Dental workforce challenges in rural England: Survey into recruitment and retention in Devon and Cornwall

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Abstract

Introduction Devon and Cornwall have been identified as a “dental desert” with limited NHS dental access, high levels of oral health inequality and challenges in recruitment and retention of the dental workforce. Recruitment and retention of all members of the dental team has been identified as an important factor in the availability of dental services particularly within rural and coastal areas. During the last five years there has been an 8% decrease in the number of dentists working within the NHS in Devon, and although this may be due to a variety of factors, recruitment and retention appears to be key. The aim of this research was to explore the experiences of dental practices within Devon and Cornwall in relation to recruitment and retention of the dental workforce. Method A self-administered, online questionnaire was used to explore various aspects of recruitment and retention of the dental workforce in Devon and Cornwall. The questionnaire included categorised rating scales and free text question formats providing both quantitative and qualitative data. Results 106 dental practices responded to the survey, providing a response rate of 36%. The vast majority of respondents (94%) considered recruitment and retention to be a major barrier to delivering NHS services. 77% of practices had a current staff vacancy; 57% had a dentist vacancy; and 48% had a vacancy for dental nurses. Thematic analysis led to identification of four main themes which were considered to influence recruitment and retention: NHS system; Economic Challenges; Logistics; Support Networks. The current NHS dental contract was identified as the main barrier in recruiting and retaining workforce within the NHS in the region. Other factors such as income generation, workload, economic challenges, geographic isolation, lack of support, training opportunities and career development were identified as important issues which affected both NHS and private practices in rural and coastal areas. Conclusion Recruitment and retention of the dental workforce is a major barrier to delivering oral healthcare services in the Southwest Peninsula. A large number of dental practices are failing to operate at capacity due to workforce shortages which is affecting both NHS and private practices. The situation is most acute in recruitment and retention of dentists and dental nurses, with NHS practices affected more than the private sector. Urgent action is needed at a local, regional and national level to avoid further deterioration.

In Brief

- Over three-quarters of respondent dental practices in Devon and Cornwall currently have vacancies within their workforce, with 57% of practices having a vacancy for at least one dentist.
- Practices with an NHS contract are most likely to be affected by issues with recruitment and retention, but private practices in Devon and Cornwall are also facing challenges.
- A variety of local, regional and national factors are contributing to the challenges of recruitment and retention in rural areas, and they can be categorised as macro- (societal, political, governmental), meso- (group, institution), or micro- (individual) level.

Introduction

The crisis within NHS dentistry is well documented, with many rural and coastal areas experiencing particular challenges in delivering services. The Southwest Peninsula (SWP), comprising Devon and Cornwall, has been identified as a “dental desert,” with a recent Healthwatch Report declaring that no dental practices in Devon were accepting new adult or child patients under the NHS. This depressing picture of NHS Dentistry in England was reinforced by a BBC Report in August 2022, which again highlighted Southwest England as an area of particular concern. In March 2021, NHS England (SW) reported that there were 73,872 patients on a waiting list for NHS treatment in Devon, with over 16,000 in Plymouth alone.

The Chief Medical Officer (CMO) for England has previously highlighted the health inequality which exists within rural and coastal communities, when compared to inland urban neighbours. Areas such as Devon and Cornwall experience a high level of health inequality, yet receive limited policy and research attention. The level of oral health inequality is well illustrated in the data from the Plymouth Oral Health Needs Assessment undertaken in 2019. It was reported that 21.4% of five-year old children in Plymouth had visible decay on examination, but this varied significantly in prevalence and severity across the different areas of the city. In wards with the greatest deprivation, 56% of 5-year olds had decay compared to only 6.7% in the more affluent areas. The same report highlighted the age-standardised incidence rate and the mortality rates for oral cancer in Plymouth, which were significantly higher than in England as a whole.

Access and availability to NHS dentistry is crucial in preventing oral disease and reducing oral health inequality.

The crisis within NHS dentistry is well documented, with many rural and coastal areas experiencing particular challenges in delivering services. The Southwest Peninsula (SWP), comprising Devon and Cornwall, has been identified as a “dental desert,” with a recent Healthwatch Report declaring that no dental practices in Devon were accepting new adult or child patients under the NHS. This depressing picture of NHS Dentistry in England was reinforced by a BBC Report in August 2022, which again highlighted Southwest England as an area of particular concern. In March 2021, NHS England (SW) reported that there were 73,872 patients on a waiting list for NHS treatment in Devon, with over 16,000 in Plymouth alone.

