

Online Research @ Cardiff

This is an Open Access document downloaded from ORCA, Cardiff University's institutional repository: <http://orca.cf.ac.uk/113422/>

This is the author's version of a work that was submitted to / accepted for publication.

Citation for final published version:

Cope, Anwen, Wood, Fiona, Francis, Nick and Chestnutt, Ivor 2018. Patients' reasons for consulting a GP when experiencing a dental problem: a qualitative study. *British Journal of General Practice* 68 (677), e877-e883. 10.3399/bjgp18X699749 file

Publishers page: <https://doi.org/10.3399/bjgp18X699749> <<https://doi.org/10.3399/bjgp18X699749>>

Please note:

Changes made as a result of publishing processes such as copy-editing, formatting and page numbers may not be reflected in this version. For the definitive version of this publication, please refer to the published source. You are advised to consult the publisher's version if you wish to cite this paper.

This version is being made available in accordance with publisher policies. See <http://orca.cf.ac.uk/policies.html> for usage policies. Copyright and moral rights for publications made available in ORCA are retained by the copyright holders.



Patients' reasons for consulting a GP when experiencing a dental problem: a qualitative study

Anwen L. Cope, Fiona Wood, Nick A. Francis, Ivor G. Chestnutt

Dr Anwen L. Cope, BDS PhD MPH MFDS RCPS(Glasg)

Specialty Trainee and Honorary Lecturer in Dental Public Health, Cardiff and Vale University Health Board

University Dental Hospital, Heath Park, Cardiff, CF14 4XY, UK

Dr Fiona Wood, BA MSc PhD

Reader, School of Medicine, Cardiff University

Neuadd Meirionnydd, Heath Park, Cardiff, CF14 4YS, UK

Dr Nick A. Francis, BA MD PhD

Clinical Reader, School of Medicine, Cardiff University

Neuadd Meirionnydd, Heath Park, Cardiff, CF14 4YS, UK

Professor Ivor G. Chestnutt, BDS MPH PhD FDS(DPH)RCSEd, FDS RCSEng, FDS RCPSGlas, FFPH

Professor and Honorary Consultant in Dental Public Health, Applied Clinical Research and Public Health, School of Dentistry, Cardiff University

University Dental Hospital, Heath Park, Cardiff, CF14 4XY, UK

Correspondence to:

Dr A L Cope

Room 114, University Dental Hospital, Heath Park, Cardiff, CF14 4XY, UK

Email: copea1@cardiff.ac.uk

Tel: 02920 746553

Abstract

Background

There are approximately 380,000 dental consultations in UK general practice every year.

Aim

To explore the reasons why patients may consult a General Practitioner (GP) rather than a dentist when experiencing problems with their teeth or gums.

Design and Setting

A qualitative semi-structured interview study with adults who had consulted a UK GP with a dental problem in the previous 12 months.

Method

Participants were recruited via print and social media; internet adverts; *HealthWise Wales*, the Welsh national population research cohort; and word of mouth. In total 39 telephone interviews were conducted, and transcripts thematically analysed.

Results

Participants' consultation behaviour was influenced by their interpretation of their symptoms; their perceptions of the scope of practice of primary care practitioners; the comparative ease of navigating medical and dental care systems; previous experiences of dental care, including dental anxiety and dissatisfaction with prior treatment; and willingness and ability to pay for dental care.

Conclusions

There are several reasons why patients may consult a GP with a dental problem. Effective interventions will need to break down the barriers preventing access to dental care. Accessible public-facing information on where to seek care for dental problems is required, and general practice teams should be able to signpost patients who present with dental problems, if appropriate. Dental providers should also be encouraged to maintain timely access to urgent care for their patients.

Keywords

General practice, dental care, health knowledge, health services accessibility, dentistry, qualitative research

How this fits in

Consultations for dental problems in general practice are often not an effective or efficient use of resources. Patients are unlikely to receive the best care for their condition, leading to concerns about patient morbidity from untreated dental disease and the emergence and spread of antimicrobial resistance arising from inappropriate antibiotic prescribing.

