IN BRIEF

- This paper describes the changing demographic profile of dental specialists and their future career aspirations.
- Access to a wide range of clinical work, continuing professional development opportunities, autonomy and sociability were the most important factors when choosing a future career.
- Few specialists were considering an academic career in the future.
- Flexibility in the future will be key to attracting and retaining specialists to hospital and academic posts.

The current working patterns and future career aspirations of specialist trainees in dentistry

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Objectives To determine current demographic details of dental specialist registrars in the UK, to examine their current working patterns and ascertain their future career aspirations.

Methods A cross-sectional survey, using a self-administered postal questionnaire of all 418 dental specialist registrars (SpRs) in the UK.

Results The response rate was 78%. Of the SpRs who responded 59% were male, the majority were aged under 36, 54% were married and over one third had dependants. Orthodontics had the greatest number of SpRs with 141, followed by maxillofacial surgery (70) and restorative dentistry (52). On completion of training, 80% of SpRs intended to work full time. Significantly more women intended to work part-time. Only a fifth of SpRs said they would consider an academic appointment compared with 54% for specialist practice. Three quarters intended to work partly in the public sector and partly in a private capacity. London was the most popular choice of location for a post in the future. Access to a wide range of clinical work, continuing professional development, autonomy and sociability were the most important factors when considering their future choice of career.

Conclusion Changes in the demographic profile of dental specialists and increasing opportunities for providing care within primary care may lead to difficulties in recruitment to academic and hospital posts. Increasing provision of specialist services in the 'high street' might improve access but could lead to inequalities unless these services are commissioned according to the needs of the population.

Specialisation in dentistry is not new. However the advent of recognised specialist training pathways leading to the certificate of completion of specialist training and the formation of

specialist lists by the General Dental Council (GDC) has formalised the system for developing a specialist dental workforce. There are currently 13 distinct dental specialties recognised by the GDC and one speciality, oral and maxillofacial surgery, recognised by the General Medical Council.

The number of specialist registrars in training in each of the specialties is closely controlled by the allocation of national training numbers for each specialty. The number awarded determines the maximum number of specialist registrars that can be in training at a specified time. This system is designed to ensure that each specialty is not over- or under-supplied with consultants in the future. However decisions about the numbers needed in training are often based on existing numbers of consultants and historical workload and patterns of working.

In 1994, the Chief Dental Officer for England published a report outlining the future for specialist dental services.¹ The report recommended that specialist dental services might be delivered increasingly in dental practices based in the community rather than in hospitals, with the exception of maxillofacial surgery, which should continue to be hospital based. Since then, there has been an expansion of specialist practices particularly for orthodontic care, but also for surgical dentistry and restorative care. Alongside this has been the continuing need for consultants within the hospital dental services and academic dentists within universities.

Not only is the provision of specialist dental services evolving but the workforce is also changing. There has been an increase in the proportion of female dentists and in those applying for specialist training. This has implications for the whole time equivalent workforce as many female dentists take time off for child rearing and/or wish to work part-time.^{2,3} The desire to reduce hours spent at work for a more favourable balance of career and family life is also increasing in the male medical workforce.⁴ Coupled with this is a rise in the proportion of consultants who wish to retire early.⁵

It is not known whether the currently well documented problems in the supply of dentists in the general dental services^{5,6} will also apply to specialist dental services although there is evidence of increasing difficulties in recruitment to academic dentistry.⁷

At present, little is known about the career aspirations of current specialist trainees and the factors that influence the choices they will make on the completion of their training.

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Therefore, the aims of this study were, via a cross-sectional survey of all specialist registrars in the United Kingdom, to:

- Determine current demographic details of the trainees
- Examine their current working patterns
- Ascertain their future career aspirations with respect to factors such as: pay and conditions of work, balance of career and family life, and geographical considerations.

METHODS

The study comprised a cross-sectional survey, using a self-administered postal questionnaire of all 418 dental specialist registrars (SpRs) in England, Wales, Scotland and Northern Ireland.

The post-graduate dental deans from each of the 15 deaneries in the UK were contacted and their approval for the study obtained. Two methods were used to mail the questionnaires to the survey participants. In 8 of the 15 deaneries, the questionnaire was mailed directly to the SpRs by the authors, whilst in the remainder they were distributed via the postgraduate dean's office.

A pilot study was conducted on a random sample of twenty-four specialist registrars whose names were taken from the database. This was to confirm the interpretation and validity of the questionnaire. Minor modifications to the wording of questions were made in advance of the main mailing.

