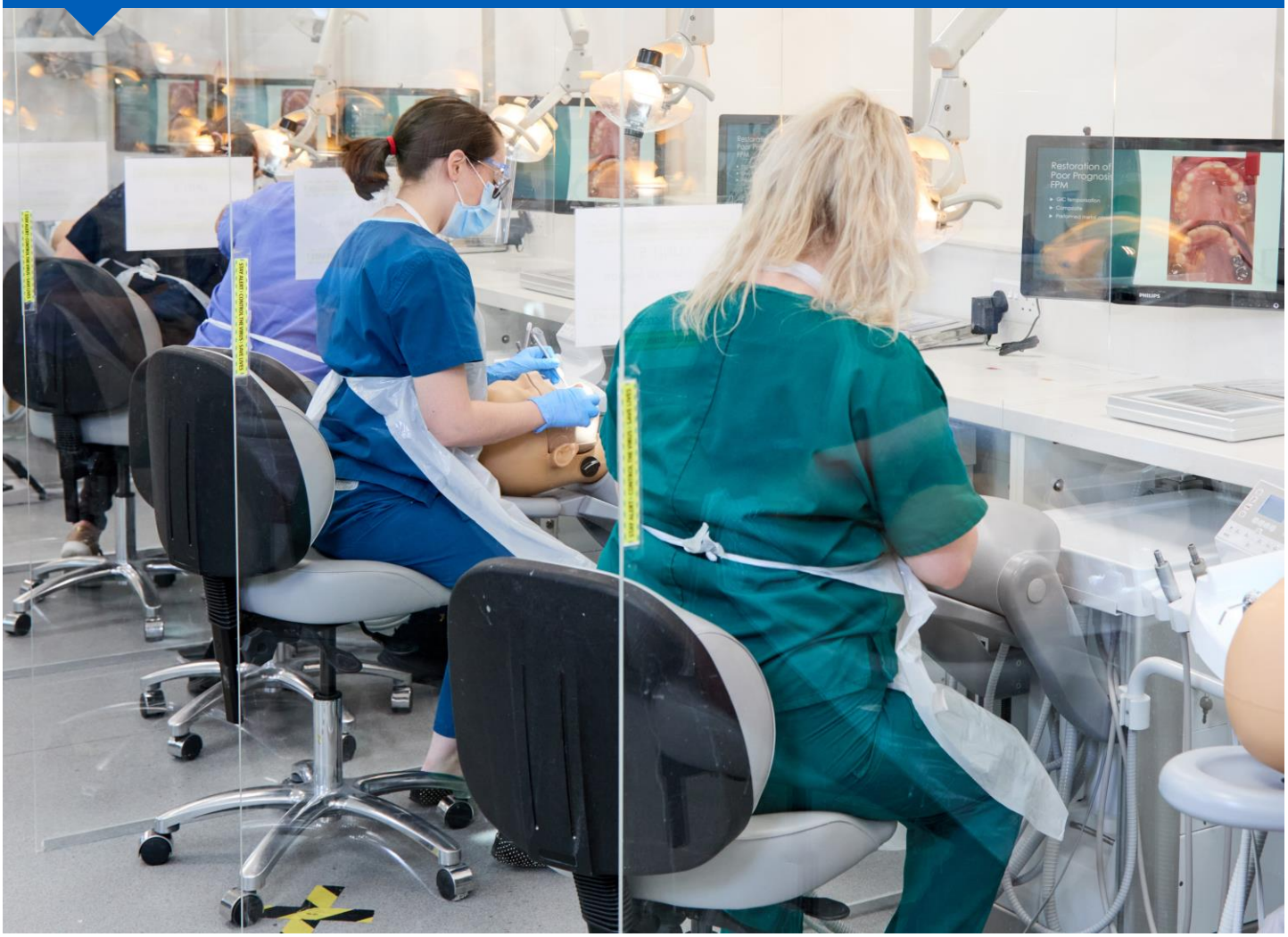
NHS
Health Education England

Advancing Dental Care Review: Evaluation report



A report for Health Education England by SQW

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Advancing Dental Care Review: Evaluation report

A report for Health Education England

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Summary

The evaluation scope

1. Health Education England (HEE) established the Advancing Dental Care (ADC) programme in 2017, with the aim of developing an education and training infrastructure that can build a skilled workforce responding to the changing needs of patients. Its objectives were articulated in the ADC Review:

   - **Objective one**: Collate a robust evidence-base on the population's oral health needs in a technology enabled, prevention-oriented system, and model the most appropriate dental workforce for meeting those needs
   - **Objective two**: Identify and evaluate new and existing innovative training approaches, and develop or upscale exemplars within the available funding envelope
   - **Objective three**: Understand the continuing professional development (CPD) requirements of the existing workforce and identify best practice.

2. The programme comprised a range of different innovations and workstreams that are described in full in the report; 'Blueprint for future dental education and training to support a multi-professional NHS oral health workforce'.

3. This evaluation report presents the findings of an independent study focussed on six innovative training initiatives undertaken in one or more regions in England. The evaluation was undertaken by SQW and followed a mixed-methods approach to generate qualitative and quantitative insights across the pilots. Following development of a logic model and evaluation framework, data were collected at a programme or overview level, as well as at initiative and regional levels.

4. The six initiatives explored were:

   - Two-year combined **Dental Foundation Training and Dental Core Training (DCT)** programmes in two regions, designed both to enhance the attractiveness of key posts and provide a more rounded early career experience of dentistry
   - **Alternative DCT posts** (meaning alternative to solely oral and maxillofacial surgery training posts) which included posts with rotations in different sites, settings or specialities and academic clinical fellow posts
   - **Level 2 training,** to provide professional development opportunities for experienced general practice dentists to enable them to conduct more complex case work
   - **Dental Therapist Foundation Training** to improve clinical skills, experience and confidence for newly qualified dental therapists

- **Return to Therapy,** to refresh the therapist skills of those who qualified but have since been delivering hygienist level care
- **Dental Nurse Apprenticeships** in a hospital setting, exploring implications of changes to the funding from HEE to the apprenticeship levy.

5. The pilot delivery period coincided with the Covid-19 pandemic. This disrupted therapists' training and dental nurse training to a greater extent than the dentistry pilots, although all were affected.

Report findings

6. The rationale underpinning the need for training reform **continues to be relevant and important**. Patient needs and workforce supply issues continue to be felt in different regions of England, and at different scale and intensity. What has changed since the publication of the first Education and Training Review (2017)[1] is that understanding about the scope of practice in the workforce, where people work and the costs and benefits of certain strategic training options, has improved. There is though **still work to be done to strengthen understanding** of the regional map of patient needs, the characteristics of the current workforce, and the type, delivery model and location of dental training posts.

7. Training **flexibility** was considered in the evaluation in two different ways. One was the mode of training delivery and whether posts could be delivered in less than full-time models. This was something that was rarely activity considered, in contrast to blended modes of training that combine online delivery with face-to-face teaching or clinical supervision. The Covid-19 pandemic **accelerated innovation and take up of blended learning routes** and has changed the appetite for technology enhanced teaching and assessment.

8. It was also considered that flexibility of training could relate to learning and progression throughout an oral health career. Dentists wanting or needing to upskill face different challenges depending on their current practice and training background. Some have strong academic skills required for postgraduate level study, while others need to develop their theoretical knowledge and academic writing skills. Those working in secondary care settings might find it easier to physically access and secure time off to train compared with those in general practice. Dental nurses who trained in hospitals were said to have a better knowledge of the range of different types of oral health roles that they aspire to. Training routes need to

[1] Health Education England (2017) Advancing Dental Care: Education and Training Review: Phase 1 Report – The case for change. Accessed at: https://www.hee.nhs.uk/sites/default/files/documents/Advancing%20Dental%20Care%20Phase%20I%20Report%20-%20A%20case%20for%20change_2.pdf

acknowledge such barriers and **ensure pathways to continuous professional development are clearly articulated, understood and effectively supported.**

9. A third key theme was trainee skill development. The trainees who participated in the evaluation (either via survey or interview) appreciated their training, reported **improved skill levels in key competencies, and reported feeling more confident in their professional practice. Trainees had enjoyed their experience** and in particular the opportunity to train in different settings and with particular teams, benefitting from peer group support. Training was often undertaken as part of a multi-professional team in hospital-based courses. In a survey of dental core trainees, almost all (123 out of 126) respondents said they had fully achieved a learning objective to **understand their role in multi-professional teams.**

10. While these positive aspects of training should be retained and expanded, there were areas for improvement identified. Multiple **rotations were valued**, however there was no systematic assessment of the relative benefits of different duration of placements. **Supervisors also play a vital role** in the training infrastructure, and many do an excellent (and often under-acknowledged) job. But there were concerns associated with maintaining high standards and extending the number and range of settings in which placements could be hosted. Thirdly, there is scope for the use of **simulation and digital resources** to be further embedded in dental training programmes.

11. **The extent to which training leads to changed practice varies**. While trainees have new skills and confidence, many may not have opportunities to practice to their full scope. The number and regional spread of posts where they can continue to develop their skills at DCT2 and beyond, and the confusion associated with commissioning services that require level 2 skills, were barriers noted in relation to dentistry. For dental therapists and dental nurses, there are pay disincentives that dissuade therapists from practising therapy (as opposed to better paid hygienist roles); dental nurses (particularly in general practice) were said to be leaving the profession for safer and better paid alternatives.

12. Some research participants noted that the system introduced by the General Dental Contract in 2006 had inadvertently created an inflexible system that is unable to keep up with the changing type and distribution of dental care needs. Interviewees highlighted a need to align training and resources to 'cold spots' of provision to help redress spatial inequalities of access to quality care. Several also noted that **effects of the Contract** inevitably limited what could be achieved by skills supply transformation alone.

13. The need to have a workforce that reflects the cultural diversity of the population served was noted. The profile of pre-registration students (dentists and therapists) was said to be particularly diverse compared with other medical and non-medical professions and the wider dental workforce. However, it was acknowledged that

there was nonetheless **work still to be done to ensure equality of opportunity and a more representative balance across all skill levels in the oral health workforce.**

14. Finally, the programme has encouraged key stakeholders to work together on issues affecting them all. It has allowed regional variation to occur within a national learning network, and this in turn has encouraged a positive, proactive and reflective approach to change. Going forwards, the Dental Education Reform Programme will continue to seek improvements in dental education training, building on ADC's legacy.

1. Introduction

The Advancing Dental Care programme

1.1 The Advancing Dental Care (ADC) programme was established by Health Education England (HEE) in 2017, and continued through to March 2021. Its purpose was to:

'Develop a dental education and training infrastructure that supplies a dental workforce with the skills to respond to the changing oral health needs of patients and services'.
Health Education England[2].

1.2 Adult oral health had been improving over recent years and decades, but challenges remain regarding demand for services. These included an ageing population with changing needs, regional inequalities in children's oral health, and remote or rural populations that found it more challenging to access specialist services[3].

1.3 On the supply side there are challenges associated with recruitment; the British Dental Association (BDA) reported that 75% of NHS practice owners in England struggled to fill vacancies in 2018[4]. In addition, it was recognised that some dental teams were not functioning to achieve optimal efficiency. Outdated knowledge and understanding, and effects of the commissioning model, had resulted in frustrations for some Dental Care Professionals (DCPs[5]) who were not fully utilising their 'scope of practice'.

1.4 Another key driver for the ADC programme related to the funding and commissioning models, recognised as insufficiently flexible to respond to the mismatch in the demand for services and the supply of skills within the NHS. Changes in funding arrangements were reducing the number of dental school places, and concerns were felt about the effect of the end of therapist and hygienist bursaries in 2017 and the introduction of apprenticeship schemes[6]. The commissioning model, based on historical supply of services rather than anticipated demand, was unable to address unequal distributions of skilled practitioners and the increasing referral of specialist cases to secondary care.

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[2] https://www.hee.nhs.uk/our-work/advancing-dental-care
[3] Health Education England (2019) The Future Oral and Dental Workforce for England: Liberating human resources to serve the population across the life-course
[4] https://bda.org/news-centre/press-releases/75-per-cent-of-nhs-dental-practices-now-struggling-to-fill-vacancies
[5] The title DCP encompasses six roles; Dental nurses, dental hygienists, dental therapists, orthodontic therapists, dental technicians and clinical dental technicians.
[6] Health Education England, ADC phase II, context; high level findings; tube maps. Accessed at: https://www.hee.nhs.uk/our-work/advancing-dental-care/advancing-dental-care-phase-ii

Programme aim and objectives

1.5 The aim of the ADC programme was to **develop an education and training infrastructure that can respond to the changing needs of patients and services**, within the context of the NHS Long Term Plan and HEE's People Plan. Its three objectives were articulated in the ADC Review[7]:

- **Objective one:** Collate a robust evidence-base on the population's oral health needs in a technology enabled, prevention-oriented system, and model the most appropriate dental workforce for meeting those needs
- **Objective two:** Identify and evaluate new and existing innovative training approaches, and develop or upscale exemplars within the available funding envelope
- **Objective three:** Understand the CPD requirements of the existing workforce and identify best practice.

1.6 The ADC Review described the future dental team as 'a high-functioning mix of dental care professionals where the right skills were deployed at the greatest efficiency and delivering maximum benefit for the patient'[8]. To achieve this vision, the structure of services and the education and training of the dental workforce have needed to adapt as referenced in the Interim NHS People Plan[9] and reinforced in the People Plan 'We are the NHS'[10].

Background to the pilot initiatives

1.7 The first phase of the ADC programme produced an Education and Training Review (2017)[11]. The review made recommendations across four thematic areas, including to pilot and evaluate innovative dental education and training initiatives in response to key issues faced by DCPs. This has been updated with a final report for the

[7] Dental Education and Training: ADC Review 2020 to 2021. Accessed at: https://www.hee.nhs.uk/sites/default/files/documents/ADC%20Phase%20II%20-%20context%20%3B%20high%20level%20findings%3B%20tube%20maps_0.pdf
[8] Health Education England (2017) Advancing Dental Care: Education and Training Review: Final report. Accessed at: https://www.hee.nhs.uk/sites/default/files/documents/Advancing%20Dental%20Care%20Final%20Report%20.pdf
[9] NHS (2019) Interim NHS People Plan. Accessed at: https://www.longtermplan.nhs.uk/wp-content/uploads/2019/05/Interim-NHS-People-Plan_June2019.pdf
[10] HEE People Plan. Accessed at: https://www.england.nhs.uk/wp-content/uploads/2020/07/We_Are_The_NHS_Action_For_All_Of_Us_FINAL_24_08_20.pdf
[11] Health Education England (2017) Advancing Dental Care: Education and Training Review: Phase 1 Report – The case for change. Accessed at: https://www.hee.nhs.uk/sites/default/files/documents/Advancing%20Dental%20Care%20Phase%20I%20Report%20-%20A%20case%20for%20change_2.pdf

programme; 'Blueprint for future dental education and training to support a multi-professional NHS oral health workforce'.

1.8 This evaluation report focuses on part of the ADC programme; namely **six training initiatives** designed to better equip the dental workforce to meet service demands of the future, which are currently being undertaken in one or more English regions. The rationale and purpose of these six initiatives are described below.

Dentistry initiatives

1.9 Dentists choose to follow different training or employment routes. Those choices continue throughout their careers as they build skills, continue to practice and /or specialise. Each choice has its advantages and trade-offs. Those who undertake their primary care based Dental Foundation Training (DFT) and decide to stay in practice could deliver extensive service but have limited understanding of the nature of secondary care and limit their opportunities to develop further skills. Those undertaking traditional Dental Core Training (DCT) posts in oral and maxillofacial surgery (OMFS) may not get the opportunity to develop their skills in a wider range of specialties. In addition, experienced dentists in primary care may not be able or willing to forego income to develop skills (or have their skills accredited) to perform Level 2 services, thus limiting potential for Level 2 care in primary care settings.

1.10 As a result of the key issues experienced within the oral healthcare system, the ADC programme sought to test and evaluate three key initiatives. These were:

- **Two-year DFT/DCT:** undertaken by newly qualified dentists, which allows trainees to undertake both programmes, spending time concurrently in practice (DFT) and hospital (DCT1) settings. The programme is delivered in the North East, Yorkshire and Humber and the North West. Two-year posts enable new dentists to gain experience and skills in both primary and secondary care, and offer increased employment security for trainees.
- **Alternative DCT posts:** this is a category for DCT posts which can be one or two years in length, and are delivered (at least partly) outside of OMFS settings. Some involve rotations between different specialties or care settings (e.g. primary care). Others are Fellow posts in academia. They are designed to give trainees a wider range of opportunities than traditional OMFS hospital-based posts, exposure to multi-professional teams, and open up career opportunities by enabling trainees to make more informed decisions.
- **Level 2 Training:** a small programme offering Level 2 training for experienced dentists in the South West and Thames Valley and Wessex regions. The initiative aims to develop enhanced skills of general dental practitioners, with either certification or a qualification, to increase the number of dentists able to provide Level 2 interventions in primary care.

Dental Therapy initiatives

1.11 Dental therapists are expected to become an increasingly important part of the primary care workforce. Therapists offer the potential to provide cost-effective care to patients by providing oral health services currently delivered by dentists, thus freeing dentists to do more complex and specialist work. This is seen as vital to improve dental care capacity and address regional inequality in access to services.

1.12 However, dental therapists do not always get the opportunity to undertake the full scope of practice for which they are trained. This is for a number of reasons:

- They may lack the confidence to perform their skills in practice, as they do not have the same foundation year to build their confidence that dentists have. This is compounded as time passes resulting in a loss of skills and confidence.
- They cannot take on their own commissions in the NHS, but have to work on lists provided by a commissioned dentist. Dental practices are often not structured to accommodate the work of therapists, and financial incentives to restructure are not in place.
- Therapists find that pay is better working as a hygienist, despite the lower skill level required.

1.13 Two key initiatives aimed to address these issues:

- **Dental Therapist Foundation Training (DTFT):** a one-year foundation programme for qualified dental therapists, operating in all regions. Trainees typically spend three days working in practice and undertake an accompanying study day programme. The remaining two days can be used for other employment (or to undertake training in an alternative dental setting, for example, a hospital or community setting). The initiative is designed to ease the transition from student to practising therapist, and encourage more practices to employ dental therapists, enabling trainees to utilise their full set of skills.
- **Return to Therapy:** a programme for qualified dental therapists who have not previously undertaken DTFT and are working as hygienists in London, Kent, Surrey and Sussex, and Thames Valley and Wessex. The course aims to equip Dental Therapy graduates to be refreshed with necessary training and education to gain the skills and confidence to return to working successfully in a general dental practice environment as a therapist.

Dental Nurse Apprenticeships

1.14 Dental nurses are the largest part of the oral health workforce. Most work in primary care and are trained in those settings. New standards for dental nursing

under the apprenticeship scheme have been agreed; primary care settings have been moving to the apprenticeship model for recruiting and training new dental nurses.

1.15 Some dental nurses will use their nursing experience as the basis of career progression to orthodontic work or other roles. Dental nurses also work in secondary care settings both in service provision and training support roles. Dental hospitals require dental nurses with an additional and different set of skills compared with primary care. Because dental nurses play an important role in the training of undergraduate and post-registration dentists and dental therapists, HEE has in the past invested in their training in secondary care. However, once the apprenticeship levy was put in place it was agreed that this was a more propitious mode of funding dental nurse training. HEE ceased funding dental nurse training for new starters from September 2020. In the period leading up to this, HEE provided areas with transition support which was used differently in different regions[12].

Evaluation aim and scope

1.16 SQW[13], an independent research and consultancy organisation, was commissioned by HEE to conduct an evaluation of these ADC training pilots, from February 2020 to June 2021. The aim of the evaluation was to test and evaluate how these training initiatives served to improve or modify the skills and capabilities of the dental workforce, whilst offering training and workforce flexibility, in comparison to existing training models.

1.17 The scope of the evaluation did not extend to the whole ADC programme, but focused on the **six initiatives** outlined above. Specifically, the evaluation examined:

- Training flexibility (both within pathways and across the training infrastructure)
- Trainees' skill development (including the quality of training, overall learning experiences and progression)
- Future workforce supply and retention
- Training commissioning (including the effects of different funding models, barriers and risks to running training initiatives and ability to upscale).

The effects of Covid-19 on the ADC pilots

1.18 The coronavirus Covid-19 pandemic has caused disruption for many dental trainees, although the impact has differed depending on the training initiative, setting and

[12] Note that this evaluation has focused on Dental Nurse Apprenticeships in three regions (North West, Yorkshire and Humber and London, Kent, Surrey and Sussex) only, due to funding legacy.
[13] http://www.sqw.co.uk/

region. Dental practices were instructed to close for routine care and to provide only urgent treatment from 25 March to 8 June 2020 as part of restrictions to reduce the risk of Covid-19 transmission. From June 2020, dental practices were able to open for all face-to-face care, where practices assessed they had the necessary safety requirements in place.

1.19 The closures have arguably been more disruptive for dental therapists. While both dental therapists and trainees on the two-year DFT/DCT scheme were not able to do clinical training during this period, there were concerns that increased patient demand and reduced capacity of educational supervisors would mean that dental trainees would be prioritised over dental therapists. Furthermore, those on the two-year scheme are based in primary care over a longer period (2 years), giving them greater opportunities to 'catch up'.

1.20 Trainees based (or partially based) in secondary care settings faced less disruption. While there were fewer elective opportunities for some DCTs, many were able to continue training as usual. Some DCTs in secondary care were redeployed, although their learning was able to continue and they had the opportunity to develop different skills.

Report structure

1.21 This draft report presents evaluation findings, followed by reflections on their implications. It is structured as follows:

- Section 2: Evaluation methods
- Section 3: Foundation and DCT
- Section 4: Dental therapists
- Section 5: Level 2 training
- Section 6: Dental nursing
- Section 7: Programme level learning
- Section 8: Reflections and recommendations.

1.22 The report is supported by the following Annexes:

- Annex A: Bibliography
- Annex B: Dental therapist survey: key findings
- Annex C: Dental core trainee survey: key findings.

Acknowledgements

1.23 This report was compiled by an SQW evaluation team comprised of Lauren Roberts, Dr. Jo Hutchinson, Jane Meagher, Holly Waddell, Alice Birch, Carolyn Hindle and Megan Cordwell.

1.24 We would like to acknowledge the time and insights provided by many people who have contributed to the evaluation research and supported us by providing direct insights, introductions to key people and access to relevant data. Without stakeholder inputs the evaluation would not be possible.

1.25 In particular we would like to thank:

- Trainees, trainers and key stakeholders for speaking to us and sharing their experiences, and dental therapists and dental core trainees for completing our surveys
- The programme team at HEE for reviewing our work, introducing us to key stakeholders, providing data, disseminating materials on our behalf, and advising us of new developments.

2. Evaluation methods

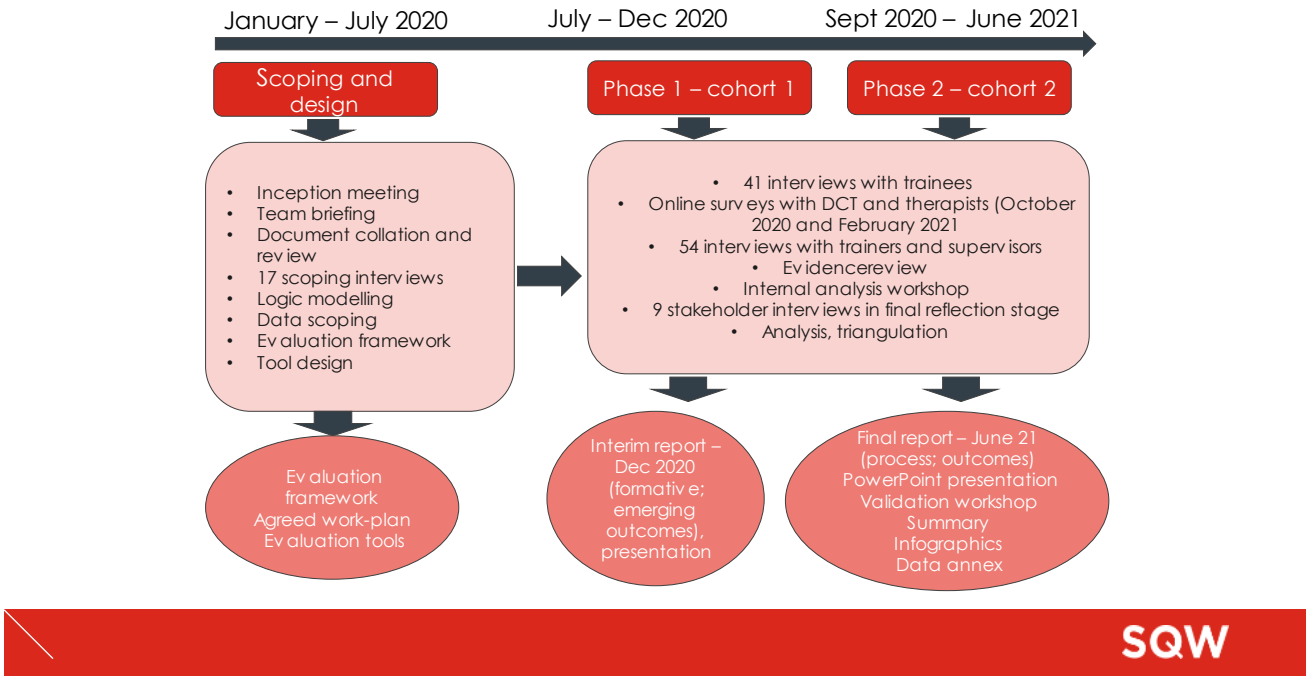
2.1 This section sets out the evaluation methodology (research questions and data sources) and associated key considerations.