This study explores patients' reasons for consulting in UK general practice for dental problems. It concludes that patients' consultation behaviour is not only influenced by their current symptoms and the relative availability and accessibility of general practice compared to dental care, but also by contextual factors such as past experiences of dental care and perceptions about scope of practice.

Introduction

Whilst the majority of patients will seek care from a dentist when experiencing dental problems, others will consult a GP. Dental consultations account for approximately 0.3% of patient contacts in UK general practice,(1) equating to around 380,000 consultations annually.(2) Overall, consultation rates for dental problems in UK general practice declined between 2008 - 2013. However, there is high inter-practice variability, with rates up to 29.8 dental consultations per 1000 patient-years in some practices.(2)

Evidence-based guidelines regarding the management of acute dental conditions recommend that patients (with the exception of those who are critically unwell) are referred to practitioners who have the necessary skills and resources to stabilise their condition and prevent further deterioration of their oral health.(3) In many cases, this will require the provision of operative dental treatment such as a dental extraction or endodontic (root canal) treatment.(3) GPs are unlikely to have either the skills or facilities to diagnose and manage such problems,(4) which may explain the high rates of antibiotic prescribing in dental consultations.(2, 5) However, since antibiotics alone rarely result in definitive resolution of most acute dental conditions,(6) their use in these consultations gives cause for concern. There are also direct, indirect, and opportunity costs associated with dental consultations, which place a burden on general practices.(7)

It has previously been reported that ease of getting an appointment and the affordability of care may influence choice of practitioner for orofacial symptoms.(8) In a study of patients referred to an Oral and Maxillofacial Surgery department, 26% of participants referred by their GP reported that having to pay to see a dentist but not a doctor would influence who they would consult for mouth or jaw problems. However, the findings of this study may not be representative of the wider population of patients experiencing dental problems who consult a GP, only a small proportion of whom would be referred to secondary care. A better understanding of why patients visit a GP when experiencing dental problems will inform the design of interventions to reduce consultation rates for dental problems in general practice. The aim of this study was therefore to explore patients' reasons for consulting a GP rather than a dentist when experiencing problems with their teeth or gums.

Method

Design

This was a qualitative interview study conducted in the UK between January - August 2017. The study was given a favourable opinion by the Proportionate Review Sub-committee, NHS North West - Liverpool East Research Ethics Committee.

Study population

Individuals were eligible to participate if they had consulted a UK GP with a dental problem (defined as a condition of the teeth or gums) in the previous 12 months, and were at least 18 years of age at the consultation.

Recruitment

A number of recruitment methods were used in order to maximise variation in the sample. An article was published in a local newspaper (issue readership of 50,000).(9) A quarter page advertisement was purchased in *Third Age Matters*, the national publication of the University of the Third Age (direct circulation around 230,000).(10) UK-wide advertisements were placed on social media platforms, *Facebook* and *Twitter*, parenting fora *Mumsnet* and *Netmums*, and the research opportunity website, *Call for Participants*.

Participants were also recruited via *HealthWise Wales*, a Welsh population research cohort.(11) All participants of *HealthWise Wales* who had consented to be contacted about other research studies were sent a short email briefly outlining the requirements of the study. Approximately 10,700 emails were delivered.(12)

Interested individuals were directed to the study website where they could access participant information and provide consent. All participants were given a £10 shopping voucher.

Data collection and analysis

Telephone interviews were conducted by single researcher. Participants were aware that the interviewer was a dentist undertaking postgraduate training in the NHS. None of the participants were known to the researcher prior to the study and no repeat-interviews were conducted.

A topic guide was prepared prior to data collection. This was subsequently amended and revised in response to emergent findings. For example, a question related to the comparative waiting times for dental and GP appointments was added. No notes were recorded during the interview other than memos of additional questions/probes.

