, a second school (but much smaller with only eight students per cohort) was developed in Whitechapel, London (today, this is Queen Mary University of London).¹

Dental therapy training was introduced as a method of providing clinicians who could bridge the shortfall of professionals in what was called the 'school dental services'. For many years, a dental therapist could only work within these community services or hospital settings, unlike a dental hygienist who was able to work in general practice.^{1,2} By 2002, the profession was changing and employment of dental therapists expanded across all sectors of dentistry. In the same year, the scope of practice for both dental therapists and dental hygienists was expanded and remains fairly unchanged to the current day.^{3,4}

A 2013 report on workforce planning in the UK revealed 'undeniably some degree of shortfall in dental workforce supply in the short term and under-utilisation of dental care professionals, both hygiene/therapists and clinical dental technicians'.⁵ The increasing size and complexity of treatment needs in the ageing population, the need to ensure preventive care is available from an early age, and an appropriate workforce to support the 'starting well, keeping well, maintaining well and sustaining well' approach of the Dental Workforce Advisory Group (DWAG)⁶ all impact on future workforce planning challenges. Health Education England's 2018 *Advancing dental care: education and training review* suggests that, currently, the absolute numbers of dental therapists required relative to the different areas of the profession are unknown and that training needs to remain flexible to be able to accommodate changes.⁷ The 2019 DWAG states that there will be a need for an 'increase in DCP student numbers, ensuring their training is integrated with dental students in preparation for effective team working and meeting the needs of all sections of the population'.⁶

Adopting a team approach to patient care will be key, and the UK Department of Health and British Dental Association have both emphasised the importance of the skill mix of the dental team.⁴ A study exploring the views of general dental practitioners in West Sussex

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Table 1 Comparison of scope of practice of dentist, therapist and hygienist

Primary skills listed by GDC	Dental hygienist	Dental therapist	Dentist
Obtain a detailed dental history from patients and evaluate their medical history	✓	✓	✓
Carry out a clinical examination within their competence	✓	✓	✓
Complete periodontal examination, charting, use indices to screen and monitor periodontal disease	✓	✓	✓
Diagnose and treatment plan within their competence	✓	✓	✓
Prescribe radiographs	✓	✓	✓
Take, process and interpret various film views used in general dental practice	✓	✓	✓
Plan the delivery of care for patients	✓	✓	✓
Give appropriate patient advice	✓	✓	✓
Provide preventive oral care to patients and liaise with dentists over the treatment of caries, periodontal disease and tooth wear	✓	✓	✓
Undertake supragingival and subgingival scaling and root surface debridement using manual and powered instruments	✓	✓	✓
Use appropriate antimicrobial therapy to manage plaque-related diseases	✓	✓	✓
Adjust restored surfaces in relation to periodontal treatment	✓	✓	✓
Apply topical treatments and fissure sealants	✓	✓	✓
Give patients advice on how to stop smoking	✓	✓	✓
Take intraoral and extraoral photographs	✓	✓	✓
Give infiltration and inferior dental block analgesia	✓	✓	✓
Place temporary dressings and re-cement crowns with temporary cement	✓	✓	✓
Place rubber dam	✓	✓	✓
Take impressions	✓	✓	✓
Care of implants and treatment of peri-implant tissues	✓	✓	✓
Identify anatomical features, recognise abnormalities and interpret common pathology	✓	✓	✓
Carry out oral cancer screening	✓	✓	✓
If necessary, refer patients to other healthcare professionals	✓	✓	✓
Keep full, accurate and contemporaneous patient records	✓	✓	✓
If working on prescription, vary the detail but not the direction of the prescription according to patient needs. For example, the number of surfaces to be restored or the material to be used	✓	✓	N/A
Carry out direct restorations on primary and secondary teeth	X	✓	✓
Carry out pulpotomies on primary teeth	X	✓	✓
Extract primary teeth	X	✓	✓
Place preformed crowns on primary teeth	X	✓	✓
Prepare comprehensive treatment plans	X	X	✓
Prescribe and provide endodontic treatment on adult teeth	X	X	✓
Prescribe and provide fixed orthodontic treatment	X	X	✓
Prescribe and provide fixed and removable prostheses	X	X	✓
Carry out oral surgery and periodontal surgery	X	X	✓
Extract permanent teeth	X	X	✓
Prescribe and provide crowns and bridges	X	X	✓
Provide conscious sedation	X	X	✓
Carry out treatment on patients who are under general anaesthesia	X	X	✓