Approach

2.2 Figure 2-1 provides an overview of the evaluation methodology. The evaluation was initially planned to complete in April 2021; this was extended to deliver final reporting in June 2021 due to delays associated with the Covid-19 pandemic.

2.3 The evaluation combined elements of process evaluation (to identify aspects of delivery that were working well or less well, and why) and impact evaluation (to generate insights and outcomes evidence across the pilots).

Figure 2-1: Overview of evaluation methodology



Source: SQW

Research questions

2.4 The evaluation provides insights into a nested set of research questions. These explore the experience and effect on the learner of the level and speed of skill acquisition, their confidence to practice and future ambition. The relationship between the learner, their trainer and their experiences provides a second set of research questions. The context within which these relationships operate provides

the third set of research evidence required, as experiences differed by course, setting, region and locality.

2.5 The pilots were also part of a wider policy context that sought to shift the provision of dental services from secondary to primary care settings where safe and appropriate to do so. The evaluation explored the context of that shift and the role that training could play in creating a better and more equitably provision of services.

2.6 The core research question areas explored by the evaluation are summarised in Table 2-1.

Table 2-1: Core research question areas

Core question areas by research theme
Training flexibility
• Trainee motivation and experience of the level of flexibility to complete their chosen training pathway and / or move onto another training pathway • Capacity in the training infrastructure to accommodate flexible training pathways
Trainees' skills development experience, acquisition & utilisation
• Measures of quality of training and development of learners' skills[14] • Trainees' and trainers' overall learning experiences • Skills and utility of scope of practice as benefits patients and services • Attainment, progression and drop off in pilots versus comparators
Future workforce supply and retention
• Effect on recruitment and future workforce retention • Effect of and on multi-professional delivery • Impact on skills planning in the short and longer term
Training commissioning
• Effect of commissioning and funding models applied to training initiatives, and the benefits and challenges of these • The barriers, risks and issues to running training initiatives and resolutions • Resources associated with pilot initiatives (financial, management and other) • Capacity to transfer/replicate training initiatives across more regions from 2021

Source: SQW, Scoping Report

[14] As aligned with elements of the HEE quality framework.
[14] Elements of this are captured during dentistry training through the Review of Competence Progression (RCP)

Data collection methods

2.7 The evaluation followed a mixed methods approach to generate qualitative and quantitative insights across the pilots. Following development of a logic model (see Annex B) and evaluation framework, data was collected at programme or overview level and at initiative and regional levels.

2.8 As shown in Table 2-2, a range of different data collection methods have been implemented to address the research questions. They include interviews, surveys of DCT and dental therapy trainees, and review of secondary data and local evaluations/impact assessments. The findings from each initiative have been triangulated to pull out generalisable learning and lessons across the ADC programme, alongside initiative specific findings.

Table 2-2: Evidence used in the final evaluation (February 2020 – June 2021)

Data source	Interviews and survey responses achieved
Scoping interviews with key stakeholders	• 6 Post-Graduate Dental Deans, 4 Training Programme Directors and 7 programme managers and administrators
Local evaluation reports, policy papers and academic publications which depict regional and national activity and experiences	• Annex A provides an annotated bibliography of additional documentary evidence reviewed
Telephone/MS Teams interviews with trainees participating in pilot initiative in scope, to explore their motivations, experiences, progression, planned next steps, enablers, challenges and barriers	• 2 year DFT/DCT posts x10 • DCT x3 • Alternative DCT posts x10 • Level 2 x4 • Dental Therapy Foundation trainees x12 • Return to Therapy trainees x2
Telephone/Teams interviews with trainers/supervisors to explore their motivations, experiences, reflections on trainee opportunities and progression, how 'typical' combined initiative trainees are, training structure and delivery model, enablers, challenges and barriers, and comparison with BAU	• TPDs x4 • Foundation and core dental trainers/supervisors x23 • Level 2 trainers/managers x7 • DTFT trainers and managers x9 • Dental Nurse Apprenticeship trainers/supervisors x11
Telephone/Teams interviews with Heads of Schools, ADC programme leads, Postgraduate Dental Deans and other stakeholders	• Postgraduate Dental Deans and members of the Board x9 (5 had been interviewed previously in the scoping phase).
Two online, self-completion surveys of DCTs, 25 August 2020 to 12 October 2020 and 13 January to 1 March 2021. See Annex B for full results.	• 2019-20 and 2020-21 Dental core trainees who had either completed or were completing a DCT one-year post (DCT 1, 2 or 3) or a DFT/DCT combined two-year post.

Data source	Interviews and survey responses achieved
	• From the 2020 survey, 83 usable responses were analysed, including 9 partial responses. • From the 2021 survey, 140 usable responses were analysed, including 14 partial responses.
Two online, self-completion surveys of dental therapy trainees, 24th August 2020 to 12th October 2020 and 12th January to 1 March 2021 See Annex C for full results	• 2019-20 and 2020-21 ADC dental therapist trainees who had either completed/were undertaking the Dental Therapist Foundation Training or the Return to Practice training. • From the 2020 survey, 34 usable responses were analysed including 4 partial responses. • From the 2021 survey, 22 usable responses were analysed, with six partial responses.
Applicant preference data	Alternative and OMFS DCT1, DCT2 and DCT3 training in England in 2020, 2019 and 2018.

Source: SQW

Data analysis

2.9 Survey responses were downloaded from the survey software, and a protocol was followed for cleaning and anonymising responses in Excel. Frequency tables were used to analyse quantitative data. Working papers of survey findings were shared with the Board.

2.10 Interview notes were written up in full, key quotes and examples noted. All interview notes were uploaded to specialist qualitative analysis for systematic review. For qualitative data, an agreed coding framework was developed in line with the research questions to identify common themes across qualitative responses.

2.11 Secondary data sources, including evaluation reports and published articles, were all recommended by interviewees or programme leads. Sources were identified, collated and sorted according to theme. Where sources provided external and additional evidence relating to the pilots, their key findings and conclusions have been included in this report.

2.12 An interim report was prepared with emerging findings in December 2020 and discussed with Board members in February 2021 to provide an opportunity for critical review.

Strengths and limitations

2.13 The evidence used in the evaluation has a number of strengths:

- The evaluation team were supported by colleagues at HEE and members of the Board to secure access to key stakeholders either for interview or to invite survey participation (or indeed both). There was therefore a good level of engagement by key parties to provide insights from different perspectives.
- The surveys generated a good level of response.
- The integration of information and evidence from other sources, including other published evaluations and cost modelling, created an efficient mode of data collection that minimised duplication.

2.14 The evaluation evidence also has gaps and limitations, which are important to keep in mind when reviewing this report:

- The statistical context for training innovations is not robust. While the General Dental Council (GDC) reports the numbers and characteristics of the workforce, where they trained and what they are registered to do, there is no breakdown by type of provider, specialism or take up of Continuing Professional Development (CPD). The relative scale of importance of some training issues is therefore difficult to gauge.
- The evidence for some issues is provided by observers rather than those directly involved. For example, we were told about difficulties experienced by therapists in their practice, but we did not speak with practice managers. Some of the findings are reported as observations (that were repeatedly made) rather than direct testimony. Similarly, comments were made about private sector training providers which could not be corroborated as we had no testimony from such providers.
- The evaluation had a longer reporting period than that of the ADC programme as a whole, meaning that the sequencing of reporting was slightly out of synchronisation.
- With a relatively small number of participants engaged in the pilot initiatives and a smaller sample reflected in the evaluation, the individualised nature of experiences will be reflected. We found for example that more dentists in academic 'alternative' training routes volunteered for interview; this may have meant that the voices of those in other forms of training (such as community services or paediatrics) are under-represented.

The effect of Covid-19 on the evaluation

2.15 The March to June 2020 Covid-19 lockdown delayed the scoping phase of the evaluation; the evaluation timeframe was therefore extended to June 2021.

2.16 As outlined above, Covid-19 affected the delivery of training for some of the 2019/20 cohorts and recruitment and delivery for 2020/21 cohorts. The initial evaluation plan was to complete interviews with trainees (and trainers) at the end of their training period. However, some training programmes were extended, some (dental nurse apprentices for example) were temporarily suspended, and others restructured. Consequently, interviews were undertaken only with those actively involved in the training pilots at the time of interview.

2.17 Covid-19 related questions were added to the research tools to explore its effects on the pilot training, separate to any generic issues. These factors have been considered in the data analysis to identify and present findings specifically related to the impact of Covid-19 on the initiatives and trainee experiences separately throughout this report.

3. Foundation and Core dental training

Background

3.1 COPDEND (Committee of Postgraduate Dental Deans and Directors) is responsible for the development of the dental training curriculum, and its quality management at both Foundation and Core levels. Foundation training is defined as a relevant period of employment (fully funded by the NHS) during which a dental practitioner is employed under a contract of service by an approved training practice to provide a wide range of dental care and treatment. In addition, the dental practitioner is required to attend at least 30 study days, with the aims and objectives of enhancing clinical and administrative competence and promoting high standards through relevant postgraduate training[15]. Foundation training supports newly qualified dentists to move from being a safe beginner to a confident and competent practitioner. This became mandatory following research that highlighted the erosion of clinical practice experienced by undergraduate pre-registration students[16]. Most HEE investment in post-graduate dental education is focused on Foundation training.

3.2 The most recently published survey of dental foundation trainees (2018) suggests that trainees in Foundation training are satisfied with their experiences. A total of 1006 out of 1017 respondents said their clinical practice had improved as a result of their Foundation training, and trainees were particularly positive about the role of their educational supervisor/trainer:

Clearly, many trainees felt that they had been very lucky to have such a good Educational Supervisor or Supervisors and were genuinely grateful for the support they had had.
2018 National survey of Dental Foundation Trainees[17]

3.3 The ADC programme is not therefore seeking to fix something, but to adapt proven training practices to future proof the profession and ensure it is ready to meet the challenges of service provision.

[15] Committee of Postgraduate Dental Deans and Directors (COPDEND) (2015) Dental Foundation Training Curriculum.
[16] Ali, K, Slade, A, Kay, E, Zahra, D, Tredwin, C., 'Preparedness of undergraduate dental students in the United Kingdom: a national study', British Dental Journal, 2017 222 (6): 472 - 477. https://doi.org/10.1038/sj.bdj.2017.272
[17] Joint Committee for Postgraduate Training in Dentistry (2018) National Survey of Dental Foundation/Vocational Training 2018 Summary Report, Royal College of Surgeons. https://www.rcseng.ac.uk/dental-faculties/fds/careers-in-dental-surgery/postgraduate-training-jcptd/trainee-surveys/

3.4 Dental Core training is a route that follows Foundation training to enable specialisation. The number of Core training posts available reduces as specialisation increases. The location, focus and structure of posts is the function of several factors, including historical patterns of provision, the location of specialist services that can host trainees, capacity of consultants to train, and service requirements.

3.5 The ADC programme sought to explore ways to:

- **Integrate skills development in both primary and secondary care settings,** recognising that most dental training is undertaken in secondary whilst most employment is in primary
- Ensure that training provides an **understanding of what different specialities entail,** to help career decisions and to improve better referral practices
- **Generate more flexible training opportunities** that enable practitioners to move between primary and secondary settings for training, including more part-time training.

3.6 This section presents evidence and findings regarding dental core and Foundation training, covering two pilot initiatives: the two-year (or longitudinal) DFT/DCT, and 'alternative' DCT posts. It draws on preferencing data, the results from the two waves of DCT trainee surveys, interviews with trainees, trainers/supervisors and key stakeholders, and local evaluation reports.

Characteristics of the pilot initiatives

Two-year DFT/DCT

3.7 The combined DFT/DCT programme is a two-year programme undertaken by newly qualified dentists, which incorporates one-year dental Foundation training, and one year of dental Core training. Rather than undertaking a full year of DFT followed by a full year of DCT1 (applied for separately), the two-year programme allows trainees to undertake both programmes based on one application, spending time concurrently in practice (DFT) and hospital (DCT1) settings.

3.8 The programme is delivered in the North East and the Yorkshire and Humber regions, with 24 trainees being recruited across both regions per year (12 in each region annually). The delivery model varies. In 2020 it also commenced in the North West.

3.9 In the **North East** two trainees are based together in a practice, essentially providing a job share service equivalent to one whole-time trainee, given the alternating week each spends in the Dental Hospital (North East) and in practice. The model (known as 'General Professional Training') also includes rotations in all the core aspects of dentistry practiced in the hospital setting (with one-year rotation working in

restorative dentistry, and the other year completing three four-monthly rotations in oral surgery, paediatric dentistry and orthodontics, and the dental emergency clinic). This model is designed to provide broad and comprehensive training to improve knowledge of, and confidence in, different specialisms.

3.10 The model operates differently in **Yorkshire and Humber** (known as 'Joint Dental Foundation Core Training') where trainees are appointed to two-year posts and are located within District General Hospitals as well as general practice. The **North West** model provides two-days per week for trainees in dental foundation, alongside two days each week in dental Core training in an appropriate Level 2 provider, plus one day each week in a study programme.

3.11 In the **North East,** the programme has been ongoing for over two decades, whereas in Yorkshire and Humber the programme has been running since 2011.

Alternative DCT posts

3.12 The majority of DCT posts are one-year posts based in OMFS departments in secondary care. Alternative DCT posts (previously referred to as 'innovative' DCT posts) are currently being delivered in all regions, and vary in length, focus, funding arrangements and level. Alternative DCT posts are usually 1-2 years in length (although Academic Clinical Fellow posts could be longer). Some involve rotations between different specialties or care settings; rotations can occur as frequently as monthly, whereas some are yearly. The posts are located in a variety of settings, including: Community Dental Service; Oral Medicine; Oral Pathology; Restorative Dentistry; Paediatric Dentistry; Oral Surgery; Orthodontics; Special Care Dentistry; Dental Public Health; as well as National Institute for Health Research (NIHR) funded Academic Clinical Fellow posts.

3.13 Alternative DCT posts are designed to give trainees a wider range of training experiences than traditional OMFS hospital-based posts, allowing a greater number of trainees to undertake DCT. They are also intended to broaden the range of career opportunities through more specialty options, allowing trainees to make a more informed decision about their own progression. The variety of available posts also has the potential to increase the numbers of early career dentists with academic skills and increase DCT accredited dentists in primary care, reducing the need for referrals and improving accessibility for patients.

3.14 There are more DCT1 posts than DCT2 or DCT3 posts, with the numbers of posts decreasing and the level of speciality increases. This is also true of alternative DCT posts (Table 3-1).

Table 3-1: DCT posts available for recruitment in 2020

	Alternative posts	OMFS posts	Total
DCT1	93	214	307
DCT2	85	110	195
DCT3	26	19	45

Source: Preference data 2020

Evidence informing the evaluation

3.15 This section of the evaluation is informed by the following:

- Published documents, including from the General Dental Council, HEE and NHS England
- A report commissioned by HEE from the Cardiff Unit for Research and Evaluation in Medical and Dental Education on the career motivations, preferences and perceptions of DCT[18]
- An overview of the North East and Yorkshire and Humber two-year combined DFT/DCT training schemes from the *British Dental Journal*[19]
- Two articles[20] outlining the personal experiences of dental trainees: one undertaking the two-year combined DFT/DCT in Leeds and one undertaking an Academic Clinical Fellow post alongside DCT3 in Yorkshire and Humber.
- Interviews with
  - ten DFT/DCT trainees
  - three DCT trainees based in OMFS posts
  - ten DCT trainees undertaking alternative posts
  - 23 foundation and core dental trainers/supervisors

[18] Bullock, A., Bartlett, S., Cowpe, J., (2019). Dental Core Trainees: Career Motivations, Preferences and Perceptions of Training. Cardiff Unit for Research and Evaluation in Medical and Dental Education. https://www.baoms.org.uk/_userfiles/pages/files/professionals/dct/dct_final_report_july_19.pdf

[19] Karsondas, N., Karsondas, N., and Blaylock, P., (2019). 'The two-year longitudinal dental foundation training programme: an option worth revisiting' British Dental Journal, 226 (3) pp. 224-7 https://doi.org/10.1038/sj.bdj.2019.100

[20] Schofield, C., Johnston, M., and Blaylock, P., (2020). 'Do I consider a career in dental academia and if so how do I go about it?' British Dental Journal, 229 (4) pp. 253-5 https://doi.org/10.1038/s41415-020-1991-y
Shelswell and Patel, (2020). 'How can DCTs become involved in research?' British Dental Journal, 228 (5) pp. 325-6 https://doi.org/10.1038/s41415-020-1387-z

- Two waves of online, self-completion survey of DCTs, with 83 usable responses to the 2020 survey and 140 usable responses to the 2021 survey.

Effect of Covid-19

3.16 During restrictions implemented in response to the Covid-19 pandemic, many dentist trainees were unable to continue their training as planned. Experiences have varied throughout 2020 and 2021 as restrictions were implemented and eased at different times, and in different ways depending on the setting.

3.17 Over three-quarters of DCTs surveyed in 2021 reported that Covid-19 had **reduced the amount of clinical experience they had gained through their training**, with reductions in patient numbers and increased patient cancellations contributing to this. This was consistent with feedback from trainees interviewed. For example, trainees reported that there had been a reduction in all activities, including clinical procedures, theatres and surgeries, affecting their skill levels. Even when primary care settings were able to re-open, there were limitations in the numbers and types of procedures and some initial issues over the availability of appropriate personal protective equipment.

3.18 Survey respondents reported that Covid-19 had **reduced the amount of training they had received or had access to**, not only due to the transition of study days to virtual delivery (resulting in reduced face to face opportunities), but also as a result of reduced staff availability due to self-isolation and reduced learning opportunities.

3.19 Survey respondents noted **a shift in work patterns and roles**, including the redeployment of trainees to other areas (such as NHS 111) and an increase in the amount of on call work. For example, one respondent indicated that this had limited their training opportunities to instead focusing on medical skills.

3.20 Other effects of Covid-19 reported included increased stress both for individual respondents and their teams and reduced career progression opportunities. Respondents also reported reduced confidence in their skillsets as a result of the pandemic's effects.

3.21 In one area, the start date of one alternative DCT programmes was delayed by a year. This occurred less commonly for other types of post, e.g. Academic Clinical Fellows were able to focus on non-clinical elements of training when restrictions impacted clinical opportunities. **Other dentists, particularly those on DCT programmes in secondary care, have still been able to train.** Some consultees noted that their local dental hospitals became dental urgent care centres, so trainees were still getting similar training opportunities as before.

3.22 Despite the shift in roles, a large number of survey respondents noted that redeployment and the impact of Covid-19 more widely had **allowed them to**

diversify their skillset, for example by gaining experience in medical skills and in triaging over the phone and prioritising care. Other positive effects of Covid-19 noted included increased time for research projects and audits to be completed, increased support due to reduced workload for senior staff, and reduced pressure due to the lower number of patients and reduced trauma.

3.23 It was observed during consultation that those trainees undertaking the two-year combined DFT/DCT were likely to have been exposed to Covid-19 frontline work, built resilience and learnt new skills, and were therefore expected to successfully complete their training.

Training flexibility

Variety of experience

3.24 Most trainers spoke about the importance of providing dental trainees with a **breadth of experience prior to specialisation**. The benefits were articulated as:

- Providing a sense of the range of dentistry available, to inform trainees' future plans
- De-mystifying and giving trainees confidence that they can cope with doing procedures even if they do not form part of their regular practice
- Giving trainees experiences that allow them to compare and contrast different approaches, and share practice from one setting with another (characterised as a '*cross fertilisation of ideas*').

3.25 **Alternative posts** and two-year combined DFT/DCT posts **allow for a wide variety of experiences**. Trainees and trainers alike saw varied options as providing richer experiences from a variety of specialities and settings, helping to achieve varied skills for the future workforce.

3.26 Those Dental Core Trainees interviewed undertaking posts in OMFS settings found elements of alternative posts (in particular rotations) appealing, but the limited number of rotational posts was a barrier, particularly when location was a priority factor in their decision making. Similarly, a quarter of survey respondents who had completed an OMFS-only post indicated that they would have preferred a post with rotations in other areas of dentistry. A key reason for choosing an OMFS-based post rather than a post with rotations was wanting to develop expertise specifically in oral surgery specialties and OMFS.

Less than full-time training models

3.27 There was **limited evidence on the availability of less than full-time training models** – and therefore limited feedback on how well they work within the models.

Two-year combined DFT/DCT and alternative DCT trainees were mostly unaware that less than full-time training could be an option and did not think it would be possible as a model for their training posts (mainly related to overcoming logistical challenges and in particular for two-year posts). There was however evidence of a trainee with an alternative post on a 0.8FTE over an extended number of years, who reported that they were satisfied with their flexible working arrangements.

Location

3.28 At DCT1 level, **alternative DCT posts are more concentrated** in certain areas (London, North West and West Midlands) whereas **OMFS-based posts are more dispersed** across the country. There is a similar pattern at DCT2, although the concentration of alternative posts in London is not as apparent. **DCT3 posts are concentrated in a small number of regions** (West Midlands, North West and Yorkshire & Humber). Four regions do not host any DCT3 posts, which means that trainees in those regions would likely have to relocate if they wanted to undertake DCT3.

3.29 There was mixed evidence about the relative importance of location as a key factor influencing applicant behaviour. Geography was identified as a key influencer in the research undertaken on DCT motivations and preferences in 2019[21]. However, geographical location was not suggested to be the major motivation behind application decisions in the DCT survey undertaken for this evaluation with DCTs in 2020 (of whom 54 would have accepted a DCT post in a different region of England, while 14 said that they would not). Similarly, in 2021 three-quarters of survey respondents said they would have accepted a DCT post in a different region of England, while 10% said that they would not (shown in Table 3-2).

Table 3-2: Statement which best fits motivation for applying for posts (N=38)

	Number of respondents
Location and type of training post were equally important to me	79
The type of training post was more important to me than its location	53
The location of training was more important to me than the type of training post	8

Source: SQW analysis of the survey of dental therapist trainees 2021

3.30 However, when respondents were asked to state their motivations for applying and taking up posts, over half indicated that the location and type of training post were equally important to them. The findings indicate that **whilst geographical location may be a major motivator**

[21] Bullock, A., Bartlett, S., Cowpe, J. (2019). *Dental Core Trainees: Career Motivations, Preferences and Perceptions of Training* Cardiff University School of Social Sciences. https://www.baoms.org.uk/_userfiles/pages/files/professionals/dct/dct_final_report_july_19.pdf

behind the ranking of posts for some, trainees appear to be willing (if necessary and on the whole) to move to other regions for a DCT post.

Awareness of opportunities

3.31 Dental foundation and core trainees interviewed who were undertaking two-year combined DFT/DCT or alternative training had often **heard about their post from a personal contact already in the setting** who could tell them more about the post. Interviewees said that they were not always clear about how training posts featured in national selection might differ. This suggests that some trainees might not consider a two-year combined DFT/DCT or alternative post because they don't know what is involved, how it might fit with their career ambitions and they don't know people who can provide more information.

Run through

3.32 Almost all DFT/DCT 2021 survey respondents identified **the two-year 'run through' feature of their training as a decisive factor at application stage**. The reasons for the appeal of this feature included **job security**, with the two years of employment provided by the course seen as a benefit; **exemption from the recruitment process after a year; and consistency of location** in terms of stability and continuity of relationships.