The main mailing was conducted in March 2002. Each specialist registrar was sent a copy of the questionnaire with a cover letter explaining the purpose of the research, an assurance that the data would be anonymised so that it would not be possible to identify individuals from the survey results and a reply paid envelope. All non-respondents were sent a further questionnaire and reply paid envelope, four weeks later. During the second mailing, the SpRs were asked to return the questionnaires uncompleted if they did not wish to take part in the survey.

The questionnaire was developed to answer the objectives of the study. The questionnaire covered four areas of interest:

- **Section 1** The SpRs were asked about their current arrangements, their specialty, whether they are full- or part-time, their employer and their funding arrangements for both their salary and their post-graduate study.
- **Section 2** This covered the future intentions of the registrars with respect to where they considered they might work in the future both geographically and the nature of their employer. The respondents were asked also about how much of their time they plan to spend within the NHS.
- **Section 3** The SpRs were asked to identify how important various criteria were to their choice of future employment. Included in this section were questions about working terms and conditions such as salary, flexibility, autonomy and employment benefits. There were questions related to other aspects of work such as sociability, the range of clinical work, research opportunities and other non-clinical work. They were also asked about access to childcare facilities, continuing professional development and library and computing facilities.
- **Section 4** The SpRs were asked some personal demographic details including their gender, age, ethnic origin, marital status and whether or not they had dependants.

The questionnaire comprised a combination of closed questions and semantic differential scales on which respondents rated the importance of factors affecting future choice of employment that ranged from very important to not at all important.

Completed questionnaires were coded and entered into SPSS (SPSS Chicago, Illin). The data were analysed by simple frequency statistics to describe sample demographics and the relationship between variables was determined by cross-tabulation and Chi-square statistics where appropriate.

RESULTS

Response to the questionnaire

Of the 418 questionnaires mailed to specialist registrars in dentistry, 327 were completed and returned, giving an overall response rate of 78%. The response rate for the direct mailing was 75% and for the mailing via the postgraduate dean's office 84%. The response rate by deanery varied from 100% in the South West and Northern deaneries to 66% in North Thames. A total of 290 SpRs (69%) responded to the first mailing, with a further 37 (9%) responding to the follow up mailing.

Demographic details of the respondents

Of the 327 SpRs who replied, 191 were male (59%) and 135 were female (41%). The majority were under 36 years old with over 40% of the study sample aged between 31 and 35 years. Twenty-four of the respondents (7.4%) were over 40 years old. Of these, ten were training in oral and maxillofacial surgery and five were training in restorative dentistry. The women in the survey were on average younger than the men ($P = 0.004$).

One hundred and forty four SpRs (44%) were single and 175 were married (54%). The women in the study were more likely to be single ($P = 0.03$). Over one third of the study sample (36%) had dependants. The proportion of male SpRs with dependants was significantly greater than the proportion of female SpRs with dependants ($P = 0.001$). Nearly three quarters of the registrars described themselves as white and less than 20% were Asian with other ethnic groups making up to less than 10%. There was no difference in the proportion of male and female SpRs from the different ethnic groups.

Training by specialty

Figure 1 shows the number of SpRs responding to the questionnaire who were training in each specialty. Orthodontics had the greatest number of SpRs in training with 141, followed by maxillofacial surgery (70) and restorative dentistry (52). The remaining specialties had relatively few trainees. There were marked gender differences between the specialties. In oral and maxillofacial surgery only 13% of registrars were women, whereas in paediatric dentistry this figure was 78%. In orthodontics 53% of trainees were female.

Fig. 1 Number of specialist registrars in each dental specialty who responded to the survey

Figure 2 Factors influencing future choice of career

Key: Range = Range of clinical work, CPD = access to continuing professional development, Autonomy = autonomy, Sociability = mixing with colleagues/sociability, Multidisciplinary = working with colleagues from other specialties, Remuneration = level of remuneration, Library = access to library/computing facilities, Salaried = guaranteed salary, Benefits = employment benefits eg paid maternity and annual leave, sick pay, Flexibility = flexibility of hours/days worked, Non-clinical duties = variety of non-clinical duties eg teaching, management, New contract = an enhanced consultant reward scheme, Research = research opportunities, Childcare = access to childcare facilities

Training by employer

The NHS employed more than three quarters of the SpRs, and fewer than 20% were university employees. The armed forces employed five SpRs. Twenty per cent of the NHS employees had an honorary academic contract. Not all of the posts were funded by the NHS or universities, a number of SpRs had to fund their own training. Twenty-one respondents were wholly self-funded and forty-three were partly self-funded. Thirty-four of the specialist registrars (10%) were in part-time training programmes. They worked an average of six sessions per week. The majority of the part-time trainees were women (59%).