Fig. 1 a) Case 1 before: front view. b) Case 1 before: left-hand side. c) Case 1 before: right-hand side

Fig. 2 a) Case 1 after: front with denture. b) Case 1 after: front. c) Case 1 after: left-hand side. d) Case 1 after: right-hand side

concluded that 'in general dentists had a favourable attitude towards dental therapists, although there was a real lack of knowledge about their permitted duties'.³ Most dentists felt therapists should treat children and adults with special needs.

Providing care by dental therapists in UK practice is complex for multiple reasons, including factors relating to the current NHS contract and remuneration of therapists.⁶ The risk of under-utilisation of dental therapists is that it can lead to frustration among therapists, who consequently feel undervalued and may eventually lose the confidence to pursue the therapy aspect of their role.⁴ Financial factors aside, reasons for the under-utilisation of dental therapists in dental practice have been reported by the General Dental Council (GDC) to be related to a variety of issues including educational challenges, policy and unintended or negative reaction to policy, referral barriers and practical challenges in the sharing of care.⁸ It has also been shown that patients' acceptance of therapists follows dentists' acceptance, and so it seems likely that if dentists are supported to accept and understand the full utilisation of therapists, patients are also more likely to agree.³

In 2013, along with the 'Scope of practice' (SoP) guidance, the GDC introduced direct access (DA) legislation in the UK. DA aims to facilitate patients' access to care by allowing trained and competent dental care professionals (DCPs) to diagnose, treatment plan and carry out treatments within their scope of practice⁹ without the patient needing to see a dentist first for a treatment prescription.^{10,11} There are numerous challenges to supporting the DA approach and facilitating optimal utilisation of the skills of dental therapists in practice, including educating dentists to recognise and appreciate the potential of the dental therapists within their teams.¹¹ Evidence shows that dentists are aware of the importance of teamwork and value the support from the staff they have. Additionally, the majority of dentists are in favour of a team approach to care.³ The recent GDC review into the SoP reported that DCPs are more familiar with the SoP remit than dentists and that dental nurses are the group least familiar with it.⁸

This would suggest that there is not a fundamental attitude problem towards integrating a team approach to dental care across systems and that educating the whole dental team on the contemporary SoP of their

colleagues may begin to address some of these challenges. Changes to the system may also be advisable to support integration, but these are outwith the remit of this paper.

Table 1 shows the SoP of dental therapists and hygienists compared to dentists, and the potential each has to complement the full dental team and care of patients in the UK. Education providers rely on the SoP document to inform course content, support fitness to practise processes, and to develop and deliver professional development and training opportunities. Where dental and therapy students are trained together, it is noted that they are more cognisant of one another's SoP, and delegation of appropriate duties and teamwork between the two professions is enhanced.¹² It seems likely then that recently qualified graduates and education providers are in the best place to highlight and showcase the successful patient outcomes that can be achieved when different members of the team are working together in the optimal way, with each working to the full extent of their SoP. In 2013, the University of Plymouth Peninsula Dental School introduced a curriculum that fully integrates the training of undergraduate dental therapists and dentists from day one. This prepares them to understand the scope of the other, collaborate during their course and after dental school in the workplace, as well as preparing therapists for DA.¹²

The aim of this paper is to present undergraduate student clinical cases that exhibit teamwork, shared care and the optimal use of both to achieve successful patient outcomes.

Clinical case studies

Two clinical cases were prepared by an undergraduate dental therapist for their final-year assessments. Each of these demonstrated a range of treatments that can be undertaken by an appropriately trained, competent and indemnified therapist within their SoP. They also showcase how a shared care teamwork approach between a dental therapist and dentist can provide excellent treatment outcomes for the patient.