The same report highlighted the age-standardised incidence rate and the mortality rates for oral cancer in Plymouth, which were significantly higher than in England as a whole. Reduced access to NHS dental services has been a chronic problem for many years. The situation was exacerbated considerably by the COVID-19 pandemic, with strong indications that increasing numbers of dental professionals are leaving the profession. Data from England and Wales show that more than 1,000 dentists left the NHS during the last five years and a recent report from one of the large Dental Body Corporates indicates that they have experienced an attrition rate of 18% for dentists over the year 2020-21 and 29.5% for qualified dental nurses. A recently published report from Cumbria indicates that 54% of practices in that region currently have at least one vacancy for a dentist. A reduction in workforce numbers can have a significant impact on access to dental services, erode the health and well-being of staff and undermine the financial sustainability of dental practices.

Study Rationale And Aims

During the last five years there has been an 8% decrease in the number of dentists working within the NHS in Devon, and although this may be due to a variety of factors, R&R appears to be key. In response to growing concerns around R&R within dentistry, researchers at Peninsula Dental School collaborated with Devon and Cornwall Local Dental Committees (LDC), to explore the experiences of dental practices within the SWP through the question: “what is the extent and nature of the recruitment issues in the dental workforce in Devon and Cornwall?” The results provide insight into the extent and nature of recruitment issues facing dental practices within this rural and coastal community.
Materials And Methods

Study design & recruitment

The cohort study used a self-administered, online questionnaire delivered via JISC Online Surveys, a secure educational platform that supports HEIs and research projects. The 29-item survey included 22 questions exploring various aspects of R&R of the dental workforce and was distributed to dental practices in Devon and Cornwall. The survey questions were predominantly quantitative, and focused on current practice vacancies, previous experience of recruitment and any specific problems encountered with workforce retention. Five questions invited free text answers providing the opportunity to express views on factors which could affect R&R. An overview of the questionnaire is included within Appendix 1.

The survey was voluntary and anonymous, although practice postcode data was collected to enable deduplication to achieve a single response per practice. The survey was piloted with members of Devon LDC and revised in line with their feedback on the content, format, relevance and readability of the survey, prior to circulation.

The survey (including study information and consent) was distributed through professional networks to all dental practices in Devon and Cornwall (including the Isles of Scilly). The survey was open for a period of 8 weeks between 29th July and 23rd September 2022, with one response per practice requested. Reminders were sent out to maximise the response rate. Ethical approval was obtained from the University of Plymouth Faculty of Health Research Ethics and Integrity Committee (Reference number: 3382).

The questionnaire included categorical rating scale and free text question formats. A copy of the questionnaire is available on the online supplementary information. Rating scales were analysed using frequency analysis with quantitative data subject to descriptive statistical analysis and paired t-tests. Qualitative data from responses to free text questions were analysed using Braun and Clarke’s six recursive steps for reflexive thematic analysis.

Independent coding, theme development and cross checking was undertaken by multiple members of the research team, two of which were non-dental. Final themes and codes were agreed by all, and overseen by an experienced qualitative researcher to ensure rigour.

Results

The potential sample size was 295 practices (197 Devon; 98 Cornwall), and 134 responses were included in the final analysis after deduplication and postcode eligibility checking. Dental practice duplication accounted for exclusion of 26 responses, with a further 2 responses removed as they were not within geographical boundaries. This provided a 36% response rate (106 practices out of a possible 295) across Devon & Cornwall. A similar response rate was obtained across the two Counties, but a greater response obtained from those working in NHS / mixed practice compared to solely private practice (see Fig. 1).

94.4% of respondents considered R&R a Major factor in enabling patient access to NHS dentistry. The NHS Dental Contract was widely considered to be the main barrier to R&R of dental associates in the NHS, with income generation identified as a Major (n = 69) or Significant factor (n = 33) by 95.3% of respondents.

Recruitment

A large proportion of practices indicated they had vacancies at the time of data collection (76.6%, n = 82). Fifty-seven percent of practices currently had a vacancy for a dentist (n = 60), and over three-quarters of these vacancies were within NHS practices (n = 46). Several of these practices had multiple vacancies with one declaring as many as 6 unfilled associate positions. Of the private practices responding to the survey, 54% had a vacancy for a dentist (n = 13).