All interviews were audio-recorded and recordings transcribed verbatim and anonymised. Transcripts were not returned to participants for comment. Transcripts were checked for accuracy and then imported into NVivo (Version 11, QSR International Pty Ltd). Data were examined using thematic analysis.(13) Transcripts were initially coded by the interviewer. All codes were reviewed and those with synonymous meanings resolved into a single code. Codes were then grouped into five themes. A fifth of transcripts were independently second-coded. Minor discrepancies between coders were discussed and resolved, and no further double coding of transcripts was deemed necessary.

Sample size

It was initially estimated that up to 25 participants would be interviewed. However, the variety and complexity of participants' accounts meant that after 25 interviews the majority of themes were insufficiently explored. A decision was made to conduct 10-15 further interviews. After 14 more (39 in total), it was judged that sufficient saturation of themes had been reached.

Within the study saturation was pre-defined as the point at which the richness of data within a theme no longer appeared to be increasing with subsequent interviews. It was demonstrated when the primary coder could build a comprehensive and convincing insight into participant behaviour, which she presented to the second coder.

Results

In total, 39 participants were interviewed (Table 1). The average length of interview was 25.3 minutes (range 12.2 – 45.3 minutes).

Understanding of symptoms and perceptions of scope of practice

Whilst most participants agreed that problems of the teeth were most effectively managed by a dentist, many were less sure about who was the most appropriate practitioner to consult when experiencing problems of the gums or other intraoral tissues. A number of participants alluded to a boundary between conditions managed by a GP, and those treated by dentists, suggesting a perceived mutually exclusivity regarding scope of practice. As such, some believed their GP would be better placed to treat certain oral conditions, such as jaw pain or gingival ulceration, whereas dentists were concerned with teeth.

“Even if I had a dentist at the time, I would’ve probably thought to go to the doctor anyway, rather than the dentist.”

ID#2, female, 18-27 years, gingival condition

Having identified that tooth-related problems were the domain of dentists, there was evidence of cognitive dissonance (a psychological stress arising from an incompatibility between an individual’s behaviour and their beliefs and/or knowledge) amongst participants who had consulted GPs with such a problem, as they struggled to reconcile their beliefs regarding scope of practice with their behaviour. These participants typically relayed accounts of new symptoms, inconsistent with the typical presentations of dental disease, as explanations of why they had sought care from a doctor rather than a dentist.

‘It was getting different... it wasn’t so much the ordinary toothache, it was this pain that was going down from the nerve in my cheek down into the gland in my neck...By that stage, I was pretty sure it wasn’t a normal toothache, and I thought it might be something [else]. I don’t know where the borderline exists between doctor and dentist. When do you go to the doctor, and when do you go to your dentist, if it’s something affecting your teeth and mouth?... It was because of this change in the pain, that I began to think maybe it isn’t a dental problem only...Otherwise I wouldn’t have mentioned it to the doctor.’

ID#18, female, 68+ years, dental abscess

Even though many participants thought that tooth-related problems could be best managed by a dentist, many considered that a GP could treat the infection arising from a dental problem.

‘If you’re able to just ring the doctor and say, “Can you prescribe me something for these and then I can see the dentist tomorrow?” It saves time and it saves the dentist having to do it... And then you can get on with getting better before the dentist has to intervene.’

ID#71, female, 38-47 years, wisdom tooth problem

There was also a small number of participants who, due to the unusual presentation of their symptoms, did not realise their condition had a dental aetiology until they consulted a GP.

Comparative ease of navigating medical and dental care

At the time of consulting their GP, many participants did not have a 'regular' dentist. Some had left a previous dentist after being dissatisfied with care. Others had relocated and never sought a new practice. Several had never perceived a need or desire to engage in routine care. Upon experiencing symptoms, many participants were either unable to 'register' or were told they would be held on a waiting list. This was a key reason why several participants sought care from their GP instead.