Fig. 3 a) Case 2 before: front. b) Case 2 before: left-hand side. c) Case 2 before: right-hand side

Fig. 4 a) Therapist treatment: tooth 25 before. b) Therapist treatment: tooth 25 prepped for direct restoration. c) Therapist treatment: tooth 25 completed restoration. d) Therapist treatment: teeth 21 and 22 before. e) Therapist treatment: teeth 21 and 22 caries removal and direct restorations

All cases were assessed initially and treated within scope by the therapist under DA legislation, and utilising appropriate group directives where necessary. The therapist undertook the initial examination, with screenings and special tests including periodontal charting, indices and radiographs. Radiographs were interpreted by the therapist initially and subsequently reported by the dentist. Although there was no prescription from the dentist for the therapist's treatment stages of periodontal care, disease stabilisation and direct restorations, the shared care required active participation of both parties in collaborative planning, discussion and coordinated treatment delivery from the beginning to ensure that the work was complementary and not contradictory. This included the areas of restorations impacting denture design and endodontic treatment, and the timing and placement of restorations with periodontal care. Such a shared care approach between therapist and dentist proved to provide treatment outcomes for the patient that they deemed successful. In this way, the patient's treatment time was reduced because treatments could be synchronised and coordinated, and the patient did not have to wait so long for appointments. In private practice, this may also reduce the overall cost to the patient.

Figures 1, 2, 3, 4 and 5 are examples of two shared care cases completed by undergraduate

Fig. 5 a) Case 2 after therapist treatment plus dentist completed root canal treatment tooth 45: front. b) Case 2 after: left-hand side. c) Case 2 after: right-hand side

dental therapy and dental students.

Figures 1 and 2 show the first case that combined the therapist's periodontal care shared with extractions and a partial denture by the dental student. Figures 3, 4 and 5 demonstrate a wider remit for the therapist including direct restorations working alongside the dentist providing endodontic treatment. 'After' images were taken at completion of treatment in scope of the therapist, before completion of all final dental student work.

Discussion

Dental therapy as a profession has altered considerably since the 1960s when the first dental therapy school was set up. The most notable changes have been the 2002 SoP expansion, permission of dental therapists to be employed within all sectors of dentistry and the creation of DA in 2013. Nevertheless, the role contains core skills that have remained unaffected throughout multiple other changes, as outlined in Table 2.

A 2007 study described the proportion and volume of work undertaken in primary dental care that could be delegated to hygienists and therapists. Without DA, dental therapists could provide up to 35% of a patient's care, and with DA, this could rise to 70% of visits and 58% of clinical time.¹⁰ There is still opportunity to support a wider and more accurate recognition of the scope of dental therapists within the profession to overcome the existing barriers to full optimisation. Thorough knowledge and understanding of dental therapists' scope across the full remit of GDC registrant categories would support better utilisation of them within the field of dentistry, although it is acknowledged that this is only one part of a much bigger picture, with workforce, political, governance and financial issues all having additional impact.^{4,5,6,7,10,13}

It is reported widely that an expansion in the dental workforce is required and that therapists have an important role to play to meet the increased demand of patients' treatment needs associated with multiple factors, including the ageing population.^{5,6,13} Undergraduate education has an important role to play in this regard.^{7,12}

Conclusion

By optimising full SoP of dental therapists, we would allow dentists to focus on more complex items of treatment including crowns, bridges, endodontics, dentures and implants, which lie outside of the therapist's current SoP. Case studies demonstrate successful patient outcomes when a dental therapist is used to their full potential and a shared care approach is adopted.

Through embedding such integrated teaching in an undergraduate curriculum, which

Table 2 Primary scope of practice and expansion of duties of dental therapists

As introduced in 1960s	As of 1 July 2002
Intraoral and extraoral assessment	Pulp therapy treatment of primary teeth (pulpotomy)
Record indices and monitor disease	Placement of preformed crowns on primary teeth
Scaling and polishing	Administration of inferior dental nerve block analgesia
Apply materials to teeth such as fluoride and fissure sealants	Temporary replacement of crown and fillings
Take dental radiographs	Take impressions
Provide dental health education on a one-to-one basis or in a group situation	Treat patients under conscious sedation provided the dentist remains in the surgery throughout the treatment
Routine restorations in both primary and permanent teeth, from class I–V cavity preparations	
Can use all materials except pre-cast or pinned placements	
Treat all types of patient	
Extract primary teeth under local analgesia	

places great emphasis on a shared care approach, the potential for enhanced integration of dental therapists into the profession can be optimised.

Conflict of interest

The authors declare no conflicts of interest.

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