Almost half the practices (48%, n = 51) had vacancy for a dental nurse, with several having multiple unfilled positions. The majority of practices affected were NHS, accounting for 80% of dental nurse vacancies. Other groups from within the dental team appeared to be less affected: hygienists / therapists with 12% vacancy rate (n = 13); receptionists with 10% (n = 11); practice managers with 1% (n = 1). (See Fig. 2)

Previous difficulty in recruiting dentists was reported in 60.7% (n = 65) of practices, with 24.3% (n = 26) of practices reporting this had frequently been a problem, and 36.4% (n = 39) reporting this had always been a problem. Only 1.9% (n = 2) of respondents reported that recruitment of dentists had never been a problem.

Only 5.6% (n = 6) of practices stated they had never experienced difficulties recruiting dental staff. The number of practices experiencing difficulty with recruitment outweighed this considerably, with 27.1% (n = 29) stating they had always experienced difficulties, and 31.8% (n = 34) reporting that they had frequently experienced this difficulty. 65.4% of practices reported that recruitment of dental staff had become much harder in recent years (n = 70), and 24.3% (n = 26) reporting dental staff recruitment had become harder.

There were no significant differences in perception of recruitment of dentists between practices based in Devon and those based in Cornwall (t(104) = -3.94, p = .117). Correspondingly, there were no significant differences between Cornwall and Devon based practices for reported recruitment or retention issues (t(104) = -4.30, p = .459; t(102) = -2.81, p = .898 respectively).

Retention

43% said retention of dental staff was an issue; with 28% [n = 30] stating frequently and 15% [n = 16] always. Similarly, a large proportion of practices (78.5%, n = 84) reported retention of dental staff had become increasingly difficult in recent years, with 30.8% (n = 33) reporting it was much harder to retain dental staff, and 47.7% (51) reporting it was harder to retain dental staff.
Recruitment and retention within dentistry in rural and coastal areas has previously been highlighted as a serious issue which directly impacts on the availability of oral health care services. The survey data from Devon and Cornwall provides further evidence that, despite the establishment of a dental school within the region, recruitment and retention of dentists and dental staff remains a major barrier to care. The responses suggest that the situation is deteriorating, with almost 90% of respondents declaring that recruitment of dental staff had become more difficult in recent years. The data also revealed that retention was also a major problem with more than three-quarters of practices reporting that it had now become harder to retain staff.

Influencing factors

The factors considered to influence R&R in Devon and Cornwall are explored within the next section, drawing on analysis of the free-text responses. It is worth noting that when asked to report the main factors affecting recruitment, there were no significant differences between private practice and NHS practice selected response options, with the exception of the response Career opportunities ($t(99) = -7.94, p = < .001^*$) which were reported as better within the private sector than the NHS.

Qualitative data

Free text questions invited participants to share their views on the influencing factors impacting on R&R. The answers were analysed thematically and the findings are summarised in Table 1. It is important to recognise that there is overlap within these themes / sub-themes and factors are often inextricably linked and interdependent.

Table 1

<table>
<thead>
<tr>
<th>Theme</th>
<th>Subtheme</th>
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<tbody>
<tr>
<td>NHS System</td>
<td>Dental Contract Reform</td>
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<td>Financial Aspect</td>
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<td>Workload</td>
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<td>Economic Challenges</td>
<td>Location and Travel</td>
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<td>Accommodation and Cost of Living</td>
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<td>Logistics</td>
<td>Support</td>
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<td></td>
<td>Training</td>
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<td>Support networks</td>
<td>Mental Wellbeing</td>
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<td></td>
<td>Career Development</td>
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</table>

NHS System

The current NHS dental contract was seen as the key factor impacting on recruitment and retention within the NHS, which was primarily related to remuneration and workload when compared to the private sector.

‘The NHS dental service is a national disgrace and dentists and staff don’t want to work in it.’ (#13)

The need for urgent change was highlighted by several respondents, with many fearful for the future of NHS dentistry.

‘I am leaving NHS and going privately as my patience with the current contract is over’ (#14)

Respondents noted that a lack of investment in NHS dentistry was a barrier to R&R within NHS practices. The financial constraints imposed by NHS funding impacted on the ability of practices to remunerate staff at a competitive rate, which was seen as a factor in recruitment and retention of staff.

‘Lack of investment in NHS dentistry is the main reason for practices inability to offer staff competitive salaries.’ (#51)

Workload under the NHS was another issue raised, and many felt the continuing pressure to deliver UDA targets within an increasingly challenging environment, led to significant stress and increased risk of mistakes, complaints and legal action.