Of participants unable to access a general dentist, only a minority attempted to contact the local emergency dental service. Many reported that they did not know this service existed. Of those participants who were aware of emergency dental services, there were other barriers to accessing these such as travelling distance, waiting time, or cost.

'They offered me appointments, to be fair, in three different places, but all of them were either a hundred miles away or more away from us, and I was desperate to get it sorted... so that's why I went to the GP.'

ID#63, female, 68+ years, dental abscess

The difficulties many participants experienced trying to navigate dental services contrasted with the familiarity of accessing primary medical care. There was also a greater permanency in the relationship between a patient and their general medical practice. Even participants who did not report a strong relationship with a particular GP would not consider 'shopping around' for care in the way they felt it was acceptable to do for dental care. In situations where participants could feel overwhelmed by a complex and unfamiliar dental system, the GP offered a trusted source of care.

'I guess you trust doctors a bit more. I don't know why, because they're your doctor and I would never go fishing around for doctors if that makes sense? With dentists...I was trying to solve the problem so I went around to lots of dentists.'

ID#10, female, 38-47 years, dental abscess

Among participants with both a regular general dental and general medical practice, opinions varied as to whether one would wait longer for medical or dental care. However, some participants consulted a GP because of long waits for dental care.

'I let it go on for a few days and then when it wasn't going away I thought, "I do need to go and sort this out".. I tried several times to get a dentist appointment and they were telling me that the dentist appointments were like weeks away and I thought, "I'm not waiting that long". So that's why I decided to go and seek advice from my GP.'

ID#36, female, 38-47 years, gingival condition

GPs were also viewed as offering a more accommodating range of appointment times than dentists. For one participant who ran her own business, only being able to access dental care during office hours meant she would be financially disadvantaged had she visited a dentist.

'Either you have to close your business down and lose money that way, or you have to employ someone else to do your job, which, of course, at the national living wage these days, often you pay out more than you're going to take in.'

ID#43, female, 58-67 years, dental abscess

Dental anxiety

Over a third of participants reported dental phobia or traumatic experiences of dental treatment. In many situations this had contributed to lack of engagement in regular dental care over many years. This often resulted in a participant experiencing difficulties trying to find a dentist when a problem developed.

In two cases dental phobia was the primary reason why the participant had consulted a GP rather than a dentist. Both participants reported recurring dental problems which they typically self-managed until the point at which symptoms became unbearable, at which point they sought help from their GP. Both reported having consulted a GP on more than one occasion with dental problems and were typically explicit in their expectations of receiving antibiotics.

'I go in saying, "I've got trouble with my teeth, and I think I need antibiotics." And then, I tell a white lie by saying, "I'm looking for a dentist. But I need these while I'm looking."

ID#40, female, 68+ years, dental abscess

Whilst neither participant considered themselves currently registered with a general dental practice, both had been able to engage in regular dental treatment as adults at some point, despite having distressing experiences during dental treatment as children or young adults. However when this patient-practitioner relationship had ended (due to retirement of the practitioner or relocation of the participant) neither had been able to re-engage in regular care with a new dentist.

Dissatisfaction with previous dental care

Dissatisfaction with previous dental care featured prominently in participants' accounts of the sequence of events that led them to consult a GP. Experiences in the first few appointments with a dental practice or practitioner appeared to be particularly critical, and dissatisfaction during these visits was more likely to result in a refusal to return for further treatment. Dental restoration failure, poor aesthetic appearance of dental treatments, and post-operative complications all contributed to feelings of dissatisfaction. However, more damaging to the patient-practitioner relationship than the perceived technical quality of dental work, was if individuals felt that their views had not been respected, they were not treated with dignity, or that they had been subject to unnecessary treatment.