Future career aspirations – working pattern

On completion of their higher specialist training, nearly 80% of SpRs (257) intended to work full time. Sixty-seven registrars intended to work part time, of which fifty-two (78%) were women ($P < 0.001$). Nearly half of those SpRs intended to work eight sessions, although the mean number was 6.8 sessions. The SpRs were asked where they might work on completion of training, they were permitted to state more than one location if they wished. Fifty per cent of respondents indicated that they would consider working in a dental hospital, 47% in a general hospital and 54% in specialist practice. However only 21% said they would consider an academic appointment. A fifth of all respondents intended to work fully within the public sector, three quarters intended to work partly in the public sector and partly in a private capacity. Only eight SpRs (2.5%) indicated an intention to be fully private on completion of specialist training. There was no gender difference in response to their future commitment to the NHS.

Future career aspirations – locality

If a suitable post were available, 70% of the SpRs would consider moving to another part of the country after training was finished. Men were significantly more willing or able to move than women ($P < 0.0001$). Overall, London was the most popular choice of location with 150 SpRs considering working there in the future. The other deaneries in the south of England were also popular choices. Manchester was the most popular region in the north of England. More than a quarter of the SpRs would consider working in Scotland, just over 20% would work in Wales and 10% would work in Northern Ireland. Twenty per cent of the SpRs would also consider moving to another EU country or another non-EU country when their training was finished. Table 1 provides a breakdown of the responses by deanery.

Other factors influencing career choice

The SpRs were asked to rate the importance of factors that might influence their future choice of employment. Figure 2 shows the results, which have been arranged to show the factors that are most important at the top down to those that are least important at the bottom.

The range of clinical work was very important and this ranked most highly out of all of the factors considered. Access to continuous professional development (CPD), autonomy and sociability were also ranked highly by the respondents with more than three quarters ranking them as very important. Men were more likely to rank autonomy as very important ($P = 0.008$). Multidisciplinary working and remuneration were considered to be very important by seventy percent of the SpRs.

Deanery in which training is taking place	Number of SpRs responding	Possible future location (%)																
		Birmingham	Bristol	Cambridge	Kent	Leeds	London	Manchester	Liverpool	Newcastle	N. Ireland	Oxford	Scotland	Sheffield	Southampton	Wales	EU country	Non -EU country
West Midlands	19	79	47	42	26	37	21	21	11	21	5	26	16	37	21	26	32	21
South West	15	33	80	47	33	20	27	40	33	27	7	33	20	20	53	27	27	33
East Anglia	5	40	40	60	40	40	40	60	40	40	0	20	0	20	2	40	40	60
South Thames/KSS	55	29	29	36	56	18	78	13	9	9	6	40	15	13	15	15	27	15
Yorkshire	26	35	39	35	27	73	39	54	46	39	12	27	35	42	23	19	23	23
North Thames	57	14	25	30	51	16	86	16	5	7	4	30	9	14	12	7	9	12
North West	24	38	29	25	25	38	21	79	33	25	13	21	33	38	25	25	29	13
Mersey	14	21	21	7	0	36	14	71	71	14	7	7	29	14	7	21	0	0
Northern	20	20	85	25	35	45	20	50	25	65	10	25	50	20	20	25	25	25
N. Ireland	11	18	27	27	27	27	18	18	9	18	82	18	46	27	9	9	27	36
Oxford	6	50	17	17	33	17	67	17	0	0	0	83	0	17	17	17	0	0
Scotland	30	27	47	23	20	33	37	20	23	47	23	20	90	30	10	20	23	30
Trent	20	25	30	40	20	70	20	35	25	35	5	25	30	75	20	10	20	20
Wessex	7	29	86	57	57	43	29	43	43	29	14	57	29	29	86	43	0	14
Wales	18	28	78	33	33	28	22	39	22	17	6	28	17	11	28	78	11	22

Table 1 Where SpRs would consider moving to on completion of training

The SpRs could indicate as few or as many alternative locations as they wished. Results are expressed as a percentage of SpRs training in each deanery

Access to library facilities and a guaranteed salary was considered to be very important, by two thirds of those responding. Employment benefits such as paid maternity leave, annual leave and sick pay were considered to be very important by 58% of SpRs with significantly more women likely to rank this factor highly ($P < 0.0001$). Flexibility was also considered to be very important for 58% of respondents but was of greater importance to female SpRs ($P = 0.004$).

Only 50% of the SpRs felt an enhanced consultant reward scheme and a variety of non-clinical duties were very important. At the bottom of the list were research opportunities with just over 40% considering it to be very important and access to childcare facilities, which was ranked as very important by a third of respondents but by significantly more women ($P < 0.0001$).