3.33 A number of respondents highlighted that a two-year combined DCT2/3 post would also be appealing:

"One of the key issues with one-year DCT is that you are seen as temporary by staff members and supervisors - they are not engaged with your development and a two-year programme would improve their investment"
DCT trainee (survey)

3.34 Several respondents identified the opportunity **for gaining experience in primary and secondary care** as a key benefit of the two-year combined programme. Multiple respondents noted that it was an opportunity to gain a wide range of experience across dentistry and different specialties, to gain awareness of what was available.

3.35 However, **the run-through model is not right for all trainees**. Some undertaking one-year programmes see run-through as unappealing because they want to retain flexibility to change specialty or location after one year, want fewer rotations within the year, or want to focus on primary care.

Appetite for further flexibility

3.36 There was interest in exploring different patterns of rotation (of 4-, 6- or 8-months duration), rotations in different settings, and blocks or alternate weeks or fortnights. Possible improvements to the model suggested by trainers and trainees included:

- Longer alternating rotations (two weeks to six months in each setting were proposed)
- Ensuring trainers have access to trainees' portfolios across settings
- Ensuring a broad range of posts in hospital settings are on offer, including OMFS but also in other departments.

Trainee skill development

Types of skills developed

3.37 Both the two-year combined DFT/DCT and alternative pilot training models were reported to provide dental trainees with a wider range of experience across different specialties in comparison to business-as-usual models. Combined two-year DFT/DCT trainees said they thought their training provided clinical experience more relevant to dentistry than their colleagues who had completed an OMFS-only post.

"I feel like I am getting relatively more clinical experience relevant to dentistry"
DCT trainee (survey)

3.38 One dental trainee completing the two-year combined DFT/DCT programme reported that their training provides more opportunity for increased practical experience than their colleagues in OMFS-only posts.

"I have gained a skillset that you would be very unlikely to gain from more conventional Core training posts."
DCT trainee (survey)

3.39 Academic Clinical Fellows (ACFs) said they liked the fact that their posts were longer than traditional DCT posts, giving them 3-4 years to develop their skills and knowledge and build relationships with colleagues. Three ACF trainees stated that the academic aspect of the course was much stronger than the clinical side. One said they did not have a clinical aim for their post, while another found few study days appropriate to their role. Those undertaking these posts highlighted the self-directed element of their research, with the levels of freedom, flexibility and tailoring to the individual higher than expected. They valued the opportunity to

teach; research and other evidence show that ACFs are more likely to continue into research and academic dentistry careers[22].

3.40 **Most two-year combined DFT/DCT and alternative trainees interviewed felt their confidence in their ability to practice had increased** as a result of their post, due to opportunities to undertake new or complex tasks with support and applying skills learnt across settings. Trainees felt less fazed by issues presented and more confident in decision making, as well as more skilled in dealing with patients, pathways, multi-disciplinary team working and medical history management. However, the impact of Covid-19 was highlighted as having limited the increase in confidence trainees experienced, due to practical experience and exposure to patients being limited.

The importance of supportive and experienced supervisors and trainers

3.41 All dental training requires skilled and experienced supervisors and trainers. Those involved in organising and delivering the pilots were said to **need additional skills and energy.** For instance, those involved in two-year combined DFT/DCT would need management skills to deal with the logistical challenges of having trainees alternating between settings and recording skills for double the number of trainees to ensure that each trainee's progress was recorded correctly on the Annual Review of Competence Progression (ARCP).

3.42 Trainers and supervisors were aware that training and support were available to them from their colleagues, academic partners and through HEE, but mostly felt that they did not need to engage with this unless specific issues arose. Trainers who had encountered challenges felt able to engage with their informal support networks or their TPD to gain the support required.

Future workforce supply and retention

Trainee demand

3.43 Trainers reported that **two-year combined DCT/DFT posts were oversubscribed, and most alternative posts were popular and attractive to applicants.** Posts with rotations were reported to "always fill" due to the variety offered. The location of posts was a factor in their popularity. Posts in London were always over-subscribed, credited with being due to their location in the capital. There were examples where attractive posts (combining two-year training with popular rotations) were put into less attractive locations and were successful in attracting

[22] Shelswell, J & Patel, V.A. (2020). 'How can DCTs become involved in research?' British Dental Journal, 228 (5) pp. 325-6 https://doi.org/10.1038/s41415-020-1387-z

applicants. The box below provides a summary of analysis of preferencing data for posts available in 2020.

Preferencing data analysis

SQW analysed preferencing data for dental Core training posts available to start in 2019 and 2020. This showed that alternative posts were more popular than the OMFS posts.

2020	Available posts		Ratio of applications per available post	
	Alternative	OMFS	Alternative	OMFS
DCT1	93	214	257.8	110.2
DCT2	85	110	185.4	112.6
DCT3	26	19	94.2	80.4

In 2020, at DCT1 level, alternative posts were more concentrated in certain areas (London, North West and West Midlands). London hosted 42 of the 93 alternative DCT1 posts in 2020. East of England hosted the greatest number of DCT1 OMFS posts and was the only area which hosted no alternative DCT posts at any level. DCT3 posts were concentrated in a small number of regions (West Midlands, North West and Yorkshire & Humber). Four regions did not host any DCT3 posts.

At DCT1 and DCT2 in 2020, the top 10 most popular posts (based on the number of applications per post) were all alternative posts and the 10 least popular posts were predominantly OMFS. The 10 most popular posts were predominantly based in London and the North West. The top 10 least popular posts tended to be based in more rural areas, including East Midlands, East of England and Yorkshire & Humber.

The majority of DFT accepted applicants were from the UK (92%), however - particularly in less popular posts - international students were accepted.

Source: Anonymised preference data supplied to SQW by Health Education England

Retention

3.44 **Retention was generally not reported to be an issue** in relation to the Dental Core and Foundation training posts.

3.45 Most two-year combined DFT/DCT trainees interviewed were hoping to undertake a DCT2 post at the end of their two-year training post, with one trainee wanting to find a job in general practice (which was a back-up option for several trainees if

unsuccessful in applying for DCT2 posts). One trainee was undecided on their next steps, but felt the two-year combined DFT/DCT post had opened up more opportunities to them than a standard training route as they had maintained their clinical skills in practice and hospital settings across the two years.

3.46 However, several trainers raised the challenges of the lack of availability of NHS staff vacancies in specialties, which they felt was a barrier for trainees' career progression:

"There is a group of people who come to end of four years structured training and then there are no other training opportunities unless they fund it themselves (e.g. MA degree) or get a registrar post, so they are forced to go into primary care. It would be good to have a halfway training post between registrar and primary care - Level 2 training could be meeting that need in oral surgery but there are no posts in restorative care and maybe there is a need there."
Dental Core TPD (interview)

Training commissioning

3.47 Trainers consistently reported that they would like to see the two-year combined DFT/DCT model mainstreamed and felt it was suitable for different contexts and regions. Similarly, trainers agreed that having alternative DCT training posts as an option alongside OMFS posts across regions should be continued and scaled up where appropriate. They suggested other alternative models of delivery including more 'innovative' posts for trainees at more junior levels (e.g. DCT1) providing rotations in other specialties/settings, or with different components (such as posts with a teaching role gaining a Post Graduate Certificate in Learning and Teaching) should also be scaled up where appropriate.

3.48 Having alternative ways of training was seen as providing different opportunities to suit the preferences of individuals, flexibility for trainees and more variety of training options. This was also felt to be important to distribute skills and opportunities nationally.

3.49 The **main barriers to scaling up** both the two-year combined DFT/DCT and alternative training models were reported to be:

- **Capacity** in the system to accommodate more flexible training options, requiring strong oversight, organisation and communication from training management teams/TPDs
- Associated **financial resources**; some practices may be wary about engaging with the two-year combined DFT/DCT model, as some costs and training inputs are doubled (e.g. PPE and uniform) when hosting two trainees effectively operating on a job share model.

- Availability of **high quality, engaged and willing trainers**; ensuring adequate staffing and structures for support are in place, for example to conduct inductions and complete portfolios.

3.50 Most trainees think they have a good knowledge of the training opportunities available, but not all feel this way. As shown in Table 3-3, a quarter of trainees thought they did not know what opportunities for further training existed in their geographical area.

Table 3-3: Opportunities for jobs and training (N=126)

	Strongly agree	Agree	Disagree	Strongly disagree	Not relevant
I know what opportunities for further training exist in my geographical area	15	72	34	3	1

Source: SQW analysis of the survey of dental therapist trainees 2021:
**Note: One respondent provided no response to this statement.*
N=126 as 14 partials did not reach this question

3.51 Ensuring that the level of supply aligns with the availability of roles post-DCT3 is also a challenge that should be considered, with a short supply of specialty posts reported. The potential for **funding mini/Level 2-type training options and more training for primary care practitioners post-DCT3 to retain and further develop skills across the system** was proposed in order to address this issue.

Summary and future considerations

3.52 The principle that dentists trained in both foundation and the first year of Core training should experience training in different settings and with different teams was favoured by almost all interviewees. Different models that test different rotation patterns or work experiences should continue to be developed in response to service demand and/or patient need.

3.53 Two-year training was an attractive option for some trainees as it gave them stability and enabled them to focus on their training rather than the interruptions of selection. Run-through provides a way to attract applications to posts that are otherwise difficult to fill, and gives employers a more stable workforce. Run through should be a strategic response to move resource to areas where high service need co-exists with workforce skills needs.

3.54 The variety of different training posts and routes is a strength as it reflects a flexible approach to emerging training needs. Many trainees said that they were told about the post and encouraged to apply. However, **posts need to be fully and properly promoted to applicants to promote equality of opportunity.** Providers need to ensure that all posts are fully explained in the national selected process.

3.55 Further experimentation in terms of the combination of different rotations, their duration and how they are structured should be encouraged as part of ongoing pilots. Additional **attention should be paid to flexibility of provision** to ensure that participants understand which opportunities might be available on a less than full-time basis.

4. Dental therapists

Background

4.1 In December 2019, there were 3,620 dental therapists on the GDC register, making up 3% of registrants[23]. A total of 323 new registrants were added to the register during 2019. Dental therapists are almost exclusively female, and are more likely to work on a part-time basis[24].

4.2 Many qualified dental therapists are not currently delivering the full scope of practice for which they are trained. Therapists cannot be commissioned directly to deliver NHS patient care – their patients need to be referred by a dentist. Their dental practices may only allocate them patients for a proportion of their time, and there are not enough therapy roles for graduates. Instead, many newly qualified therapists opt to work as hygienists, reportedly due to a lack of self/dentist-confidence in their ability to perform more complex procedures, and higher salaries attached to private hygienist role.

"In recent years the provision and acquisition of a dual hygiene/therapy qualification has become the norm, but while it enhances the flexibility of the use of the qualification for the holder, market forces may mean that the dental hygiene qualification may be used more than dental therapy."
Gallagher, J. Lim, Z. and Harper, P. (2013, 61)[25].

4.3 With an increased need for service, higher level dental skills in short supply and a limit to new entrants to the workforce, there is a strategic imperative to encourage more dental therapists to deliver more dental therapy work for patients. ADC explored ways to raise the skills and confidence of dental therapists in practice.

Characteristics of the pilot initiatives

4.4 **Dental Therapist Foundation Training (DTFT)** follows a similar structure and concept to DFT, with a dental therapist trainee working in a practice and undertaking an accompanying study programme. However, in contrast to the DFT, the DTFT is not mandatory. Neither is it usually full-time; trainees take part in the programme for three days per week, freeing up two days for other employment (or

[23] General Dental Council (2019) Registration Statistical Report https://www.gdc-uk.org/docs/default-source/registration-reports/gdc-registration-statistical-report-2019---final-30-09-2020.pdf?sfvrsn=53215636_12
[24] Gallagher, J., Lim, Z., Harper, P. (2013). Workforce skill mix: modelling the potential for dental therapists in state-funded primary dental care. Int Dent J. Apr;63(2):57-64. https://doi.org/10.1111/idj.12006
[25] Ibid.

to undertake training in an alternative dental setting, for example, a hospital or community setting). The exception to this is the enhanced DTFT scheme, piloted in the North East, involving three days per week in practice and an additional two days per week in an alternative setting (e.g. oral health, paediatrics, community dentistry, or public health) or undertaking research with the Clinical Research Team at Newcastle University School of Dental Science.

4.5 The initiative is designed to ease the transition from student to practising therapist and encourage more practices to employ dental therapists, enabling trainees to utilise their full set of skills. There have been approximately 76 dental therapists undertaking the programme each year.

4.6 **Return to Therapy** is delivered in London, Kent, Surrey and Sussex, and Thames Valley and Wessex. It is designed for therapists who have experienced extended periods of time away from delivery of therapy skills leading to a loss of the key skills and confidence required to undertake the role effectively and safely. The training in London, Kent, Surrey and Sussex takes 6 months, whereas in Thames Valley and Wessex the course takes three months.

4.7 The Return to Therapy programme is open to dental therapists who have been qualified for over a year, who have not previously undertaken DTFT and are now working as hygienists. There are currently 24 therapists undertaking the course each year (12 in each region). The programme 'buddies' therapists together, so that they are able to re-skill with peer support.

Evidence informing the evaluation

4.8 This section of the evaluation is informed by the following:

- Interviews with 12 DTFT trainees
- Interviews with two Return to Therapy trainees
- Interviews with nine TPDs or key stakeholders
- Interview with one practice-based trainer and two trainers supporting DTFT placements outside of practice
- Two online, self-completion surveys of dental therapy trainees completing either the DTFT or Return to Therapy training, with 34 respondents (30 complete and 4 partial) in 2020 and 22 respondents (16 complete and 6 partial) in 2021

- A *Nature Research journal*[26] article on the personal experiences of a dental hygienist and therapist who participated in the DTFT in the Thames Valley and Wessex region
- An evaluation completed by the Thames Valley and Wessex Deanery[27] for the pilot Dental Therapist Refreshers Course (Return to Therapy).

Effect of Covid-19

4.9 The restrictions put in place as a result of Covid-19 led to a **reduction in the amount of training** dental therapist trainees were able to receive. It was reported that the pandemic cost trainees 'four to five months' of training, which has resulted in reduced practical exposure to patients and therefore a **reduced ability to work to their full scope of practice**.

4.10 The lack of face-to-face teaching affected trainee progress. Survey respondents reported having increased online teaching, noting that the **reduction in face-to-face teaching had limited their opportunities for learning**. One trainee reported that their colleagues would have expected them to have advanced a lot more by this point, but Covid-19 had prevented that. Trainers also attributed limitations on trainees using their full scope of practice to the lack of face-to-face teaching.

4.11 A lack of training opportunities and progress also **negatively impacted on trainees' overall experience of their training**. Trainees reported increases in stress and anxiety, and a loss of earnings due to fallow periods. However, **others reported that they were satisfied with their experience**, and in some cases the scheme had exceeded expectations.

4.12 Some trainees highlighted unintended benefits of the pandemic on their experience. The **move to online working was said to be helpful in some instances**. Another reflected on their ambitions, indicating that they would like to further deliver information to patients around the importance of oral health in maintaining overall health. One stakeholder said their staff and trainees that had been redeployed to support front line with patient proning, supporting emergency services to declare absence of life and helping community pharmacy services had given them additional clinical skills and resilience, whilst building a positive reputation amongst health-care colleagues.

4.13 Covid-19 could potentially have a longer-term impact on DTFT and Return to Therapy trainees. Training providers said when interviewed that they were concerned that they would not be able to offer as many training places for

[26] Cox, Laura, (2018). 'My professional life has been a whirlwind'. BDJ Team 5, 18092. https://doi.org/10.1038/bdjteam.2018.92
[27] King, L. (2019) Dental Therapist Refresher Pilot Scheme: An Overview. Unpublished report for Thames Valley and Wessex Deanery.

therapists, due to a **reduced capacity of educational supervisors**, with some existing educational supervisors stating they will no longer be continuing with a new cohort. Furthermore, it was noted that dentist trainees would probably take priority over dental therapist trainees (for financial and workforce supply reasons), and therefore it is expected that it will 'take a while for therapists to get back into the clinical role again'.

Training flexibility

4.14 DTFT and Return to Therapy trainees indicated that they were not aware of flexible training options for their post beyond the fact that the DTFT scheme mostly runs for three days a week. However, several interviewees did note that they were aware there was flexibility around which three days they could work, with this decided with the practice.

4.15 Survey respondents were asked to say whether they would have preferred the training to follow a 3 or 5-day per week training model. Half said their most preferred option was a 5-day mixed rotation model, while a 5 day training option was the least favoured option. Trainees appear to be saying that it's not so much the duration of training that makes a difference to them, but rather how they use the time (Table 4-1).

Table 4-1: Training model preferences (n=16)

	1 (Most preferred)	2	3 (Least preferred)
5 days a week with a day of outreach / community / secondary care placements	9	6	1
3 days a week of training	6	3	7
5 days a week of training	1	7	8

Source: SQW analysis of the survey of dental therapist trainees 2021

4.16 Trainees on the North East's enhanced DTFT scheme specifically stated in interview that they were attracted to the model as they wanted to work full-time alongside the opportunity to gain experience in other placements, environments and specialties. It was also noted that this model provides the opportunity for trainees to work in a multi-disciplinary, multi-professional team.

4.17 Other trainees indicated that they were happy with the three day a week option. They reported that this **enabled them to work part-time** which suited their lifestyle, or provided trainees with the **flexibility to gain employment in the remaining two days**. One trainer also suggested that five days would be difficult for trainees early on and therefore having that break from the training was beneficial. Another called for a more flexible approach, with time in the training role increasing

as confidence returned and to ensure they achieved the number of procedures required by the end of the course.

4.18 Overall, the flexibility of the programme was seen as a benefit for trainees in comparison to non-training roles. However, it was felt to be **important that different models were offered**, to afford trainees the flexibility they need; currently only one option is available to trainees in each region.

Trainee skill development

4.19 DTFT trainees reported that participation was viewed as a way to **develop and maintain their therapy skills** beyond those learned at university, to avoid deskilling. The Return to Therapy course was seen as an **opportunity to regain and refresh therapy skills**, whilst also offering access to advice and chances to learn new skills, including communication skills as well as technical capabilities.

4.20 Those who have undertaken the DTFT or Return to Therapy training felt they were now **more confident in their ability to practice and use their therapist skills**:

"I know quite a few people I have qualified with who haven't done DTFT and they have completely lost their confidence. It helped me to gain confidence and have reassurance."
Dental Therapy Return to Practice trainee

4.21 Confidence required opportunities to practice, and one DTFT trainee did note that **not all primary care settings were offering the same opportunities to practice skills**. Likewise, one Return to Therapy trainee reported difficulties with the general practice element of the training scheme, with limited practical opportunities to use their therapy skills.

4.22 Some trainees reported not receiving **sufficient practical patient exposure to practice their new skills, predominantly as a result of Covid-19**. Other barriers noted included restrictions associated with NHS contracts and the limited awareness amongst practices of the scope of dental therapists.

4.23 According to the 2021 survey, Table 4-2 shows that trainees reported an **increase in confidence in carrying out various procedures since participating in training**, including extracting primary teeth (15/16), carrying out direct restorations on primary teeth (15/16) or secondary teeth (15/16), compared to the lower proportion of respondents expressing confidence prior to commencing training (11/22, 10/22 and 11/22 respectively). However, a high proportion of respondents (10/15) still reported that they were very unconfident or unconfident carrying out pulpotomies on primary teeth (compared with 20/22 pre-training).

Table 4-2: Confidence in carrying out procedures since participating in training (n=16)

	Very confident	Confident	Unconfident	Very unconfident
Carrying out direct restorations on primary teeth	7	8	1	0
Carrying out direct restorations on secondary teeth	3	12	1	0
Placing pre-formed crowns on primary teeth	3	7	5	1
Carrying out pulpotomies on primary teeth	2	4	4	6
Extracting primary teeth	2	13	1	0

Source: SQW analysis of the survey of dental therapist trainees 2021

4.24 The supportive and supervisory element of DTFT was also noted by trainees to provide them with the **opportunity to gain experience under supervision, with support available when required** from their educational supervisor. Furthermore, interviews with TPDs, key stakeholders and trainees highlighted that the DTFT programme is **embedded within multi-professional teams**, with the majority of trainees reporting that they had a better understanding of the role of multi-professional teams and their role within them as a result of the training:

"A year like this gives you the opportunity to see the inner workings of a practice and where you might fit in."
Dental Therapy Foundation Trainee

4.25 Furthermore, trainers said that the DTFT model based alongside Foundation training for dentists was beneficial as it **was based on an established model of delivery, and ensured clinical and educational support was in place for the trainees.** Additionally, combining study days with DFTs provides the opportunity for both dentist and therapist trainees learn about their respective roles. However, **some of the study day topics were reported to be more aimed towards dentists and not relevant to therapists**. Here, several trainees and trainers suggested that therapist-only study days or tailored parallel sessions would be beneficial.

4.26 An article featured in the *Nature Research journal*[28] based on the personal experiences of a dental hygienist and therapist who participated in the DTFT in the Thames Valley and Wessex region identified the benefits associated with the programme, in terms of providing the **opportunity to consolidate treatment and time management skills and gain experience in treating a wide variety of**

[28] Cox, Laura, (2018). 'My professional life has been a whirlwind' BDJ Team 5, https://doi.org/10.1038/bdjteam.2018.92

patients. An evaluation completed by the Thames Valley and Wessex Deanery[29] for the pilot Dental Therapist Refreshers Course (Return to Therapy) found that all participants felt that they had the opportunity to **regain confidence and skills and to decide their professional development and career** as a result of the programme.

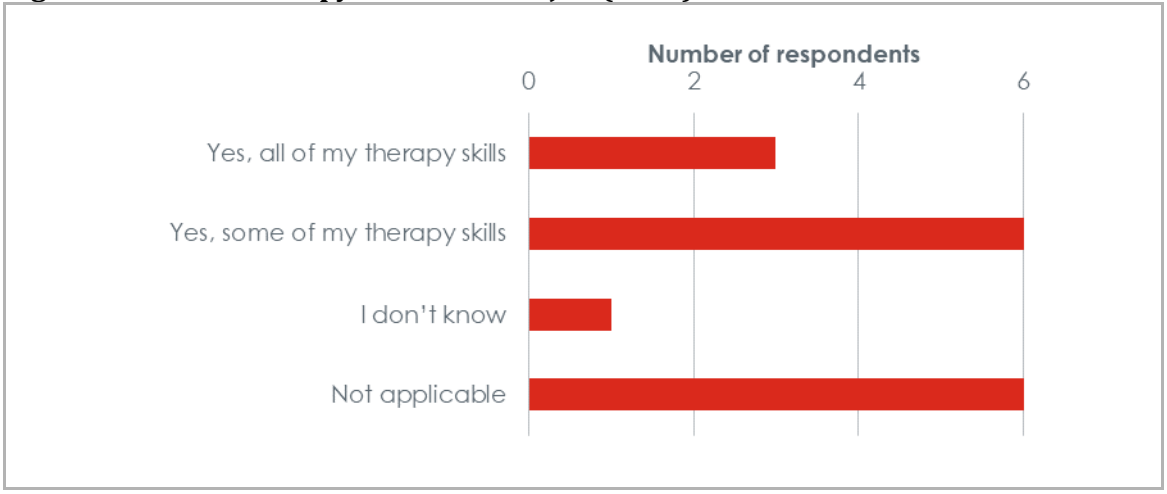
Future workforce supply and retention

4.27 Interviews with trainers highlighted that **DTFT posts were attractive to applicants**, with a range of reasons cited including the fact it offers a formal training pathway, paid employment, a supportive environment and the opportunity to develop and use therapy skills:

"Therapists see the posts as a decent wage, not under major stress to hit targets and do a certain quality of work under close support. Courses are oversubscribed."
Dental Therapy Trainer

4.28 Trainees highlighted that they had **foregone salary by taking part in the DTFT training**. Consultees suggested that a role in general practice, would likely have higher potential earning than their training role. This was mirrored in the surveys, with 19 of 30 respondents in 2020, and 5 of 16 in 2021 reporting that their earnings were reduced whilst they completed the training programme. However, most interviewees indicated that the support and training received through the course compensated for the loss of earnings during training.