'I had some toothache in one of my teeth... I went to the dentist and he said I needed a filling in it. And anyway, when I went back to the appointment, I thought, "Oh gosh, I'm in this chair such a long time", and I was in a lot of pain, and he told me then that he'd done a root canal filling... But he didn't tell me until I was in the chair, and he was actually finishing the procedure... I lost faith in that dentist then, and it made me very nervous of going to the dentist... I didn't go back there.'

ID#77, female, 48-57 years, non-specific dental pain

Four participants also described how a dental practice or clinic where they had previously received treatment had refused to provide further care after they missed appointments or changed address. This left these individuals feeling abandoned by professionals in whom they had placed trust, and unsure where to seek care. Similar views were expressed by two participants whose dental practice changed from providing NHS to private care.

Willingness and ability to pay for dental care

Views on affordability of NHS dental care and its effect on choice for healthcare provider for dental problems varied between participants. Despite having to pay for dental treatment (but not medical care) some participants said this would not affect their choice of healthcare professional during future episodes of dental problems. However, other participants expressed anxiety regarding the lack of transparency around costs associated with dental care.

'It's a bit like an axe hanging over your head isn't it? Because usually they don't tell you the full price until they've finished the treatment.'

ID#43, female, 58-67 years, dental abscess

Other participants reported deferring routine care due to the cost in the past, only to be unable to access care when experiencing an acute dental condition.

'I was made redundant in the first instance and had to change my job to much less pay and...I just I was struggling at that time to pay bills of any description, so going to the dentist and having to pay was just the last straw. So I did neglect going out and having things done that I perhaps should have done.'

ID#28, male, 58-67 years, dental abscess

Participants' care-seeking behaviours may also be influenced by their personal values regarding willingness to pay for dental care. One participant, who received his dental care privately, was vehemently opposed to paying for medication (antibiotics), he could otherwise obtain free of charge via general medical services in Wales.

'I don't want to pay, I'm retired. I don't want to pay for drugs, and go all the way into [CITY], to be given a piece of paper and then pay for drugs, when I can see my local doctor and I can get the antibiotics I need on NHS prescription, which is free.'

ID#27, male, 58-67 years, post-operative problems following dental procedure

Discussion

Summary of findings

This study explored patients' reasons for consulting a GP when experiencing a dental problem. The findings indicate that consultation behaviour is influenced by patients' interpretation of their symptoms; their perceptions about the scope of general medical and dental practice; their previous experiences of dental care, including dental anxiety and dissatisfaction with prior treatment; the costs associated with dental care; and the comparative ease of navigating medical and dental care systems. As such, choice of healthcare provider during episodes of dental problems can be considered as arising from an interaction between patients' personal characteristics, characteristics of the healthcare system in which they are seeking care, and the context in which this process is occurring.

Strengths and limitations

Adopting a qualitative approach allowed detailed exploration of participants' experiences of seeking care for their dental condition. Many accounts involved multiple consultations with a variety of healthcare providers, a complexity that it would have been difficult to capture via quantitative methods. Furthermore, semi-structured interviews afforded greater flexibility of questioning than positivistic approaches.

Multiple sampling frames were used in order to obtain a variation of participant experience; however this was not a true maximum variation sample. There were only small numbers of men and non-Welsh participants included in the study, which may mean that certain experiences, attitudes and beliefs may not be captured. Some of the findings may reflect the organisation of local NHS services and many not be generalisable to different areas of the UK where different arrangements for care exist. Furthermore, we were unable to assess whether the sample included participants from a wide range of social backgrounds. The nature of the study, in which participants were asked to speak at length about their experiences, may have attracted participants who were less likely to be in full time employment or who had extremes of opinion about their experiences of care and wanted an opportunity to express this. However, whilst it may not be possible to extrapolate the results of this study to all patients who consult a GP with a dental problem, some findings regarding care-seeking behaviours may be transferable to other contexts, situations, and populations.

No triangulation of participants' accounts with medical or dental records was undertaken. Inclusion of participants in the study was dependent on their self-report of a dental problem. Although it was apparent from most accounts that the participants were likely to have been suffering from a dental condition, there were a minority of cases in which a definitive diagnosis had not been reached. The study could therefore plausibly have included participants whose symptoms were not caused by a dental problem.

