

# Dental therapy in the United Kingdom: part 1. Developments in therapists' training and role

J. S. Rowbotham,<sup>1</sup> J. H. Godson,<sup>2</sup> S. A. Williams,<sup>3</sup> J. I. Csikar<sup>4</sup> and S. Bradley<sup>5</sup>

## VERIFIABLE CPD PAPER

### IN BRIEF

- This paper outlines the history and development of dental therapy within the UK.
- It describes the recent expansion in the number of dental therapy training places and details of dental therapy schools.
- It explores the clinical remit of dental therapists, the expanded range of clinical settings in which they currently work and their future importance in providing added value to the dental team.

The number of students entering training for dental therapy has been increasing rapidly over the last few years. In practice, the scope of their work has increased, both in terms of permitted duties and their range of clinical settings. The possibilities for dental practitioners to work with therapists is therefore increasing, so it is important for them to be clear about therapists' potential capacity to provide added value to the dental team. This paper, which is the first of four covering aspects of dental therapy in the UK, traces the history of dental therapy together with the development of therapists' training opportunities and emerging competencies, up to the present. The subsequent three papers will describe aspects of a survey of dental therapists undertaken in late 2006.

## THE EARLY YEARS

There are now increasing numbers of students entering training for dental therapy in the UK. Dental therapists could be considered by the general public and dental profession as a new additional team member since their introduction to general

dental practice in 2002.<sup>1</sup> In fact historical evidence reveals that there were 'dental dressers' performing equivalent roles almost a century ago.

As early as 1909, local authorities, including those in Bradford, Cambridge, Chester, Coventry, Sheffield and Norwich, had already started to lay the foundations for a School Dental Service.<sup>2</sup> However, during the First World War it was difficult to recruit dentists, and there were high levels of dental caries in children requiring attention.<sup>3-5</sup> Therefore, some authorities experimented with the introduction of 'dental dressers'. These were women who worked with a dentist and were trained to clean, fill and extract the teeth of school children under immediate supervision of a dentist.<sup>2,5</sup> By 1923, Derbyshire, Sheffield and Shropshire Education Authorities were employing dressers. In Derbyshire, there were two dressers working with one dentist. On this basis, it was argued that dressers cost less to train (and employ), and that such teams substantially improved the dentist's output.<sup>5</sup>

The introduction of dressers was met with substantial opposition from the dental profession.<sup>4</sup> In 1923 the Ministry of Health ordered that the Derbyshire scheme be abolished, under the powers of the 1921 Dentist Act.<sup>5</sup> In 1932 there was a further amendment which restricted the scope of the dressers' work to scaling and polishing,<sup>5</sup> although they were not completely abolished until 1942.<sup>2</sup>

By the end of the Second World War, the government again recognised the significant amount of oral disease in the country. While the School Dental Service had been largely neglected during the inter-war years,<sup>4</sup> the future of this service was threatened in 1948 with the introduction of the new National Health Service, when large numbers of school dentists, with the prospect of better pay, moved into general practice.<sup>5</sup> With the possibility of disintegration of the School Dental Service, the government looked to New Zealand for inspiration.

## NEW ZEALAND DENTAL NURSES

New Zealand had been facing a similar problem to that of the UK and had developed a model similar to 'dental dressers'. In 1921 the first School for Dental Nurses had opened in Wellington.<sup>5</sup> Women were trained to carry out a range of dental duties including diagnosis of dental disease and treatment planning for deciduous teeth. Some children who were seen regularly by New Zealand dental nurses might not see a dentist until the age of 13. By the 1950s two more schools had opened in Auckland and Christchurch. This model has been subsequently used and developed by Australia, Canada, Malaysia, Sri Lanka, The Netherlands and many more countries worldwide.

A government group was sent out from the UK to assess the New Zealand model.

## DENTAL THERAPY IN THE UNITED KINGDOM

1. Development in therapists' training and role
2. A survey of reported working practices
3. Financial aspects of current working practices
4. Teamwork – is it working for dental therapists?

<sup>1</sup>Dental Therapist/Principal Tutor, Programme of Dental Hygiene and Dental Therapy, Leeds Dental Institute, Clarendon Way, Leeds, LS2 9LU; <sup>2</sup>Honorary Lecturer, Dental Public Health, Leeds Dental Institute/Consultant in Dental Public Health, NHS Bradford and Airedale, Douglas Mill, Bowling Old Lane, Bradford, BD5 7JR; <sup>3</sup>Emeritus Professor in Oral Health Services Research, Dental Public Health, Leeds Dental Institute, Clarendon Way, Leeds, LS2 9LU; <sup>4</sup>Researcher, Dental Public Health, Leeds Dental Institute/Senior Public Health Manager, NHS Bradford and Airedale, Douglas Mill, Bowling Old Lane, Bradford, BD5 7JR; <sup>5</sup>General Dental Practitioner/PCT Dental Adviser, Primecare Oral Health Services, Bedale Health Centre, Sussex Street, Bedale, North Yorkshire, DL8 2AH

\*Correspondence to: Ms Julia Csikar  
Email: j.i.csikar@leeds.ac.uk

In 1951, they reported back to the effect that the nurses provided a high standard of treatment. There was a significant degree of controversy and opposition from dentists to the idea of introducing this type of clinical worker into the UK but the Dentists Bill was finally passed in 1957. The newly created General Dental Council (GDC) was then instructed to carry out an experimental scheme and it was the GDC itself that was to set the conditions under which the newly emerging 'dental auxiliaries' would work.

## THE NEW CROSS ERA

The new dental auxiliaries (as they were originally known) would only be allowed to work in the public services (for example, salaried – hospital and school dental service) but not in general practice. They would work to a prescription from a dentist and would not be permitted to discharge their patient without a final inspection from the dentist.<sup>5</sup> They were allowed to carry out 'simple fillings' and extraction of deciduous teeth. Compared to the New Zealand nurses, who additionally performed independent diagnosis and treatment planning for young children, their clinical practice was extremely restricted.

In 1959 the first school for dental auxiliaries was opened at New Cross Hospital in South London.<sup>5</sup> The school admitted 60 female students per year for a two-year course. Entry requirements were five GCEs. Students were chosen from across the UK in the expectation that they would return to their home towns on completion of their training. However, after two years the government realised this was not happening and made students, parents and guardians sign to say they would be prepared to work anywhere in the UK as a condition of acceptance on the course. However, this was impossible to enforce. By 1965 it was considered that the new dental auxiliary was making a valuable contribution to the dental service<sup>5</sup> and the Ancillary Dental Workers Regulation established them as part of the dental team.

## AN ERA OF CHANGE: 1980s ONWARDS

New Cross continued to train approximately 60 students per year. In 1979 the Royal Commission on the NHS<sup>6</sup> recommended that there should be an expansion

of training facilities for dental therapists and the establishment of two new schools. The Nuffield Foundation Inquiry into dental education in 1980<sup>7</sup> was also positive and anticipated changes in duties to allow therapists to become even more useful members of the dental team.

Despite these favourable reviews, in 1981 the Report of the Dental Strategy Review Group<sup>8</sup> recommended the closure of New Cross along with a 10% reduction in dental undergraduate places nationwide. In 1983 New Cross closed.

However, the training of a small number of dental therapists continued at the Royal London Hospital. A combined course for eight students offered dual qualification as a dental therapist and dental hygienist (the current roles of these groups can be seen in Table 1). Unlike New Cross, where students were trained in isolation from the rest of the dental team, students were now integrated with undergraduate dental students for part of their two-year course.

Unfortunately during the 1980s employment opportunities for dental therapists were limited as they were restricted to employment within hospitals and community placements and few positions were available. However, there was plenty of demand for dental hygienists, who could also work in general dental practice. A number of 'New Cross' therapists therefore took the opportunity of attending shortened courses to obtain the hygienist qualification. This gave them the option of working in general practice as a hygienist where potential earnings were far greater.

In 1993, The Nuffield Report into the Education and Training of Dental Auxiliaries<sup>5</sup> was published. The report made significant recommendations for all clinical dental auxiliaries, including dental therapists, dental hygienists and dental surgery assistants, later called professionals complimentary to dentistry (PCDs) and more recently, dental care professionals (DCPs). With regard to dental therapists, the report recommended that they expand their remit and, most importantly, that the restrictions regarding workplace should be lifted and therapists permitted to work in general dental practice in the future. In 1998, the GDC Dental Auxiliary Review Group<sup>9</sup> published their report, which further endorsed these recommendations.

**Table 1 Dental therapists' (\*hygienist) permitted duties currently included in the curriculum 2004<sup>10</sup>**

*Record and monitor disease
*Plan the delivery of treatment
*Treat adults and children
*Give oral hygiene instruction, diet advice and smoking cessation
*Carry out supragingival and subgingival scaling
*Root surface debridement
*Fluoride application and anti microbial therapy
*Fissure sealants
*Take, process and interpret radiographs
*Give local infiltration and Inferior Dental Block anaesthesia
* Refer patients to other healthcare professionals
*Take impressions
*Place Rubber dam
*Recement crowns with temporary dressing if removed during treatment
Restorations in permanent dentition without pulpal involvement
Restorations in deciduous dentition
Pulpotomies on deciduous dentition
Placement of preformed stainless steel crowns on deciduous dentition
Extraction of deciduous teeth under local anaesthetic
<b>Additional skills which dental therapists (*hygienists) could develop during their careers have been set out by the GDC within 'Scope of practice'<sup>25</sup></b>
*Tooth whitening
*Prescribe radiographs
*Administer inhalation sedation
*Removal of sutures
Vary the detail, but not the direction of a treatment plan

## EXPANSION OF TRAINING

The Royal London Hospital continued to train eight students per year as dually qualified dental therapists and dental hygienists. Expansion in therapy training began in 1996 when Cardiff Dental Hospital started a dental therapy course funded by the Welsh Office. Qualified dental nurses working within the community dental services were recruited for the first course. They were funded throughout the course by their respective community dental services and on qualification returned to work there. The following year, the

Table 2 Details of current UK dental therapy schools (dual qualification) August 2007

School	Course started	Award	Entry qualifications	Length of course	Tuition fees	Financial support	Students per year
Birmingham	2004	BSc in Dental Hygiene and Dental Therapy	3 'A' levels grades BBC 2 'A' levels + qualified dental nurse	3 years	Nil	NHS bursary	25
Bristol	2007	Diploma in Dental Hygiene and Dental Therapy	2 'A' levels Qualified dental nurse + Biology 'A' level Qualified dental hygienist	27 months	Nil	NHS bursary	12
	2006	Diploma in Dental Therapy (one off course)		1 year full time	Nil	Bursary	6
Cardiff	1996	Diploma in Dental Therapy	Qualified dental nurse or 2 'A' levels	2 years	Nil	NHS bursary	9
Dundee	2004	BSc in Oral Health Sciences	UCAS 240 points	3 years	Nil	Grant	10
Edinburgh School of Hygiene and Dental Therapy	2006	Diploma in Dental Hygiene and Dental Therapy	3 Scottish Highers + 5 standards		Nil	Grant	4 (increasing to 6)
Edinburgh University	2005-2007	Diploma in Dental Therapy	Qualified dental hygienist	3 days a week for 36 weeks	Nil	No	4 (increasing to 10)
Glasgow	2003	Diploma in Dental Hygiene and Dental Therapy	3 Scottish Highers + 5 standards	27 months	Nil	Grant	10
Leeds	2001	Graduate Diploma in Dental Hygiene and Dental Therapy	Biology 'A' level + qualified dental nurse 2 'A' levels, biology + 1 other Access course	27 months	Nil	NHS bursary	24
Liverpool (outreach sites: Blackburn Crewe Lancaster)	2004	Combined Dental Hygiene and Dental Therapy	2 'A' levels, 1 science related Qualified dental nurse	27 months	Nil	NHS bursary	24
London: Eastman Dental Hospital UCLH Foundation Trust	1998	Diploma in Dental Hygiene and Dental Therapy	2 'A' levels Qualified dental nurse	27 months	Nil	NHS bursary	10
London: Guys, Kings & St Thomas'	2004	Diploma in Dental Hygiene and Dental Therapy	Qualified dental nurse 2 'A' levels grade C or above	27 months	Nil (no longer university fees)	NHS bursary	40
London: Barts and the London	1983	Diploma in Dental Hygiene and Dental Therapy	Qualified dental nurse + AS level biology or human biology 2 'A' levels 1 biology	27 months	Nil	NHS bursary	12
Manchester	2003	BSc in Oral Health Sciences	UCAS entry 2 'A' levels (from 2008 3 'A' levels)	3 years	Standard tuition fees	Student loan	12
Greater Manchester, Salford	2005	Diploma in Dental Hygiene and Diploma in Dental Therapy	Qualified dental nurse + 1 post qualification 2 'A' levels, 1 science-based	27 months	Nil	NHS bursary	10
Newcastle	2006	Diploma in Dental Hygiene and Dental Therapy	Biology 'A' level + qualified dental nurse 2 'A' levels, biology + 1 other	27 months	Nil	NHS bursary	10
Portsmouth	2004	BSc in Dental Hygiene and Dental Therapy	UCAS 240 points	3 years	Nil	NHS bursary	24
Sheffield	1996	Diploma in Dental Hygiene and Dental Therapy	Qualified dental nurse + 2 post qualifications 2 'A' levels, 1 science or health related	27 months	Nil	NHS bursary	30

NB: All schools require minimum 5 GCSEs grade C and above for admission; most schools accept Access to Higher Education Qualification  
Scottish Rural School of Oral Health Science

intake was opened up to students from the rest of the UK.

The Charles Clifford Dental Hospital, Sheffield, also started a therapy course in 1996 offering a combined course similar to that operating at the Royal London Hospital. Recruitment opportunities for dental therapy posts were relatively few and so by offering the dual qualification, it provided the potential for the graduates to work in general practice as hygienists. Dental hygienists also had job opportunities overseas. Unlike dental therapists, dental hygienist posts do exist in some European countries and this gave them the opportunity to work, for instance, within the EU. UK dental therapists have very limited opportunities to work elsewhere. Due to the differences in their duties, they may require additional assessment before working abroad.

Since 1996, the remaining dental hygiene schools have gradually begun to offer dental therapy as a combined course or as a separate qualification (Table 2). Liverpool University was the first to introduce a part-time course for dental hygienists to train as dental therapists. They recruited eight students per year for a two-year course. Running a part-time course enabled the hygienists to stay in employment while completing their training. All clinical work was carried out in outreach placements in community clinics.

A major change for the training establishments occurred around this time. The GDC had stepped down as the awarding body and the schools anticipated that the universities might take on this role. Many therapy schools have now made a successful move to a full university course. The GDC continues to ensure that educational providers meet the high standards required and to maintain a register for dental therapists as part of the Dental Care Professional (DCP) Register.

Two courses in Liverpool and Greater Manchester started training dental therapists away from dental schools. The unique feature of these courses is that all clinical training takes place in outreach placements, within community clinics and general dental practices.

### Degree courses

In September 2000, the first degree course was introduced at the University of

Manchester. This is a three-year course leading to a BSc in Oral Health Science for the successful candidates. A degree is awarded an additional 40 academic credits, making a total of 360 credits, compared to the graduate diploma which has 320. However, the GDC ensures all students reach the same required clinical standard on graduation. Since then a number of schools have converted to a degree qualification.

### CLINICAL ROLE OF A DENTAL THERAPIST

The GDC recommended that therapists be permitted to work in all sectors of dentistry, including general dental practice, in 1999. This was approved from 1 July 2002. At the same time, extended duties were added to their potential remit.

In 2004 the GDC published a curricula framework for the training of DCPs.<sup>10</sup> At present all schools are regularly inspected by the GDC as part of quality assurance, ensuring they are all teaching to the published guidelines. Therefore, newly qualifying students will only be competent in the procedures as stated in the curricula (Table 1), previously termed 'permitted duties'.

The latest developments to impact on dental therapist working practice occurred in July 2006. The new GDC standards, 'Principals of dental team working'<sup>11</sup> state that DCPs can carry out treatment if they are sure they are trained and competent to do it. Hence, therapists are no longer required to work to a specific remit, but as long as they are trained and competent, they can carry out any specific procedure. This has caused a lot of confusion among the dental profession as a whole and more clarity is needed regarding the context of any extra training to develop additional competencies.<sup>11</sup> In response to these concerns the GDC has launched a 'scope of practice consultation'.<sup>12</sup> The focus of the consultation is to protect the best interests of patients by developing greater clarity about the skills expected of a registrant on qualification, those they can develop, and those that should be reserved for other groups.

### Developing role in primary dental care

As part of the government initiative to improve access to NHS care, a number of therapists were employed within personal

dental service (PDS) schemes.<sup>13-15</sup> The PDS was initiated to test an alternative delivery system of dental services, including the employment of dental therapists within dental practices.<sup>16</sup> The PDS allowed therapists to work alongside general dental practitioners. It is argued that therapists working in NHS practice in an area of social deprivation with unmet need and lower levels of dental manpower can be a powerful boost to team working.<sup>17</sup> While this vision may be limited by the numbers of therapists available, the situation is improving as more therapists are graduating. Since the changes in 2006, dental therapists can also own practices and employ other dental professionals.