Figure 4-1: Use of therapy skills in usual job (n=16)



Source: SQW analysis of the survey of dental therapist trainees 2021

4.29 Dental therapy trainers were concerned that despite the value of the courses, therapist skills would continue to be lost to the workforce. This was confirmed in the 2021 survey. Figure 4-

[29] King, L. (2019) Dental Therapist Refresher Pilot Scheme: An Overview. Unpublished report for Thames Valley and Wessex Deanery.

1 shows that **just three of the 16 respondents (who had participated in either foundation or return to therapy courses) reported that they now practice all of their therapy skills** in their usual job, while six practice some of them.

Training commissioning

4.30 A challenge identified by key stakeholders and TPDs related to the scaling up of DTFT, particularly the **availability of educational supervisors and practices**. It was noted that it is more difficult to recruit educational supervisors for DTFT than DFT, despite the role requiring less capacity. Consultees suggested this was for a range of reasons including that they are paid less to train DTFT than DFT programmes, and that some supervisors may not fully appreciate the role of therapists and so are less confident in training them.

4.31 Furthermore, consultees reported that where the training is successful, and practices retain the trainee post-training, they may then have **insufficient space to take on another trainee**. Several consultees also noted that at present, there is **not a financial model or sufficient financial incentives** for practices to view employing a therapist through the programme or beyond the programme as sustainable. Therefore, it was noted that even though there are relatively high application rates for the DTFT each year, regions are constrained by the number of educational supervisors and practices willing to take part (also noted in Firmstone's evaluation[30]).

4.32 Furthermore, several trainers suggested that there **needs to be a system to support therapists beyond their training.** At present there is no mechanism or career pathway to follow on with their therapy training and development after DTFT or Return to Therapy:

"We are training these to work on the NHS, but do they have a system to support them to work as therapists? A lot go on to work as dental hygienists, which suggests there is no mechanism to follow on with their training and development. How can we support them further once they complete? What else can we do?"
Dental therapy trainer

4.33 Others highlighted the **opportunity to deploy therapists into other areas**, for example research, education, and community or hospital placements. The North East enhanced DTFT scheme was highlighted by trainers and trainees as an example of this, providing opportunities for trainees to gain experience in a wide range of areas.

[30] Firmstone, V, (2011). An Evaluation of the Pilot Foundation Programme for Dental Therapists in the West Midlands. Centre for Research in Medical and Dental Education (CRMDE), University of Birmingham. https://www.birmingham.ac.uk/Documents/college-social-sciences/education/crmde/pilot-foundation-programme-report.pdf

Here, one trainer noted the importance of multi-professional training in highlighting wider opportunities.

Summary and future considerations

4.34 Dental therapists benefited from the Foundation training and the Return to Therapy training. They report increased confidence and competence. The combination of Foundation training for therapists and dentists is welcomed, but both groups require content tailored to their needs.

4.35 Providing a mix of models within each region would allow therapists to apply for training appropriate for their needs and ambitions, while also addressing potential workforce gaps locally (i.e. by deploying therapists to areas of need outside of primary care).

4.36 However, there are barriers to upscaling postgraduate training for therapists, particularly in terms of the capacity and/or willingness of practices and educational supervisors to offer training. This issue is likely to become more prominent following the pandemic, with dentists given priority for training places. Improved financial models or incentives are needed that:

- Encourage dentists to shift some of their routine work to dental therapists
- Develop supervision capacity in practices of therapists undertaking Foundation training
- Encourages multi-disciplinary learning to reinforce the team delivery model ideal
- Create career pathways for therapists in other forms of oral health care that utilise their skills and reward them for it in terms of job enrichment and salary.

4.37 The findings indicate that the training is valuable for therapists, but does not by itself address the structural problems in the system that sometimes prevent them from using their full scope of practice. If therapists are not able to provide the full range of services that they are eligible to deliver to patients following training, then the training may merely delay the erosion of their practical skills before they take up hygienist roles instead.

5. Level 2 training for dental practitioners

Background

5.1 NHS England (2015)[31] established three levels of patient needs and defined the workforce skill level needed to meet those needs. Level 1 treatment requires skills and competencies covered by dentists during their undergraduate and Foundation training. As practitioners develop their experience and practice, they are expected to operate above Level 1 in a number of specialist areas.

5.2 The definition of Level 2 care is provided below.

Level 2 care is defined as procedural and/or patient complexity requiring a clinician with enhanced skills and experience who may or may not be on a specialist register. This care may require additional equipment or environment standards but can usually be provided in primary care. Level 2 case complexity maybe delivered as part of the continuing care of a patient or may require onward referral. Providers of Level 2 care on referral will need a formal link to a specialist, to quality assure the outcome of pathway delivery.
NHS England (2015) Guide for Commissioning Specialist Dentistry Services[32]

5.3 The GDC maintain specialist registers; about 10% of all UK dentists were listed on one or more of the Council's specialist lists (GDC, 2019[33]). Level 2 care can be provided by a dentist working in either primary or secondary care, as long as they have relevant competencies. They can take referrals of Level 2 cases from other dentists regardless of the organisation they work in, so long as the referral is part of a recognised pathway of care.

5.4 Contracting for dental specialities has its challenges, as units of dental activity cannot be routinely applied to patients requiring specialist dental care provision. NHS England recognised this, whilst challenging commissioners to address inequality and ensure there is no contractual discrepancy which penalises providers who offer services to vulnerable patients. Resolutions to the problem of contracting for specialist services are still being developed and, in the meantime, different practices are deployed in different regions. One area of commissioning inconsistency lies in whether services are commissioned from either qualified or registered specialist practitioners. We were told that some regions are commissioning Level 2

[31] NHS England (2015) Guide for Commissioning Specialist Dentistry Services, https://www.england.nhs.uk/commissioning/wp-content/uploads/sites/12/2015/09/intro-guide-comms-dent-specl.pdf
[32] Ibid.
[33] GDC, 2019 quoted in Health Education England (undated) Advancing Dental Care Interim Evidence Report.

services only from registered or accredited practitioners, whilst others (operating under older commissioning contracts) are considering this.

5.5 The context for training for Level 2 services is therefore complex. Dentists may be motivated to undertake such training for their own professional development, to develop new skills or practice existing skills. In some areas they may need to train in order to secure accreditation of competence for commissioning purposes, but this is not currently the case in all regions.

5.6 The types of training at Level 2 also range from short courses run by commercial providers through to fully accredited Masters level qualifications.

Characteristics of the pilot initiatives

5.7 From October 2019, in the South West the HEE pilot funded general dental practitioners to undertake certificated training (leading to a Diploma after two years) in specialisms that would enable them to seek accreditation of their competence to perform more complex cases at Level 2. There were 12 places aviable in Plymouth and 8 in Bristol with a starting date of September 2020, although not all places were taken up. The training covered a range of areas including restorative dentistry, oral surgery, pain and sedation. In a separate development a new MSc in endodontics has recently started in Plymouth following the move of a specialist from Kings College London. Six students from the region have started the course (which is part-time), to enable them to continue to practice alongside studying. This provides an alternative option for them to acquire practice in the more complex Level 2 procedures.

5.8 In Thames Valley and Wessex, trainees were required to develop a portfolio of cases demonstrating the necessary experience and competence (as is typically required for Level 2 accreditation), rather than undertaking specific training courses. In addition, the Deanery planned to run face to face training sessions for endodontics and oral surgery, but the model could not go ahead as planned due to the Covid-19 restrictions; instead a single course in oral surgery was delivered. In a separate develoment plans are being developed for courses in periodontics and oral surgery endodontics. Courses are four days long (three days online with one day face to face), with a cost charged at £150 per day per participant payable privately. These courses are certified but not assessed or accredited.

5.9 In the South West, HEE funds 50% of the training (£5000 per trainee), with the remaining 50% funded by the individual participant (dentist). In Thames Valley and Wessex, development costs amounted to £10,000 per trainee (funded by HEE).

Evidence informing the evaluation

5.10 The findings draw on interviews with four Level 2 trainees from courses in the South West and seven trainers or managers of Level 2 courses. Stakeholders provided additional contextual insights. The insights from trainers came from academic providers who had been supported by HEE investment.

5.11 The coverage of interviews was limited to two regions, both of whom drew contrasts with provision in London. We did not speak with a London-based provider specifically about Level 2 training, although issues relating to concentration opportunities discussed were also true of foundation and Core training (see section 3.44).

Effect of Covid-19

5.12 Most face to face training for Level 2 procedures is undertaken in dental hospitals. Provision in hospitals has mostly continued during the pandemic In addition, most of the interviewees were located in the South West, which experienced relatively low case numbers in comparison with the rest of the country.

5.13 Nevertheless, in line with experiences in other ADC pilot initiatives, elements of the training courses were moved online, and some face to face provision was suspended.

Training flexibility

5.14 Some training courses (either four-day courses or Masters-level courses) are run part-time to enable students to continue practice alongside their study. This reduces the cost to the student (as salary foregone is limited) and enables them to practice enhanced skill development.

5.15 Trainees also said that because the cohorts were small, they were able to negotiate timings for key sessions that suited them all, and make arrangements to fit with both work and domestic commitments.

"Because we were a small cohort there was flexibility. [Three babies were born during the course]... They were really flexible... The course coordinator did make sure we got stuff done prior to their due dates and that they had some time to recover afterwards."
Level 2 trainee

5.16 Finally, learning opportunities in places which are physically distant, requiring travel and overnight stays, makes them less accessible to some practitioners. Where training opportunities are offered within a trainee's region they are more accessible and more popular.

5.17 Flexibility of accreditation arrangements was also listed as a challenge by stakeholders. To be included on the GDC specialist list, a senior consultant needs to observe and sign off competence; this can either be done in practice (with the senior consultant travelling to a practice) or in a training environment where the consultant could observe several trainees simultaneously. The latter is more efficient but needs physical infrastructure and logistical support.

Trainee skill development

5.18 Trainees come to Level 2 training with different skills. One course provider noted that candidates needed some academic / theoretical knowledge, and a sufficient level of practical skills to get the most out of Level 2 training. They observed that some candidates were very able practitioners who could perform different and difficult skills but did not have up to date academic or theoretical knowledge; others were more up to date with the theoretical but (because they had recently graduated) did not have the necessary experience, whilst a third category of candidate were neither suitably experienced nor academically proficient.

5.19 In addition, access to Level 2 accreditation was said to be more straightforward for dentists who have done Dental Core training, because they are familiar with the use of portfolios and the need to create a log of practice. This is unfamiliar to those who have not undertaken DCT, but is an essential part of competence accreditation. One solution that was being planned was to offer short courses about the use of the portfolio as a condition of acceptance to practice development courses.

Level 2 trainee feedback

Feedback on training was provided by trainees before the Covid-19 pandemic took place. Generally trainees enjoyed their training experience. Trainees felt well supported on their Level 2 training; the small group aspect of the course was credited with enabling this. Trainees also reported that the standard of teaching was high, with opportunity for practical training, and access to high-end clinical models to practice on was beneficial (and not something they would be able to access at their job).

However, one trainee stated that they felt their course was not hands-on enough, and more practical training could have been provided. Another noted that sometimes it was difficult to arrange training opportunities for specific types of surgery.

Costs of training were also discussed, with disparities noted between those who work in primary and secondary care. One primary care trainee had to take days off work to accommodate the training, resulting in a loss of earnings. However,

another in a secondary care setting stated that they were allocated study allowance, leading to no loss of earnings.

Overall, trainees stated that they had improved their skillset and confidence levels as a result of involvement in Level 2 training, with two reporting that they have been able to undertake more complex procedures in their day job as a result. Another trainee had moved role from primary to secondary care (for a range of reasons including their wish to do more complex work). Trainees felt that their qualification would support them in their future career prospects, with one noting that it would allow them to take on more teaching responsibilities.

Source: SQW interviews with 2019 Level 2 trainees

5.20 The demand for courses is affected by the way services are contracted. If Level 2 procedures are not adequately financially compensated then the motivation to up-skill will be weaker, regardless of the scale of patient need. This may therefore hamper the uptake of courses and skill enhancements. Academic skill providers questioned the quality of some privately provided training courses, and pointed to the external examination and quality assurance systems as ways to maintain high standards and ensure relevance of the curriculum.

Future workforce supply and retention

5.21 Consultees reported a need for more postgraduate training and CPD opportunities. One reflected on a general feeling that the undergraduate curriculum was not providing the same level of experience or skill as it did years ago, leading to graduates being more likely to refer cases to specialist services, creating a demand from a limited and over-burdened specialist resource. More Level 2 skills continue to be needed to limit referrals to specialists only where specialist skill is needed, and to ensure that patients have somewhere to go.

"General practitioners are a willing and keen workforce who would prefer not to refer to secondary care providers - but they need the training, and they need contracts that make it worth their while."
Level 2 dentist

5.22 The inconsistency between regional practices, and confusion about commissioning conditions, makes practitioners' decisions about their training needs complicated.

"There is a lot of confusion in the profession about service commissioning…. it also varies so much from region to region, so I think that in [one region] all perio and endodontic contracts are subject to accreditation - but that is not the case here."
ADC stakeholder

5.23 Deaneries have been responsive to offering training courses using different modes of delivery, types of accreditation or certification, duration and cost. But while market conditions are still changing, and incentives or obligations are the subject of confusion among the workforce, and the risks to scaling up the offer are not commensurate with the rewards.

Training commissioning

5.24 **Some courses are more expensive to run than others**, but providers like to offer simple payment terms. In one region, a four-day course with two facilitators, a skills room and 12 participants paying £150 each per day was viable in terms of what the market would bear and the costs of running a restorative course. However, it costs twice as much to run an endodontics course. The course provider reported that **future subsidy was needed** to fill this gap.

5.25 **Training opportunities are also not equally available geographically**. Level 2 and 3 skills are concentrated in London, where trainers and training opportunities are focussed. Breaking this pattern is difficult; incentives for skilled practitioners to move to the regions are reported to be insufficient, and it is difficult for practices or Trusts to encourage specialists to relocate. Similarly, it is not practical for many practitioners to attend training courses involving residential stays in London. Both factors reinforce the geographic concentration of skills in the capital.

5.26 Despite the challenges, one course provider thought that there was **a lot of latent demand in the system.** When the funding and accessibility barriers were addressed (with HEE subsidy and part-time blended learning) one Masters course in the South West was able to fill its places in a couple of weeks.

Summary and future considerations

5.27 The ADC pilots provided an oportunity in two regions for providers to develop or pilot courses that would provide opportunities for practicing dentists to improve their skills to enable them to do more Level 2 complex procedures. There are many other providers in this market both nationally and regionally offering CPD opportunities.

5.28 The market for dental services is complex and it operates varies between regions. Training providers working in this context need to be be aware of the different market opportunities that exist to provide training and accreditation. Trainees respond to such opportunities either to develop their skills for job-enrichment, or to enable them to offer different services (or a combination of both). The evaluation of the HEE ADC pilots has shown that: a) providers offer different forms of training to meet the needs and circumstances of their trainees; and b) trainees will use their

skills in practice either in the short term (to meet course requirements) or the longer term as part of increasing specialisation.

5.29 In order to ensure accessbility, the following factors need to be considered in Level 2 training course design:

- **Full or part-time** – part-time courses allow students to continue to practice and can increase accessibility
- **Location** – training offered within a region or in ways that minimise the burden of travel can be more accessible to local dental practitioners
- **Learning mode** – the use of blended learning has proved beneficial to most trainees, as it reduces the time they need to commit to studying whilst maintaining training quality
- **Cohort size** – the small size of cohorts was appreciated by trainees but needs to be balanced with affordability and patient demand levels
- **Pricing models** – simple pricing structures were recommended, although this may mean that some courses subsidise others. Trainees in NHS posts may have access to resources and support (such as study leave and access to bursaries) that their private sector colleagues do not.
- **Accreditation –** qualifications are valued by some students who see them as helpful for their long-term career progression.

6. Dental nursing

Background

6.1 Dental nurses comprise a significant proportion of the dental workforce. There are currently 58,898 dental nurses registered with the GDC, representing 49% of all GDC registrants. A total of 98% of dental nurses are female. In 2019 4,350 dental nurses were added to the register, while 3,938 were removed[34].

6.2 Under the Enhanced CPD Scheme (2018) dental nurses need to complete a minimum of 50 hours of verifiable CPD every five years[35]. Workforce survey data regarding their place of employment or training is not available.

6.3 Dental nurses train at Level 3 and can register with either a City and Guilds Level 3 Diploma in Dental Nursing, National Diploma in Dental Nursing (NEBDN), NCFE CACHE Level 3 Diploma in the Principles and Practice of Dental Nursing, or qualifications offered by three English universities.

6.4 HEE have supported hospital-based training of some dental nurses in the past. This was to ensure a workforce for service provision in secondary care and with the skills to support undergraduates in their pre-registration training. Data relating to 2014/15 provision shows that at that time, HEE spent £5.3million to train 453 dental nurses; this covered their salary and the costs of training. There was however considerable variation in the length of training (between 12 and 24 months), pay awarded to trainees, and qualifications attained. Some providers trained nurses who worked in hospital settings, while others had cohorts largely based in primary care practice.

6.5 The NHS Education Funding Guide[36] states that dental nurse training is not currently commissioned across all HEE regions and that any legacy arrangements that existed would cease by March 2021. Programmes are expected to move to the apprenticeship model.

6.6 An apprenticeship provides 'on the job' training leading to a national qualification, available for both new and existing staff. Anyone over the age of 16 and not in full-time education can apply to be an apprentice. There are different levels of apprenticeships, from intermediate and advanced to higher and degree levels. Apprenticeships typically combine on-the-job training at an employer's site with off-

[34] General Dental Council (2019) Registration statistical report. https://www.gdc-uk.org/docs/default-source/registration-reports/gdc-registration-statistical-report-2019---final-30-09-2020.pdf?sfvrsn=53215636_12

[35] https://www.gdc-uk.org/education-cpd/cpd/enhanced-cpd-scheme-2018/

[36] NHS and Health Education England NHS Education Funding Guide 2020-2021 Financial Year. https://www.hee.nhs.uk/our-work/education-funding-reform/nhs-education-funding-guide-202021

the-job training provided by a training organisation for at least 20% of the time. Employers wishing to employ and train an apprentice must be a registered provider with Ofsted either as an employer provider (where the training and/or accreditation is provided by an approved organisation) or as a main provider. Apprentice pay is at the discretion of their employer but must be at a minimum rate (the apprentice rates currently start at £4.30 an hour for a 16-year-old).

6.7 HEE have provided transition support for eight dental hospitals, ranging from 20 places at Barts (for 12 months of training) through to nine places in Newcastle, Teesside, and Leeds[37]. Some of this transitional support has been extended due to the disruptions caused by Covid-19. HEE also employ seven NHS Regional Apprenticeship Relationship Managers to cover the regions. They provide operational support to the NHS for the Talent For Care agenda, focusing on apprenticeships for all roles including dental nurses and other oral health practitioners.

6.8 In addition, a pilot programme was run by three London dental hospitals: Barts and The London, Kings College Hospital Dental Institute, and Guys and St Thomas' (GSST). The 18-month pilots commenced in May 2017, with 34 commissioned places.

Evidence informing the evaluation

6.9 This section of the evaluation was informed by the following:

- Published documents including those from the GDC, HEE and NHS England
- An evaluation report of the London pilot
- Interviews with ten trainers, educators and managers, including from seven dental training hospitals
- Interview with one practice-based trainer
- Data provided through the Association of Dental Hospitals.

6.10 Apprentices themselves were not interviewed because those who had benefitted from HEE transitional funding should have left their training.

Dental nurse training in hospitals

6.11 There are **fewer dental nurses being trained in dental hospitals as a result of the move to the apprenticeship model**. The duration of courses and number of trainees in cohorts has been distorted as a result of two factors:

[37] Data provided by HEE to the evaluation team.

- **Covid-19 has interrupted training for several dental nurses** - particularly in the first lockdown period. Some had training put on hold, others were redeployed (for example to help reception staff take temperatures and ensure mask-wearing), or trained in a different facility. Affected cohorts have mostly completed their training although it has taken some longer than anticipated.
- Local **HEE decisions to commission dental nurse training on an ad hoc basis**. One provider spread the funding over a larger number of trainees (by paying them less than previous cohorts but more than the apprenticeship wage), while another was given some underspend which meant they had to recruit a cohort between January and March.

6.12 Despite these distortions, there are only two hospitals in England (out of eight that responded to information requests) planning to continue training dental nurses for the workforce (rather than just to meet their own needs). There are several reasons for this, but two fundamental reasons relate to the Education and Skills Funding Agency funding model and registration requirements.

6.13 The process of becoming a main provider for a Trust is not straightforward, and some consultees said their **Trust Boards did not see themselves as training providers in this way**. The process also carries risks. The employer provider apprenticeship model reportedly works well for several workforce roles where a Trust can recruit, employ and train apprentices to meet their own needs. Any issues arising from being a main provider (for example with unfavourable Ofsted inspection reports) could put this at risk.

6.14 Trusts are not used to paying trainee dental nurse salaries, as this was previously funded by HEE. The apprenticeship levy cannot be used for salary cover. The transition from one to another was challenging because the old system paid trainee nurses in line with the Agenda for Change salary scale, and Trusts employed them on Trust terms and conditions. Apprentices are paid a lower minimum hourly rate. This meant that one year's recruits would be paid c.£12,000 (on Trust terms and benefits) while they were training alongside apprentices on c. £6,700 with different holidays and benefits.

6.15 HEE transitional funds were used for salary payments for existing or new cohorts, rather than paying for system support to manage the transition to a new funding system.

6.16 **Funding from the apprenticeship levy is different in scale to that formerly provided by HEE as it can be used only to cover the costs of training, uniforms, resources and assessment**. It also comes with a number of conditions. It must be drawn down in arrears monthly, which means that funding is lost if any apprentices withdraw. It cannot be used to cover salary, which needs to be paid by the employer. A final payment is made on completion, which has been a problem as apprentices

could achieve their qualification and register with the GDC before formally completing their apprenticeship; **as many did not formally complete their Trust could not access the full payment.**

Trainee skill development

6.17 The apprenticeship model has not changed the divide between primary and secondary care based training models. The prevailing model for dental nurse training is to train either in a primary or a secondary care setting. The trainees' experience will be different: those in secondary care settings are exposed to a wide range of career routes, specialisms and working environments; for example, they have access to training in theatres, in the community team, and/or they see speciality work. This means that they are aware of a range of career progression routes. Trainees in general practice are reported to be trained to work in a more fast-paced environment, understand the commercial environment, and may use some different equipment. Partly as a result of Covid-19 disrupting established training models, in some areas trainees were accessing experiences both in general practice and secondary care settings. One hospital secured technical placements for their trainees with a local NHS practice and wanted to continue this because it reportedly enriched the training experience.

6.18 The **quality of training** was raised by several interviewees. A private sector general practice training provider was confident that the apprenticeship standards and assessment were working well. They particularly liked the flexibility; they saw the mix of online and remote learning alongside work in practice being appropriate and convenient for trainees, who could study in two-hour blocks rather than spending time travelling to seminars in a college. Hospital based trainers were more concerned about an erosion of standards and saw the hospital provision as a way to pull up standards by setting a high bar for trainees and providing a strong foundation for future supervisors and trainers.

6.19 Employers of dental nurses in hospitals said that when they recruited nurses who had been trained in general practice for secondary care nursing, they found they needed to provide them with additional training before they were ready to meet the full role requirements.

6.20 The **curriculum was not reported to have changed, although the move to the apprenticeship model has been associated with a revision to the City and Guilds curriculum**. Despite concerns about variable quality, no consultees suggested that patient safety or satisfaction was being compromised.

Future workforce supply and retention

6.21 We are aware of two dental hospitals that are running, or plan to run, the apprenticeship model:

- One London training hospital is a main provider of apprenticeships, which means they can train dental nurses they employ and those from general practices. They have not had HEE funding in the past for dental nurse training and have moved ahead with building their capacity as a main provider.
- A hospital Trust in the North West recently trained 80 dental nurses a year but could not do this as an employer provider. They are working with HEE on an interim solution while they progress their registration to become a main provider.

6.22 Others have used the apprenticeship model and want to continue to train dental nurses but will be doing so for fewer numbers. One hospital trained a cohort of apprentices using HEE transition funding and adapting their training model from 24 to 18 months. In the future, because funding does not cover salary, they plan only to recruit and train sufficient dental nurses for their own needs.