‘Risks of litigation, inability for dentists to provide the time and care patients need, pressures from practices to see more patients than appropriate for each dentist. Increases risk of mistakes, serious issues being missed such as oral cancer.’ (#50)

Economic challenges

Many respondents highlighted the lack of investment in NHS dentistry and reported the impact of the COVID-19 pandemic on the ability to retain and recruit dental staff within the NHS.

‘Many dental nurses left during/post covid-19 due to the increase workload for no reward.’ (#60)

Wage stagnation within the NHS and the rising cost of living, led to staff seeking alternative roles within the job market.
'COVID and people deciding to take alternate careers......in lots of places supermarkets are paying the same and have far less expectations on the role.' (#99)

A number of respondents also suggested that 'Brexit' was a particular barrier to recruitment and retention of non-UK dentists.

"BREXIT makes recruitment of EU dentists much more difficult" (#21)

**Logistics**

*Location and travel* were cited as an issue to R&R due to access to training, poor transport links, road congestion during summer months, and a preference for younger staff to live in urban locations19.

'We lost one dentist as her commute became intolerable as the traffic in Cornwall in the summer months has become incredibly congested, and she needed to work closer to home with her young children.' (#109)

*Accommodation and cost of living* was identified as another factor, with house prices rising significantly in recent years.

'It is also more difficult in Cornwall now given the price of housing is astronomical.' (#109)

**Support networks**

Respondents frequently mentioned "support", although this had several different elements including clinical, emotional and financial support. Leadership and management, mentoring and the value of personal and professional networks were also identified as important.

'Working in a rural practice can be quite isolating for younger dentists especially after the support of the dental school environment.' (#86)

Isolation was also highlighted in relation to cultural identity and lack of diversity within many rural areas.

'There is definitely a cultural barrier too, being a single British Hindu woman, I am firstly the only female dentist in my practice and there is definitely a cultural barrier ie Diwali which would widely be celebrated in my previous practice in London here in Devon some of my colleagues had never even heard of it which can make one feel more isolated.' (#20)

*Access to training* was seen as a potential barrier to R&R, with dental professionals having to travel significant distances to support their continuing professional development.

'More courses/teaching in Cornwall to enhance further training .... not having to travel to Bristol and beyond for any worthwhile course...’ (#119)

The reduced number of Dental Foundation Training practices in the area, their distribution and ongoing mentorship were also highlighted as a potential issue.

'I also think the NHS needs to consider alternative options for foundation training and or mentor training - this would help newer dentists.' (#4)

The inability to retain students from Peninsula Dental School beyond graduation was highlighted as a frustration, and this was linked by some as shortcoming in admissions where too few 'local' students were being given the opportunity to train as a dentist or a therapist at the University of Plymouth.

'Recruit local students to the dental school, otherwise they all return back to their homes in UK away from Devon.' (#19)

Deterioration in the state of mental health and well-being amongst many in the profession, particularly those within the NHS, was highlighted. Although dentistry has always been considered a stressful occupation, the views of our respondents appeared to suggest this was getting worse.

'In over 30 years of practice I cannot remember a time when morale and enthusiasm for dentistry was lower.' (#116)

**Career progression** was reported as a reason for dental staff leaving the NHS, and in some cases the profession, which aligned with the work of Holmes et al20. The lack of opportunities within dentistry, particularly the NHS, was deemed to impact deleteriously on retention with respondents describing a desire for staff to be keen to pursue "new challenges" (#86), "career development outside of dentistry" (#25) and "opportunities for a bigger or different challenge" (#26). This appeared to affect dental nurses more than any other group within the dental workforce.

**Recruitment solutions**

The final question in the survey invited respondents to provide any additional comments, which led to a number of suggestions on what could, and should, be done to improve R&R within the region. The solutions tended to reflect the factors already identified within the survey. These included addressing issues at a local, regional and national level and focussed on NHS dental contract reform (DCR), local recruitment into dentistry, increased numbers of training places, incentives to retain Peninsula graduates to stay in Southwest, better access to training / CPD and improvements in peer support and mentorship.