A published review of four PDS pilots in the North West of England representing a range of practice profiles found that none of the practices were able to cover the cost of the salary of the dental therapist, dental nurse and practice overheads on the basis of the then current general dental service (GDS) fee scale.<sup>16</sup> This calculation could not take account of the longer-term potential health gain associated with the preventive role of the therapist or the increased productivity of the dental team as dentists' freed capacity may be used to complete more complex clinical procedures with potential increased remunerative capability. However, the payment arrangements in NHS general dental practice have now changed.

A new dental contract was introduced in the NHS in England and Wales in April 2006.<sup>18</sup> This contract is monitored on targets for units of dental activity (UDAs). 'Providers' (for example, the dental practice contract holders) are set annual targets and this has become the new contract currency. This arrangement has presented some opportunities for therapists who are in a position to generate UDAs, while hygienists are less able to do so. For example, if a dentist examines a patient and prescribes treatment, one UDA will have been earned by the dentist. If that patient also requires 'Band 2 treatment' that will usually fall within the remit of the therapist. As a result, three UDAs will have been earned in total, two by the therapist and one by the dentist. Another factor to consider is that of increased productivity. Once the patient has been referred to the therapist for routine care, the dentist is available to

spend time doing more complex treatment and/or seeing private patients, while the therapist is working. This issue will also apply to hygienists, although the scope for their treatment will be more limited.

If the dental therapist expands the practice capacity for NHS treatment and prevention beyond that of the existing dentists, growth money would need to be allowed for in the contract.<sup>16</sup> A therapist may, however, replace a dentist as long as there is sufficient capacity within the practice to complete the treatment required that is beyond the competence of the therapist and so be funded from within the contract value. There is insufficient evidence to determine whether or not a therapist working in practice within the new contract would be self-financing, but they could provide the opportunity for the dental practitioner to spend time treating other patients on a private basis.<sup>19</sup>

As long ago as 1982, the majority of dental practitioners surveyed could perceive themselves as head of a dental team delegating simple tasks.<sup>20</sup> In effect, the role is more complex than this, including being a team co-ordinator and primary decision maker.<sup>21</sup> The supervising dentist clearly needs to have teaching and management skills, in order to delegate an appropriate range of tasks for therapists to be effective and efficient members of the dental team.<sup>22</sup>

## THE FUTURE

There has been a significant increase in the number of qualified dental therapists entering the profession each year. In 1985 there were eight students qualifying per year and now there are approximately 240. Most of the dental hygiene schools are now offering the combined course, providing greater potential flexibility as a hygienist and as a therapist. This increased capacity in the dental workforce offers the potential for improved scope and output

of NHS care, including preventive care. As with dental hygienists, larger group practices may be best placed to employ a therapist.<sup>17</sup>

The expansion in dental therapy training opportunities has now been followed by the recent increases in dental undergraduate places. It is therefore crucial that all this training investment is well managed through workforce planning in the longer term and can enable provision of dental services according to the diversity of need. In addition to the existing courses, a new hygiene therapy course commenced in Scotland over two sites (Dumfries and Inverness) in September 2008. The current need for therapists to work to a dentist's treatment plan requires dentists' awareness and acceptance of the potential of that role.<sup>11,23</sup> The clinical responsibilities of the dentist *vis-à-vis* that of the therapist must be clear and complementary and will benefit from a fusion of parallel and integrated training opportunities, especially where there are learning opportunities under the same roof. In the future, the dentist undergraduate workforce could expect to build up leadership, management and supervisory talents as team co-ordinators, as well as developing postgraduate specialist skills. The vision of a dental team where each member has 'mutual respect, trust and understanding of their respective roles and a genuine desire to embrace fully the science and art of teamwork'<sup>24</sup> is the ultimate goal.

*This study was funded by the NHS R&D Primary Dental Care Programme.*

1. General Dental Council. *Principles of dental team working*. London: GDC, 2006.
2. Gelbier S. 125 years of developments in dentistry, 1880–2005. Part 6: general and specialist practice. *Br Dent J* 2005; **199**: 685–688.
3. Woolgrove J, Boyles J. Operating dental auxiliaries in the United Kingdom – a review. *Community Dent Health* 1984; **1**: 93–99.
4. Welshman J. Dental health as a neglected issue in medical history: the school dental service in England and Wales, 1900–40. *Med Hist* 1998; **42**: 306–327.
5. The Nuffield Institute. *The education and training of personnel auxiliary to dentistry*. London: The Nuffield Institute, 1993.
6. Royal Commission on the National Health Service, London, 1979.
7. The Nuffield Institute. *An inquiry into dental education. A report to the Nuffield Foundation*. London: The Nuffield Institute, 1980.
8. Dental Strategy Review Group. *Towards better dental health: guidelines for the future*. London: Department of Health, 1981.
9. Dental Auxiliary Review Group. *Professions complementary to dentistry*. London: GDC, 1998.
10. General Dental Council. *Developing the dental team. Curricula frameworks for registerable qualifications for professionals complementary to dentistry (PCDs)*. London: GDC, 2004.
11. Ross M K, Ibbetson R J, Turner S. The acceptability of dually-qualified dental hygienist-therapists to general dental practitioners in South-East Scotland. *Br Dent J* 2007; **202**: E8.
12. General Dental Council. Scope of practice consultation webpage. <http://www.gdc-uk.org/News+publications+and+events/Consultations/Closed+consultations/Scope+of+Practice+Consultation.htm> (accessed 24 September 2009).
13. Department of Health. *Modernising NHS dentistry; implementing the NHS plan*. London: Department of Health, 2000.
14. Goodwin N, Morris A J M, Hill K B *et al*. National evaluation of personal dental services (PDS) pilots: main findings and policy implications. *Br Dent J* 2003; **195**: 640–643.
15. Ward P. The changing skill mix – experiences on the introduction of the dental therapist into general dental practice. *Br Dent J* 2006; **200**: 193–197.
16. Harris R, Burnside G. The role of dental therapists working in four personal dental service pilots: type of patients seen, work undertaken and cost-effectiveness within the context of the dental practice. *Br Dent J* 2004; **197**: 491–496.
17. Gallagher J L, Wright D A. General dental practitioners' knowledge of and attitude towards the employment of dental therapists in general practice. *Br Dent J* 2003; **194**: 37–41.
18. National Health Service. *The National Health Service (General Dental Services Contracts) Regulations*. London: HMSO, 2005.
19. Harris R V, Haycox A. The role of team dentistry in improving access to dental care in the UK. *Br Dent J* 2001; **190**: 353–356.
20. Woolgrove J, Harris R. Attitudes of dentists towards delegation. *Br Dent J* 1982; **153**: 339–340.
21. Hay I S, Batchelor P A. The future role of dental therapists in the UK: a survey of district dental officers and general dental practitioners in England and Wales. *Br Dent J* 1993; **175**: 61–65.
22. Douglass C W, Lipscomb J. Expanded function dental auxiliaries: potential for the supply of dental services in a national dental program. *J Dent Educ* 1979; **43**: 556–567.
23. Jones G, Devalia R, Hunter L. Attitudes of general dental practitioners in Wales towards employing dental hygienist-therapists. *Br Dent J* 2007; **203**: E19.
24. Seward M. PCD – what's in a name? *Br Dent J* 1999; **187**: 1.
25. General Dental Council. *Scope of practice*. London: GDC, 2009.

# Dental therapy in the United Kingdom: part 2. A survey of reported working practices

J. H. Godson,<sup>1</sup> S. A. Williams,<sup>2</sup> J. I. Csikar,<sup>3</sup> S. Bradley<sup>4</sup> and J. S. Rowbotham<sup>5</sup>

## IN BRIEF

- Outlines the current working practices of dental therapists within the UK.
- Describes their geographic distribution, hours of work and work settings and explores their clinical role.
- While many undertake a full range of clinical duties some are only utilising their hygiene skills, risking deskilling. Eight were unable to find therapist work in their area.

**Objectives** To conduct a survey of current working practices of UK dental therapists following the changes in permitted duties, allowed clinical settings and the introduction of the new dental contract in England and Wales. **Methods** A piloted postal questionnaire was circulated in 2006 to all General Dental Council (GDC) registered therapists and those on the hygienists register possessing a dental therapy qualification. Two subsequent mailings were used to boost the response rate. **Results** There was an 80.6% response rate (n = 587). Ninety-eight percent of respondents were female. Average time since qualification was 17 years. Eighty percent (n = 470) of respondents were currently working as a dental therapist, 53% part-time. Of the 470, half were engaged entirely in general dental practice (GDP), one third in the salaried dental services (SDS), while others worked across different settings. Only 39% claimed to spend most of their time treating children. Recently qualified therapists more often worked in GDP (p < 0.001). Overall, a wide range of clinical duties were performed, although there was concern about maintaining skills across all the competencies since qualification, while emphasis on hygiene work was a limiting factor for some. On the basis of the continued professional development (CPD) activities described over one year, only half would have met the GDC CPD requirements from August 2008 for dental care professionals (DCPs). **Conclusions** More than half of therapists now work in GDP, compared with none six years previously. Many undertake a full range of duties. However, there was concern that some dentists use them for hygiene skills rather than across the whole range of their competencies, risking deskilling, while others reported their inability to gain employment as a therapist.

## DENTAL THERAPY IN THE UNITED KINGDOM

1. Development in therapists' training and role
2. A survey of reported working practices
3. Financial aspects of current working practices
4. Teamwork – is it working for dental therapists?

<sup>1</sup>Honorary Lecturer, Dental Public Health, Leeds Dental Institute/Consultant in Dental Public Health, NHS Bradford and Airedale, Douglas Mill, Bowling Old Lane, Bradford, BD5 7JR; <sup>2</sup>Emeritus Professor in Oral Health Services Research, Dental Public Health, Leeds Dental Institute, Clarendon Way, Leeds, LS2 9LU; <sup>3</sup>Researcher, Dental Public Health, Leeds Dental Institute/Senior Public Health Manager, NHS Bradford and Airedale, Douglas Mill, Bowling Old Lane, Bradford, BD5 7JR; <sup>4</sup>General Dental Practitioner/PCT Dental Adviser, Prime-care Oral Health Services, Bedale Health Centre, Sussex Street, Bedale, North Yorkshire, DL8 2AH; <sup>5</sup>Dental Therapist/Principal Tutor, Programme of Dental Hygiene and Dental Therapy, Leeds Dental Institute, Clarendon Way, Leeds, LS2 9LU

\*Correspondence to: Ms Julia Csikar  
Email: j.i.csikar@leeds.ac.uk

Refereed Paper

Accepted 8 April 2009

DOI: 110.1038/sj.bdj.2009.962

©British Dental Journal 2009; 207: 417–423

## INTRODUCTION

Over the last five years, there have been major changes in the training, numbers recruited and regulations pertaining to the work of dental therapists.<sup>1</sup> UK opportunities are rapidly expanding as schools and numbers in training increase. The range of treatment competencies taught has expanded. Since 2002, GDC regulations have enabled extension of the range of clinical activities or 'permitted duties' that can be performed by therapists, as long as they have received the appropriate training.<sup>2</sup> The range of clinical settings allowed has also increased. Following the personal dental service (PDS) pilots in England, which were established to test alternative ways of delivering dental services (through local contracting arrangements) including the employment of dental therapists in dental practices,<sup>3</sup> and the introduction of the new dental contract in England and Wales in 2006, therapists may now work in general dental practice as well as the salaried and hospital services to which they were previously limited. Therapists are

now referred to under the term 'dental care professional' (DCP), which also includes dental hygienists, dental nurses, dental technicians, clinical dental technicians and orthodontic therapists, all of whom must now register as DCPs with the GDC.

Further clarification regarding the roles of DCPs was given by the GDC in 2009 in a document entitled *Scope of practice*, which details the skills that each DCP will have been trained to carry out and additional skills they may develop during their careers. Irrespective of whether a therapist has a diploma in dental therapy alone or combined with dental hygiene or a BSC, they will be trained and competent to carry out all the duties of a therapist in addition to those of a hygienist as described in *Scope of practice*.<sup>4</sup>

The extent to which dentists have seriously considered the possibility of adding dental therapists to their practice teams in the UK has changed over time. In 1982, 38% of GDPs indicated they would welcome the opportunity to employ a therapist.<sup>5</sup> However by 2007, 43% of dentists

Age group (years)	n	%
20-30	139	24
31-40	126	22
41-50	185	31
51-60	114	19
60+	21	4
Missing value	2	0
Total	587	100

(NHS and private) in Wales were prepared to consider employing therapists<sup>6</sup> compared with 64% in Southern Scotland.<sup>7</sup> Recently qualified practitioners were more likely to favour delegation<sup>5</sup> and to welcome the opportunity of employing therapists,<sup>5,8</sup> as were those already working with a hygienist and/or operating in larger practices.<sup>7</sup> However, recent studies of dentists' knowledge of the employment of dental therapists in Scotland<sup>7</sup> and West Sussex<sup>9</sup> reported that dentists lack knowledge of dental therapists clinical remit, the groups they can treat and level of supervision required.

The most recent published survey of working practices of UK dental therapists<sup>10</sup> was conducted before recent developments, which now involve expansion into general dental practice, extended clinical duties and the new dental contract in England and Wales. This survey was conducted in order to ascertain the scope of work that therapists now undertake following the introduction of the new contract in England and Wales and other recent developments influencing the current practice of dental therapy.

This paper sets out the basic findings of the survey in terms of demographic profile, work settings, locations, hours of work, details of clinical practice, oral health promotion activity and Continuing Professional Development (CPD) of dental therapists. A secondary aim was to identify characteristics, including year of qualification, the clinical setting in which they worked and percentage of NHS work undertaken, that might be related to these responses and to collate any additional explanations provided from the open responses. Subsequent papers in the series will focus on finance and teamwork.

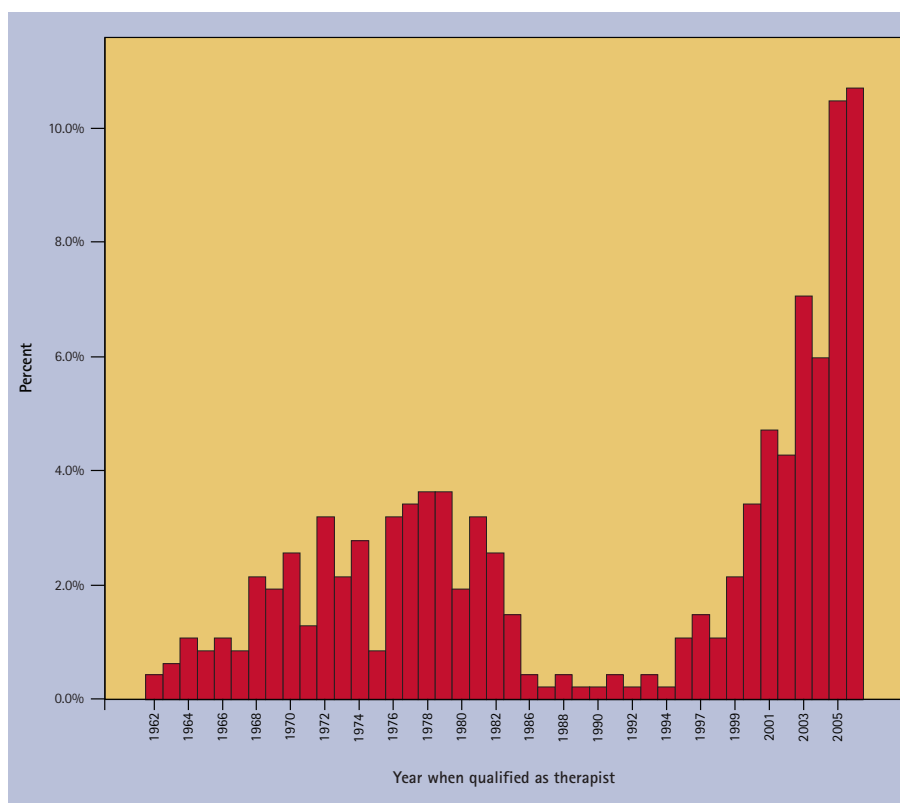


Fig. 1 Distribution of therapists who responded, according to year of qualification

Strategic health authority (SHA)	No. of therapists (%)	Population per dentist	Population per therapist (ranking)
London	57(11%)	1,987	131,895 (9)
South East Coast	47 (9%)	2,013	89,660 (5)
South Central	54 (11%)	2,232	73,148 (1)
East of England	45 (9%)	2,234	123,155 (7)
South West	41 (8%)	2,247	123,610 (8)
North West	82 (16%)	2,318	83,488 (3)
North East	13 (3%)	2,506	196,769 (10)
York & Humber	61 (12%)	2,573	83,016 (2)
East Midlands	50 (10%)	2,616	86,120 (4)
West Midlands	47 (9%)	2,620	114,149 (6)
Total	497 (100%)	2,414	101,473
<b>Country</b>			
England	497 (86%)	2,414	101,473
Wales	46 (8%)	2,584	64,209
Scotland	30 (5%)	2,704	169,827
Northern Ireland	7 (1%)	2,287	246,343

Notes: England, Wales and SHA data, population data ONS 2005 mid-year population estimates based on 2001 census  
 England number of dentists (performers) BSA data 31 December 2006  
 Welsh number of dentists – Wales Assembly Government statistics Wales 31 December 2006  
 Scotland number of dentists – Scottish health statistics ISD Scotland 31 March 2004  
 Northern Ireland number of dentists – Northern Ireland Statistics and Research agency April 2006  
 Dentists may be counted more than once if they have contracts in more than one SHA/health board

## MATERIALS AND METHODS

The sample was identified as all therapists on the GDC list and therapists on the hygienist register (identified by stated qualification in dental therapy) in June 2006. At that time, the GDC held separate rolls for each group, although this has now been superseded by a register for all DCPs. Thus participants would all be qualified as dental therapists. Of these, some would also be qualified as hygienists, although they might only have opted to register to practice as hygienists at that time. A postal questionnaire survey was carried out between September 2006 and January 2007.