6.23 A different hospital trained a cohort of dental nurse apprentices and needed to adapt their model from 12 to 18 months. They are committed to training dental nurses, partly because it is part of their heritage and partly because the specialist nature of their work requires dental nurses trained for their work. They are however considering different models for the future.

6.24 The implication is that **the numbers of dental nurses being trained in dental hospitals will diminish further.** Most will continue to be trained in general practice. The impact of this will not be felt immediately as there are recently trained dental nurses available to the labour market. In the longer term the effects may be felt as fewer skilled nurses are available to support the dental and therapy trainees, and dental nurses provide a supply of quality candidates for higher level training such as orthodontic skills.

Training commissioning

6.25 The HEE commissioning model allowed hospital Trusts to train dental nurses for their own purposes, with a 'surplus' who would secure roles in primary care. This system meant that:

- There was a cadre of hospital trained nurses in the local labour market who could move into other secondary care roles as part of the career progression - either into different settings or different roles such as orthodontics.

- Hospitals could recruit the best nurses from the cohort, with one interviewee describing this as 'an extended interview' where they would get to know potential recruits' strengths and weaknesses in full.
- High training standards were maintained. Several interviewees commented that the skills and competences gained by their nurses were different to those gained by nurses in general practice, more diverse as they were often trained on rotations, and more robustly assessed. One said they could always tell a hospital trained nurse and thought that this training meant they were a higher calibre candidate or colleague.

Summary and future considerations

6.26 The differences in HEE commissioning practices regarding dental nurse training in the past between sites and regions has contributed to the **patchwork of different practices** between regions and sites. The commitment to a move to the apprenticeship model for funding dental nurse training should be maintained consistently.

6.27 Dental nurses represent a small sub-group of a Trust's workforce. When talking about the numbers that progressed into Trust posts after training, most sites cited numbers in single figures. **While they are a small group, they are nevertheless important** as service providers, to support training of undergraduate and postgraduate trainees, as future trainers themselves, or as recruits to the next step of skills (such as orthodontics). It appears disproportionate to expect each Trust to navigate the move to become a main provider for a small group. **One or two specialist dental nurse main providers working on behalf of other dental hospitals might provide a way forward.**

6.28 **Trusts should pay their apprentice dental nurses in the same way as they pay other apprentices that they employ**. They also need to recognise that apprentices have different terms and conditions and require different support to their other trainees and post-holders, and **should therefore work alongside HEE's apprenticeship team to build their own capacity to recruit, employ, train and progress apprentices.**

6.29 HEE may wish to consider incentivising dental nurse training models that provide dental nurse apprentices with **training in both general practice and in secondary care settings,** to provide the best of both environments. Such models require management capacity to connect training providers and assessors across a region. Any HEE investment in incentives should be **accompanied by a requirement to demonstrate effective management capacity**.

7. Programme level learning

Introduction

7.1 The ADC programme has focused attention on education and training at different levels of the dentistry workforce. It has provided an infrastructure for structured, regular and focussed discussions at a senior level, and investment in new or existing training practices that have gone beyond business as usual. It has done so whilst navigating the effects of the Covid-19 pandemic and the associated disruption to service delivery and training practices. The timing makes it impossible to view the ADC outcomes and learning independently of the effects of Covid-19 on its implementation and people's experiences and progress.

7.2 The programme itself has comprised a set of training initiatives that have been supported with HEE investment. Those investment decisions often pre-dated the establishment of the programme. Consequently, the programme has not been conducted as a classic set of 'pilot initiatives', but rather has identified examples of training that are different to 'business as usual' to capture their design and learn lessons about their implementation and impact. Sections 3 -6 of this report have presented evaluation learning about each strand of activity in turn.

7.3 In this section we summarise the key learning across the different ADC initiatives and programme as a whole. We also draw upon reflections on implications for the whole workforce and how best to meet service and population needs moving forwards.

Programme rationale

7.4 The evaluation found an engaged and professionally committed workforce who care about their practice and delivering the best patient care. The barriers to change, structural constraints and need to evolve were very clearly stated in almost all conversations, which often ended with a discussion about ambitions and plans for the future. While some people were frustrated by structural issues, resources or the pace or scale of change, **the appetite for continual improvement was strong**. This resolve provides a necessary condition for the continuation of efforts to improve the training of dental care professionals at all levels.

7.5 The **rationale underpinning the ADC programme remains highly relevant**. Health inequalities continue to exist, and indeed have been exacerbated by the Covid-19 pandemic. Skills shortages also persist in some regions, particularly at certain levels. ADC has illuminated some of these issues and provided examples of efforts to address inequalities.

7.6 As a crucial foundation for the next steps with dental education reform, ADC has **provided a better evidence base** in terms of the scope of practice of the workforce, where they work and the costs and benefits of certain strategic choices. However, the findings from this evaluation indicate that work to strengthen the evidence base must remain a priority. It is **important that effective estimates of both population trends and their specific oral health needs are modelled**. We were told that different regions have different oral health needs depending on social determinants of health, behaviours and historic patterns of dental health care provision. A clear picture of need is a pre-requisite of plans to address it. This **mapping of need (current and anticipated, based on population projections) could then be mapped against provision, to identify the gaps where health inequalities lie or risk emerging**.

7.7 The **characteristics of the workforce also need to be better understood**. A workforce survey that maps where skills are found (geographically and by service organisation), flows into and out of the workforce, training and career plans, the prevalence of flexible working, and equality and diversity characteristics would provide a second important dataset, mapping current skills with a view to informing remedial action and investment to address emerging shortages or gaps.

7.8 Finally**, a map of the provision of training places by type, level, salary and cost to the trainee** would give a picture of the future supply of skills, and help to raise understanding of the opportunities available across the country.

7.9 **These mapping exercises are not all within the remit of HEE or the members of the ADC Board**. However, without this intelligence to highlight where gaps in provision lie, their collective response is, entirely reasonably, made on the basis of **incremental adjustments to improve a known situation**. This evaluation has shown that those changes have generated valuable lessons and made improvements to training that have benefited trainees, but that **the structural barriers in the system impose a limit on what is currently possible**.

7.10 The evaluation brief posed research questions around four key themes: training flexibility, trainee skill development, future workforce supply and retention, and training commissioning. Themes arising from the evaluation as they relate to more than one strand of delivery are discussed in turn below.

Training flexibility

7.11 Training flexibility can be considered in a number of different ways; the provision of less than full-time training roles or courses, flexible training pathways that facilitate moves from general to specialist training and back, and flexible modes of delivery.

7.12 The first of these is the availability of options that allow for less than full-time modes of learning. There were **two training routes under ADC where part-time training**

was offered, these were foundation therapy courses where different models operated (one was offered as a three-day course and the other was a five-day course), and a part-time Masters course which trained general dentist practitioners in specialist skills. The part-time nature of the courses **allowed trainees to continue to practice alongside study**, meaning that they could both earn a wage and practice their skills. This was important to trainees balancing work and family lives alongside career development, and those that could not afford to forego a wage.

7.13 Part-time routes for dental foundation or Core training and dental nursing were not part of the dialogue about flexibility. Trainers commented that it can be logistically difficult to manage (if trainees are part of a rotation or day-swap pattern, for example), and there was not thought to be high demand due to the age and life stage of most trainees. However, this may well exclude a potential cohort of recruits, and may not align with the wishes of new graduates entering the profession, with a growing rise of 'portfolio' careers elsewhere.

7.14 Linked to this, for all levels of training, the **need to provide trainees with opportunities that gave them a portfolio approach to career development was articulated**. A potential problem highlighted with higher level training and movement through different forms of dentistry was that trainees who went from dental foundation through to core 1, 2 or 3 were said to be more likely than general dental practitioners to be able to step on and off this route as their career developed, because: they a) knew what options were available and what might suit them best, and b) understood the training environments and had relevant experiences for their application. **Choices made in early stages of a career could then establish parallel career tracks with few opportunities to cross-over**. To counteract this, stakeholders wanted to see:

- Different settings built into all dental training – this was discussed for post-registration dentists and therapist as well as dental nurses.
- Training pathways for experienced dentists in general dental practice wishing to upskill, with clear eligibility requirements and opportunities to progressively enhance skills. Courses on 'preparation for learning' were also thought to be helpful, for example courses in portfolio building or academic research.
- Commissioned support targeted at skills development in areas with unmet service need, offered with accessibility requirements in mind.

7.15 One of the effects of **Covid-19 was the rapid take-up of remote forms of learning** for parts of courses. Online course delivery was adopted for some components of training courses. A more widely reported effect by trainees was its impact on their clinical practice. Some training was cancelled or postponed. Other trainees (and indeed trainers) were redeployed to other parts of the healthcare sector where their skills were used for a range of services including proning Covid-19 patients,

supporting emergency services to confirm absence of life, community pharmacy and other frontline support services. Both the adoption of more **blended forms of learning, and enhanced professional relationships with other parts of the health service,** were hoped to provide a legacy for more flexible training in the future.

Trainee skill development

7.16 The **pandemic interrupted some training** and brought problems associated with reduced time in clinical practice. There are anxieties about the impact of lost clinical time on the cohort as they progress through their training, as well as others affected through their training being delayed or cancelled. However, this was not unique or specific to ADC initiatives.

7.17 **The ADC training initiatives delivered improved skills.** Trainees who participated in the evaluation (at each level) appreciated their training, reported improved skill levels in key competencies studied, and improved levels of confidence. For example:

- Foundation dentists valued a range of practical experiences offered through two-year combined DFT/DCT models, while the OMFS trainees we interviewed said they too would have liked a wider range of training experiences
- Academic Clinical Fellow post-holders developed skills and understanding relating to academic dentistry
- Level 2 trainees said they valued access to practical training and good quality teaching
- Therapists said they increased their confidence and experience in carrying out several procedures including extractions and restorations, but some felt they needed further training to carry out pulpotomies on primary teeth.

7.18 Trainers also reported that dental nurses who trained in a hospital setting, either in the former HEE supported model, or as an apprentice, achieved good skill levels and had a rich training experience due to their exposure to a wider range of clinics.

7.19 The trainees we spoke with said their **training had been enjoyable**, particularly opportunities to train in different settings, with particular teams or to develop peer support groups.

7.20 **Training was often undertaken as part of a multi-professional team** in hospital-based courses. In a survey of Dental Core Trainees 123 out of 126 respondents said they had fully achieved a learning objective to understand their role in multi-professional teams. In interview, therapists told us that they liked doing their

Foundation training alongside foundation dentists, but **ensuring all sessions are relevant** (and running parallel ones if needed) is key.

7.21 Trainers and other key stakeholders said how important it was to establish a multi-professional mode of working at the start of a career. They were optimistic that having been trained as part of a multi-professional team, each group would understand and respect their colleagues' scope of practice. With adequate funding, and positive relationships with clinical partners, training providers develop quality learning experiences. Trainees learn and develop professional practice as a result.

7.22 However, there were **areas of improvement** suggested by both trainees and trainers:

- **Duration and structure of rotations or experiences**. Different regions were developing different patterns of rotation for two-year foundation and Core training, depending on which settings had capacity to host a trainee, and their location. Each training director or trainee was able to say what they thought worked well about their model, but the scale of the evaluation was insufficient to say which model worked best for either the trainer or the trainee. It is unlikely that one size would fit all nationally, but further investigation of the strengths and weaknesses of different rotation durations (4, 6 or 8 months), patterns of delivery and associated costs would be useful for future decision-making.
- **Clinical supervision**. Supervisors play a critical role in the training process. Most of the evaluation participants were based in secondary care. The contribution of supervisors in both primary and secondary care settings was positively valued by trainees and trainers alike, and systems to select and support supervisors were thought to work well. There were some concerns expressed about incidences relating to the quality of supervision and the richness of the experience of foundation trainees (dental and therapy) and dental nurses in private practice. Concerns were associated with the amount of close supervision that might be needed compared with what was possible in a busy practice, the isolated nature of the relationship (compared to the multi-professional team in a larger practice or hospital setting), potential lack of pastoral care or employment advice.
- **Use of simulation and digital resources**. The pandemic accelerated the shift to online learning. Whilst not appropriate for all scenarios, digital learning provides a way for trainees to access learning that is convenient and enables them to learn efficiently. Having opened the door to IT-enhanced learning, further innovation could follow with the use of virtual reality training, remote consultations and supervision, and even assessment of competence. The use of simulation was also an area that some stakeholders suggested could and should be explored further, to enhance opportunities to practice skills before clinical work is undertaken.

Future workforce supply and retention

7.23 **The opportunities for trainees to apply their newly acquired skills in practice varied**.

- Most trainees doing two-year combined DFT/DCT were hoping to undertake a DCT2 post at the end of their two-year training post. The availability of posts was the key constraining factor. While survey evidence suggests that trainees would prefer posts in their region, many would be willing to move for the right training opportunities.
- Level 2 trainees interviewed were able to undertake more complex procedures and one had moved role into secondary care (it should be noted these were trainees who had undertaken Masters courses rather than short courses).
- Only 3 of the 16 dental therapists who participated in the evaluation were able to use all their therapy skills within study timescales; six only used some, while another six said this was not applicable to them as they were not working in therapy roles.

7.24 This latter point is important. **Training is valuable for therapists, but it does not by itself address the structural problems in the system that prevent them from using their full scope of practice**. If therapists are not able to provide services to patients following registration or Foundation training then the ADC initiatives risk merely delaying the erosion of their practical skills before they take up (or return to) hygienist roles. This is important given the potential of therapists to release capacity in the system for dentists to undertake work of higher complexity or to take or deliver further training. The barriers to such a shift are varied, and include **outdated modes of working in practices, resistance to cultural change, lack of physical capacity and current NHS contractual arrangements in primary care**.

7.25 **Issues of retention were raised only with respect to both dental nurses and therapists**. Churn in the dental nurse workforce was expected due to a number of factors, including leaving to train for higher skilled roles in the dental profession, parental leave, or to find roles with higher wages. There was anxiety about the numbers that might have left the profession during the pandemic. There was also a concern about the loss of dental therapists, either as they take up higher paid roles as hygienists or other roles that use their clinical or patient interface skills. Their under-employment was a frequently cited concern, as few fully use their full scope of practice.

7.26 **There remains further concern about the erosion in numbers of hospital-trained dental nurses** over time. Only one dental hospital has currently made the apprenticeship model (training nurses employed by general practices) work for them with another still delivering apprenticeships and trialling a new approach this

year. Most have struggled with the transition and have stopped training while two other sites are exploring different ways to make it work financially and practically for their own employees. At best, the move to an apprenticeship model has made hospital-based training viable only for nurses needed for that Trust's workforce rather than the wider regional workforce. In the longer term there is anxiety that this won't be sufficient for specialist dental services, and may lead to a general erosion of training standards for dental nurses with negative effects on the training experiences of other students.

7.27 **The supply of a workforce that reflects the cultural diversity of the population** they serve was important to the stakeholders who participated in the research, and is highlighted as a key priority in HEE's People Plan 2020-21. The profile of pre-registration students (dentists and therapists) was said to be particularly diverse compared with other medical or other professions and compared with the wider dental workforce. It was acknowledged that there was nonetheless work still to be done to ensure equality of opportunity. Several dimensions were mentioned:

- The dominance of females in the dental nurse workforce, and the lack of representation of white, working class males among participants for all courses was noted as evidence that further work is needed on widening participation.
- There is limited evidence about academic attainment and subsequent career progression of different groups across the strands and specialisms in the workforce, to inform any critical review.
- Better understanding is needed of culturally specific practices that affect oral health and appropriate treatment, alongside ensuring culturally-appropriate practices are deployed in workforce training and workplace behaviours.
- Development of training materials and curricula that respect and represent cultural differences could be useful.

7.28 The training system is dependent upon a **supply of quality supervisors** able to work together to provide effective learning experiences for the oral health workforce. Innovation in supervisory support and delivery was not part of the scope of the evaluation, but nonetheless several trainers, trainees and strategic stakeholders referenced their fundamentally important contribution to workforce development. The process of selection, training and support for supervisors was reported to work well. Many hospitals, practice chains and individual practices are part of education networks and known to provide quality placement experiences year after year. There will continue to be a need for new supervisors, either as trainees are taken on by practices or as demand for placements increases. Whilst the current system is largely seen to work well, there are challenges associated with attracting more high-quality supervisors:

- The tariff awarded to employers to host a Foundation dentist is much higher than that to host a Foundation therapist (as one is classed as medical while the other is under the hygiene and therapy tariff)[38], which creates imbalance in the system and potentially disincentivises Foundation therapy training provision.
- Supervision of trainees needs to be embedded in the employer culture, so that all systems (pastoral, HR, administrative as well as clinical) are deployed to support the trainee.
- Development of new structures for training delivery (with different rotations or patterns of deployment) requires additional input from supervisors with more complex logistics and different patterns of input required compared with previous models.
- Covid-19 may have created a backlog of placements that lead to certain types being prioritised over others.

7.29 Supervisors are motivated by their commitment to the profession rather than monetary reward (although fair compensation is a basic requirement). Currently there are few ways that the profession plays that back and recognises their contribution at a national level, although regional awards and commendations do exist.

Training commissioning

7.30 The **regional variations** in training commissioning were generally reported as positive. Each region has its own challenges and needs to be able to manage resources to address its specific needs. The regional nature of commissioning has created different practices which act as demonstration projects for other areas to share learning. One of the strategic effects of ADC has been the open exchange of ideas and experiences between regional stakeholders, which has facilitated the exchange of good practice and supported subsequent adoption into different regions. However, regional variations were **sometimes seen to create anomalies and unfair practice** - particularly in the case of dental nurses and the move to the apprenticeship funding system.

7.31 The fundamental concern with a regional approach to commissioning is that, while it might help to focus on local issues by moving resources to particular cold spots of provision, it does not tackle inter-regional inequality, which by perpetuating the same regional allocations of posts and resources, continues to be experienced.

[38] Department of Health and Social Care. Education and training tariff guidance and prices for the 2020 to 2021 financial year. Available via: www.gov.uk/government/publications/healthcare-education-and-training-tariff-2020-to-2021

7.32 The evaluation highlighted some commissioning decisions taken to allow the creation of attractive two-year posts into places which were hitherto either underserved (with unallocated units of dental activity) or had hard to fill posts. This created demand for posts in areas that found it hard to attract trainees. Where resources for two-year posts are capped, and assuming that adequate mapping insights exist, these attractive posts could perhaps be allocated solely (or as a priority) to areas on the basis of criteria that address patient need or skills shortages.

7.33 The evaluation found that training models that provided **a variety of experiences, and exposure to high-functioning multi-professional teams**, were particularly attractive to trainees and valued by the profession. These principles could perhaps be built into all training expectations, so that training resources are awarded to providers that can ensure quality training in different settings and as part of multi-professional teams.

7.34 Such an approach would **raise the issue of needing to address potential shortfalls in placement and supervision capacity**. The evaluation found that education providers were often able to suggest innovative approaches to address such shortfalls: the use of 'hub and spoke' training models, short term use of specialist facilities on a peripatetic basis into places distant from training hospitals, taking trainers to trainees, use of blended learning and simulation technologies were all part of the potential solutions.

7.35 These approaches could work in the longer term only if jobs, or market opportunities, are available in places where they are most needed. There is a **need for workforce planning** to prevent cohorts of students being trained for jobs that don't exist or are not well aligned with population needs. There needs to be a rebalancing of resources towards identified needs and demand. With a finite set of resources, this creates an uncomfortable scenario where some areas may need to lose public investment in order for it to move to areas of greatest need, for example to meet the needs of an ageing population or those living outside of urban conurbations. The associated risk is that if skilled people do not follow those resources then provision will have levelled down rather than levelling up.

7.36 The effects of the initiatives supported through ADC take years to be realised; investment in skills in a long-term endeavour. ADC initiatives provided some good practice examples, but further reform work is needed to really deliver the systemic change required. The Dental Education Reform Programme will continue beyond 2021 to develop the evidence further for change and to drive innovative implementation in dental care and the training of the oral health workforce.

8. Recommendations

8.1 These recommendations are presented as cross-cutting recommendations that affect multiple strands of training activity. Where actions need specific partner involvement it is stated, otherwise it is assumed that actions are owned by HEE.

Table 8-1: Table of recommendations from the ADC evaluation, linked to key findings and learning presented throughout the report

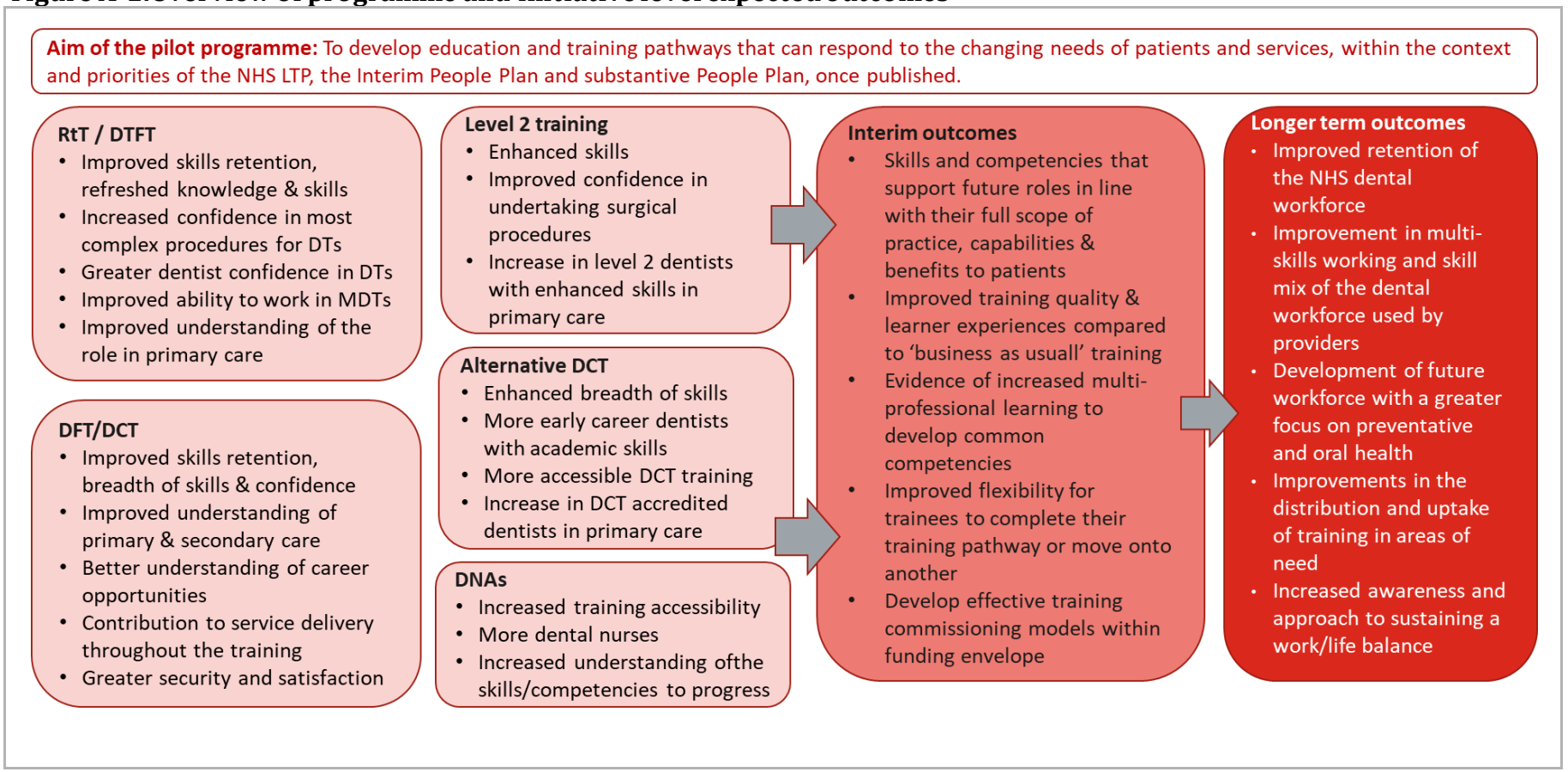
Learning / key findings	Recommendations
ADC rationale and design	
The ADC programme has **brought key stakeholders together** and made good progress in capturing evidence, identifying success factors associated with different training models and sharing learning.	• Continue to ensure the infrastructure for strategic dialogue across regions, and practice development and learning, continues. • Provide resources that enable the steering group to make rapid progress (in particular, secretariate support, analysts and data specialists).
The **evidence base** of the population's oral health needs and the dental care workforce supply needs further development. Information and its interpretation should inform future investment decisions.	• The NHS should consider developing a data strategy, exploring population needs and demographics, trainee and postholder numbers and characteristics, course and post provision and destination data, as a minimum. • An annual destinations survey should be undertaken to track post-course progression and retention in the sector.
National workforce planning is needed to rebalance health inequalities between the regions.	• Commissioners of training need to shift resources to where health inequalities lie - at a national level and sub-regional level.
Flexibility of training provision	
There is an assumption that only some forms and levels of training are suitable for **part-time modes** of delivery. This risks limiting the potential intake of trainees, and may limit inclusivity.	• Audit training routes to ensure that those which could be offered on a less than full-time basis are advertised and developed as such.
Trainees valued being part of a **multi-professional team.**	• Ensure that all commissioned training for dentists and therapists includes a period of learning within a multi-professional team.
Trainees and the profession benefit when **training is undertaken in different settings.**	• All Foundation dentists and therapists and dental nurses should be trained in different settings, either as rotations or as a weekly or fortnightly shift pattern.