**Discussion**

The findings within this survey confirm that R&R is one of the major issues affecting dental access in Devon and Cornwall, with over three-quarters of practices reporting a current vacancy. The Southwest data on dentists is comparable with the findings of the Cumbria Report2 which indicated that over half (54%) of the practices in the Cumbria region had at least one dentist vacancy.
Within the Devon & Cornwall survey, the majority of dentist vacancies were within NHS practices (78%), but it is worth noting several private practices also reported a vacancy. Although the response rate from private practices was relatively small, of the 24 practices who did respond, over half (54%) reported a vacancy. Suggestions have previously been made that there is no shortage of dentists, simply a shortage of dentists willing to work in the NHS\textsuperscript{21–24}. Our findings would seem to contradict this view, when applied to a rural setting. This is supported by the experience of others who have found recruitment of dentists to be challenging within the private sector in rural areas\textsuperscript{3}.

A shortage of dentists is only part of the problem, and the challenges of R&R for other members of the dental team must not be overlooked. A dentist cannot operate without the rest of the dental team and with 54% of practices reporting at least one staff vacancy, this will undoubtedly impact on availability of services, standards of care and patient safety. Recruitment and retention of dental staff appears to primarily affect NHS practices, and this may reflect market conditions where there is an ability to pay more in the private sector, the workload is often less intense and there may be greater opportunities for training, continuing professional development (CPD) and career development.

The number of vacancies for dental hygienists and therapists (DHT) were relatively small in comparison to dentists and nurses, although it was interesting to note that both private and NHS practices struggled to recruit. It would be overly simplistic to assume that low vacancy rates, indicate no DHT workforce shortage. Experience within practice would suggest this is not necessarily the case, and is more likely to reflect the greater security of hygienists in the private sector (improved retention) and the under-utilisation of DHTs in the NHS (lack of recruitment). The DCR changes proposed by NHS England, when fully implemented, will hopefully enable DHTs to utilise their full scope of practice within the NHS\textsuperscript{25}. If the proposed regulatory changes support and incentivise the use of DHTs within the General Dental Services, this is likely to lead to an increased demand within NHS practice and recruitment could become more of an issue in the future\textsuperscript{26}.

Difficulty with R&R does not only affect patient access to services, it can also impact on the health and well-being of the team and their ability to provide high quality care. The loss of highly trained work-colleagues can compromise teamwork, create additional stress within the team and undermine morale. Stability within a team is important and the constant churn of staff can also impact on patient safety, clinical outcomes and undermine patient experience\textsuperscript{33, 34}. Patients value continuity of care\textsuperscript{27}, and constant changes in workforce can directly impact on the quality of care provided\textsuperscript{28}.

Concerns around mental health and well-being of the profession were highlighted within the survey and identified as an influencing factor in staff attrition. Stress and burnout have been recognised as a serious issue within dentistry\textsuperscript{29} and it is incumbent on the profession, and those who regulate and commission our services, to create a supportive environment\textsuperscript{30}.

Our thematic analysis of respondents’ views on issues affecting R&R of the dental workforce in Cornwall and Devon identified four major themes. (See Table 1). We have mapped these factors into a framework with two main dimensions. Firstly, the framework delineates whether the factors operate at the macro- (societal, political, governmental), the meso- (group, institution), or the micro- (individual) level. Secondly, the framework also distinguishes between those factors which are national or general, and those which were identified as being of specific concern locally within the Southwest peninsula region.

The factors set out in this framework constitute barriers to effective recruitment and retention in dentistry. Inevitably, factors at the different levels are interlinked, with many of those identified at the micro-level being framed by the socio-economic issues situated at the macro-level, for example.

### Table 2

<table>
<thead>
<tr>
<th>National / General</th>
<th>Local / Regional</th>
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<tbody>
<tr>
<td><strong>Macro-level</strong></td>
<td></td>
</tr>
<tr>
<td>• NHS contract / UDA value</td>
<td>Transport infrastructure</td>
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<tr>
<td>• Investment in NHS dentistry</td>
<td>Housing costs &amp; availability</td>
</tr>
<tr>
<td>• Workforce planning</td>
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<td>• COVID-19 pandemic</td>
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<td>• Brexit</td>
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<tr>
<td><strong>Meso-level</strong></td>
<td></td>
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<tr>
<td>• Practice management</td>
<td>Dental Foundation programme places</td>
</tr>
<tr>
<td>• Workload and working conditions</td>
<td>Access to training opportunities</td>
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<tr>
<td>• Availability of ORE examinations</td>
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<tr>
<td>• Flexible training</td>
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<tr>
<td><strong>Micro-level</strong></td>
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<tr>
<td>• Fear of complaints &amp; litigation</td>
<td>Distance from training opportunities</td>
</tr>
<tr>
<td>• Stress</td>
<td>Networks offering peer support</td>
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<tr>
<td>• Remuneration</td>
<td>Preference for cities over rural locations</td>
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<tr>
<td>• Difficulties due to cost of living</td>
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<tr>
<td>• Alternative career opportunities for DCPs</td>
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This framework allows identification of the different characteristics of the barriers described by our respondents, enabling consideration of how these issues may best be addressed, and by whom. Some proposed solutions exist at the macro level, requiring governmental intervention. This is certainly the case with...
some of the national issues, for example DCR or workforce planning, but is also the situation with some regional issues, such as transport infrastructure and the availability and cost of housing. The meso and micro level factors are potentially more easily addressed, although implementing changes to undergraduate training, overseas examinations or dental foundation places are unlikely to be straightforward or rapid.