The semi-structured questionnaire addressed topic areas which had been covered in previous surveys and included demographic profile, sector of practice, type of work and patients seen, remuneration method and CPD. The respondents were asked to clarify their answers to closed questions with free text open responses to obtain a qualitative perspective regarding their work as a dental therapist. The questionnaire was piloted with a group of dental therapists and amendments made to wording and layout.

The questionnaire, covering letter and reply paid envelope were sent to each identified participant. Two subsequent mailings were also carried out at four week intervals to improve response rates. The quantitative data were coded and entered into the Statistical Package for the Social Sciences (SPSS version 12.1). Questionnaires with responses to less than 90% of applicable questions were excluded from the analysis. If single items were missing the respondent was excluded for that item only. The quantitative data were examined in stages, firstly describing the sample according to the variables, using univariate analysis on working patterns and multivariate analysis to assess whether the setting therapists worked in, the proportion of time spent working in the NHS and years since qualification affected the range of clinical duties performed. The threshold for statistical significance adopted was the 5% level.

The open responses were transcribed and organised into themes and sub-themes. Any illustrative quotes used were put in the context of the overall responses, ie when they reflected a majority/minority view this was stated in the text. The

validity of the open responses was cross checked by comparison with the relevant quantitative response.

## RESULTS

### Response rate

Of the original sampling frame of 816, 36 were not known at the address given and two were existing students, resulting in a revised sampling frame of 778. After three mailings the total number of responders was 627 (80.6%). Of the 627 who responded, 40 were not actively working or were not working in the field of dentistry ( $n = 2$ ) leaving a total sample of 587.

### Qualitative themes

The qualitative information arising was substantial, with information provided consisting of approximately 500 separate responses. The most frequent themes identified from the semi-structured and open text responses were current working practices (104), followed by extended duties (53) and CPD (32). Examples of responses reflecting the quantitative findings have been used throughout the paper.

### Profile of responders

Of the 587 dental therapists who responded, 98% ( $n = 573$ ) were female, the majority aged between 41–50 years (31%) with 24% aged 20–30 years (Table 1). Of the 41–50 year group, 69% had trained at New Cross. Of the 154 therapists who originally trained at New Cross, 59 (38%) had gone on to obtain additional hygienist qualifications. The average time since qualification was 16.9 years (SD 14.2 years) with peaks in qualification in the 1970s and post-2000 (Fig. 1).

### Geographic distribution

The location of dental therapists was assigned according to the postcode of their registered address (Table 2). Of those who responded, the majority were based in England ( $n = 497$ , 86%) with 8% in Wales, 5% Scotland and 1% in Northern Ireland. Within England the largest number ( $n = 82$ , 16%) were located in the North West Strategic Health Authority (SHA). The distribution of therapists was examined in relation to dentist and therapist population ratios (Table 2). Inequalities in provision were identified between countries and

**Table 3** Therapist clinical working settings ( $n = 470$ )

Working setting	Number	Percent
GDP only	228	50%
SDS only	140	30%
Hospital only	16	3%
Teaching only	2	<1%
GDP & SDS	45	10%
GDP & hospital	14	3%
GDP & tutor	1	<1%
SDS & hospital	9	2%
GDP & SDS & hospital	3	<1%
NR	12	

Key: GDP = general dental practice; SDS = salaried dental service; NR = no response

according to SHA within England. SHAs with below average provision for England as a whole for either dentists or therapists had above average provision for the alternate service provider apart from the North East and West Midlands, which had lower than average England provision for both dentists and therapists. In contrast, North West, South East Coast and South Central SHAs had above average provision for England of both dentists and therapists.

### Current working practice of all responders

The majority of respondents reported that they were currently working as a dental therapist ( $n = 470$ , 80%). Of the 117 'not working as a dental therapist', the majority (91%) claimed to be either 'entirely limited to dental hygiene' or involved in 'other dental work'. Twenty-three respondents were GDC registered as hygienists but not as therapists. Eight stated that they could not find therapist work in their locality. Of those not currently working as a dental therapist, half of those responding felt disinclined to return to working as a therapist in the future. The main reasons offered were that they now worked as a hygienist, while some mentioned that they lacked confidence to return to dental therapy and/or needed a refresher course.

Further analysis was restricted to the 470 dental therapists (all registered with the GDC as dental therapists) who claimed to be currently working as a therapist either full- or part-time.

**Work settings**

Of those currently working as a therapist, half worked in general dental practice (50%, n = 228) with 31% (n = 140) in the salaried primary dental services (SDS) and a further 10% combining work in both (Table 3). The remainder worked in the hospital services or as a tutor or in combination.

The work setting was assessed according to years since qualification. Those in GDP were more likely to be recently qualified (71% qualified for 10 years or less) compared with those working only in the SDS (20% qualified less than 10 years) (p <0.001).

Dental therapy offered variety, since the majority (63%) reported that they worked at more than one location and 8% worked in four or more sites (Fig. 2). There was no difference in the number of locations worked between those only in GDP and those only in the SDS.

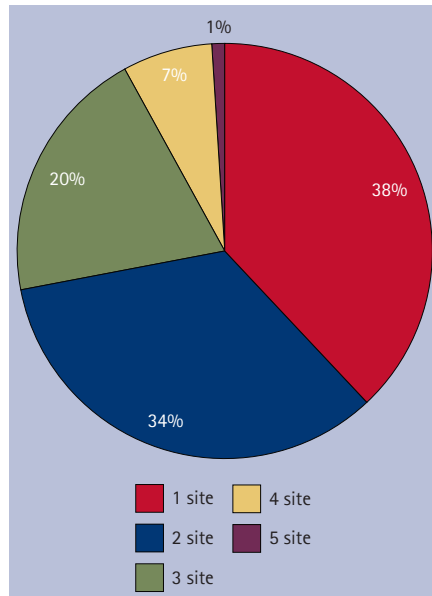
**Hours of work**

The average hours per week worked by therapists was 25.3 hours (range 0.5-45 hours). Over half (53%) worked part-time, considered as less than 30 hours per week. The distribution of working hours is shown in Figure 3. The part-time nature of the work and the variety it offered were appreciated by some:

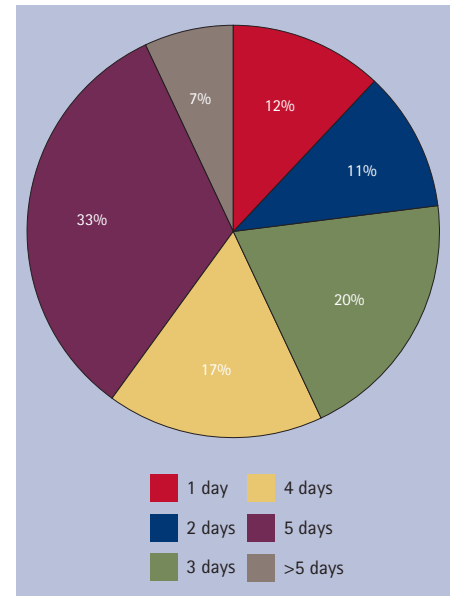
*‘Currently I work 2½ days per week due to family commitments. I work one day in the community dental services as a dental therapist. 1½ days in practice as a hygienist. I feel that way my work is varied and I do enjoy both hygiene and therapy work’*

**Treating children**

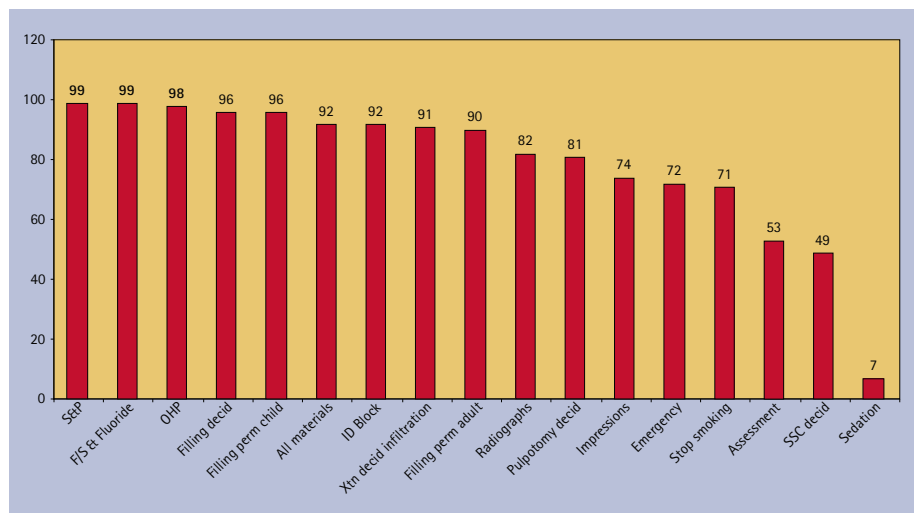
Of the 470 dental therapists, 39% claimed that they spent most of their time treating children. Of this group 54% were New Cross-trained therapists, compared with 38% who trained elsewhere (p <0.001). However, New Cross-trained therapists who had also acquired additional hygienist qualifications did not behave any differently to the rest of that group in respect of treating children. Those spending most of their time treating children were more likely to have been qualified in dental therapy for the longest, spent 100% of their time on NHS work and to work in the SDS. In contrast, those seeing the lowest proportion of children had



**Fig. 2** Number of sites where dental therapists work



**Fig. 3** Number of days worked by dental therapists (1 day = 7.5 hours)



**Fig. 4** Percentage of therapists carrying out various procedures

qualified in dental therapy most recently (2004-2006), worked mainly in the private sector (0-8% NHS) and in a GDP setting. These differences were all highly significant (p <0.001).

**Percentage of NHS work undertaken**

Respondents (n = 470) were asked to state what proportion of their work was NHS-related in terms of clinical time. Approximately one third (36%) worked 100% under NHS regulations, whereas a further 32% spent the majority of their time on NHS (NHS 50-99%) work. The remaining 32% were mainly involved with private work, with 13% spending <10% of their time with NHS activities. Those therapists who qualified more recently (since

1997) were significantly more likely to undertake a higher proportion of private work (p <0.001).

**Clinical duties**

Of the 470 therapists currently working full or part time as a dental therapist, 105 stated that they currently performed the majority of clinical duties corresponding to those of a hygienist. Of this group (n = 105), two thirds were in GDP, while a few worked in combination with SDS or hospital services. Three therapists also worked as a dental nurse but always in combination with their therapy and hygiene roles. This nursing role was confined to the SDS. Out of 104 free text responses regarding current working practices, the majority of views reflected the exclusive or nearly exclusive

emphasis on hygiene work (n = 49) and lack of job opportunities (n = 28):

*'I find it frustrating. I do the majority of my clinical time working on hygiene.'*

*'Mostly do hygiene work and find it very disappointing that hardly any therapist positions are available. Can't understand why so many therapists are currently being trained.'*

*'I would like to do more days with therapy but find that dentists are only interested in hygiene.'*

*'Why is it so difficult to find a job as a therapist? It is not fair! We are qualified to do a lot but because there aren't many jobs available, we have to work as hygienists!'*

Twenty-six responses elaborated on the lack of confidence resulting from an inability to practice previously learned skills:

*'I don't really carry out much of the work I was trained to do as a therapist. I ... spend almost all of my working time doing hygiene work... I have lost my confidence to do fillings as I haven't done enough since qualifying.'*

Since 2002 all newly qualified dental therapists have been trained to carry out an increased range of duties. Of those GDC registered therapists who qualified before this date (n = 376), the majority (86%) claimed to have received additional training to enable them to carry out this full range of duties.

Those currently working as therapists (n = 470) were asked about the range of duties they carry out (Fig. 4). Over 90% of therapists stated that they performed nine common procedures (scale and polish; fissure sealants/fluoride application; oral health promotion (OHP) in the surgery; restoring primary teeth; restoring permanent teeth in children; using all materials; administering ID block; extracting primary teeth; restoring adult teeth). However, a lower proportion took radiographs (82%), performed pulpotomies (81%) and emergency replacement of crowns and fillings (72%), took impressions (74%), gave smoking cessation advice (71%), undertook oral assessments (53%), fitted stainless steel crowns (49%) and treated patients under

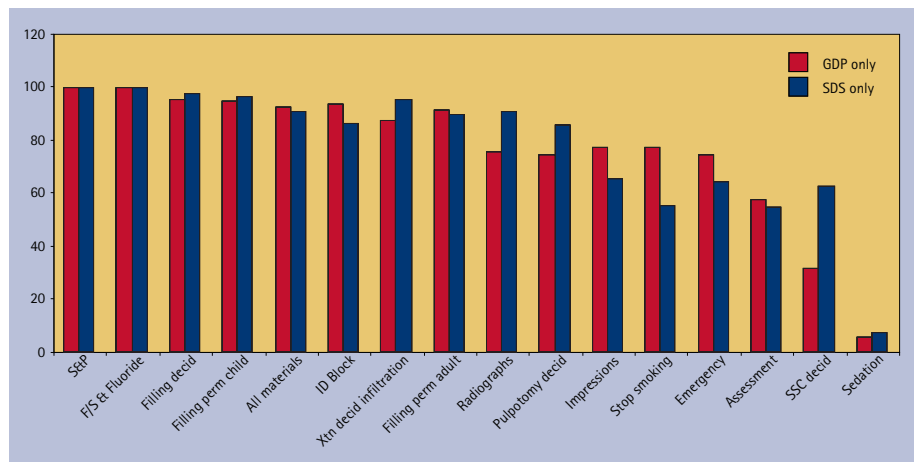


Fig. 5 Percentage of therapists carrying out procedures, according to work setting

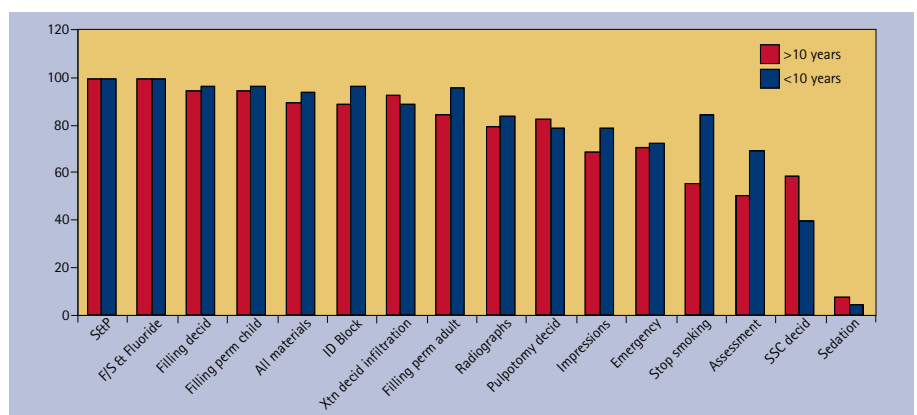


Fig. 6 Percentage of therapists carrying out procedures, according to years qualified

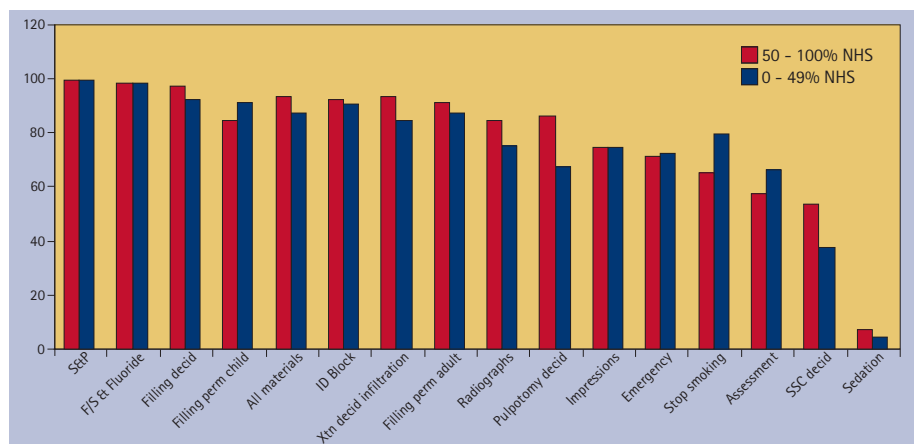


Fig. 7 Percentage of therapists carrying out procedures, according to the percentage of their time spent on NHS work

conscious sedation (7%). Responses supported the challenge in maintaining all these skills in a working environment (n = 27):

*'It is hard for us to regularly do all the procedures and then you lose confidence. I need to routinely carry out procedures to be clinically excellent.'*

*'I have never treated anyone under conscious sedation. I think this is a waste of*

*a duty as a dentist has to be in the same room while carrying out treatment. Not very cost effective so it doesn't happen.'*

Duties carried out were described according to the clinical practice setting: either GDP or salaried services (Fig. 5). They were also compared according to years qualified (Fig. 6) and NHS commitment (Fig. 7).