Learning / key findings	Recommendations
	• Further research to capture the relative effects of different duration of rotations (4, 6 or 8 months) and different delivery models in at least two different regional contexts should be undertaken.
Trainee skill development	
There are many CPD options for dentists to acquire skills and accreditation to deliver Level 2 services but progression pathways through the options can be difficult to navigate	• Training should be planned as part of an individual dentist and therapist professional development portfolio linked to their registration.
Academic career routes were not as widely publicised or understood among applicants as other training routes.	• The job role, training balance and purpose of Academic Clinical Fellow posts should be made very clear at application stage. • Ensure equality of access to information and advice about different training posts.
Simulation and digital resources used for learning during the pandemic were welcomed as an important part of training	• Blended learning should be used in course design. • The potential of virtual reality and other IT-enhanced learning resources should be explored and trialled for dental and therapist Foundation training. • The use of digital communication to support assessment of competence should also be further trialled and rolled out for professional development purposes.
Future workforce supply and retention	
Covid-19 created links with other parts of the healthcare sector, and demonstrated just how transferable DCP skills are for meeting patient (and system) needs	• Build on links with other parts of the healthcare system to provide learning and deployment opportunities for all trainees (dentists, therapists and dental nurses). • Create strategic links with ICSs to ensure oral health services are included as a core part of system infrastructure, exploring potential synergies, risks and opportunities across the system.
Clinical supervisors are critical to the system and the experience of trainees is often heavily influenced and affected by local factors including the relationship with their supervisor.	• The contribution of clinical supervisors to the profession should be recognised by the profession nationally. • Supervisor support and training need to be considered alongside training quality assurance mechanisms, to ensure a culture of continuous improvement for professional supervision. • Incentives to train therapists should be considered to ensure that they have access to

Learning / key findings	Recommendations
	quality training that is equitable compared with opportunities available to dentists. • Where supervision is not working, effective remediation measures need to be rapidly enacted to address concerns of either the trainee or their supervisor.
It is important that the supply of the **workforce reflects cultural diversity**. Those in training have diverse characteristics but inequalities may still persist.	• The findings of the Diversity in Dentistry Action Group should be embedded in the work of the ADC partners in future.
Training commissioning	
Two-year posts are attractive to trainees and have encouraged them to take up training in areas with limited provision or which may otherwise be less appealing to applicants.	• Commissioning decisions should encourage the creation of two-year posts in regions of greatest need, rather than regions already popular with trainees. This applies to DFT/DCT, but is also likely to be appropriate for combined DCT2/3 posts. • Trainees in all regions should have the opportunity to apply to some two-year posts in their region. • As outlined above, be transparent as to the nature of (and likely opportunities offered via) different training posts/routes.
The level of financial compensation (**tariff**) for training a dentist on clinical placement far outweighs that provided for therapists (by a factor of approximately six).	• The classification of dental therapists compared with dental trainees in the tariff needs review to create more equal opportunities for quality training posts.
Dental therapists are an underutilised resource whose practice needs to be encouraged and rewarded.	• Courses that train therapists alongside dentists should provide parallel sessions appropriate to their learning needs. • Providers should be incentivised to train a therapist alongside a Foundation dentist.
Dental nurses in hospitals benefit from having been trained in a secondary care setting, but **opportunities are declining.**	• Hospital Trusts need to include dental nurses in their workforce development plans and train for their own workforce needs. • Hospitals that are registered as main providers of apprenticeship training should be commissioned to support training of dental nurses linked to NHS provision.

Annex A: Programme logic model

Figure A-1:Overview of programme and initiative level expected outcomes



Source: SQW, with programme level interim and longer-term outcomes taken from the ADC Evaluation specification (HEE, 2019)

Annex B: Dental core trainee 2021 survey key findings

Introduction

B.1 This annex presents the findings from SQW's survey of ADC Dental Core trainees who had either completed or were completing a Dental Core Training (DCT) one-year post (DCT 1, 2 or 3) or a DFT/DCT combined training two-year post.

B.2 The survey launched on 13 January 2021 and remained open for responses until 1 March 2021. This was slightly longer than originally planned, in order to seek additional responses.

B.3 HEE distributed the survey to all DCT trainees in England, with reminders having also been issued to encourage completion. The survey generated a total of 134 full and 48 partial completions. After removal of duplicates and data cleaning, the analysis presented here is from **140 respondents**, with 14 partial responses included for the initial questions around motivation, course considerations and overall training satisfaction, so as to maximise response numbers for analysis.

Survey results

Respondent characteristics and programme details

B.4 Respondents' region of study and programme details were as follows:

Table B-1: Respondent's region of study

	Completed undergraduate training	Completed Dental Foundation training (or equivalent)"	Last year's Dental Core Training post
North East	7	10	9
Yorkshire and Humber	29	27	16
Thames Valley and Wessex	1	6	5
South West	12	10	5
North West	26	16	6
London, Kent, Surrey and Sussex	25	22	4
Midlands and East of England	9	24	18
Scotland	2	2	0
Wales	7	5	2
Northern Ireland	3	0	0

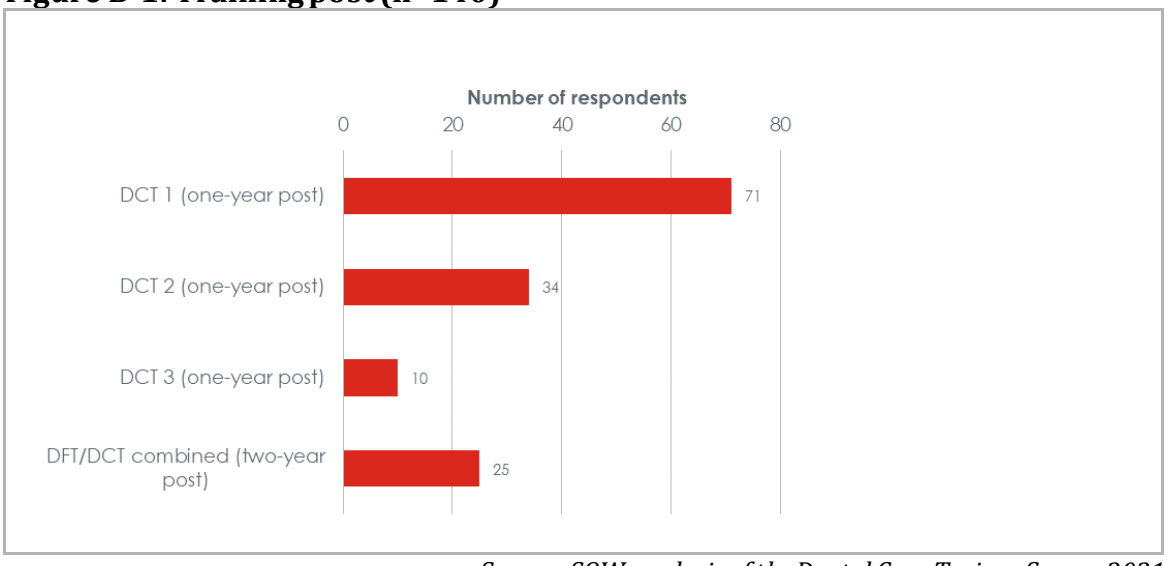
	Completed undergraduate training	Completed Dental Foundation training (or equivalent)"	Last year's Dental Core Training post
Europe	6	0	0
Internationally, outside of Europe	0	0	0
I don't know	0	0	0
Not applicable	2	0	15

Source: SQW analysis of the Dental Core Trainee Survey 2021
Note: As a result of non-responses to this question, n=129 for 'Completed undergraduate training', n=122 for 'Completed Dental Foundation training' and n=80 for 'Last year's Dental Core Training post'

B.5 The majority of respondents had completed their Dental Foundation Training or equivalent since 2019, with 34 (30%) of the 114 respondents having completed their training in 2019 and 65 (57%) in 2020, with the remaining 15 having completed their training between 2016 and 2018. Respondents completing the DFT/DCT combined training two-year post were not asked this question.

B.6 Just over half of respondents (71/140) were currently undertaking a DCT 1 (one-year post), whilst 34 were completing a DCT 2 one-year post (Figure B-1). The DCT 3 one-year post and DFT/DCT combined two-year post were also represented but to a lesser degree, as might be expected given overall post numbers on these programmes.

Figure B-1: Training post (n=140)

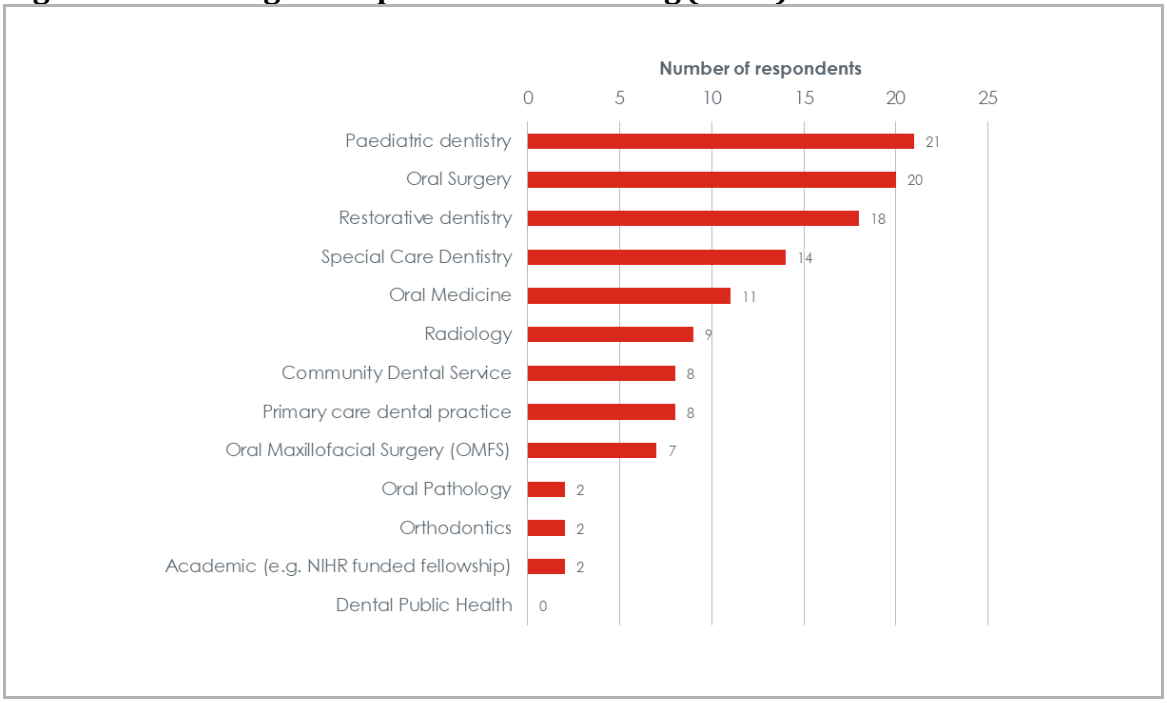


Source: SQW analysis of the Dental Core Trainee Survey 2021

B.7 In total, 101 of the 140 respondents (72%) reported that their training was in Oral Maxillofacial Surgery (OMFS) as the primary training setting. The remaining 39 respondents were asked to detail which settings and specialties they had completed training in, with Paediatric Dentistry being the most frequently selected (Figure B-

2). Other specialties noted by respondents included dental emergency and urgent dental care and sedation dentistry. One respondent did not respond to this question.

Figure B-2: Settings and specialties of training (n=38)

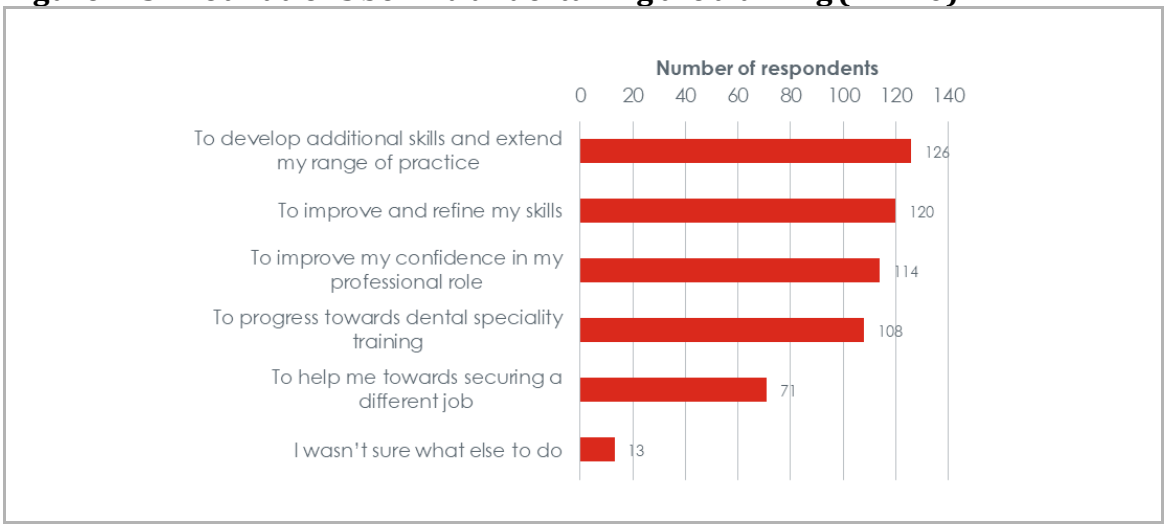


Source: SQW analysis of the Dental Core Trainee Survey 2021

Motivations and course considerations

B.8 Of the 140 respondents, 126 reported that they had wanted to undertake the training in order to develop additional skills and extend their range of practice (Figure B-3). Similarly, the vast majority of respondents indicated that they had undertaken the training to improve and refine their skills, and wanted to improve their confidence in their professional role.

Figure B-3: Motivations behind undertaking the training (n=140)



Source: SQW analysis of the Dental Core Trainee Survey 2021

B.9 The majority of respondents stated that the training post they had completed was ranked either highest or in the top ten in their ranking of preferences at application stage (Table B-2). Eight respondents reported that the post was ranked lower than 51st in their preferences.

Table B-2: Preference ranking of post at application stage (n=140)

	Number of respondents
Ranked 1 (highest)	64
Ranked between 2 and 10	40
Ranked between 11 and 30	17
Ranked between 31 and 50	11
Ranked 51 +	8

Source: SQW analysis of the Dental Core Trainee Survey 2021

B.10 Of the 140 respondents, most (104) would have accepted a DCT post in a different region of England, while 10% (14) said that they would not. However, when respondents were asked to select which statement best fit their motivations for applying and taking up posts, over half (79/140) indicated that the location and type of training post were equally important to them.

Table B-3: Statement which best fits motivation for applying and taking up posts (N=38)

	Number of respondents
Location and type of training post were equally important to me	79
The type of training post was more important to me than its location	53
The location of training was more important to me than the type of training post	8

Source: SQW analysis of the Dental Core Trainee Survey 2021

Motivations behind completing Oral Maxillofacial Surgery posts

B.11 The 101 respondents who had completed an OMFS-only post were asked to detail why they chose this rather than a post with rotations in other areas of dentistry, with 81 providing a response. Key reasons included:

- Several respondents wanting exposure and opportunities to develop expertise specifically in oral surgery specialties and OMFS as part of their post; a number of respondents wanted to pursue a career in OMFS or oral surgery.

"I am interested in working in OMFS or oral surgery in the future."

The proximity of the post to home, as well as the number of OMFS posts available.

"The location: the other posts with rotation aren't as common."

"Because OMFS posts are far more available compared to others. There are not enough posts in other areas of dentistry"

- The opportunity to challenge themselves in OMFS training, alongside several others reasons such as the opportunity to explore something different and the opportunity to complete a mono-specialty course.
- Five respondents also reported that they were allocated the OMFS post through the selection process and did not have a choice.

"Did not get it in national recruitment - would have preferred those [innovative DCT posts] instead. Very limited"

B.12 Of the 101 respondents, 26 indicated that they would have preferred a post with rotations in other areas of dentistry, while 42 stated they would not and 23 that they did not know (10 respondents provided no response to this question).

Motivations behind completing DFT/DCT combined two-year posts

B.13 The 25 respondents who were completing a DFT/DCT combined two-year post were asked whether the two-year 'run through' feature of the training was a decisive factor for them in applying for the training. Almost all agreed or strongly agreed that this was the case: just over half (13) of respondents strongly agreed; 11 agreed that this was the case, while the remaining one disagreed with this statement.

B.14 Respondents completing a DFT/DCT combined two-year post were asked to explain their responses, whilst those who were not completing a DFT/DCT combined two-year post were asked whether such a post would be appealing (100/115). In summary:

- **Job security** was highlighted by multiple respondents, with the two years of employment provided by the course seen as a benefit, particularly in light of Covid-19.

"Especially in the current pandemic climate I wanted to be secure in a combined post where progression to the second year allows smooth progression within a work environment I am comfortable in"

- Linked to this, a number of respondents indicated that **exemption from the recruitment process** multiple times informed their decision to apply for the combined two-year post, while others noted the consistency of location as a

benefit in terms of stability and continuity in friendships and colleague relationships.

"Avoids having to go through the national recruitment process again"

"Job and location security; for example, location security was identified by respondents as providing the opportunity to settle and purchase a home with their families as opposed to having to move after at least a year.

- Several respondents identified the opportunity **for gaining experience in primary and secondary care** as a key benefit of the combined two-year programme. Further, multiple respondents noted that it was an opportunity to gain a wide range of experience across dentistry and different specialties, to gain awareness of what was available.

"Variety between practice and hospital allowing me to directly assess which I may prefer"

"I am able to broaden my experience and be able to truly see all the avenues dentistry has and be able to immerse myself in the experience to eventually decide what area of dentistry I would like to specialise in, all the while learning so much from all the seniors at all the departments"

- Other appealing aspects noted by respondents included the **opportunity to become involved in research and quality improvement** such as two-cycle audits; the opportunity to see cases from start to finish; increased investment from trainers and supervisors over the longer time period; the opportunity to understand the requirements of DCT years and specialising; and the benefits of the post in terms of representing a nice progression for newly qualified dentists than moving straight onto the DCT1 programme. A number of respondents highlighted that a DCT 2 and 3 year post would be particularly appealing.

"One of the key issues with one year DCT is that you are seen as temporary by staff members and supervisors - they are not engaged with your development and a two year programme would improve their investment"

"In particular I think a DCT 2/3 post would be useful as at this stage is when you know more about specialising, and it would enable you to better plan your career."

B.15 Some of those respondents who indicated that the course would be somewhat appealing outlined a number of considerations, including that it would depend on the rotations included in and the location of the posts. Several also indicated that the aspect that was less appealing was that it would be difficult to leave or progress in

the post if you don't like the post and have to remain for two years as opposed to one.

"A run-through post would have been appealing depending on the geographical location and specific post type"

"Certain aspects sound good in that it can combine both primary and secondary care but if you dislike your placement 2 years can feel like a long time."

B.16 A small number of respondents indicated that completing a DFT/DCT combined two-year post would have been not at all appealing, with reasons including:

- Several respondents indicated that the two-year commitment was not appealing, with one noting that they may have wanted to change specialty and another that they may have wished to change location.

"Not appealing as I was unsure which specialty I wanted to go into, therefore didn't want to commit to a two-year training programme."

- One respondent noted that the two-year post would have involved too much rotation within the year, suggesting separating the DCT and DFT years in the post would work better.

"You chop and change too often - unless it was 1-year DFT and then 1 year DCT"

- Another indicated that it would not be an appealing post if you did not want to work in secondary care.

"Combination of the DFT/DCT1 course would not be appealing to many people who wish to work only in practice and not in a hospital environment."

Training satisfaction

B.17 Table B-4 outlines respondent's satisfaction with various elements of training, with the most frequently selected ranking for each element highlighted in pink. For almost all aspects of training the highest proportion of respondents were satisfied. Quality of supervision was the only element with the highest proportion of respondents (52/140) indicating that they were very satisfied. Amount of time spent in teaching sessions was the aspect of training that the highest number or respondents (42/140) reported that they were either very dissatisfied or dissatisfied with, followed by the amount of time spent in clinical sessions to practice skills, which may reflect Covid-19 restrictions.

Table B-4: Satisfaction with aspects of training (1 is very dissatisfied and 5 is very satisfied) (n=140)

	1	2	3	4	5	N/A
Recruitment process	5	17	35	50	33	0
Induction period	12	16	43	42	27	0
Flexibility (work-life balance)	6	25	47	43	19	0
Quality of teaching	2	18	30	59	31	0
Quality of supervision	2	11	25	49	52	1
Skills and procedures covered	5	14	36	65	19	1
Training facilities	1	11	38	61	27	1
Timetabling/rota	9	23	37	50	18	2
Amount of time spent in teaching sessions	15	27	35	43	19	0
Amount of time spent in clinical sessions to practice skills	9	32	39	38	20	2
Relevance of skills learnt to your future career	1	12	21	57	48	1
Opportunities for inter-professional learning	2	17	31	54	31	3

Source: SQW analysis of the Dental Core Trainee Survey 2021

Posts where the primary training setting was not OMFS

B.18 Those respondents who did not complete an OMFS-only post were asked how satisfied they were with their training role; 12 were very satisfied and 13 were satisfied with their training role. A high proportion of respondents indicated that their post had been well supported by their supervisor and other staff throughout the training programme. However, one trainee did indicate that despite being impressed with the support from the department they had worked in, they were less so with support from Health Education England.

"Really nice training role, very varied, helped me choose a career path due to exposure to different specialities, really supportive supervisor and overall, lovely environment to be in."

"I am very satisfied with the department I work on, however I do not feel satisfied with the support from HEE."

B.19 Several respondents indicated that they had gained exposure and clinical experience in completing the post across a range of specialties. However, several did also note that this had been limited as a result of Covid-19.

"Highly supportive staff. The role has been tailored as much as possible to aid me in my StR [Specialty Registrar] ambitions. Clinical experience has equipped me to deal with conditions that I was previously not confident regarding."

"Had Covid not affected DFT and to a lesser extent DCT I feel I would be very satisfied, though lower than usual patient contact is unfortunate."

B.20 Three trainees were neither satisfied nor unsatisfied, with reasons for this including that Covid-19 had impacted on clinical training and that they felt restricted in what they could do and what was available. Six trainees were unsatisfied or very unsatisfied, with reasons including:

B.21 Covid-19, cited by five of the six trainees as having hindered their opportunity to gain clinical experience and provide treatments to patients. Other responses noted included the availability of limited pastoral support, no scheduled training and the fact that changes had been made to training without informing trainees.

"Due to the pandemic, my opportunities have been scant and I do not feel I can transfer many of the hard skills I've learned in OMFS to general practice. I certainly do not feel I have done enough operative procedures such as surgical 8s to do them in general practice and will likely continue to refer. Soft skills such as triaging, communication with other professionals such as nurses, labs, theatre and patients has improved somewhat. It is incredibly difficult to know whether this role was worthwhile in light of the pandemic in improving my skills due to the severe detriment the pandemic had on my FD year so there is nothing to compare it to. I feel that I have not adapted well to the situation, and due to cancellation of all routine work for the foreseeable, I am unlikely to learn much more in the remainder of my post."

B.22 The same respondents were asked to outline the ways in which they thought their training experience differed to their colleagues who had completed an OMFS only post, with 24 providing a response. The training was viewed to provide them with a wider range of experience across different specialties in comparison to OMFS, and some indicated that their training was more dentally relevant and providing more clinical experience relevant to dentistry than their colleagues who had completed an OMFS only post.