DISCUSSION

This cross-sectional survey investigated the career aspirations of dental specialist registrars in the UK, the results of which may have implications for the planning of specialist dental care in the future. The purpose was to provide information to assist the dental specialist workforce planning process. It might also provide information about the role of specialist dental services in the future and the possible configuration of such services in terms of their location, either primarily hospital or community based, and whether the provision will be state or privately funded.

In the past, dental specialists generally followed hospital careers as consultants in their specialty although with a proportion of their time spent seeing patients privately. In line with the rec-

ommendations of the report from the CDO, many specialists are now considering working in specialist practice.¹ However, the system for providing training numbers for specialist registrars is designed to ensure that there are adequate numbers of trained specialists to fill hospital consultant posts and is primarily set up to cater for doctors. Specialist practitioners on the high street offering NHS dental care may reduce the requirements for hospital-based consultant posts in these specialties, although the extent to which they do this is unknown, as they will be providing care either via the NHS, or privately or a combination of both.

There seems though that there is a conflict here. There will continue to be a need for hospital consultants. They fulfil many important functions both in terms of the care they can provide to patients who have more complex problems, which often require multidisciplinary working, but also training of future specialists and providing post-graduate education for general practitioners. Academic specialists are also vital for undergraduate and post-graduate training as well as for their expertise in oral and dental research.

Those factors considered to be very important by SpRs may sway them in one direction or another when it comes to the choices they will make on completion of their specialist training. A wide variety of clinical work, sociability, multidisciplinary working, access to library facilities and non-clinical roles may be more readily available in a hospital setting. Autonomy and flexibility may be greater in specialist practice. Remuneration may also be higher in specialist practice, particularly in private practice.

There is potential therefore to encourage specialists into one career path or another. Hospital posts could become more attractive if there was increased flexibility and autonomy. Specialist practice may be more inviting with a change from fee-for-item care to a well remunerated pay scale offering a guaranteed salary and employment benefits. In fact under *Options for Change*⁸ there is the opportunity for exploring different ways of working in the GDS. However there needs to be a coherent sense of how specialist services should be configured in the future. A wholesale shift towards specialist practice may lead to some serious problems. Specialist practitioners can choose to practise wherever they wish. This may lead to a lack of provision in some parts of the country. It is clear from the results of the survey that the South of England, and London in particular, is the preferred location for many SpRs.

In addition, in specialist practice there is no restriction on private care. In the present survey more than a fifth of all trainees intend to work exclusively in the public sector and although three quarters believed they would do some private work, on average three quarters of their time would still be committed to the NHS. Only eight SpRs intended to be fully private when their training was completed. This compares favourably with GDS dentists of whom a quarter saw the majority of their patients privately and half were seeing both NHS and private patients.⁹ However, as has happened in the past, if practitioners are unhappy with the NHS terms and conditions of service there could be a major shift towards private care. The potential for inequalities in care both in terms of geography as well as ability to pay is enormous.

There is already evidence of recruitment difficulties in academic dentistry.⁷ In this survey 20% said they might consider an academic career alongside other options, although this varied by specialty. However, the SpRs rated access to research opportunities as being the second least important factor after access to childcare facilities when considering future career opportunities. The pressures on senior academics are considerable. Many find it difficult to maintain a balance between their research, teaching and administrative commitments in addition to their clinical duties. These problems are not restricted to dentistry, clinical academic medicine is having recruitment difficulties also.¹⁰ Competing pressure from service, teaching and research; difficulty in obtaining research grants; the small number of academic appointments available; and uncertainty about pay parity with the NHS are some of the issues highlighted by medical SpRs.¹¹

The proportion of women in training posts is approaching 50% and many women may consider part-time working both during

training and when fully qualified. This will have implications for both the numbers needed in training and the nature of consultant and specialist posts. Part-time working and job sharing are likely to become more commonplace and employers will need to be responsive to the needs of their employees. At present only a quarter of female dentists who take a career break return to work.² Those specialties that attract a greater proportion of female practitioners will need to be aware of the potential reduction in the whole time equivalent of their trained workforce. The average life-time workforce contribution of female medical practitioners is about 68% of the average male practitioner.¹²

In conclusion, the NHS will have to cater for the needs of dental consultants and specialists if it wishes to retain them in the NHS. Working conditions and payment systems will have to reflect the changing demographic profile of the workforce and the move to specialist practice. Failure to do so could lead to a major shift towards private provision of specialist services and increasing inequalities in the dental health of the population.

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