In order to avoid confounders that can distort interpretation of findings when

**Table 4 Predictor of each clinical treatment reportedly carried out (Logistic regression analysis, dichotomised independent variables entered into each equation).**

Independent variables	Stainless steel crown	ID block	Pulpotomy	Deciduous extractions	Radiograph	Deciduous filling: child	Intra-oral assessment	Stop smoking advice
100% NHS employment (no/yes)	NS	NS	NS	NS	NS	NS	NS	NS
Qualified <10 years ago (no/yes)	NS	3.8* (1.7-8.5)	NS	NS	2.3* (1.3-4.0)	3.1* (1.1-8.7)	2.6* (1.7-4.0)	3.6* (2.3-5.7)
Working in SDS only (no/yes)	NS	NS	NS	3.8* (1.3-11.0)	2.5* (1.1-5.8)	4.8* (1.04-22.2)	0.5* (0.3-0.9)	NS
Working in GDP only (no/yes)	0.3* (0.2-0.4)	NS	0.5* (0.3-0.8)	NS	0.5* (0.3-0.98)	NS	0.4* (0.3-0.8)	NS

\*Odds ratios (95% CI)  
Key: SDS = salaried dental service; GDP = general dental practice

simple univariate analyses are performed, the most important predictors for each specific clinical duty (the dependent variable) were assessed in turn using multivariate analysis with binary logistic regression. In each case, the independent dichotomised variables were 100% time on NHS treatment, qualified less than 10 years, working only for the SDS, working only in GDP. Table 4 shows the results for those duties including where a significant outcome was established.

As can be seen from Table 4:

- Those working only in GDP were less likely to provide extra-/intra-oral assessments, stainless steel crowns, pulpotomies or radiographs
- Compared with those who had been qualified longer, recently qualified therapists were more likely to provide an extra-/intra-oral assessment, radiographs, ID blocks and deciduous restorations as well as smoking cessation advice
- Those working in the SDS only were less likely to provide extra-/intra-oral assessment, but more likely to take radiographs and undertake deciduous restorations and extractions.

### Continuing professional development

All GDC registered therapists were asked about their CPD activities in the last year. Of the 470 respondents, 83% claimed to have taken part in CPD activities, 78% attended a course, 74% read journals and 26% used computer aided learning programmes. Only half would have met the new GDC requirement of 30 hours CPD for DCPs in the last 12 month period.

Responses within the theme of CPD addressed the perceived lack of

opportunities to attend CPD courses (n = 14) either because they were geographically distant, none were available, or due to lack of funds. Several respondents also thought that DCPs should access CPD courses alongside dentists:

*'Need more CPD courses for dental therapists to attend alongside dentists. Most courses are for dental therapists/dental hygienists – and usually involve a lot of travel.'*

*'Would like to access the same courses as dentists.'*

*'There is a lack of opportunity for me to return to therapy work. A lack of hands-on courses.'*

*'PCTs do not fund CPD courses for dental therapists – yet CPD will be compulsory in 2008.'*

### DISCUSSION

This paper reports the findings of a survey with a response rate of over 80%. The results can therefore be accepted as reasonably representative of UK-based therapists. A large volume of explanatory text was provided by most respondents to the semi-structured and open questions. The number and length of these may be interpreted as testimony to the strength of their views but might also be considered as a potential source of bias on account of an inherently differential response. Clearly a carefully designed qualitative study is required to substantiate and further explore the issues identified here.

The average age of dental therapists and years since qualification reflect the history of training in the UK, with peaks in the 1970s and post-2000. The distribution of therapists throughout the UK varied, with

South Central, Yorkshire & Humberside and North West SHAs being best served and the North East least served. In contrast, in 1980 Holt and Murray<sup>11</sup> found South East Thames to be best served and Mersey and the North the least. Clearly, there has been a marked redistribution since then, although the North East, as an area of deprivation, remains relatively underserved by therapists and dentists alike. The Nuffield Report<sup>12</sup> commented on the desirability for therapists to be working in areas of greatest need, where access is lowest and disease levels higher. However, it was also noted that the provision of therapists in an untargeted way, left to market forces, might not serve to reduce health inequalities. In this survey, one third of therapists were working in practices where more than 50% of clinical time involved private work, indicating that this trend may be occurring.

In 2000, the previous survey of dental therapists involved 304 therapists (with an 80% response rate) compared with 470 in the present study, thus reflecting the increasing numbers of therapists on the register. At that time, 205 (93% of the study sample) worked in the SDS, with a significant proportion treating children. The present study showed that similar numbers (197 therapists, 42%) worked at least part of their clinical time in the SDS. Interestingly, this group was represented by those who had mainly been qualified before 1997. GDP now involved 50% of the sample as the only source of work and had attracted more recently qualified therapists. The majority of therapists no longer spend most of their time treating children.

The study used a sampling frame from two separate GDC registers, although these

are no longer available with DCPs now making one single registration payment instead. The previous system provided an opportunity to establish that 80% of those with dental therapy qualifications felt that they were spending part or all of their time on therapy duties. It also indicated that a proportion of previously qualified therapists were now working as hygienists, although some were happy with that situation. The previous study<sup>10</sup> also noted that 60% (n = 46) of those not currently working as a therapist were working as a hygienist, so this is a long-standing issue. However, this survey also noted concerns about deskilling resulting from the perceived lack of opportunities to undertake the full range of therapy duties, an issue also raised in a recent paper.<sup>13</sup>

The majority of therapists work at more than one site, even though 53% work part-time. The proportion working part-time was identical to that found in 2000.<sup>10</sup> Childcare responsibilities have been linked to part-time working, as were career breaks,<sup>10</sup> whereas this study also identified frustration at being unable to find therapy posts locally.

In 1993 the most popular predicted role for therapists was an equal division between provision of dental care and dental health education.<sup>8</sup> Therapists must work to the written prescription of a dentist and the findings of several studies<sup>7,9</sup> have illustrated that many dentists were vague about this remit. While knowledge of the therapist's role concerning treatment of children was good, this was not true for adults. Ross *et al.*<sup>7</sup> reported that only 25% of dentists knew that therapists are able to undertake multisurface restorations for adults and 60% incorrectly thought that they could only work if a dentist was on the premises – all of which may contribute to lack of employment prospects.

The range of permitted clinical duties has changed since the previous survey, which had noted that the majority of respondents had clinical responsibilities involving 'simple fillings', fissure sealants, dental health education and temporary dressings.<sup>10</sup> The

present study enquired about which duties are being undertaken that therapists are currently trained to perform. While nine of the 15 listed duties were carried out by at least 90% of respondents, few were involved with sedation. Further analysis illustrated that those who qualified more recently were more likely to undertake oral health assessments, take radiographs, administer ID blocks, give smoking cessation advice and restore deciduous teeth, while those working in general dental practice were least likely to insert stainless steel crowns, take radiographs or perform pulpotomies and oral health assessments. However, this study only enquired about the range of clinical duties rather than the frequency with which they were performed. In order to address the issue of deskilling, further research is required to examine this in more detail. Clearly there are implications for retraining and for confidence-building, as well as for the provision of a wider range of opportunities to prevent deskilling occurring in the first place, where possible.

The majority of therapists claimed to have taken part in CPD activities in the past year. However, only 50% would have met the GDC average requirement that from August 2008 DCPs should complete 30 hours of CPD per annum. Respondents and other authors<sup>14</sup> have commented on the lack of access to courses due to them being geographically distant or the lack of funding to attend. There is a clear need to further develop suitable CPD programmes for the dental team in each deanery, combining where appropriate with some of those currently available only to dentists.

Where there is a dental manpower shortage and dental care is commissioned locally, the employment of dental therapists within GDP may now become more attractive to providers of dental care. However, until dentists or dental providers fully understand the advantages of integrating dental therapists into the dental team so that they can use their clinical skills to their full potential, therapists

are likely to continue to find limited employment opportunities.

## CONCLUSION

More than half of therapists now work entirely in general dental practice, compared with none six years previously. Many undertake a full range of duties. However, there was concern that dentists may use them for hygiene skills rather than across the whole range of their competencies, risking deskilling, while others reported their inability to gain employment as a therapist.

*This project was funded by NHS R&D in Primary Dental Care.*

1. Rowbotham J S, Godson J H, Williams S A, Csikar J J, Bradley S. Dental therapy in the United Kingdom: part 1. Developments in therapists' training and role. *Br Dent J* 2009; **207**: 355–359.
2. General Dental Council. *Developing the dental team. Curricula frameworks for registerable qualifications for professionals complementary to dentistry (PCDs)*. London: General Dental Council, 2004.
3. Harris R, Burnside G. The role of dental therapists working in four personal dental service pilots: type of patients seen, work undertaken and cost-effectiveness within the context of the dental practice. *Br Dent J* 2004; **197**: 491–496.
4. General Dental Council. *Scope of practice*. London: General Dental Council, 2009.
5. Woolgrove J, Harris R. Attitudes of dentists towards delegation. *Br Dent J* 1982; **153**: 339–340.
6. Jones G, Devalia R, Hunter L. Attitudes of general dental practitioners in Wales towards employing dental hygienist-therapists. *Br Dent J* 2007; **203**: E19.
7. Ross M K, Ibbetson R J, Turner S. The acceptability of dually-qualified dental hygienist-therapists to general dental practitioners in South-East Scotland. *Br Dent J* 2007; **202**: E8.
8. Hay I S, Batchelor P A. The future role of dental therapists in the UK: a survey of district dental officers and general dental practitioners in England and Wales. *Br Dent J* 1993; **175**: 61–65.
9. Gallagher J L, Wright D A. General dental practitioners' knowledge of and attitude towards the employment of dental therapists in general practice. *Br Dent J* 2002; **194**: 37–41.
10. Gibbons D, Corrigan M, Newton J T. The working practices and job satisfaction of dental therapists: findings of a national survey. *Br Dent J* 2000; **189**: 435–438.
11. Holt R D, Murray J J. An evaluation of the role of New Cross dental auxiliaries and of their clinical contribution to the community dental service. *Br Dent J* 1980; **149**: 259–262.
12. The Nuffield Institute. *The education and training of personnel auxiliary to dentistry*. London: The Nuffield Institute, 1993.
13. Jones G, Devalia R, Hunter L. A survey of the workload of dental therapists/hygienist-therapists employed in primary care settings. *Br Dent J* 2008; **204**: E5.
14. Ward P. The changing skill mix - experiences on the introduction of the dental therapist into general dental practice. *Br Dent J* 2006; **200**: 193–197.

# Dental therapy in the United Kingdom: part 3. Financial aspects of current working practices

S. A. Williams,<sup>1</sup> S. Bradley,<sup>2</sup> J. H. Godson,<sup>3</sup> J. I. Csikar<sup>4</sup> and J. S. Rowbotham<sup>5</sup>

## VERIFIABLE CPD PAPER

**Objectives** To enquire into current remuneration arrangements among UK dental therapists and to explore the nature of any financially related concerns. **Methods** Part of the postal survey of therapists described in the previous paper in this series. **Results** The majority of therapists (63%) often work in multiple locations and therefore may be in receipt of more than one type of payment mechanism. Two thirds of therapists are paid an hourly rate in at least one of the locations where they work; just over half are paid a fixed monthly amount and one third are self-employed. Nine percent of respondents were receiving performance-related pay, using goal setting, incentives and bonuses. A number of financially-related concerns were identified. **Conclusion** Diverse payment systems were reported. Some aspects could present important implications for future recruitment and retention.

## INTRODUCTION

Concern about cost-effectiveness of therapists is a long-standing issue. In 1984, Woolgrove and Boyles commented that therapists appear to be 'good value' as they earn less than dentists.<sup>1</sup> It has been argued

that the economic case for delegation rests on lower pay and status of therapists. It also assumes that salary differentials will continue to be maintained and can be justified in terms of responsibility and training.<sup>2</sup> The role of women as therapists and men as the dentists was also seen to be part of this pay differential,<sup>2</sup> a situation that has changed substantially since 1984.

Hygienists have long been accepted as economically viable. McKendrick (1971) demonstrated that it was cheaper for hygienists to provide preventive measures than for a dentist to treat the resulting disease.<sup>3</sup> In the past, evaluation of therapists' output has shown it to be comparable to that of hygienists,<sup>4</sup> while high productivity can result from incentives and organisation.<sup>5-7</sup> Since UK therapists do not require direct personal supervision, they may be more cost-effective than their American counterparts.<sup>2</sup>

For many years, dental therapists were restricted to working in the hospital and salaried public dental services (SDS) performing a limited range of clinical competencies. In contrast, hygienists have been able to negotiate a range of payment possibilities since they have been permitted to work across salaried and general dental practice (NHS and private) settings.

From 2002, therapists have been able to expand their clinical duties and responsibilities. Subsequently, employment

opportunities widened to include general dental practice, firstly in England within personal dental services (PDS) pilots, which were established to test alternative ways of delivering dental services using local innovative contracting arrangements, and later within both NHS and private general dental practice. However, a previous report of findings from the present survey found that some therapists in general dental practice were undertaking a substantial proportion of hygiene duties within their overall remit.<sup>8</sup>

The debate about cost-effectiveness related to team working involving dental therapists has continued.<sup>9-11</sup> In NHS general dental practice in England and Wales, changes involving the new dental contract have required an adjustment in the mindset from fee-for-item of service (FIS) reimbursement to unit of dental activity (UDA) generation for payment. At the same time in the salaried NHS services throughout the UK, 'Agenda for change' has been introduced as a single pay system, applicable to all directly employed NHS staff (except doctors, dentists and some senior managers), creating a banding process which has led to variations even within staff groups in pay and allocated bandings.

Under the FIS payment system contract, one quarter of dentists surveyed had felt that finance was a major barrier to

## IN BRIEF

- This paper presents the findings from a survey which looked at remuneration arrangements as reported by UK dental therapists.
- Many therapists were in receipt of more than one type of payment mechanism.
- Concerns were expressed that levels of clinical responsibility as therapists were not always commensurate with remuneration.
- This could influence future recruitment and retention in some circumstances.

## DENTAL THERAPY IN THE UNITED KINGDOM

1. Development in therapists' training and role
2. A survey of reported working practices
3. **Financial aspects of current working practices**
4. Teamwork – is it working for dental therapists?

<sup>1</sup>Emeritus Professor in Oral Health Services Research, Dental Public Health, Leeds Dental Institute, Clarendon Way, Leeds, LS2 9LU; <sup>2</sup>General Dental Practitioner/PCT Dental Adviser, Primecare Oral Health Services, Bedale Health Centre, Sussex Street, Bedale, North Yorkshire, DL8 2AH; <sup>3</sup>Honorary Lecturer, Dental Public Health, Leeds Dental Institute/Consultant in Dental Public Health, NHS Bradford and Airedale, Douglas Mill, Bowling Old Lane, Bradford, BD5 7JR; <sup>4</sup>Researcher, Dental Public Health, Leeds Dental Institute/Senior Public Health Manager, NHS Bradford and Airedale, Douglas Mill, Bowling Old Lane, Bradford, BD5 7JR; <sup>5</sup>Dental Therapist/Principal Tutor, Programme of Dental Hygiene and Dental Therapy, Leeds Dental Institute, Clarendon Way, Leeds, LS2 9LU

\*Correspondence to: Ms Julia Csikar  
Email: j.i.csikar@leeds.ac.uk

Refereed Paper

Accepted 8 April 2009

DOI: 10.1038/sj.bdj.2009.1010

©British Dental Journal 2009; 207: 477-483

employing therapists, due to lack of NHS funds and the 'uneconomic GDS scale'.<sup>12</sup> At that time, it was also suggested that salaries for therapists working in the FIS-based NHS general dental practice setting were impracticable.<sup>9,13</sup> Respondents seemed reluctant to accept that therapists would generate enough income to pay their salaries, even at the lower salary scale of the therapist.<sup>12</sup> Even in England and Wales under the new dental contract, since NHS workloads are based on historic fee scales, it was anticipated that adding a therapist to the team would not be self-financing,<sup>9</sup> although it could enable a dentist to carry out more complex and well remunerated procedures either within the NHS or privately.

The aim of this study was to survey current remuneration arrangements among UK dental therapists (in October 2006) and to explore the nature of any financially related concerns.

**MATERIALS AND METHODS**

The 470 respondents to the previously described questionnaire survey<sup>8</sup> who stated that they were working as a therapist, either part-time or full-time, were the subject of this analysis. These included some who would also be qualified as hygienists. The data excluded those respondents who stated that they only performed clinical duties related to dental hygiene.

The questionnaire posed four key questions regarding type(s) of employment: whether the respondents were self-employed, paid an hourly rate, a fixed monthly amount and whether the pay was performance-related. The results were cross tabulated with other questions reported on previously,<sup>8</sup> including the percentage of their clinical NHS time commitment, whether working in public salaried or NHS/private dental practice settings, whether undertaking mainly hygiene duties, and the year when they gained their therapy qualification. Semi-structured and open questions afforded the opportunity for respondents to provide free text answers with a qualitative perspective from which themes related to pay were extracted in order to identify key issues.