Comparison with existing literature

The current study suggests that choice of healthcare provider for dental problems is influenced by both patient characteristics, such as perceptions of scope of practice and willingness and ability to pay for dental care, and features of healthcare providers, including the accessibility and availability of primary care services, and the appropriateness of previous care provided. This would appear to agree with the work of Levesque *et al.*,⁽¹⁴⁾ who proposed a framework whereby access to healthcare was a product of the dynamic interaction between health systems and the populations they serve.

One of the primary reasons participants without a regular dentist gave for consulting a GP was lack of timely access to dental care. Difficulties 'registering' with an NHS dentist have been widely described,⁽¹⁵⁻¹⁷⁾ despite some evidence from the literature suggesting the majority of patients who try to access NHS dental care are successful in making an appointment.⁽¹⁸⁾ There were also participants who were offered dental care but were unable to accept this due to working arrangements or access to transportation. Difficulties obtaining dental appointments compatible with working patterns, or lack of transportation to attend appointments, have also been previously identified as barriers to accessing dental care.^(19, 20) However, in the current study there was a marked contrast between the perceived difficulties and often inconvenience of accessing dental care and the ease and familiarity of getting a GP appointment. Greater awareness of the route into general practice has previously been described as a factor driving GP consultations for conditions that could otherwise be managed by community pharmacists.⁽²¹⁾

In contrast to the participants who were unable to access dental care, there were others in the current study who felt unable to engage in dental care because of dental phobia. Dental anxiety is a widely recognised barrier to accessing dental care,^(17, 18) and for some participants this proved an insurmountable barrier that led them to consult a GP instead of a dentist.

Other participants were driven to visit a GP because they were unable to afford, or unwilling to pay, the patient charges associated with dental care. The cost of dental treatment has previously been described as a barrier to accessing dental care,^(17, 23) and as a factor that may influence patients to seek care from a GP rather than a dentist.⁽⁸⁾ Unwillingness to pay for dental care has also been identified as a barrier to access.⁽²³⁾

Implications for research and practice

Since there is no one single reason why patients consult GPs with dental problems, it holds that there will not be a single solution to ensure patients present to the professional most able to manage their dental condition. There is however, a need to overcome the barriers preventing access to dental care. Action may also be required to increase access to urgent dental care services for those patients without a regular dental practitioner and to ensure that dental providers maintain timely access to urgent care for their patients, to avoid long waits during which patients may seek care from a GP instead.

The findings also indicate a need for accessible and reliable patient-facing information about where to seek care for common oral conditions; particularly highlighting the role dental practitioners can play in the management of non-tooth related oral problems. This information should be tailored to reflect the local provision of dental services, together with the costs associated with treatment. General practice teams should also be able to signpost patients

presenting with dental problems to local emergency dental services, or other sources of care, if appropriate.

In order to understand the dominant influences on consultation behaviour, the factors identified here should be explored via a well-powered observational study. This study should also explore differences in care-seeking behaviours amongst vulnerable populations.

Funding

This study was funded by a TC White Young Researcher Award, Royal College of Physicians and Surgeons of Glasgow.

Ethical approval

The study was given a favourable opinion by the Proportionate Review Sub-committee, NHS North West - Liverpool East Research Ethics Committee (ref: 17/NW/0021).

Competing interests

The authors declare no competing interests.

Acknowledgements

The authors would like to acknowledge the support of the HealthWise Wales team.