Training and support for the dental team were areas identified in our survey, the Cumbria Report\textsuperscript{2}, and within the wider literature\textsuperscript{20, 31}. This is an area which could, and should, be addressed in the short term with a focus on all members of the dental team, in order to support CPD, career progression, networking and social interaction\textsuperscript{20}. The Advancing Dental Care (ADC) Report\textsuperscript{32} published in 2021 highlighted the need to modernise training and provided a “blueprint for change to reform dental education and training”\textsuperscript{32}. Many of the suggested initiatives could potentially have a positive impact on rural and coastal regions through flexible training and utilisation of skill mix, and this is an area currently being pursued in the Southwest.

A more flexible approach to dental school admission was suggested as a means to improve R&R in the region, by encouraging and facilitating a greater intake of students from the Southwest, who may be more disposed to remain in the area following completion of their training. This is an area currently being explored by Peninsula Dental School through their Widening Participation Programme, which is supported by the Dental Schools Council and HEE\textsuperscript{32}. It is hoped this approach will not only promote equality of access to dentistry, but may also have a positive impact on recruitment and retention within the Southwest Peninsula.

There are limitations to this survey in terms of the low response rate, particularly from the private sector. There is also a potential for sampling bias, with respondents affected by R&R issues more likely to participate in the survey. Despite these limitations, the authors consider the survey findings to be an important contribution to the literature base.

Conclusion

This research provides further evidence that rural areas are experiencing serious challenges with dental R&R. This is impacting directly on access to dental services and although many of the problems are chronic, the situation appears to be deteriorating.

Our survey data highlighted a number of factors which need to be addressed to improve R&R in rural areas, which builds on the work of other published research\textsuperscript{2, 3, 20}. Some of these factors depend on a significant change in commissioning (NHS Contract) or training (workforce planning / ORE), while others are beyond the control and influence of the dental profession (transport, housing, cost of living). Other issues such as access to training, support, mentorship and opportunities for career progression can be addressed at both a practice and local level. This will require collaboration across multiple stakeholders in order to address some of the disadvantages (real and perceived) in living and working in a rural community.

This survey is an initial step in identifying some of the main issues which affect R&R in Devon and Cornwall and provide the beginnings of a robust evidence base for influencing change. Further in-depth research is key and will need to explore the various barriers which exist for different groups within the dental team. We believe this to be a critical area of research which could have a profound impact on service provision, workforce health & well-being, oral health improvements, and the long-term sustainability of NHS dentistry. Despite the limitations of this survey, we believe many of the factors affecting the Southwest Peninsula will be equally relevant for similar areas of the UK.

Declarations

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Declaration of interests

The authors declare no conflicts of interest.

Author contribution statements

IM · developed questionnaire, undertook quantitative & qualitative analysis and led on writing manuscript.

MB · contributed to all aspects of study including questionnaire development, qualitative analysis and oversight, writing text, language editor and proof-reading manuscript.

LC · contributed to quantitative & qualitative analysis, writing text and proof-reading manuscript.

DE · contributed to all aspects of study including questionnaire development, analysis, revising text and proof-reading manuscript.

SH · contributed to all aspects of study including questionnaire development, oversight of project, writing text, language editor and proof-reading manuscript.

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Ethics
Ethical approval was obtained from the University of Plymouth Faculty of Health Research Ethics and Integrity Committee (Reference number: 3382). Participants completed a consent form prior to undertaking the survey questionnaire which included agreement to allow the data to be used for research purposes and future publication.

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Figures

Figure 1

Survey response rates

Figure 2

Percentage of practices with a current vacancy

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- Appendix1.docx