The frequencies were described in relation to various working patterns. In order to avoid confounders, logistic regression was used to assess whether the settings

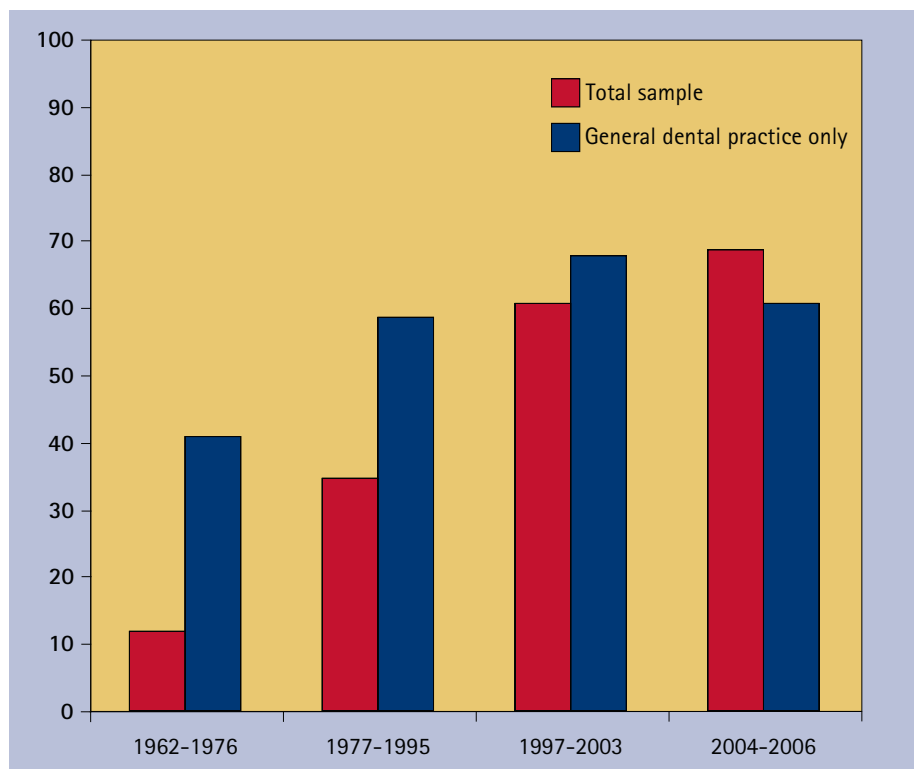


Fig. 1 Percentage of therapists stating that they were self-employed, by year of qualification as a therapist (n = 470)

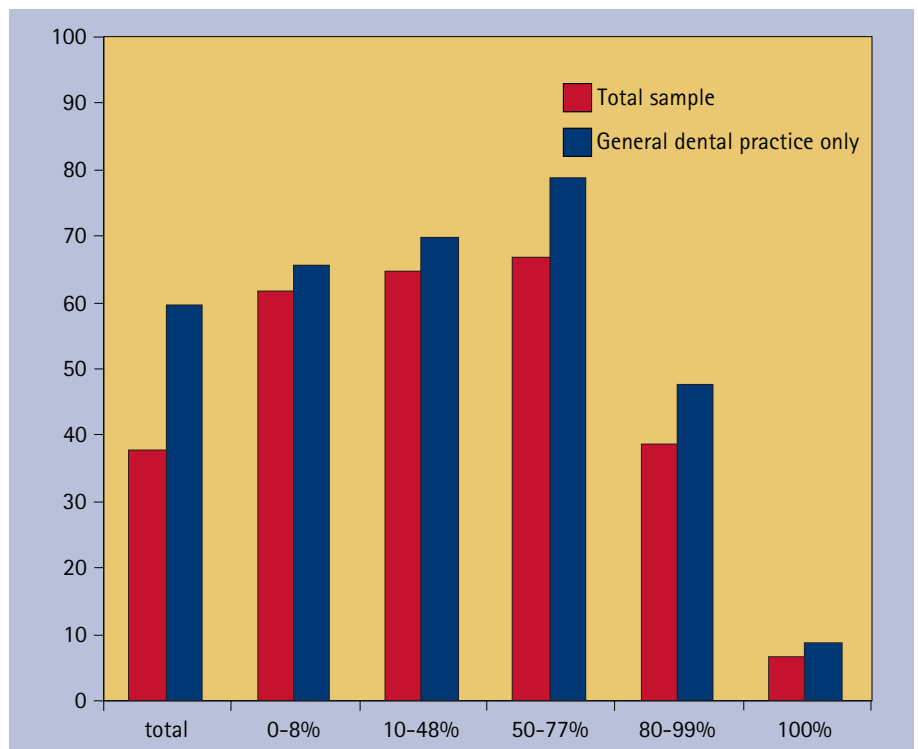


Fig. 2 Percentage of self-employed therapists, by percentage of NHS work undertaken (n = 470)

and situations in which therapists worked, the proportion of NHS clinical time and years since qualification affected the various payment arrangements. The threshold for statistical significance adopted was the 5% level.

**RESULTS**

The response rate achieved was 80.6%. The majority of respondents were based in England and Wales (94%), with 5% from Scotland and 1% from Northern Ireland. Among the respondents, 210 trained at

New Cross<sup>14</sup> (representing a larger proportion of older therapists). Of the 470, 192 were qualified separately as a therapist and as a hygienist, while 58 had successfully completed the combined course more recently.

### Remuneration arrangements

Enquiry was made regarding the different types of remuneration received. Some therapists worked in more than one type of practice or location and under varying financial arrangements. Overall, the majority (64%) were paid an hourly rate and over half (56%) received a fixed amount each month. Just one third (38%) were self-employed while 8% were on performance-related pay.

The (38%) who were either wholly or partly self-employed were more likely to:

- Have been qualified in dental therapy more recently – between 1997–2003 and 2004–2006 (64%)
- Spend their time in mixed practice (50–77% NHS: 67%)
- Work in a general practice (61%).

These variations are illustrated in Figures 1 and 2, for all therapists and for those working in general dental practice only. Logistic regression was performed with 'self-employed' as the dependent variable. The significant dichotomised predictor variables in decreasing order of significance involved 'working in private general dental practice' and 'principally undertaking hygiene duties'.

The (64% of) therapists who were either wholly or partly paid an hourly rate were more likely to:

- Have been qualified in dental therapy more recently (between 2004–2006) (79%)
- Spend their time in mixed practice (10–48% NHS: 84%)
- Work in a general practice (85%).

Figure 3 illustrates this gradient in relation to year of qualification in more detail for all therapists and for those working in general dental practice only. Again logistic regression was calculated with 'hourly rate payment' as the dependent variable. The significant predictor variables were 'working in general dental practice' and 'performing mainly hygiene duties'.

Those therapists (56%) who were either

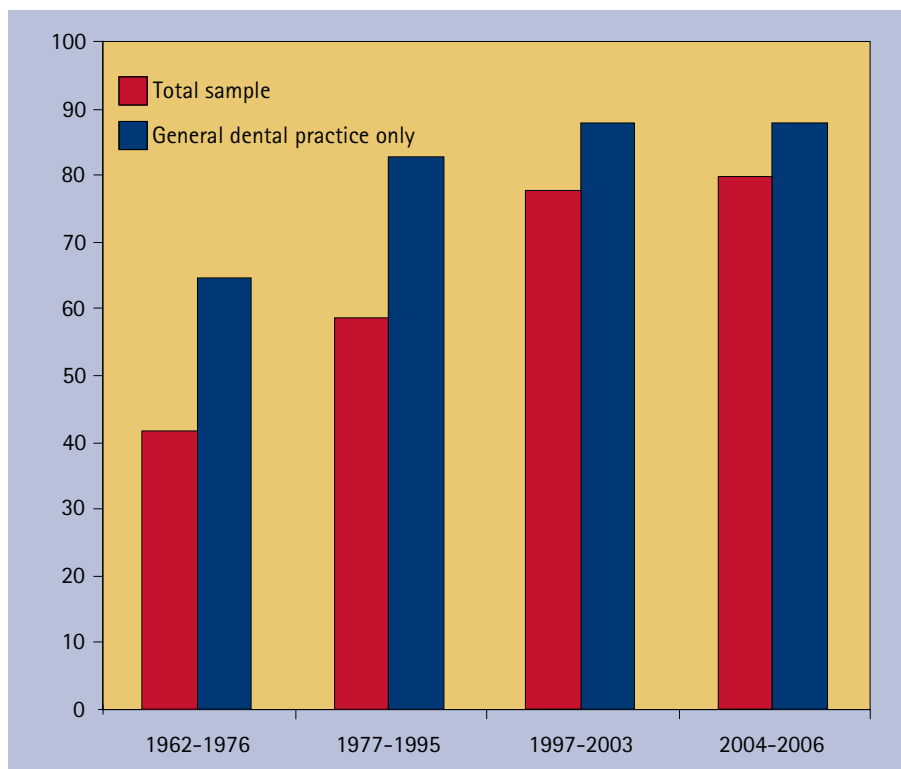


Fig. 3 Percentage of therapists stating that they were paid an hourly rate, by year of qualification (n = 470)

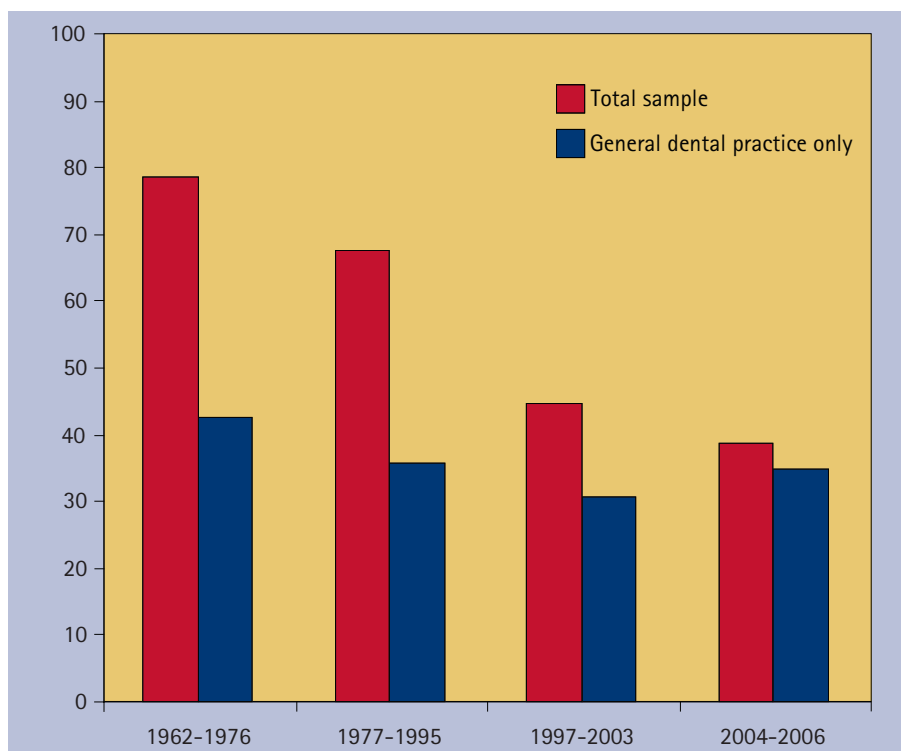


Fig. 4 Percentage of therapists stating that they were paid a fixed monthly amount, by year of qualification (n = 470)

wholly or partly paid a fixed monthly amount were more likely to:

- Have been qualified in dental therapy the longest (between 1962–1976) (79%)
- Work entirely in the NHS

(100% NHS: 89%)

- Work in the salaried service (89%).

These trends are illustrated in Figures 4 and 5. Logistic regression with 'fixed monthly pay' as the

dependent variable found that 'working in the salaried services', 'working substantially in the NHS' and 'having been qualified for more than 10 years' were significant predictors.

Those therapists (9%) who were either wholly or partly on performance-related pay were more likely to:

- Have been qualified in dental therapy between 1997-2003 (14%)
- Work in mixed practice (10-48% NHS: 18%)
- Work in general practice (13%)

Logistic regression analysis failed to establish any predictor variables for 'performance-related pay'.

There were 22 respondents who chose to provide additional information about their payment arrangements. Some of the responses below illustrate the range of remuneration arrangements that had been set up:

*'Basic rate then 45% of anything above that I earn.'*

*'I get an additional 25% of any private work I sell above my hourly rate.'*

*'Six monthly reviews with goals set and to be met by the next six month review.'*

*'If I meet my quarterly target of UDAs I receive a bonus of about £170 on top of my salary.'*

*'For every hour of private treatment I complete I get an extra £10 per hour (£35 rather than £25 per hour for NHS fillings). This also encourages the associate dentists to refer adults rather than just children on the NHS as they receive a fee for referring private to me and are charged when they refer NHS.'*

*'I must achieve a stated hourly average turnover for my private work.'*

*'I am paid a basic day rate. However if the percentage I receive from each patient's visit exceeds my basic day rate then I am paid the percentages.'*

*'I have a target figure I need to reach each month. This is not usually a problem.'*

Since some therapists work in different

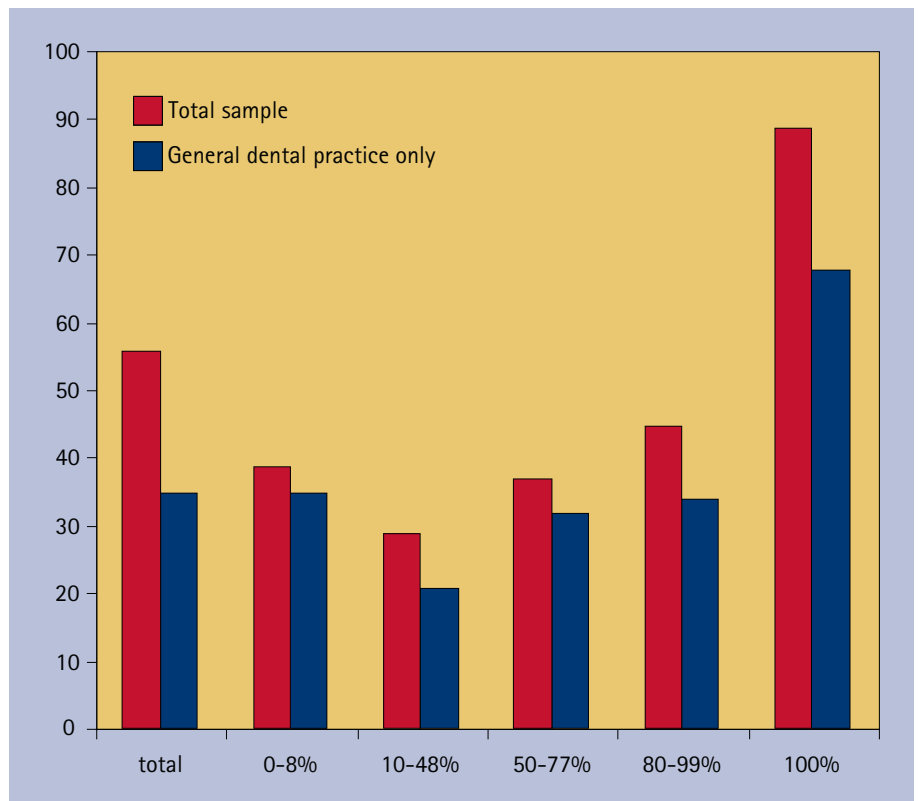


Fig. 5 Percentage of therapists paid a fixed monthly rate, by percentage of NHS work undertaken (n = 470)

clinical settings, a few comments reflected the corresponding variation in payment methods:

*'I have self-employed status/associate-type arrangement: 50/50 in one practice and an hourly rate at the other.'*

*'Where I work in private practice as a hygienist I am paid per patient. As a therapist, I am paid hourly.'*

*'I am paid 40% of fees at one private practice, but paid the hourly rate at two other NHS practices.'*

The qualitative information arising from this study provided additional themes relevant to this analysis. The largest range of responses related to concerns about low pay (n = 56), some of which were linked to 'Agenda for change' (in the salaried services: n = 19) or in England and Wales to aspects of the new dental contract (n = 21).

### Concerns about low pay

Some responses were nonspecific while others addressed particular situations, including the pay in relation to responsibilities of tutor therapists. Many respondents felt aggrieved that hygienists earn more,

although they have less stress or responsibility. Yet 15 commented that hygienists can generate more income for the practice.

*'I am very disappointed with my career as a therapist. The remuneration is poor for the work I do and the stress that goes with it.'*

*'I worked for three years as a dental therapist in general practice – payment system is very poor compared to hygienist work therefore I am not prepared to take the extra responsibility.'*

*'The pay is in no way related to the skills necessary to carry out the work we do. I have to work as a hygienist half my week because I get paid more even though I would rather work as a therapist full time.'*

*'I think most dentists don't feel having a therapist is cost-effective in general practice (especially if it's all private). Some dentists view having a hygienist as a good way of making money – no nurse, limited equipment, low overheads. Not so therapy.'*

### Impact of 'Agenda for change': salaried services

Many felt that their clinical training and responsibilities should result in a higher banding than that of a senior nurse, but

this was not necessarily the case. There was a general feeling of lack of recognition. Some were appealing against their banding decisions. There was also considerable variation between different NHS employing agencies (trusts/boards).