References

1. Anderson R, Richmond S, Thomas DW. Patient presentation at medical practices with dental problems: an analysis of the 1996 General Practice Morbidity Database for Wales. *Br Dent J.* 1999;186(6):297-300.
2. Cope AL, Chestnutt IG, Wood F, Francis NA. Dental consultations in UK general practice and antibiotic prescribing rates: a retrospective cohort study. *British Journal of General Practice.* 2016;66(646):e329-36.
3. Scottish Dental Clinical Effectiveness Programme. Management of Acute Dental Problems - Guidance for healthcare professionals. Dundee: NHS Education for Scotland; 2013.
4. Ahluwalia A, Crossman T, Smith H. Current training provision and training needs in oral health for UK general practice trainees: survey of General Practitioner Training Programme Directors. *BMC Med Educ.* 2016;16:142.
5. Anderson R, Calder L, Thomas DW. Antibiotic prescribing for dental conditions: general medical practitioners and dentists compared. *Br Dent J.* 2000;188(7):398-400.
6. Scottish Dental Clinical Effectiveness Programme. Drug Prescribing for Dentistry. Dental Clinical Guidance. 3rd ed. Dundee: Scottish Dental Clinical Effectiveness Programme; 2016.
7. Yeung CA. Toothache piling financial pressure on GPs [Internet]. *British Journal of General Practice.* 2017 [cited 10th April 2018]. Available from: <http://bjgp.org/content/66/646/e329/tab-e-letters#toothache-piling-financial-pressure-on-gps2017>
8. Bell GW, Smith GLF, Rodgers JM, Flynn RW, Malone CH. Patient choice of primary care practitioner for orofacial symptoms. *Br Dent J.* 2008;204(12):669-73.
9. Smith M. Study to research dental care choices. *South Wales Echo.* 2017 May 22;Sect. Health.
10. U3A National Office. Advertising Rates 2017 [Internet]. The Third Age Trust. 2015 [cited 10th April 2018]. Available from: <https://u3a.org.uk/company/327-advertising-rates>.
11. HealthWise Wales. HealthWise Wales - About the Study [Internet]. Welsh Government. 2017 [cited 10th April 2018]. Available from: <https://www.healthwisewales.gov.wales/about/>
12. Moylett S. RE: Message to Participants. 2017.
13. Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol.* 2006;3(2):77-101.
14. Levesque JF, Harris MF, Russell G. Patient-centred access to health care: conceptualising access at the interface of health systems and populations. *Int J Equity Health.* 2013;12:18.
15. Gregory J, Gibson B, Robinson PG. The relevance of oral health for attenders and non-attenders: a qualitative study. *Br Dent J.* 2007;202(7):E18.
16. Borreani E, Jones K, Scambler S, Gallagher JE. Informing the debate on oral health care for older people: a qualitative study of older people's views on oral health and oral health care. *Gerodontology.* 2010;27(1):11-8.
17. Goodwin M, Pretty IA. Estimating the need for dental sedation. 3: Analysis of factors contributing to non-attendance for dental treatment in the general population, across 12 English primary care trusts. *Br Dent J.* 2011;211(12):599-603.
18. Hill KB, Chadwick B, Freeman R, O'Sullivan I, Murray JJ. Adult Dental Health Survey 2009: relationships between dental attendance patterns, oral health behaviour and the current barriers to dental care. *Br Dent J.* 2013;214(1):25-32.
19. Anderson R, Thomas DW. 'Toothache stories': a qualitative investigation of why and how people seek emergency dental care. *Community Dent Health.* 2003;20(2):106-11.
20. Harris R. Access to NHS dentistry in South Cheshire: a follow up of people using telephone helplines to obtain NHS dental care. *Br Dent J.* 2003;195(8):457-61.

21. Gidman W, Ward P, McGregor L. Understanding public trust in services provided by community pharmacists relative to those provided by general practitioners: a qualitative study. *BMJ Open*. 2012;2(3): e000939.
22. Nayee S, Kutty S, Akintola D. Patient attendance at a UK dental hospital emergency clinic. *Br Dent J*. 2015;219(10):485-8.
23. Calnan M, Dickinson M, Manley G. The quality of general dental care: public and users' perceptions. *Qual Health Care*. 1999;8(3):149-53.