"I feel like I am getting relatively more clinical experience relevant to dentistry"

B.23 Timetabling and working hours were noted as being a difference between respondents' posts and their colleagues who had completed an OMFS-only post. For example, one respondent indicated that they had less intense working hours than their OMFS only colleagues, which was noted as being good for ensuring good work-life balance, whilst another reported that OMFS colleagues have more irregular timetables.

"Regular working hours - no on-call, weekends, nights and evenings so good work-life balance and good for my personal life"

"They have more medical exposure and more irregular timetables"

B.24 One respondent reported that their training provides more opportunity for increased practical experience than their colleagues in OMFS only posts. Similarly, another respondent noted that they had more opportunity for involvement in research and academic work in their post. Another respondent noted that in their previous OMFS post they had felt their role was more around service provision, with their current post feeling more like a training post.

"Much more hands on experience as procedures are much more within my competency. More emphasis on acquiring clinical skills as opposed to managing unwell patients as I'm primary care based."

"Felt more like I was in training and recognised that I am a dentist, I previously did an OMFS role and while a great learning curve and glad I did it, I often felt I was there for service provision"

B.25 However, two respondents noted that they felt they had received less training support and guidance than their colleagues in OMFS only posts:

"No scheduled teaching sessions which were present in previous OMFS posts. Far more multi site placement and less clear who if anyone to go to for support"

"Little support as many staff off, difficulty in supervision and further training"

B.26 A range of other responses were noted by respondents, including that through their post they had gained more trauma experience than their colleagues in OMFS only posts, that OMFS only posts were more readily redeployed.

Extent to which DCT training met initial expectations

B.27 Respondents were asked to what extent the DCT training has met their initial expectations, with 89 respondents providing a response. Almost half of respondents indicated that the DCT training had completely or mostly met their initial expectations, providing them with good exposure to a range of treatments and the opportunity to build confidence and work within a supportive team and support patients.

"yes i have thought the surgical experience using this post to be comprehensive of the things i wanted to learn. I have entered a team where i feel valued by the medical staff and i feel that i can approach anyone with problems. all the medical staff are very keen to impart their knowledge and encourage the DCT's to progress their skills."

"Completely - It has met all I set out to achieve. Advanced paediatric, surgical, oral med, and OMFS reporting skills"

B.28 The remainder of respondents indicated that the post had partly or not met their initial expectations, indicating that they would have liked to have gained more practical experience. This was noted by most as being a result of Covid-19 and the restrictions this has placed on opportunities to gain practical experience.

"It has partially met it with regards to experiencing new clinical skills and scenarios but Covid has disrupted the volume of work that I see"

"I have enjoyed the teaching and learning this post has offered, I think unfortunately the main issue has been due to covid-19 clinical work has been curtailed"

B.29 Other reasons for expectations not having been met included that respondents would have expected a more structure training programme, that the post had not resulted in them being more confident and as result of difficulties in the workplace including bullying and work placement anxiety.

"Would have expected more of a structured training programme, have had very little teaching sessions as there is no reserved time for teaching. was hoping to spend time developing skills relevant to dental practice such as MOS, sedation, developing oral medicine knowledge - mostly have spent time on call"

"Not at all. I will be the second person to leave the post due to bullying and work placement anxiety."

B.30 Another point to note was that several respondents indicated that the post had been more work than was originally expected, with one suggesting that the learning curve involved should be made clear to applicants.

Training achievements

B.31 Respondents were asked whether they had achieved what they wanted to from the Core Training in relation to several elements (Table B-5). In summary:

- Understanding their role in multi-professional teams was the most frequently cited element.
- Over half had partly achieved what they wanted to in relation to each of the elements.
- A limited number of respondents reported that they had not achieved what they wanted to in relation to each of the elements. For example, 11 respondents

stated that they had not achieved what they wanted to in gaining relevant skills and competence and developing their career.

Table B-5: Achievements through Core Training (n=126)

	Yes completely	Yes partly	Not at all	Not applicable
Gaining relevant skills and competence	20	95	11	0
Improving your confidence	35	81	10	0
Understanding your role in multi-professional teams	54	69	2	1
Understanding the career options available to you	36	80	10	0
Developing your career	33	81	11	0
Developing an understanding of both primary and secondary care	58	63	3	1

Source: SQW analysis of the Dental Core Trainee Survey 2021

B.32 Of the 19[39] respondents completing a DFT/DCT combined two-year post, six indicated that the run through nature of the training definitely helps to develop skills more quickly and/or comprehensively, while five indicated that it possibly helps, seven indicated that it varies across different types of skills and competencies and one indicated that they did not know.

"In some disciplines such as restorative where you progress through cases this is a negative as you don't get to see cases through to completion. in disciplines such as oral surgery and sedation is much better suited as your experience is dictated on a case by case basis and longevity does not affect things."

"It definitely helps develop our skills comprehensively as it is over a longer period of time."

B.33 A total of 95 respondents outlined what, if anything, they would have liked to have achieved through their training that they had not yet done so:

- A large proportion of respondents indicated that they would have liked to have gained more practical clinical experience through their training, however this was recognised by several trainees to have been limited by the Covid-19 pandemic. Linked to this, a number of respondents reported that they would have liked to have gained more clinical confidence.

[39] N=19 as 6 partial responses did not reach this question

"Additional teaching, more exposure to surgical extractions - although due to covid19 the patient lists have been restricted"

- Several respondents identified specific areas in which they would have liked to have developed their skills and confidence. For example, skills in minor oral surgery were noted by a number of respondents, as were specific procedures such as dental extractions, biopsies and restorative procedures, whilst a few respondents would have liked to have gained experience of more complex cases.

"To become more competence in carrying out surgical procedures, especially surgical extractions."

- Increased sedation skills were also identified by a number of respondents as an area they would have liked to have achieved through their training.

"Sedation - clinics have been cancelled but this is what I want to go in to long term"

- A number of respondents also indicated that they would have liked to have had more research opportunities through their training, whilst others reported that further teaching would have been beneficial.

"Guidance in how to get certain projects and publications especially as a DCT 1"

"More teaching from the deanery; Dentists on the ward teaching"

- Other areas identified by respondents included to have developed further skills and confidence in on call commitments and to have improved their independence in conducting procedures.

B.34 Likewise, 92 respondents outlined which of their achievements, or what they had learned, will be most important to help meet the needs of patients:

- A large proportion of respondents reported that their improved clinical and surgical skills would be most important in helping to meet the needs of patients. Several respondents also detailed specific procedures, with examples including sedation, extractions, managing swellings and trauma.

"Confidence with extractions and how to approach these, dealing with complex medical histories"

- Several respondents identified improved communication skills as being important, with it noted that this would improve their patient management, including through explaining procedures to patients. Linked to this, a number of

respondents reported that their patient management skills had been improved through the training.

"Communication and explaining procedures to patients"

"Complex Medical History management and consideration required when managing certain conditions"

- A number of respondents also noted that they felt the development of their knowledge of secondary care, including understanding of treatment options in primary and secondary care and when to refer, was the most important to help meet the needs of patients.

"I feel I have learned more about secondary care and how to refer appropriately to secondary dental care services, as well as be able to provide my patients with appropriate advice about said referral."

- Other areas identified by respondents included increased confidence, improved quality of care and skills in time management.

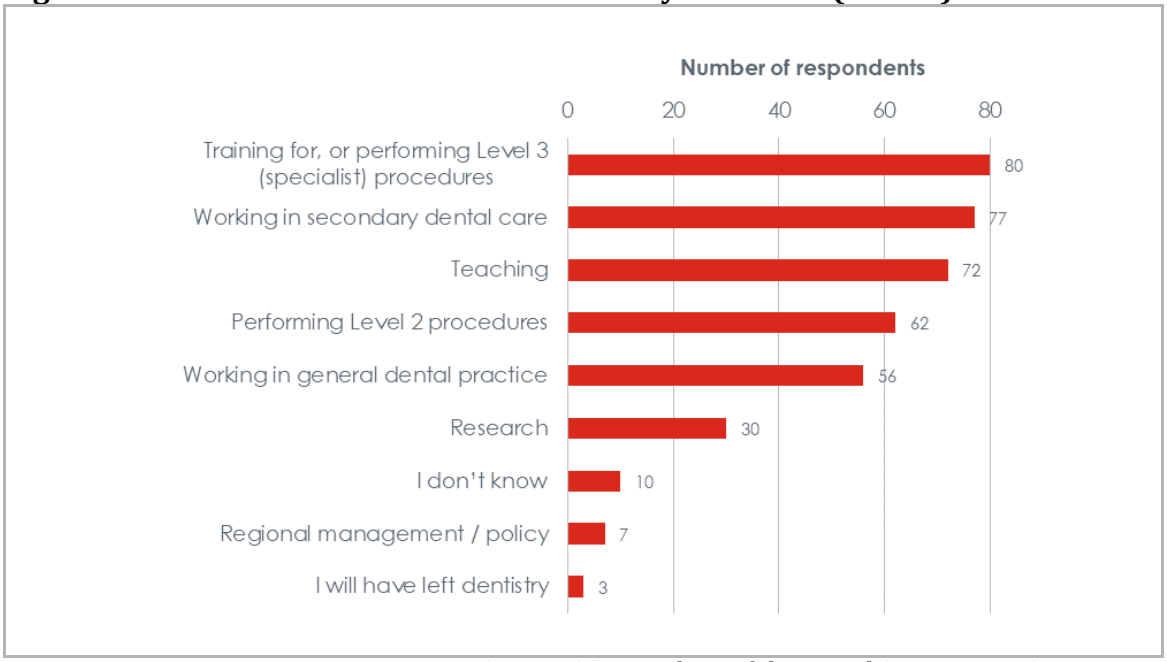
"Increased confidence and improved skill set (wider and more refined)"

"Prioritising and time management"

Post-training

B.35 Over two thirds of respondents (80/126) reported that they would like their work to include them training or performing Level 3 (specialist) in five years' time, and 77 of the 126 respondents would like to be working in secondary dental care (Figure B-4). A high proportion of respondents also indicated that they would like their work to include some form of working in dental practice and teaching. Only three respondents indicated that they would like to have left dentistry within five years.

FigureB-4: Ambitions for dental work in five years' time (n=126)



Source: SQW analysis of the Dental Core Trainee Survey 2021
N=126 as 14 partials did not reach this question

B.36 Respondents were also asked to detail which region they would like to be practising dentistry in in five years' time (Table B-6). The highest proportion of respondents (53/126) would like to be practising dentistry in the same region that they are currently working in, closely followed by 52 respondents who stated they would like to be practicing dentistry in a different region of England.

Table B-6: Future region of dentistry work (n=126)

	Number of respondents
In the same region that I'm currently working in	53
In a different region in England	52
In Scotland, Wales or Northern Ireland	11
In Europe	7
Internationally – outside of Europe.	19
Don't know	22

Source: SQW analysis of the Dental Core Trainee Survey 2021
N=126 as 14 partials did not reach this question

B.37 Finally, respondents were asked to what extent a set of statements reflected their thoughts about opportunities for jobs and training (Table B-7). In summary:

- The statement with the highest proportion of respondents who selected 'Strongly agree' or 'Agree' was that of 'There are opportunities available for the types of work I want to do', closely followed by 'I know what opportunities for further training exist in my geographical area'.

- The statement with the highest proportion of respondents who selected 'Strongly disagree' or 'Disagree' was that of 'I am confident that I can afford the costs of the training I need'.
- Generally, respondents agreed more with statements around the opportunities for further training, relevant types of work and the specific geographical location, than those around their confidence in their ability to secure a job that will progress their career or their ability to afford training costs.

Table B-7: Opportunities for jobs and training (n=126)

	Strongly agree	Agree	Disagree	Strongly disagree	Not relevant
There are relevant opportunities for me in the place (geographical location) I want to work	13	73	27	11	1
There are opportunities available for the types of work I want to do	17	78	23	5	2
I know what opportunities for further training exist in my geographical area	15	72	34	3	1
I am confident that I can afford the costs of the training I need	4	50	56	12	3
I am confident in my ability to secure jobs that will progress my career	3	62	52	7	1

Source: SQW analysis of the Dental Therapist Trainee Survey 2021:
**Note: One respondent provided no response to this statement.*
N=126 as 14 partials did not reach this question

Overall reflections

Elements of training that worked well

B.38 Respondents were asked to detail which aspects of their training they felt worked particularly well. From the 77 responses received to this question, key themes reported include:

- Over a quarter of respondents reported that support provided throughout the programme had worked well. For example, respondents indicated that the teams they had worked within had been willing to provide substantial support when required, providing the opportunity to learn not only from their educational supervisor but also a wide range of senior colleagues.

"Great educational supervisor that's always supportive and engages in career progress"

"Working with other DCTs and senior dentist/doctors. The team, including consultants, nurses, registrars and other dct are very approachable, knowledgeable and keen to help"

- Linked to this, the level of supervision was noted as a positive aspect by several respondents.
- Respondents also reported that the dedicated teaching sessions had worked well. For example, several respondents noted that the protected and regular teaching sessions had provided good teaching and learning opportunities.

"The post offers good teaching and learning opportunities. Teaching sessions are regular and kept to, there is good opportunity to learn with other specialities as well"

- The practical element of the training was another factor highlighted by respondents as something that worked particularly well, with this hands-on experience noted as a key benefit.

"Very hands on. Learning on the job, something new every day"

- Respondents also reported the exposure to a variety of experiences provided through the training as something that worked well. For example, experience across a range of specialties, treatments and clinical skills, whilst a range of different topics covered were also highlighted

"Exposure of various clinical cases and scenarios."

"A excellent mix of specialities: OMFS, oral surgery, Community, Special Care and Paeds."

- Other positive aspects highlighted by respondents included the opportunities for, and the encouragement of, engaging in research; the opportunity to develop peer networks with other trainees; and the good work-life balance encouraged through the post.

"Being with other DCTs and working together in unfamiliar scenarios"

"The chance to get work published and how this is encouraged"

"Good work-life balance - more sociable hours than secondary care"

- More widely, positive aspects noted by respondents included elements relating to the programme structure, such as the study and induction days, timetabling and the rotational element of training. The on-call rota was also cited by several

respondents as an element that worked well, with flexibility around this seen as helpful as well as the opportunities it provides in terms of developing skills in working under pressure.

"on-call rota at the primary site has allowed good development of coping with emergency patients and helped develop personal skills such as working under pressure and prioritising"

Elements of training that worked less well

B.39 Similarly, respondents were asked to detail which aspects of their training they felt had worked less well. From the 95 responses received to this question, almost a quarter of respondents reported that there was a lack of structured teaching time or training opportunities throughout their post. These respondents noted that structured training sessions and formal teaching were limited, with one respondent indicating that the inflexible timetable limits the ability to have all DCTs present at a teaching session due to on-call responsibilities, whilst one trainee indicated that the DCTs at their site had established their own teaching sessions to counter this.

"No formal teaching. The DCTs have setup their own teaching sessions to counter this. Sometimes supervision can be hard to come by for newer/more difficult procedures."

B.40 Linked to the above, the need for further supervision and support was highlighted by several respondents. For example, one respondent noted that supervision was minimal during the early stages, whilst another noted that there was no clear person for pastoral care.

"Very unsupported role. We are essentially expected to be medics on call with minimal or no help and training. High stress/pressure job with minimal relevance to dentistry. We are expected to manage complications of complex medical cases on the ward and are often criticised harshly when mistakes are made which surely should be expected given we have not been trained/supported in this role."

B.41 A lack of opportunity to gain clinical and hands-on, practical experience was also highlighted by respondents. For example, one respondent indicated that they had very little opportunity to get supervised hands-on clinical experience, whilst another suggested that they felt there was limited opportunity to become involved in clinical activity in their role. However, it should be noted that some did indicate that this may have been as a result of Covid-19.

"Not enough time for hands-on teaching sessions away from on call or clinics i.e. time dedicated to learning how to take blood, cannulate, etc."

"Actual clinical activity - MOS and theatres is very limited for DCTs. I think this is probably highlighted by the covid pandemic as there is reduced activity but I feel that I have taken a step back clinically. You are very much a spare part in theatres, and there is limited opportunity to participate even auctioning or retracting, and I feel oral surgery is also quite limited"

B.42 Timetabling issues, including late notice on rota arrangements and organisational issues were noted by multiple respondents as working less well. For example, several respondents reported that the rotas is distributed at short notice. Another element highlighted by respondents was organisational issues including timetabling, for example one respondent noted that an organisational error had resulted in them missing a large proportion of clinical time.

B.43 Other negative aspects noted by respondents included the intensity of on call work; limited opportunities for engagement with teaching and research; poor work life balance; too much administration work and an overall lack of time; the quality of study days and induction processes; pay and processes of reclaiming expenses; the behaviour of senior members of staff; and the use of SJT as a measure of DCT performance.

"The on-call duties are very tiresome alongside the keeping up to date with duties of the training post e.g. portfolio admin, audit etc. as well as to keep a good work-life balance. I feel that I definitely have less time to do leisure activities than when I was a DFT. In addition, the current COVID climate has reduced our clinical exposure massively..."

"Extremely poor opportunities for teaching and research."

"Admin - feels like a lot of admin as combined with DFT at the same time"

"Also the communication and planning of study days has been very poor and did not live up to the high expectations i had after DFT year."

"Bullying and rude behaviour by seniors."

Recommendations to colleagues regarding the programme

B.44 Finally, respondents were asked what they would tell a colleague who asked if they should complete this training. Of the 104 respondents who provided a comment, over half (61/104) indicated that they would recommend this training to their colleague for a variety of reasons; respondents highlighted the opportunity the various training posts provide in terms of developing skills and knowledge and gaining experience. For example, one respondent noted that it is an opportunity to develop your confidence and skills in terms of both surgery and transferable skills.

"if they would like to learn, be more confident with all aspects of dentistry as well as communication, be better at identifying complex lesions and learning to treat complex cases - to broaden the depth and breadth of their knowledge and experience then apply for DCT."

"Absolutely! Great experience. Chance to improve clinical skills, communication, team working, resilience and much more"

"You should, it's a great opportunity to open your eyes to the different side of dentistry, work with amazing people and share knowledge amongst your peers"

B.45 The supportive nature of staff was also reported as something that respondents would emphasise. Respondents stressed the supportiveness and friendliness of staff involved in the training. Other reasons included: the opportunity to develop confidence; job security; and the opportunity to gain experience in both primary and secondary settings.

B.46 Several respondents indicated that they would outline the various elements of the training in order to ensure that their colleague is aware of all aspects and can therefore make an informed decision as to whether they should apply and which kind of training they should complete.

"I would tell them to think long and hard about what they want to do in future and whether this post is 1. relevant to them and 2. worth the amount of work. I would discuss this with them to help figure out if this is the right post for them."

B.47 Finally, a number of respondents noted that they would recommend applying for the course, however they would do so after the Covid-19 pandemic is over.

"If they have a genuine interest, I would advise to apply for the post, but only once services have returned to normal post-Covid-19."

B.48 Several respondents did identify elements of their DCT post that they would warn their colleagues about, including:

- Respondents noted that they would only recommend completing the training if the colleague wanted to specialise on the certain areas focused on by the training, for example OMFS.

"This post is really good if you wish to pursue a career in maxfac and are looking to apply to medicine. However, if you are wanting to improve your skills with regards to MOS, then there are fewer clinics in which to do so in comparison to other posts around the country"

- Several respondents would note that the work is demanding, with respondents highlighting the steep learning curve involved in the training.

"To be ready for the challenge, but to be open to every opportunity and get involved as much as possible"

"It is true that the learning curve is very steep and very stressful to begin with. It takes time to adjust to secondary care but the support from seniors is excellent and improvement in skills and knowledge is very quick if you get involved in your learning."

- Two respondents indicated that they would highlight that the position is not as advertised and does not provide sedation experience.

Effects of Covid-19

B.49 Respondents were asked to describe any effect Covid-19 has had on their training. From the 103 responses received, over three-quarters reported that Covid-19 had reduced the amount of experience they had gained through their training, with reductions in patient numbers and increased patient cancellations having contributed to this. For example, respondents reported that there had been a reduction in all activities, including clinical procedures, theatres and surgeries, preventing them from gaining experience and subsequently their skills development.

"In all ways. Lack of exposure to clinic, theatres and surgery."

"Reduced clinical activity, less clinical skills/experience to be gained from the post"

"Fewer patients booked onto clinics/theatres so reduced experience"

B.50 Similarly, multiple respondents reported that Covid-19 had reduced the amount of training they had received or had access to, not only due to the transition of study days to be held virtually resulting in reduced face to face opportunities, but also as a result of reduced staff availability due to staff self-isolating and reduced learning opportunities.

"Provision of treatment affected, much less hands on experience, less teaching."

"Our TPD off due to isolation meant being unable to carry out own Surgical lists as the midgrades expressed not able to supervise without Consultant Oral Surgeon present."

"numbers of trauma cases decreased; lack of theatre sessions; lack of face to face practical teaching; not able to socialise with colleagues; decreased number of face to

face clinical sessions and therefore too many staff members available and less opportunity for practical work for juniors"

B.51 Respondents noted a shift in work patterns and roles, including the redeployment of trainees to other areas and an increase in the amount of on call work. For example, one respondent indicated that this had limited their training opportunities, instead focusing on medical skills.

B.52 Other more negative effects of Covid-19 reported included: increased stress both for individual respondents and their teams, changes to the rota, and reduced career progression opportunities. Respondents also reported reduced confidence in their skillsets as a result of the pandemic.

B.53 Despite the shift in work roles, a large number did note redeployment and the Covid-19 more widely had allowed them to diversify their skill set, for example in medical skills, and skills in triaging over the phone and prioritising care.

"I have been redeployed to covid wards since November 2020. This has been a challenging experience as it is completely medical and means a day of my week is taken away from training."

"Learnt new skills within the realms of medicine, realised diversity of skills, confidence in difficult situations."

B.54 Other positive effects of Covid-19 noted included: increased time for research projects and audits completed, increased support from seniors due to reduced workload, and reduced pressure due to the lower number of patients and reduced trauma.

Annex C: Dental therapist 2021 survey key findings

Introduction

C.1 This annex presents the findings from SQW's survey of ADC Dental Therapist trainees whom either completed the Dental Therapist Foundation Training programme or the Return to Practice training for Dental Therapists.

C.2 The survey launched on 12 January 2021 and remained open for responses until 1 March 2021. This was slightly longer than originally planned, in order to seek additional responses.

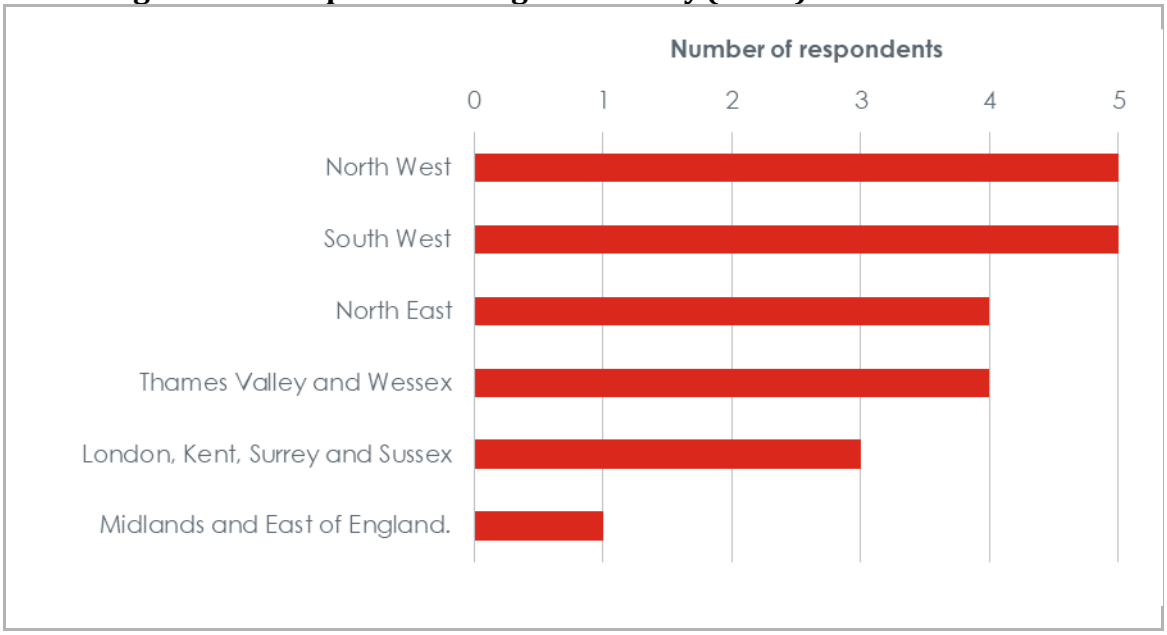
C.3 HEE distributed the survey to all ADC trainees in England, with reminders having also been requested to encourage completion. The survey generated a total of 17 full and 17 partial completions. After removal of duplicates and data cleaning the analysis presented here is from 22 respondents, with six partial respondents' responses included for the initial questions around motivation, course considerations and overall training satisfaction so as to maximise response numbers for analysis.