*'Agenda for change is not fair. Therapists across the country on different grades are doing the same job! Decisions of grades made by local Agenda for change personnel are not consistent.'*

*'Agenda for change in the NHS has caused a lot of unrest. Nurses can now be on same pay bands as therapists which is causing therapists to leave community and go and do hygiene in practice. Salaries in community for therapists are still very poor considering responsibilities that therapists have – giving ID blocks etc.'*

For some working in the salaried services, professional fulfilment in completing treatment for a patient was judged as more rewarding than the salary:

*'Pay in the community is an insult. I can't see many new therapists working for £12.50 an hour when £30 could be made in general practice. I still after 35 years get a buzz from what I do and feel I make a difference, the only reason I am still working for such poor pay.'*

### Impact of the new dental contract in general dental practice (England and Wales)

For some, the new contract had engendered a sense of insecurity as there were fewer referrals. Others felt that they were expected to perform more hygienist-type duties than they would have wished.

*'There seems to be constant instability since April 2006 as to whether therapists are viable in general practice.'*

*'Since the new dental contract, UDAs are being measured ... less work is being referred. Associate dentists under the new scheme don't refer any more as they don't get paid for US to do the work! Only the principle dentist refers work now ... I have to look for extra work at other practices and I am still looking.'*

*'The reality is that dentists cannot see any financial gain [using therapists with the UDA system].'*

Some responses illustrated how the payment system has been interpreted in relation to therapists making referral to them less attractive within general dental practice:

*'Jobs in general practice are few and far between. Post-UDAs, therapists are not needed in NHS as only dentists can get UDAs.'*

*'Practices in my area do not have any spare UDAs to pass on to dental therapists and there is no more funding available from local PCTs.'*

One respondent was advised that working in the salaried service (for £12 per hour) was more lucrative than staying in general dental practice. For some, the private sector beckoned. Others were frustrated by payment systems that depended on 'results' when they were referred only difficult cases.

*'I fear that if I am to find secure work I will need to move into the private sector. Considering the fact that the NHS funded my training it seems ridiculous that they are now making it pretty impossible for us to work within the NHS.'*

*'I declined the PDS post as salary was £10K short of hygienist salary. Going into private practice with children which I am happy with and enjoy doing.'*

*'Currently [in GDS] I am referred the "impossible to treat" patients, therefore I don't get paid. The dentist will not pay me an hourly rate.'*

### Other observations

A lack of standardisation between practices was a cause for concern:

*'Some dentists see therapists as money making machines. From my own experience, if my principal sees one gap in my working day he starts to consider reducing my hours.'*

*'Dentists are very sceptical and unwilling to pay acceptable wages.'*

*'Salaries differ greatly between one practice and another: they should be standardised.'*

Fifteen therapists felt that the inequity between themselves and other dental care

professionals (DCPs) should be recognised in terms of their higher level of training, clinical responsibilities and their pay needed to be addressed. Eight referred to the higher stress levels.

*'The salary scale in general practice must recognise the extra skills the therapist has over the hygienist and payment should reflect that.'*

*'In view of our extended duties carried out in dental therapy, I feel a pay review is necessary because of the added responsibility and work carried out and for the difficulty of type of patients we treat. Very few GDPs seem to treat children now and refer to us as untreatable, but expect us to carry out treatment. Perhaps things will change with more therapists in general dental practice.'*

### DISCUSSION

The high response rate obtained implies that many of these findings can be generalised. The majority of responses came from England and Wales, some referring to the specific contracting arrangements prevalent there. However, many responses are equally valid throughout the UK, including those related to the impact of 'Agenda for change'. Some respondents opted to provide additional textual information, which underlines the value of following up aspects of this study with an appropriately designed in-depth qualitative assessment.

The results of this study confirm that those therapists who qualified in earlier years were more likely to work in the salaried services and receive fixed monthly payments. Being self-employed or paid an hourly rate was more often associated with working in general dental practice, including seeing private patients and performing more hygiene duties. Performance-related pay involved only 9% of respondents, who were most likely to work in a mixed private/NHS practice setting.

Out of the 470 responders, 22 chose to comment regarding payment mechanisms, the majority expressing dissatisfaction. In general dental practice, this seems to focus on being used for hygienist duties, where earning potential may be higher, or for treating difficult children, where earning potential is low. As therapists become more highly trained, better paid

and require surgery space, equipment and (fully qualified) nursing assistance, unit costs increase.<sup>9</sup> Employing a therapist depends on practice productivity and, ultimately, cost. While many therapists feel their skills are not being fully utilised, it must be remembered that providing high quality patient care and economic viability is a delicate balancing act. The skills of the team must be used in such a way that their capabilities are maximised. Treatment which is outside the competence of a therapist<sup>15</sup> must be carried out by a dentist, but to refer as much work as possible to a therapist would free up more of the dentist's time for more complex or private treatment. This study has provided some useful examples of goal setting, incentives and bonuses to encourage productivity among therapists.

It has long been recognised that the therapeutic role of therapists is not directly costed.<sup>4</sup> Longer term health gain must be taken into account.<sup>16</sup> Building up a preventive practice ethos may be seen to add 'value', but under the present systems, any financial gain is more uncertain.<sup>9</sup> However, if preventive tasks formed part of the dentist's rather than the therapist's workload, the profit margin would be even more questionable.

It has previously been noted that General Dental Practitioners (GDPs) would need to plan payments carefully as the introduction of the new dental contract might make therapists' employment financially non-viable.<sup>6</sup> When principal dentists were consulted in Wales, 29% thought that hygienist/therapists should be self-employed, 22% that they should be employed while 33% stated no preference. There was concern that expected salaries might be disproportionate to therapists' earning and productivity capacity, and that at £30 per hour they would not prove cost-effective (having to gross £50-£60 per hour). Overall, it was suggested that practice profitability could be improved by employing hygienist/therapists on an hourly rate once UDAs were introduced.<sup>6</sup>

In England and Wales, there seems to be some professional misunderstanding about the earning of UDAs. It is correct to say that the UDA earned can only be attributed to a dentist with a performer number. However, that treatment can be completed by a therapist without the need for the dentist to see the patient after the

examination. The majority of patients are provided with treatment in Band 1 or in Band 2,<sup>17</sup> which is normally within the scope of a therapist. It may be argued that the therapist would not earn extra UDAs for the practice in these circumstances, but this only looks at one side of the equation. If the therapist were to complete as much treatment as possible, it would reduce the appointment time needed with the dentist to complete treatment and the productivity of the dentist in the time saved must be accounted for in assessing the viability of the therapist.

Contracts for NHS services are normally agreed at practice level between the provider and the contracting organisation. The staffing required to deliver the contract targets within the contract value is a practice decision. A dentist may wish to develop more private work and could pass some of their contract value to a therapist or perhaps replace a departing dentist with a therapist.

There are discussions within the profession about how dental contracts will be monitored in the future and in response to the Health Select Committee report on dental services (July 2008),<sup>18</sup> the Department of Health commissioned an independent review.<sup>19</sup> The Steele Review has emphasised the need for transition from dental activity to oral health using care pathways,<sup>19</sup> while finding ways 'to support dentists to make best and most cost-effective use of the available dental workforce'. Linking commissioning to the best use of skill mix is also a key component of the Report of the BDAs Independent Local Commissioning Working Group.<sup>20</sup> In addition, within the Government response it was announced that a new access indicator will be developed in consultation with stakeholders. At present, the feeling is that there will be less emphasis on UDAs as the sole measure and more interest in a broader range of indicators,<sup>19</sup> including preventive advice such as dietary control and oral hygiene regimes, application of topical fluorides, the prescription of high fluoride content toothpastes and smoking cessation advice. Other indicators of a successful practice may be information on waiting times, availability of appointments for urgent care, new patient acceptance and patient satisfaction surveys. The therapist in practice can contribute significantly to a number of these

indicators and will become a valued member of the team.

Across the UK within the salaried services, 'Agenda for change' has created a substantial degree of dissent in terms of the level of the award in relation to other dental healthcare workers. Nevertheless, there are benefits to working in a large organisation, including support facilities, in-service training and in this case, the opportunity to focus on special groups of patients. Since the salaried services are more likely to employ older therapists who will be facing retirement, recruitment could present a major challenge in this area in the near future.

It has been argued that the cost-effectiveness of DCPs depends on an unmet demand for dental services<sup>16</sup> and areas of high need and low access.<sup>12</sup> Ultimately, it has been suggested that it would be cheaper to allow therapists to work independently, with referral from therapists to a dentist<sup>2,13</sup> as in some skill mix arrangements in medicine. Not having the dentist see and assess every patient would help DCPs to be cost-effective if they can develop the competencies to carry out the basic examination and formulate a treatment plan as practised in New Zealand.<sup>14</sup> Alternative models might also include dental centres established in areas of need where therapists, paid from a monetary allocation from the NHS (rather than from the dentist), could receive referrals from GDPs.<sup>13</sup>

In conclusion, this study has confirmed that two thirds of therapists are paid an hourly rate in at least one of the locations where they work. Similarly, just over half are paid a fixed monthly amount and one third are self-employed. A number of financially-related concerns were identified, some of which may have implications for future recruitment and retention.

*This project was funded by NHS R&D in Primary Dental Care.*

1. Woolgrove J, Boyles J. Operating dental auxiliaries in the United Kingdom - a review. *Community Dent Health* 1984; **1**: 93-99.
2. Scarrott D M. The economic case for delegation in dentistry. *Br Dent J* 1973; **134**: 23-24.
3. McKendrick, A. The economics of caries prevention by dental hygienists. *Public Health* 1971; **85**: 219-227.
4. Holt R D, Murray J J. An evaluation of the role of New Cross dental auxiliaries and of their clinical contribution to the community dental services. *Br Dent J* 1980; **149**: 259-262.
5. Jones D E, Gibbons D E, Doughty J F. The worth of a therapist. *Br Dent J* 1981; **151**: 127-128.
6. Jones G, Devalia R, Hunter L. Attitudes of general dental practitioners in Wales towards employing

- dental hygienist-therapists. *Br Dent J* 2007; **203**: E19.
7. Gibbons D, Corrigan M, Newton J T. The working practices and job satisfaction of dental therapists: findings of a national survey. *Br Dent J* 2000; **189**: 435–438.
  8. Godson J H, Williams S A, Csikar J I, Bradley S, Rowbotham J S. Dental therapy in the United Kingdom: part 2. A survey of reported working practices. *Br Dent J* 2009; **207**: 417–423.
  9. Harris R, Burnside G. The role of dental therapists working in four personal dental service pilots: type of patients seen, work undertaken and cost-effectiveness within the context of the dental practice. *Br Dent J* 2004; **197**: 491–496.
  10. Ward P. The changing skill mix - experiences on the introduction of the dental therapist into general dental practice. *Br Dent J* 2006; **200**: 193–197.
  11. Goodwin N, Morris A J M, Hill K B *et al*. National evaluation of personal dental service (PDS) pilots: main findings and policy implications. *Br Dent J* 2003; **195**: 640–643.
  12. Gallagher J L, Wright D A. General dental practitioners' knowledge of and attitude towards the employment of dental therapists in general practice. *Br Dent J* 2002; **194**: 37–41.
  13. Ross M K, Ibbetson R J, Turner S. The acceptability of dually qualified dental hygienist-therapists to general dental practitioners in South-East Scotland. *Br Dent J* 2007; **202**: E8.
  14. Rowbotham J S, Godson J H, Williams S A, Csikar J I, Bradley S. Dental therapy in the United Kingdom: part 1. Developments in therapists' training and role. *Br Dent J* 2009; **207**: 355–359.
  15. General Dental Council. Scope of practice consultation [online]. London: GDC, 2008. [www.gdc-uk.org](http://www.gdc-uk.org).
  16. Harris R V, Haycox A. The role of team dentistry in improving access to dental care in the UK. *Br Dent J* 2001; **190**: 353–356.
  17. The Information Centre. *NHS dental statistics for England*. London: The Information Centre, 2007.
  18. Department of Health. *Further government response to the Health Select Committee report on dental services*. London: Department of Health, 2009.
  19. Steele J. *NHS dental services in England*. London: Department of Health, 2009.
  20. Drinkwater C. *Local commissioning: opportunity or threat?* London: BDA, 2009.

# Dental therapy in the United Kingdom: part 4. Teamwork – is it working for dental therapists?

J. I. Csikar,<sup>1</sup> S Bradley,<sup>2</sup> S. A. Williams,<sup>3</sup> J. H. Godson<sup>4</sup> and J. S. Rowbotham<sup>5</sup>

## IN BRIEF

- Investigates dental therapists' perspectives on teamwork within a range of clinical settings in the UK.
- Describes dental therapists' feelings of inclusion within the dental team, whether dental colleagues referred patients to them and whether their skills were fully utilised in their work setting.

**Objectives** To determine whether practising dental therapists, including dually qualified hygienist/therapists, considered themselves to be part of the clinical team and whether clinical work referred to them met with their expectations. **Methods** A postal survey enquired about work experiences of UK dental therapists, as previously described earlier in the series. **Results** While they certainly considered themselves to be part of the clinical team, the majority of respondents did not feel 'fully utilised'. Seventy percent of respondents felt that the dentist had more patients that could be referred and 55% thought that they could do more extensive work. There was concern that dentists lacked awareness of therapists' clinical potential, although some respondents highlighted very positive experiences in practice. **Conclusions** Dental therapists feel that they are part of the clinical team but consider that their skills are not fully utilised in many cases. There is scope for raising awareness among dentists regarding the therapists' clinical potential as well as sharing ideas for good working practice both within individual clinical settings and between different practices.

## INTRODUCTION

There is widespread use of professionals complementary to medicine.<sup>1</sup> Much routine care is now performed by individuals

who are not medically qualified but who have received appropriate training and are permitted to perform specific procedures.<sup>2</sup>

In contrast, dentistry has been slower to develop. Yet the current difficulties in recruiting dentists in the UK have been seen as an opportunity for dental care professionals (DCPs), including therapists and dually qualified hygienist-therapists, to emerge as a group that could undertake much of routine dentistry,<sup>3</sup> especially in areas of high need.<sup>4,5</sup>

The concept of the dentist leading a flexible workforce offering an interchangeable mix of skills has been around for many years.<sup>6,7</sup> As team leader, the dentist is responsible for providing a written prescription, together with the diagnosis, treatment planning and quality control of treatment provided.<sup>8</sup> The General Dental Council (GDC) document *Scope of practice*<sup>9</sup> provides clarity regarding the items of dental care that therapists can provide under the prescription of a dentist. While the care is under the dentist's supervision, it does not require the dentist to be present. The increasing numbers of therapists, their expanding remit and the changes in legislation to allow working in general dental practice is making this vision an increasing possibility.

It has been estimated that a very significant percentage of NHS general dental service (GDS) workloads could be completed by therapists, leaving dentists free to perform the more complex procedures and to see more patients.<sup>3,4</sup> In the past, dentists in general dental practice have expressed concerns about the quality of therapists' clinical work due to inadequate training,<sup>10</sup> but this issue has recently become less prominent.<sup>4,11–13</sup> Dentists' lack of knowledge about what therapists do, coupled with their lack of approval, were also thought to be a barrier,<sup>4</sup> together with patients' acceptance and satisfaction.<sup>4,10</sup>

Dental therapists have been working within the UK NHS salaried and hospital services for many years, mainly treating children and adults with special needs. Collaborative working with referring dentists has been long established, although even here things are changing, as dental therapists working in salaried settings have had the potential to offer a wider range of clinical treatments, subject to successfully completing the required competency training, since 2002. The GDC *Scope of practice*<sup>9</sup> has also clarified the role of dental therapists (and other registered members of the dental team), detailing the items of treatment they can carry out and

## DENTAL THERAPY IN THE UNITED KINGDOM

1. Development in therapists' training and role
2. A survey of reported working practices
3. Financial aspects of current working practices
4. **Teamwork – is it working for dental therapists?**

<sup>1</sup>Researcher, Dental Public Health, Leeds Dental Institute/Senior Public Health Manager, NHS Bradford and Airedale, Douglas Mill, Bowling Old Lane, Bradford, BD5 7JR; <sup>2</sup>General Dental Practitioner/PCT Dental Adviser, Primicare Oral Health Services, Bedale Health Centre, Sussex Street, Bedale, North Yorkshire, DL8 2AH; <sup>3</sup>Emeritus Professor in Oral Health Services Research, Dental Public Health, Leeds Dental Institute, Clarendon Way, Leeds, LS2 9LU; <sup>4</sup>Honorary Lecturer, Dental Public Health, Leeds Dental Institute/Consultant in Dental Public Health, NHS Bradford and Airedale, Douglas Mill, Bowling Old Lane, Bradford, BD5 7JR; <sup>5</sup>Dental Therapist/Principal Tutor, Programme of Dental Hygiene and Dental Therapy, Leeds Dental Institute, Clarendon Way, Leeds, LS2 9LU  
\*Correspondence to: Ms Julia Csikar  
Email: j.i.csikar@leeds.ac.uk

## Refereed Paper

Accepted 8 April 2009

DOI: 10.1038/sj.bdj.2009.1104

©British Dental Journal; 207: 529–536

additional skills they may develop during their careers.

In general dental practice, working with dental therapists is a newer experience. The personal dental services (PDS) pilots in England provided a range of models to test alternative ways of delivering dental services and different ways of working.<sup>14-16</sup> PDS practice profiles varied and compared with dentists working in the same practices, could involve therapists (a) treating a higher proportion of children, (b) treating a higher proportion of adults exempt from NHS payments, (c) performing more scales and polishes, (d) performing more dental health education, (e) performing more fissure sealants and (f) undertaking more preventive-based visits.<sup>14</sup> Previous surveys of dentists have indicated that children and people with special needs were considered particularly suitable for referral,<sup>4,17</sup> being time-consuming and demanding.<sup>18</sup> Survey responses have also implied that some dentists perceive NHS rather than private practice as the appropriate working environment for therapists.<sup>4</sup>

It is against a background of evolving teamwork and contrasting views that the present aspect of the survey was undertaken. In particular, it was considered important to explore the perspective of all UK dental therapists who were currently working within various training backgrounds,<sup>19</sup> across a range of clinical settings. The aim of this study was to enquire into whether practising dental therapists considered themselves to be part of the clinical team and whether the referral arrangements they experienced in clinical practice paralleled their expectations. A secondary aim was to identify characteristics associated with these responses and to collate the qualitative results obtained from semi-structured and open questions.

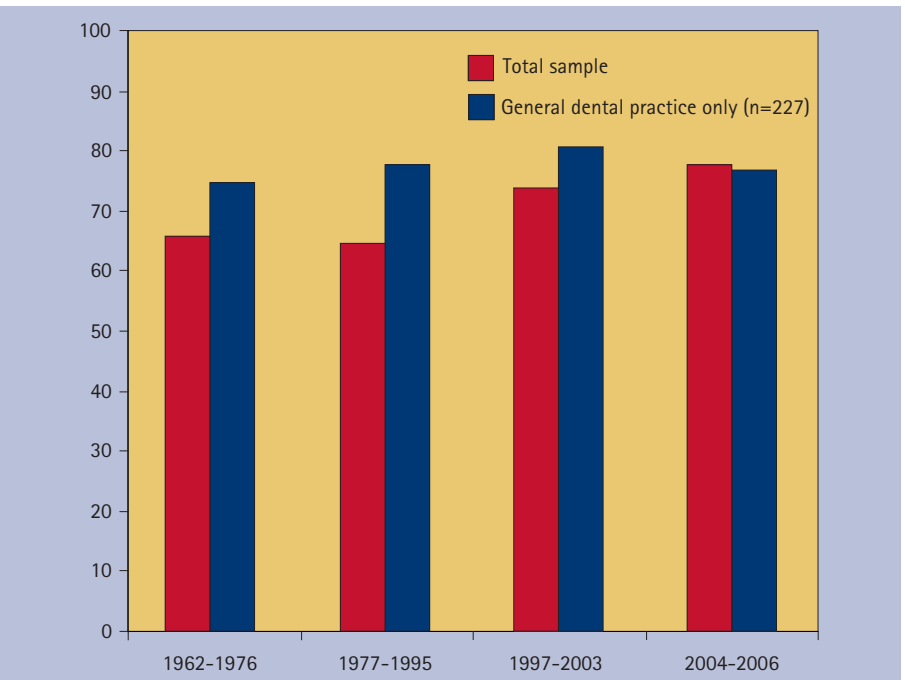
**MATERIALS AND METHODS**

This analysis was restricted to those 470 respondents who stated in the previously described questionnaire that they were working as a therapist, either part-time or full-time.<sup>20</sup> The quantitative analysis was based on three key questions in the semi-structured questionnaire relating to aspects of 'teamwork', regarding their level of agreement about whether they felt part of a clinical team, whether they thought that the dentist

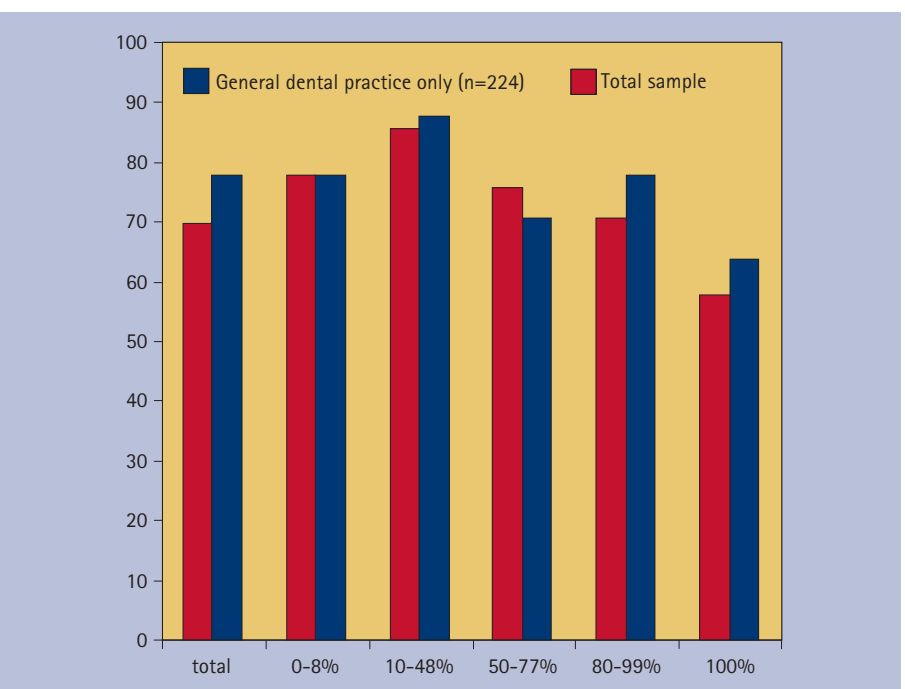
**Table 1** The number (%) of respondents according to levels of agreement/disagreement to specified statements

Statement	Strongly agree	Agree	Disagree	Strongly disagree	NA/NR
'I feel part of the clinical team'	217 (46%)	235 (50%)	11 (2%)	2 (<1%)	3
'The dentist has more patients that could be referred to me'	131 (28%)	197 (42%)	106 (23%)	27 (6%)	9
'I could do more extensive work if patients were referred to me'	94 (20%)	166 (36%)	160 (34%)	38 (8%)	12

NA = not applicable; NR = no response



**Fig. 1** The percentage of therapists agreeing that 'The dentist has more patients that could be referred to me', by year of qualification as a therapist (n = 470)



**Fig. 2** The percentage of therapists agreeing that 'The dentist has more patients that could be referred to me', by percentage of NHS work undertaken (n = 470)

had more patients that could have been referred to them, and whether they could do more extensive work if the patients were referred to them.

Previous papers in the series have reported on the respondents' years of qualification, NHS commitments and clinical work,<sup>20</sup> and remuneration arrangements.<sup>21</sup> This information was cross-tabulated with the stated views about 'teamwork'. Data analysis included Chi square tests and binary logistic regression analysis (to allow for confounding factors) at the <5% level of probability.

The questionnaire included semi-structured and open questions which allowed respondents to supply additional information, either in relation to the questions asked in the schedule, or to address other related topics. Thematic analysis was undertaken in order to draw out key points to help clarify and illustrate issues arising from the quantitative data.

## RESULTS

The response rate from the questionnaire was 80.6%. Overall, 94% of respondents were located in England and Wales. Of the 470 who stated that at least some of their working time was spent on therapy duties, 192 had qualified separately as a therapist and as a hygienist, while 58 had completed more recent programmes offering dual qualifications. Of the 210 trained at New Cross<sup>19</sup> (representing a larger proportion of older therapists), 201 had undertaken 'extended duties' training.

The responses to the three key questions and relevant inter-relationships were examined.

### 1. 'I feel part of the clinical team'

The respondents were asked whether or not they agreed with the above statement. Ninety-six percent of respondents stated that they agreed or strongly agreed (Table 1).

Positive comments (n = 11) included:

*'I am privileged to work in a practice that uses my skills to their full potential. I am definitely part of the team and they are keen for me to extend my skills further.'*

*'I am working as a therapist in all three practices and although it took some persuasion it now works very well in general practice and I carry out almost all duties. I am lucky*

*to be working with forward thinking dentists who accept therapists and we now work very well together. Patients are always happy to be seen by a therapist if it is explained properly to them.'*

However, there were some negative views (n = 11):

*'I feel treated as an outsider and not part of a clinical team. I don't belong anywhere.'*

### 2. 'The dentist has more patients that could be referred to me'

Over two thirds (70%) of respondents agreed or strongly agreed with this statement (Table 1). Those who thought that more could be referred:

- Had been qualified in dental therapy most recently (2004–2006 – 78%)
- Spent their time mainly in private practice (10–48% NHS: 86%)
- Worked in a general practice setting (78%).

Those respondents whose work was limited to general dental practice are also included in Figures 1 and 2. Figure 1 shows a clear gradient, with recently qualified therapists more likely to feel that 'more patients could be referred'. However, when those working exclusively in general dental practice were assessed, it is clear that the year of qualification makes less

difference. Logistic regression was performed with agreement or disagreement with the statement 'the dentist has more patients that could be referred to me' as the dichotomous dependent variable. The significant dichotomous predictor variables in descending order of importance were 'being self-employed' and 'working in private general dental practice'.

Some respondents highlighted the relevant background issues:

*'It is difficult to find work as a therapist as I don't think many dentists are confident or willing to refer work.'*

*'As a full-time self-employed dental therapist, I am trying to encourage the practices where I work to use my therapy skills, but at present to no avail.'*

Others specifically mentioned that they were referred hygiene work, when they could perform restorative work:

*'Dentists still do not use me to their fullest advantage by passing me the majority of their fillings patients. I find it frustrating as the majority of my clinical time is spent working on hygiene.'*

*'Dentists seem to have no problem with referring for hygiene work, or referring children, but ... still great reluctance to refer restorative work on adult patients.'*

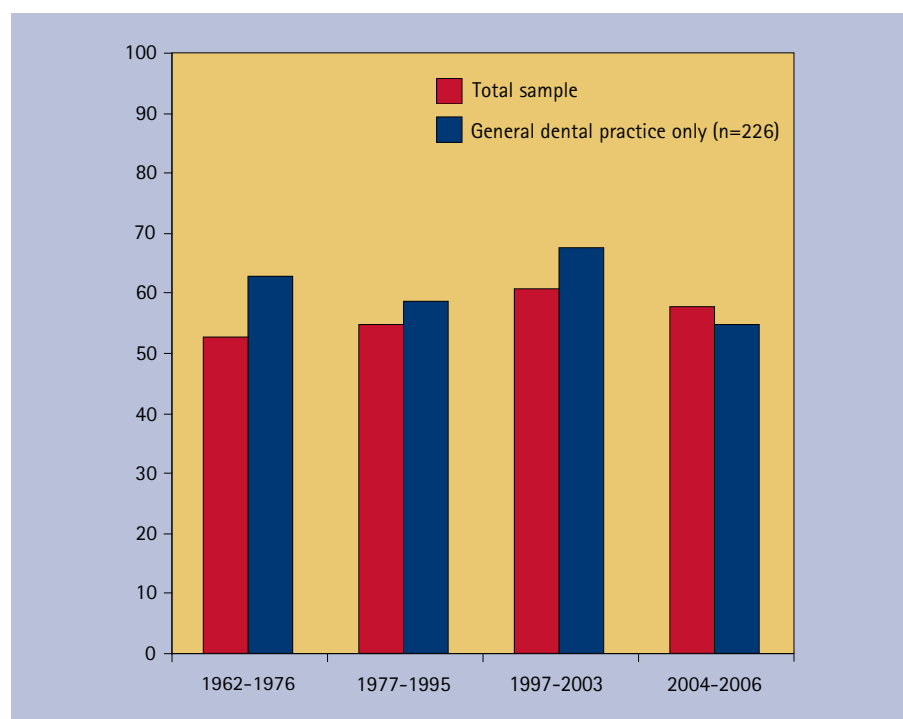


Fig. 3 The percentage of therapists agreeing that 'I could do more extensive work', by year of qualification as a therapist (n = 470)

### 3. 'I could do more extensive work if the patients were referred to me'

Over half (55%) of the sample agreed or strongly agreed with this statement (Table 1). Those who thought that they could do more extensive work:

- Had been qualified in dental therapy between 1997-2003 (61%)
- Spent their time mainly in private practice (10-48% NHS: 68%)
- Worked in a general practice setting (60%).

Figures 3 and 4 illustrate these points.

Logistic regression addressed the statement that 'I could do more extensive work if the patients were referred to me' as the dichotomous dependent variable. The significant predictor variables in descending order of importance were 'being self-employed' and 'on performance-related pay'.

Of those responses providing more in-depth qualitative information, themes and sub-themes relevant to this analysis have been summarised in Table 2. The most frequent comments related to the therapists' belief that dentists were not aware of the scope of their work, or how they could be effectively used (n = 35). However, a smaller proportion felt that things were changing (n = 29). Some were not happy with aspects of their work, including the range of referrals received (n = 22). Concerns about their status as part of the team appeared to be mainly negative (n = 20).

Points of clarification provided by respondents included limited perceptions of therapists' competencies by dentists, the public and other members of the dental team (n = 77):

*'Many dentists still think dental therapists can either only treat children, or adults as well but only for scale and polish and Class 1 cavities.'*

*'...the idea of 'simple' fillings for therapists means that dentists believe this refers to single surface cavities only. The word 'simple' still seems to be a barrier to passing patients on to the therapist for some dentists.'*

*'Please can the term 'simple fillings' be changed - I kept encountering dentists and nurses who think we can just*

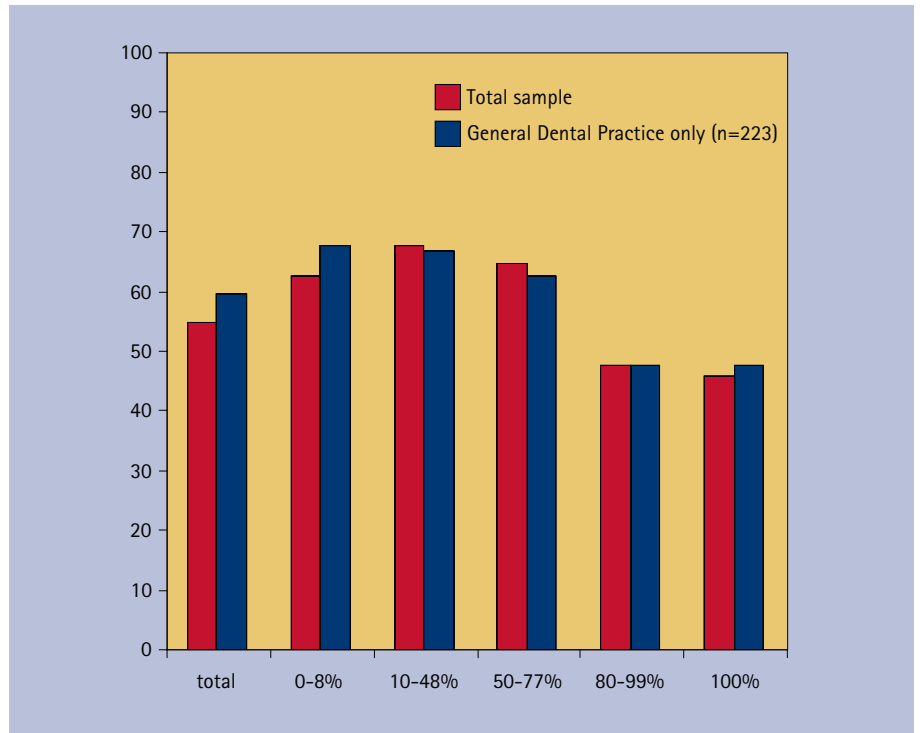


Fig. 4 The percentage of therapists agreeing that 'I could do more extensive work', by percentage of NHS work undertaken (n = 470)

Table 2 Aspects of teamwork highlighted by the respondents

Themes and sub-themes	Number of relevant responses	Rank
<b>a) Awareness of therapist duties within the dental team</b>		
Dentists don't understand	35	1
Dentists not confident in therapists abilities/reluctant to refer	6	
The public are ill-informed	8	
There are forward-thinking dentists; things are changing	29	2
<b>b) Working conditions</b>		
Mainly referred hygiene-type work	22	3
Emphasis on children's referrals	5	
Time-consuming, untreatable cases referred	5	
Too much work, too rushed	3	
Wrong items referred (not in my range of competencies)	2	
No nurse/chairside assistance	8	
<b>c) Therapist status</b>		
Negative comments*	20	4
Positive comments**	3	
<b>d) Therapy and the future of the role</b>		
There is limited information for dentists, education needed	8	
Therapists want more information	3	

\*no respect', 'left out', '2nd class workers', 'exploited', 'boxed-in', 'outsider', 'don't belong anywhere', 'poor relation', 'waste of time', 'undervalued', 'under-rated', 'underused'.  
 \*\*equal', 'respect my opinion', 'part of the team'.

*pick up a drill like a proper dentist and do a quick buzz and do a tiny occlusal cavity/restoration. The restorations I was doing before were usually multi-surface, enormous ones.'*

Some therapists felt that their situation might be changing in this respect:

*'I have pointed out in the three practices in which I work that I could treat every adult that needs a hygiene appointment plus one or two fillings in an hour's appointment ... I still find these patients are being booked with me for the hygiene work and with the dentist for the fillings. I find this frustrating at times ... the underlying inference seems to be that dentists still don't believe we are capable of doing filling work on adults, using all materials... However in one of the practices I work, I am starting to see a few more adults, but it is very slow.'*

Other semi-structured and open responses have been themed below.