Respondent characteristics and programme details

C.4 Respondents' region of study and programme details were as follows:

- The largest proportion of respondents were from the North West and South West regions, but other regions including the North East, Thames Valley and Wessex, London, Kent, Surrey and Sussex and the Midlands and East of England were also represented (Figure C-1).
- All 22 respondents had or were completing the Dental Therapist Foundation Training (DTFT) Programme.
- Most respondents were still on the course (19 of 22), with the remaining three having completed the course. Therefore, the majority of respondents (19 of 22) had commenced their training in 2020, with the remaining three having commenced their training in 2019.
- Almost all respondents (19 of) qualified as a Dental Therapist in 2020, while two qualified in 2019 and the remaining one qualified in 2018.

Annex Figure C-1: Respondent's region of study (n=22)



Source: SQW analysis of the Dental Therapist Trainee Survey 2021

Pre-training experience

C.5 Respondents were asked to outline how frequently they had performed a range of procedures in the year prior to commencing their training (Table C-1). In summary:

- Half of respondents (11 of 22) had frequently completed the procedure of 'Carrying out direct restorations on secondary teeth', while ten had occasionally completed this procedure.
- The majority of respondents, over two thirds, had occasionally having completed extractions of primary teeth prior to commencing training. Similarly, 13 of the 22 respondents reported having carried out direct restorations on primary teeth.
- Half of respondents had occasionally performed the procedure of 'placing pre-formed crowns on primary teeth'. However, a further eight had never completed this procedure prior to commencing their training.
- Almost all respondents, 17 of 22, reported that they had never carried out pulpotomies on primary teeth prior to commencing the training, with the remaining five having only done so occasionally.

Table C-1: Frequency of carrying out procedures prior to training (n=22)

	Frequently	Occasionally	Never
Carrying out direct restorations on secondary teeth	11	10	1
Carrying out direct restorations on primary teeth	5	13	4
Placing pre-formed crowns on primary teeth	3	11	8
Extracting primary teeth	2	16	4
Carrying out pulpotomies on primary teeth	-	5	17

Source: SQW analysis of the Dental Therapist Trainee Survey 2021

C.6 Respondents were then asked to detail how confident they were in carrying out these procedures prior to commencing training (Table 2). As would be expected the figures link to the frequency of carrying out procedures prior to training. In summary:

- Almost all respondents (20 of 22) reported that they were very unconfident or unconfident carrying out pulpotomies on primary teeth.
- Around half of respondents reported that they felt unconfident or very unconfident carrying out direct restorations on primary teeth (10/22) or secondary teeth (7/22), with the same being true for extracting primary teeth and placing pre-formed crowns on primary teeth.

Table C-2: Confidence in carrying out procedures prior to training (n=22)

	Very confident	Confident	Un-confident	Very un-confident
Carrying out direct restorations on primary teeth	1	11	9	1
Carrying out direct restorations on secondary teeth	1	14	7	-
Placing pre-formed crowns on primary teeth	2	9	9	2
Carrying out pulpotomies on primary teeth	1	1	5	15
Extracting primary teeth	-	11	8	3

Source: SQW analysis of the Dental Therapist Trainee Survey 2021

C.7 Finally, almost all respondents (21/22) reported that they had been finishing their undergraduate degree prior to taking up their training post, with the remaining respondent having been working in a Hygienist role in general practice.

Course considerations

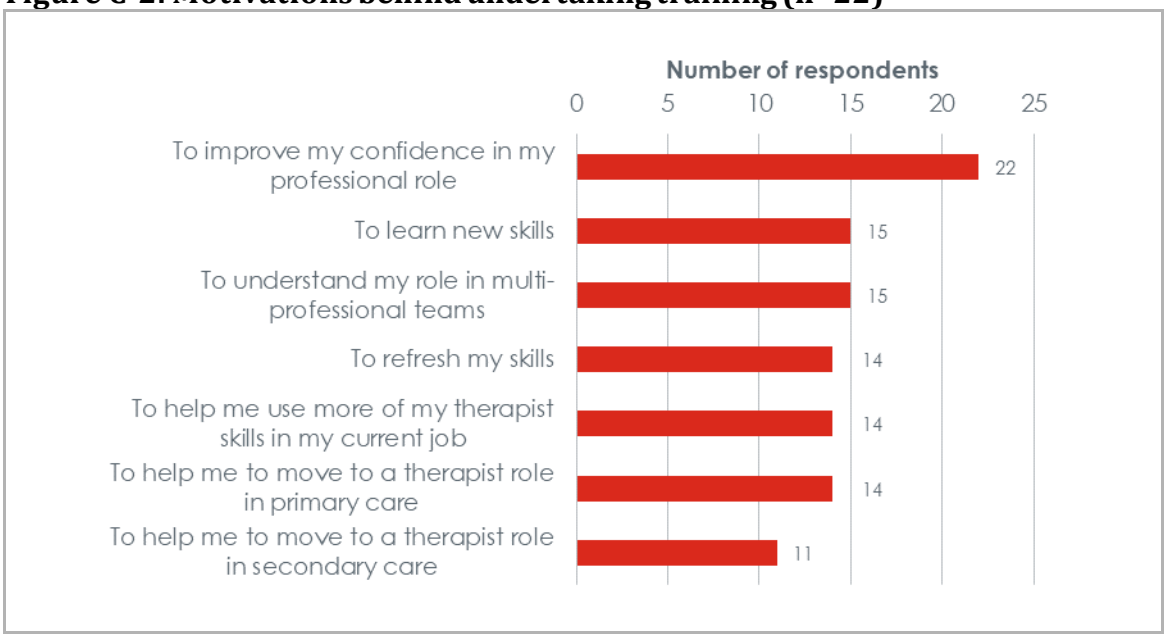
C.8 Of the 22 respondents, over two thirds (17) reported that, had the course not been available, they would have sought a Dental Therapist role. Three respondents indicated that they would have undertaken a different training course, while one would have continued in their previous role and one would not have carried out the full scope of a dental therapist and would have worked as a dental hygienist instead.

C.9 Five respondents considered applying for other training courses at the time which they decided to take the course, with all of these alternative training courses being other available DTFT schemes.

Motivations and barriers to training

C.10 The most common motivation behind undertaking training amongst respondents was that of improving confidence in their professional role, with all respondents selecting this response (Figure C-2). Other motivations reported by over two thirds of respondents included learning new skills and understanding their role in multi-professional teams.

Figure C-2: Motivations behind undertaking training (n=22)



Source: SQW analysis of the Dental Therapist Trainee Survey 2021

C.11 Of the 22 respondents, two indicated that they had experienced barriers to using their therapist skills previously. Those two respondents were then asked to select which barriers had affected their ability to utilise their therapist skills (Table C-3), with barriers selected including there being no, or a limited role for therapists in their current practice, limited availability of jobs for therapists in their area, lack of confidence to perform the therapist role, other roles being better paid than therapist roles and insufficient support for therapists in their setting.

Table C-3: Barriers to using therapist skills (n=2)

	Number of respondents
There is no or only a limited role for therapists in my current practice / setting	1
There are few jobs available in my area for therapists	1
I do not feel confident to perform the therapist role	1
Other roles are better paid than therapist roles	1
Therapists in my setting do not get sufficient support	1
Therapist working hours have proved difficult for me	-
I have not experienced any barriers to working as a therapist	0

Source: SQW analysis of the Dental Therapist Trainee Survey 2021

Training costs

C.12 Of the 16 respondents[40], five reported that their earnings were reduced whilst they completed the training programme. Additionally, nine of the 16 respondents stated that they had to pay for travel and subsistence whilst completing the programme. However, no respondents reported that they had to pay course fees or for any course materials whilst completing the programme.

C.13 The nine respondents who selected that they had to pay for travel and subsistence were asked to detail the total amount they spent throughout the training programme on course fees, course materials and travel and subsistence, with five respondents providing a response. Responses were variable as follows: £50 per month, £700 per month, £200 per month, £630 and £30.

C.14 Similarly, those five respondents who reported that they had experienced reduced earning whilst they completed the training programme were asked to detail how much their monthly income had declined as a result of taking the training course. One of the five respondents reported that their monthly income had been reduced by £251 to £500, while the remaining four did not know how much their monthly income had been reduced by.

C.15 Finally, respondents were asked to detail how many days they spent on various elements of the training. In summary:

- The majority of respondents (14/16) spent between one and five days applying for the training position.
- In terms of classroom learning, over two thirds of respondents (11/16) spent between six and 25 days in classroom learning. Similarly, the majority of

[40] From this point N=16 as the six partial responses are not included beyond this point.

respondents (10/16) spent between six and 25 days in tutorials throughout the course of their training.

- Nine respondents reported spending between one and five days in clinical supervision. In contrast, for workplace experience, the proportion of respondents was relatively evenly spread from 0 to over 101 days.
- Half of respondents reported spending between 26 and 50 hours in self-directed online learning related to the training programme, while ten reported spending between 1 and 5 days on phantom head/simulation activities.

Table C-4: Number of days spent on training activities

Days	0	1 to 5	6 to 25	26 to 50	51 to 100	Over 101	Other
Applying for the training place (n=16)	-	14	2	-	-	-	-
Classroom learning (n=15)	-	4	11	-	-	-	-
Clinical supervision (n=15)	-	9	3	1	1	1	-
Workplace experience (n=13)	1	2	1	2	3	2	2
Self-directed online learning (n=15)	1	4	8	1	1	-	-
Peer learning (n=15)	2	7	6	-	-	-	-
Tutorials (n=15)	-	5	10	-	-	-	-
Phantom head/ simulation (n=15)	-	10	5	-	-	-	-

Source: SQW analysis of the Dental Therapist Trainee Survey 2021

C.16 Survey respondents were asked to say whether they would have preferred the training to be a 3 or 5 day per week training model. Half said their most preferred option was a 5 day mixed rotation model while a 5 day training option was the least favoured option. Trainees appear to be saying that its not so much the duration of training that makes a difference to them, but rather how they use the time (Table C-5).

Table C-5: Training model preferences (n=16)

	1 (Most preferred)	2	3 (Least preferred)
5 days a week with a day of outreach / community / secondary care placements	9	6	1
3 days a week of training	6	3	7
5 days a week of training	1	7	8

Source: SQW analysis of the Dental Therapist Trainee Survey 2021

Training satisfaction

C.17 Table C-6 outlines respondent's satisfaction with various elements of training, with the ranking receiving the most responses highlighted in pink. In summary:

- The highest proportion of trainees were satisfied or very satisfied with phantom head/simulation training.
- Over half of respondents reported that they were very satisfied with several elements, including: the application process; course duration; quality of teaching; flexibility (for work life; skills and procedures covered; and training facilities.
- At most only one respondent reported being dissatisfied with any individual aspect of training.

Table C-6: Satisfaction with various elements of training (1 is very dissatisfied and 5 is very satisfied) (n=16)

	1 (Very dissatisfied)	2	3	4	5 (Very satisfied)	N/A
Phantom head / simulation	1	1	-	2	12	-
Application process	1	1	1	3	10	-
Course duration	1	-	2	3	10	-
Quality of teaching	1	1	1	4	9	-
Flexibility (for work life)	1	-	1	5	9	-
Skills and procedures covered	1	-	2	4	9	-
Training facilities	1	-	1	5	9	-
Quality of supervision	1	-	3	4	8	-
Clinical environment	1	-	-	6	8	1
Number of days spent training	-	-	3	5	8	-
Induction	1	-	3	4	7	1
Quality of materials	1	1	3	4	7	-
Access to peer networks / support	1	-	4	3	7	1
Inter-professional learning opportunities	1	1	5	3	6	-

Source: SQW analysis of the Dental Therapist Trainee Survey 2021

C.18 Respondents were asked to detail whether they had achieved what they wanted to from the training so far (Table C-7), with key findings including:

- Almost all respondents (15/16) had either completely or partly understood their role in multi-professional teams. Similarly, almost all (15/16) had either completely or partly improved confidence in their professional role and had gained relevant skills and competence.
- Eight respondents selected that they had achieved what they wanted to in relation to using their therapy skills in a new job, while three reported that they had partly achieved this. Similarly, nine respondents selected that they had completely achieved what they wanted to in relation to using their therapy skills in their current job.

Table C-7: Achievements through the training course (n=16)

	Yes completely	Yes partly	No	Not relevant	No response
Improving confidence in your professional role	12	3	1	-	-
Gaining relevant skills and competence	11	4	1	-	-
Understanding your role in multi-professional teams	10	5	-	-	1
Using your therapy skills in your current job	9	3	1	3	-
Using your therapy skills in a new job	8	3	1	4	-

Source: SQW analysis of the Dental Therapist Trainee Survey 2021

C.19 Respondents were asked to detail their confidence in carrying out various procedures since participating in training (Table C-8). In summary:

- The highest proportion of respondents (15/16) reported that they were confident or very confident carrying out three procedures since participating in the procedure: carrying out direct restorations on primary teeth, carrying out direct restorations on secondary teeth, and extracting primary teeth. This was an increase on the proportion of respondents who reported that they felt confident or very confident carrying out these procedures prior to commencing training.
- Over two thirds of respondents (10/16) felt confident or very confident placing pre-formed crowns on primary teeth.

- The majority of respondents (10/16) still reported that they were very unconfident or unconfident carrying out pulpotomies on primary teeth.

Table C-8: Confidence in carrying out procedures since participating in training (n=16)

	Very confident	Confident	Unconfident	Very unconfident
Carrying out direct restorations on primary teeth	7	8	1	0
Carrying out direct restorations on secondary teeth	3	12	1	0
Placing pre-formed crowns on primary teeth	3	7	5	1
Carrying out pulpotomies on primary teeth	2	4	4	6
Extracting primary teeth	2	13	1	0

Source: SQW analysis of the Dental Therapist Trainee Survey 2021

Post-training

C.20 Respondents were asked about the activities completed in their jobs since participating in training (Table C-9). Key findings include:

- The highest number of respondents (12/16) had carried out two procedures in their job since participating in training: direct restorations on primary teeth and extracting primary teeth.
- Eleven respondents reported that they had carried out direct restorations on secondary teeth, with only one stating that they had not but this would be relevant to their current job.
- Just under half of respondents (7/16) had placed pre-formed crowns on primary teeth since participating in training, with a further five noting that they had not but this would be relevant to their job.
- The highest proportion of respondents (12/16) indicated that they had not carried out pulpotomies on primary teeth, with eight of these indicating this would be relevant to their current job.

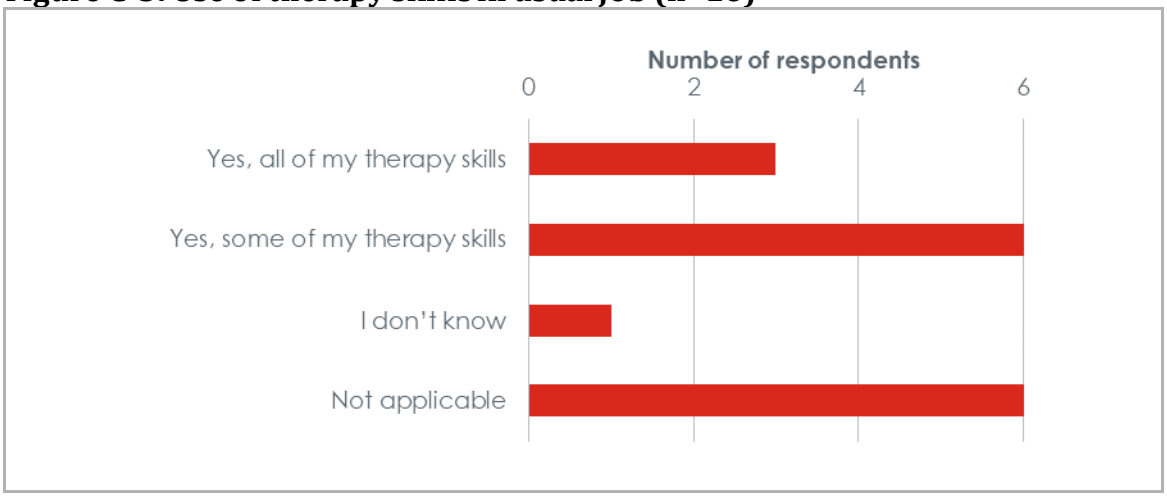
Table C-9: Activities completed in job since participating in training (n=16)

	Yes	No, but this would be relevant to my current job	No - not relevant to my current job	Not applicable - I am not in a job
Carrying out direct restorations on primary teeth	12	-	1	3
Extracting primary teeth	12	-	1	3
Carrying out direct restorations on secondary teeth	11	1	1	3
Placing pre-formed crowns on primary teeth	7	5	1	3
Carrying out pulpotomies on primary teeth	1	8	4	3

Source: SQW analysis of the Dental Therapist Trainee Survey 2021

C.21 Six of the 16 respondents reported that they now practice some of their therapy skills in their usual job, while three practice all of their therapy skills (Figure C-3).

Figure C-3: Use of therapy skills in usual job (n=16)



Source: SQW analysis of the Dental Therapist Trainee Survey 2021

C.22 A limited number of respondents (5/16) reported a variety of ways in which their job/role had changed as a result of undertaking the training:

- Multiple respondents reported feeling more confident in their role as a therapist, for example through developing confidence in both their skills and their ability to communicate these to raise awareness of their therapy skills in their work setting.

"More confident in my skills and ability and able to communicate that to dentists who are unaware"

- Linked to the above, one respondent indicated that they felt more confident to apply for a therapy job as a result of undertaking the training.

"More opportunities to network and encourage using my therapy skills"

- Other respondents reported a range of changes to their job/role, including increased speed of appointments, improved patient management and working within full scope of practice.

"I am working in my full scope of practice."

Impact of Covid-19 pandemic

C.23 Almost all respondents indicated that the Covid-19 pandemic had impacted on their experience of the training, while eight reported that it had affected their current job. In comparison, just three indicated that it had affected their career ambitions. It should be noted that one respondent did not provide a response to this question.

Table C-10: Impact of Covid-19 pandemic (N=15)

	Yes	No	Not relevant
Your experience of the training	13	2	0
Your current job	8	3	4
Your career ambitions	3	12	0

Source: SQW analysis of the Dental Therapist Trainee Survey 2021

C.24 Respondents were asked to describe the effects of the Covid-19 pandemic on their work, training or ambitions, with 11 respondents providing a response. In summary:

- Multiple respondents indicated that the pandemic had resulted in them having reduced exposure to training in therapy treatments, which in turn has limited the experience they have gained through the course.

"not been exposed to the range of treatments I would have should we not have been in a pandemic."

- Linked to this, several respondents indicated that they had experienced reduced practical training elements as a result of the pandemic. For example, respondents reported having increased online teaching, with reduced face to face teaching and practical training sessions viewed to potentially limit opportunities for learning.

"It has affected the hands on training days and there is less of them and most learning is online. For some lecture topics, it is better to have them online but for others like medical emergencies would be better in person."

- Difficulties in adjusting to use PPE were also noted by a number of respondents, with this identified as a key challenge alongside gaining confidence as a therapist. For example, one trainee indicated that changing restrictions and increased levels of PPE had created another aspect for them to understand on top of trying to understand and develop their role as a therapist, ultimately resulting in increased levels of stress and anxiety.

"The way we work in dentistry has changed due to the pandemic. There has been a lot more to consider during my training than there might have been without the pandemic, such as AGP treatments, higher levels of PPE, and confusing legislation and guidelines. As well as trying to understand my role as a therapist, I am also trying to understand how to work safely for myself and the patients during this pandemic. It has increased stress and anxiety levels when working and training."

"Having to adjust to the new PPE was challenging whilst gaining confidence in my skills as a therapist."

- Multiple respondents reported having experienced reduced earnings as a result of the pandemic. For example, two trainees noted that the introduction of fallow time had reduced earnings. Further, one trainee indicated that there are reduced jobs available as a result of the pandemic.

"Less earnings due to fallow time being introduced."

- One respondent reflected on their ambitions as a result of the pandemic, indicating that as a result of changes in thinking and increased awareness brought about through the pandemic, they would like to further deliver information to patients around the importance of oral health in maintaining overall health:

"I believe the pandemic is prompting more people to take ownership of their health and are having more understanding of the connection the mouth has to the rest of the body, I would like to further deliver this information to my patients."

Overall reflections

C.25 Of the 16 respondents, 14 reported that they would be working as a therapist in two years' time. Of the remaining respondents, one indicated that they would be working

as a hygienist and one that they would have left dentistry to take up a role in another sector.

C.26 Respondents were asked what they would tell a colleague who asked if they should complete this training, with fifteen trainees providing a response. All respondents (15/15) indicated that they would recommend this training to their colleague for a variety of reasons:

- The training was reported to provide an opportunity to improve confidence in the dental therapy skills, competencies and scope of practice.

"Yes, I would recommend it 100%. This training helps to improve confidence and competence as a newly qualified therapist."

- Respondents indicated that the training was a supportive opportunity, especially as a newly qualified dentist, with support from the Educational Supervisors and mentors noted as valuable to trainees in the year following graduation. One respondent also noted that the flexibility of the support is a key benefit of the programme, providing the opportunity for trainees to focus on specific outcomes.

"It is really beneficial and you learn a lot. You have the support of a designated person at any time to help you if you feel that you are struggling with something. It also gives you the chance to learn a lot from those who have a lot more experience in the dental field."

"I would definitely recommend the training programme, it is a great way to start your career and provides ample opportunities. There is flexibility with the amount of support you require for different things and has enabled me to focus on elements I specifically want to improve on to help me perform to my full scope of practice."

"Having an educational supervisor in practice means you can ask any questions and get advice from professionals."

- Linked to the above, trainees reported that the training provided the opportunity to develop and refresh their clinical skills and knowledge. For example, one trainee reported that it was a way in which to ease into working from being at university by providing the opportunity to refresh skills and knowledge.

"It is a great way to ease into working from being at university, and refreshes your clinical skills and knowledge. You also get a lot of support, which I think is so valuable in your first year working in dentistry."

- Multiple respondents indicated that the training is beneficial in providing the opportunity for therapists to use their full scope of practice.

"With this training scheme, I am able to increase my confidence within my whole scope of practice, with the support of my ES in practice and mentor in my outreach placements."

C.27 Networking opportunities resulting from the training were highlighted as key element of the training. For example, one respondent reported that learning amongst a cohort of dentists through the training had provided the opportunity to educate them and raise awareness of the dental therapist profession. Another respondent highlighted the benefit of the training in providing an opportunity to network within the dental community and establish friendships

"Learning amongst the cohort of dentists gives us the opportunity to educate them about our profession and how to utilise a dental therapist in practice."

C.28 In relation to the North East programme, multiple respondents stressed the value of the extended nature of the scheme, with the opportunity to work in both primary and secondary care seen as valuable.

"This was my preferred choice training scheme when applying due to the "enhanced placement" side where we work in secondary care as well as in practice in primary care."

"100% recommend this training more so as I was lucky to be in community"

C.29 One respondent noted that they would recommend the training opportunity as it provides a stable income for year in which therapists can gain confidence in their skills.

"Stable income for a year, a year to gain confidence in your skills before you become completely liable as a self-employed therapist, ability to network within the dental community and make friends."

C.30 More widely, several respondents indicated that they would recommend the training as long as there was a supportive practice in place.

"Definitely, but make sure you find a supportive practice."

C.31 Finally, one respondent indicated that due to the impact of restrictions associated with the Covid-19 on their training they would only recommend the programme if the restrictions were removed.

C.32 "Difficult as my experience has been during a pandemic, if the pandemic and current dental risks continue to be in place for the next year I would tell them not to do it. If these restrictions had been removed then I would tell them to do it."

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