### **a) Awareness of therapist duties within the dental team**

This provided a series of recurring themes. Some respondents thought that dentists did not know what therapists can do, how to make appropriate use of their range of skills or were not confident in their abilities. As a result, it was hard to find work.

*'I am amazed by the number of dentists I have met who still have no idea of the work that therapists can do.'*

*'Still many dentists don't know what a therapist can do and how to use them to maximise patient care and profitability.'*

*'It's difficult to persuade dentists that dental therapists could really help them to run a smoothly operating team.'*

There were quite a number of respondents who felt that their clinical potential was limited by being only referred children, often with behaviour problems, or alternatively that they were only used for hygiene duties.

The lack of nursing assistance was also mentioned.

*'Dentists think we mainly specialise in children and especially those that are*

*non-compliant.'*

*'The cases which dentists find difficult [behaviourally] are referred to me. This, in turn, means that I only see difficult children.'*

This topic provided a mix of responses. Some felt that their clinical work was limited to NHS or exempt adults only, while others had the opportunity to work across a range of settings.

*'Therapists are very good at what they do and are capable as dentists in doing both NHS and private work. Patients love us!'*

*'While working at private/mixed practice I do a full range of therapy duties – only a few scale and polishes. I see a whole range of ages – tiny tots, teenagers, elderly. I do many preventive resin restorations ... I do many stainless steel crowns ... with great success ... fissure sealants, impressions. My main work is restorations which I enjoy and can use whatever materials I want.'*

*'I feel initially there was a reluctance to pass on private treatment for adults as the dentist thought dental therapy training was not to the same standard as for general dental practitioners. Once the dentist saw the standard of my work, he began to start referring more private patients.'*

### **b) Working conditions**

Some respondents explained specific situations that applied in their practices, a few of which are outlined below. Some provide additional insights into the ways that some therapists may be treated in practice.

*'The dentists only give me restorations when my hygiene patients have not turned up so I do his work for him and he doesn't have to pay for an extra dental nurse.'*

*'If the dentist's equipment fails or nurses are not available I have been made to swap room with that dentist or go without a nurse as they are seen as being 'more important' members of the dental team.'*

*'We have a new associate dentist at my main private practice and so my therapist duties have been reduced in recent weeks. I'm carrying out more hygiene duties.'*

*'I will soon be doing more dental therapy time as one dentist is reducing his hours*

*and so I will be working with children.'*

### **c) Therapist status: negative comments**

Therapists provided a mixed selection of responses regarding the way they felt that they were perceived in the practice setting.

*'The therapist's position in the hierarchy of the team is not fully understood by some members of team, ie not a hygienist yet not quite a dentist.'*

*'Some of our dentists still refer to me as "the hygienist" ... despite the fact that I am not dually qualified and that I have been working here for 36 years!'*

*'The dentists I worked with in general dental practice had no experience of therapists and treated me as an extra dentist but with poor payment.'*

### **d) Therapist status: positive comments**

The comments provided also offered examples of successful practice. Some therapists felt that they were treated as equals, valued, supported and working to their full potential. There were appropriate referrals arrangements and patients were accepting of the arrangements.

*'I am referred all kinds of treatment but under no pressure to do anything I am not trained to do. I am treated as an equal and paid accordingly.'*

*'I work in a practice under the new dental contract with four dentists. I see a big mix of patients doing a large variety of work, both adults and children. The practice appreciates me and I have made a real difference. I allow the dentists greater time for any complicated treatment plans. I also see emergency lost fillings. The dentist pops in first and provides a prescription for me to work from. This helps to keep patients happy and ensures they are seen much quicker. We have had a good response from patients – they have been asking to come back and see me.'*

*'The ones I work with love referring me all their routine treatment for people of all ages, their 'paedo' patients, their compromised patients, their phobic patients, etc etc – it leaves them free to do more specialised (and lucrative) work.'*

Some additional responses provide a flavour of the degree of acceptance and support offered by some dentists as well as further evidence of patients' acceptance:

*'Patients when initially referred are a little confused about my role in their treatment, but four years on, I have regular patients who "request" treatment from myself now, and are very appreciative of the care they receive from me.'*

*'I am very lucky to work in two forward thinking and supportive practices ... I am being encouraged to expand ... I am gaining confidence ... I really enjoy it.'*

*'My practice is at present mentoring me to develop my therapy skills so I will be doing more.'*

Some therapists explained how they were trying to change the approach of the referring dentists within their current practices:

*'I have now been working in one of my practices a year. I called a meeting to discuss the reason they initially employed me, explaining my love for the job yet not feeling completely fulfilled and wanting to do therapy work. As a result have now been referred some therapy patients. It takes time and determination yet one must persevere.'*

### **e) Therapy and the future of the role**

In view of the responses about the dentists' lack of awareness, some therapists addressed the possibilities for improving the situation. There was also the sense of frustration that an existing lack of awareness among dentists was stifling their job prospects.

*'More needs to be done to let dentists know about how we work, the skills we have and how we are an asset to a practice.'*

*'I think the lack of therapy jobs and also possibly the lack of dentists' understanding of what therapists are all about and what we can do is making it difficult for us therapists to achieve our full potential.'*

*'It is time for a national campaign which fully educates dentists in what a therapist can do and how to use/employ them.'*

*'The government and university gave the impression that we were desperately needed to fill a niche in the dental environment ... as yet I am still waiting. General dental practitioners need educating about the advantages of a therapist. The NHS arrangements have constraints ... professionally and morally ... are my skills really going to be utilised?'*

### **DISCUSSION**

The high response rate implies that these results are generalisable. However, respondents varied in the extent to which they provided additional details (in number and volume of information) in relation to the semi-structured and open questions which were posed. Ideally, the information gained here could inform a qualitative study design where issues around teamwork could be explored further in depth. The views of other members of the dental team could also be sought to provide a wider perspective and put their observations in context.

The overwhelming majority of respondents felt themselves to be 'part of a clinical team', although responses to subsequent questions suggest that this question lacked value judgements. A 1999 survey of dental therapists reported that two thirds of therapists felt like 'a valued member of staff' all or most of the time,<sup>22</sup> implying that there could be room for improvement. That study was confined to therapists working in salaried services, before the introduction of 'extended duties' and expansion into general dental practice, factors which may have modified the response. However, this study found substantial signs of disquiet since over two thirds of respondents agreed that more patients could be referred to them. Similarly, over half the therapists agreed that they could do more extensive work, especially those who were self-employed and/or were on performance-related pay.

The present study indicates that therapists may resent dentists failing to recognise their range of skills and being restricted to undertaking a limited range of clinical duties, such as hygiene. A recent survey of dental practice principals found that 39% would expect more than 50% of therapists' working time to be spent on hygiene,<sup>23</sup> while it was also accepted that some 'therapy-specific treatments' would

be performed. A more recent study confirms that their restorative skills are being under-utilised.<sup>23</sup> Previous surveys of dentists have found that children and people with special needs have been deemed as most suitable for treatment by therapists,<sup>4,17</sup> and some general dental practitioners (GDPs) incorrectly believed that therapists are only allowed to undertake operative procedures on children.<sup>4,18</sup> Limiting clinical work to children and especially 'difficult' children, with no opportunity to see adults, was also identified here as a potential source of resentment. Previous studies have indicated that 54% of GDPs in 2000 thought that adults were a suitable client group to be treated by therapists<sup>4</sup> compared with 21% in 1990 in a study by Hay and Batchelor.<sup>17</sup>

This study offered a dichotomy of views over the NHS/private mix. A larger proportion of the therapists working in mainly private practices felt that more patients and more extensive work could be referred to them. Some qualitative responses indicated a potential reluctance to refer fee-paying adults, an issue mentioned elsewhere.<sup>4,23</sup> Yet hygienists are mainly based in private practice. One study in the South West of England reported that only one fifth of sessions were NHS-funded and 75% of hygienists undertook no NHS sessions at all.<sup>24</sup>

The present study illustrated a range of positive ways of working that involved both private practice and fee-paying NHS adults. The underlying themes included patient acceptance, which has been linked to dentists' acceptance.<sup>25</sup> Therapists' views about their perceived status were clearly part of this, illustrated by a range of positive reactions. In contrast, some dentists and the public are uncertain about what therapists do and who they are. There is a substantial need for practice-based initiatives to clarify the situation.

Dentists' lack of awareness has been reported previously<sup>4</sup> and can have profound effects on acceptance of therapists by the dental profession and the public.<sup>23,26</sup> This can range from not understanding the range of clinical competencies and therefore what to refer, through to not valuing/understanding the therapist's clinical expertise enough to help share the workload. For therapists to be effective and efficient members of the dental

team, the dentist must delegate a range of appropriate tasks to them.<sup>27-29</sup> One survey reported that the majority (59%) of GDPs thought (incorrectly) that therapists must work only under the direct supervision of a dentist,<sup>4</sup> rather than to a written treatment plan. In the wider context, this misunderstanding will impact on the lack of job opportunities for recently qualified therapists.

This study has also highlighted a range of good working practices, where therapists feel valued, consulted and supported as full team members. In other situations, it is clear that therapists feel that the dentist is not listening! Previous experience with PDS pilots recorded that DCPs felt that they were not adequately consulted as part of managerial involvement.<sup>15</sup> It has been suggested that dentists can feel frustrated with time spent on management.<sup>30</sup> It can be stressful coping with conflicting demands of different roles. Dentists may lack confidence to work with therapists and to take charge to support team working.<sup>23</sup>

A culture shift is needed to share power.<sup>16</sup> Mutual trust, understanding and clinical confidence are important components of good working relationships.<sup>16</sup> Some responses identified in this survey reflect levels of stress that current working practices engender. It has been argued that the dentists' quality of life may benefit from a skill-mix, team-based approach,<sup>31</sup> but the quality of life of all members of the team should be considered.

The need to improve dentists' knowledge and awareness about working with therapists has been clearly demonstrated in this and previous studies.<sup>4,23,26</sup> Seward (1999) argued for imaginative employment of DCPs.<sup>32</sup> But dentist education is required to fully explore the skill-mix being appropriately used.<sup>4,23,26,33</sup>

This is likely to require a two-pronged approach; firstly, to understand what therapists are trained to do and the level of supervision required. While referrals to therapists were often reported as too limited, there were a few others beyond their levels of competency. Dentists should only ask therapists to undertake a treatment if they are confident that they have been trained and are competent in that procedure.<sup>34</sup> Good communication could help to resolve many of these issues. The required

knowledge should be easy for future generations to achieve with undergraduate opportunities for joint teaching with parallel and integrated course and clinical work. For postgraduates, in addition to continuing professional development (CPD), it has been suggested that substantial central support will be required and that the GDC should take the initiative for disseminating appropriate information.<sup>23</sup>

Secondly, larger group practices are best placed to employ a therapist.<sup>4</sup> Any supervising dentist leading the dental team needs appropriate management skills in order to work efficiently with a therapist.<sup>25</sup> It is the duty of a dentist to create incentives and job satisfaction to encourage therapists to work to the upper limits of their abilities.<sup>35</sup> For effective team working the supervising dentist must provide good leadership, ensuring that aims are clear, agreed and shared so that the team can work together to achieve them.<sup>34</sup> The supervising dentist has a range of responsibilities to the team including encouraging them to work together effectively, while putting systems in place to review and monitor individual and team performance.<sup>34</sup>

Vocational training and CPD have been seen as possible conduits to increase the number of dentists able to head dental teams,<sup>10</sup> but sharing good practice such as has been identified here can go some way to showing what is possible.

In conclusion, this study has found that while UK-based practising dental therapists considered themselves to be part of the clinical team, up to two thirds felt that the referral arrangements they experienced in clinical practice did not meet their expectations. Those who were most likely to be dissatisfied were more recently qualified and working in predominantly private practices. There is scope for raising awareness among dentists regarding therapists' clinical potential as well as sharing ideas for good working practice both within individual clinical settings and between different practices.

*This project was funded by NHS R&D in Primary Dental Care.*

1. Department of Health. *Modernising dentistry: implementing the NHS plan*. London: The Stationery Office, 2000.
2. Ross M K. The increasing demand and necessity for a team approach. *Br Dent J* 2004; **196**: 181.
3. Evans C, Chestnut I G, Chadwick B L. The potential

- for delegation of clinical care in general practice. *Br Dent J* 2007; **203**: 695-699.
4. Gallagher J L, Wright D A. General dental practitioners' knowledge of and attitude towards the employment of dental therapists in general practice. *Br Dent J* 2002; **194**: 37-41.
5. Harris R V, Haycox A. The role of team dentistry in improving access to dental care in the UK. *Br Dent J* 2001; **190**: 353-356.
6. The Nuffield Institute. *The education and training of personnel auxiliary to dentistry*. London: The Nuffield Institute, 1993.
7. The Nuffield Institute. *An inquiry into dental education. A report to the Nuffield Foundation*. London: The Nuffield Institute: 1980.
8. General Dental Council. *Developing the dental team. Curricula frameworks for registerable qualifications for professionals complementary to dentistry (PCDs)*. London: GDC, 2004.
9. General Dental Council. *Scope of practice*. London: GDC, 2009.
10. Woolgrove J, Boyles J. Operating dental auxiliaries in the United Kingdom - a review. *Community Dent Health* 1984; **1**: 93-99.
11. General Dental Council. *Final report on the experimental scheme for the training and employment of dental auxiliaries*. London: GDC, 1966.
12. Allread H. *A series of monographs on the assessment of the quality of dental care, experimental dental care programme*. London: London Hospital Medical College, 1977.
13. Sisty N L, Henderson W G, Paule C L. Review of the training and evaluation studies in expanded functions for dental auxiliaries. *J Am Dent Assoc* 1979; **98**: 233-248.
14. Harris R, Burnside G. The role of dental therapists working in four personal dental service pilots: type of patients seen, work undertaken and cost-effectiveness within the context of the dental practice. *Br Dent J* 2004; **197**: 491-496.
15. Goodwin N, Morris A J M, Hill K B *et al*. National evaluation of personal dental services (PDS) pilots: main findings and policy implications. *Br Dent J* 2003; **195**: 640-643.
16. Ward P. The changing skill mix - experiences on the introduction of the dental therapist into general dental practice. *Br Dent J* 2006; **200**: 193-197.
17. Hay I S, Batchelor P A. The future role of dental therapists in the UK: a survey of district dental officers and general dental practitioners in England and Wales. *Br Dent J* 1993; **175**: 61-65.
18. Ireland R S. Dental therapists: their future role in the dental team. *Dent Update* 1997; **24**: 269.
19. Rowbotham J S, Godson J H, Williams S A, Csikar J I, Bradley S. Dental therapy in the United Kingdom: part 1. Developments in therapists' training and role. *Br Dent J* 2009; **207**: 355-359.
20. Godson J H, Williams S A, Csikar J I, Bradley S, Rowbotham J S. Dental therapy in the United Kingdom: part 2. A survey of reported working practices. *Br Dent J* 2009; **207**: 417-423.
21. Williams S A, Bradley S, Godson J H, Csikar J I, Rowbotham J S. Dental therapy in the United Kingdom: part 3. Financial aspects of current working practices. *Br Dent J* 2009; **207**: 477-483.
22. Naidu R, Newton J T, Ayers K. A comparison of career satisfaction among dental healthcare professionals across three health care systems: comparison of data from the United Kingdom, New Zealand and Trinidad and Tobago. *BMC Health Serv Res* 2006; **6**: 32.
23. Jones G, Devalia R, Hunter L. Attitudes of general dental practitioners in Wales towards employing dental hygienist-therapists. *Br Dent J* 2007; **203**: E19.
24. Sprod A, Boyles J. The workforce of professionals complementary to dentistry in the general dental services: a survey of general dental practices in the South West. *Br Dent J* 2003; **194**: 389-397.
25. Douglass C W, Lipscomb J. Expanded function dental auxiliaries: potential for the supply of

- dental services in a national dental program. *J Dent Educ* 1979; **43**: 556–567.
26. Ross M K, Ibbetson R J, Turner S. The acceptability of dually qualified dental hygienist-therapists to general dental practitioners in South-East Scotland. *Br Dent J* 2007; **202**: E8.
  27. Douglass C W, Gillings D B, Moor S, Lindhal R L. Expanded duty dental assistants in solo private practice. *J Am Coll Dent* 1976; **144**: 969–984.
  28. Burman N. Attitudes to the training and utilisation of dental auxiliaries in Western Australia. *Aust Dent J* 1987; **32**: 132–135.
  29. Stephens C D, Keith O, Witt P *et al*. Orthodontic auxiliaries - a pilot project. *Br Dent J* 1998; **185**: 181–187.
  30. Newton J T, Gibbons D E. Stress in dental practice: a qualitative comparison of dentists working within the NHS and those working within an independent capitation scheme. *Br Dent J* 1996; **180**: 329–334.
  31. Gibbons D, Newton T. Personnel management. In *Stress solutions for the overstretched*. Chapter 8. pp 51–56. London: BDJ Books, 1998.
  32. Seward M. PCD - what's in a name? *Br Dent J* 1999; **187**: 1.
  33. Steele J. *Review of NHS dental services in England*. London: Department of Health, 2009.
  34. General Dental Council. *Principles of dental team working*. London: GDC, 2006.
  35. Jones D E, Gibbons D E, Doughty J F. The worth of a therapist. *Br Dent J* 1981; **151**: 127–128.