A qualitative exploration of decisions about dental recall intervals – part 2: perspectives of dentists and patients on the role of shared decision making in dental recall decisions

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Key points

- Many patients are happy for decisions about recall intervals to be guided by clinical factors but want the impact on time, travel and cost to be considered.
- Most patients want to see their dentist at least once a year.
- Time, patient anxiety and concerns about potential adverse outcomes are all barriers to the use of shared decision making.

Abstract

Introduction Patients are sensitive to both the frequency and costs of dental recall visits. Shared decision making (SDM) is a principle of patient-centred care, advocated by the National Institute for Health and Care Excellence and policymakers, whereby joint decisions are made between clinicians and patients.

Aims To explore NHS dentists' and patients' attitudes towards SDM in decisions about recall interval.

Methods Semi-structured telephone interviews were conducted with 25 NHS patients and 25 NHS general dental practitioners in Wales, UK. Transcripts were thematically analysed.

Results While many patients would be happy to accept changes to their recall interval, most wanted to be seen at least annually. Most patients were willing to be guided by their dentist in decisions about recall interval, as long as consideration was given to issues such as time, travel and cost. This contrasted with the desire to actively participate in decisions about operative treatment. Although the dentists' understanding of SDM varied, practitioners considered it important to involve patients in decisions about their care. However, dentists perceived that time, patient anxiety and concerns about potential adverse outcomes were barriers to the use of SDM.

Conclusions Since there is uncertainty about the most clinically effective and cost-effective dental recall strategy, patient preference may play a role in these decisions.

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Refereed Paper.
Accepted 10 May 2021
https://doi.org/10.1038/s41415-022-4046-8

Introduction

The National Institute for Health and Care Excellence (NICE) recommends that the interval between oral health reviews should be determined according to patients' risk of dental disease and that, following a discussion, the patient's agreement or disagreement with the dentist's decision should be recorded.[1] Part 1 of this series described that although general dental practitioners (GDPs) reported routinely using risk-based recall intervals, a number of barriers exist to the implementation of this guideline.[2]

Until recently, there was a paucity of quality evidence to support risk-based dental recall intervals.[3] However, the INTERVAL trial has reported that, over a four-year period, there was no evidence of an oral health difference (judged on outcomes such as gingival inflammation/bleeding and oral health related quality of life) between participants allocated to six-month or risk-based recall intervals.[4]

Given that there are similar clinical outcomes for risk-based and 'traditional' six-month recalls, are there economic advantages of risk-based recall? It has previously been suggested that the implementation of risk-based recall intervals may foster a more efficient distribution of NHS dental resources.[5] However, cost-effectiveness evidence from the INTERVAL trial was more complex, reporting that, when considered from the perspective of society as a whole, six-monthly recalls may yield the greatest benefits.[4] Similarly, a recent Cochrane review concluded that the recall strategy that offers the best value for money to patients and the NHS may depend on the importance placed on various aspects of a dental care system (such as dental health, general health, or patient satisfaction).[6]

What remains is a situation of clinical equipoise, whereby there is uncertainty about what recall strategy is more clinically effective and cost-effective for patients, the NHS, or society as a whole. In situations where there is no clear evidence of the superiority of one treatment strategy over another, how individual patients value the risks and benefits of different options becomes particularly important. These are described as 'preference sensitive' decisions. By acknowledging that some patients may disagree with the recall interval proposed by their practitioner, NICE recognised that patients may have their own opinions about how often they attend for oral health reviews. Furthermore, preference elicitation experiments conducted as part of the INTERVAL trial revealed that, among a sample of the UK adult population, individuals were sensitive to both the frequency and cost of dental recall visits.[4] This provides evidence that dental recall interval is a preference-sensitive decision.

In situations where preference-sensitive decisions exist, the use of shared decision making (SDM) is indicated. SDM is a principle of patient-centred care, whereby clinicians and patients make joint decisions regarding care and its use is recommended by NICE.[7,8] While dental professionals have long been familiar with informed consent and the legal duty to inform patients about the benefits and harms of proposed interventions, SDM extends this responsibility, so that patients are supported to arrive at informed preferences that align with their values.[9] In contrast with the paternalistic model of care, SDM brings together the patient's expertise about themselves and their values with the clinician's knowledge about the benefits and risks of the treatment options. This means that patient expertise is valued in a similar way to clinical expertise.[10] Advantages of SDM are thought to include greater patient engagement with their healthcare decisions and management and therefore greater likelihood of positive health-related behaviours.[11] Policymakers in the UK have provided a clear mandate for the use of SDM in dental consultations; the guiding principle of the Welsh national oral health strategy is 'patients and the public at the heart of everything we do'.[12] However, there is comparatively little evidence as to how SDM is, or could be, used in primary dental care.[13] Of particular interest in the current study is the role SDM could play in decisions about non-operative aspects of care, such as dental recall interval setting.

This study, which is presented in two parts, sought to explore how decisions about dental recall interval are made in general dental practice. Part 1 of this series described the views of NHS GDPs towards the implementation of NICE Guideline CG19 on dental recall intervals. This article reports the second part and explores the potential role of SDM in decisions about dental recall. It describes patients' preferences regarding dental recall intervals and how they would like these decisions to be made. It also examines GDPs' attitudes towards the use of SDM in clinical care and specifically in decisions about dental recall intervals.

Methods

A qualitative semi-structured telephone interview study was conducted with NHS GDPs and NHS dental patients in Wales, UK between March and September 2019. Further details about the interviews with dental practitioners and the analytical methods employed are presented in Part 1.[2]

Sampling and recruitment

GDPs were identified from a database of registered NHS practices in Wales. Eligible dentists spent at least 50% of their clinical time delivering NHS care.

Patients were identified via community settings, such as sports clubs or groups for retired adults. The sample was selected using the principle of maximum variation sampling using the variables age and sex. Eligible participants were 18 years or older and had attended an NHS dental appointment in the last 24 months. Based on concepts of information power,[14] it was anticipated that approximately 20–30 participants from each group would be interviewed. Sampling ceased when it was judged by investigators that further interviews would be unlikely to yield substantial new insights.

The study was given a favourable opinion by the Proportionate Review Sub-Committee of the East of England – Cambridge Central Research Ethics Committee (19/EE/0031). All participants provided written and verbal consent to participate in the study and to have their data used as part of the research.

Data collection

Interview topic guides were prepared before data collection and are described in Part 1[2] and Table 1. Interviews were conducted by HS, a psychologist.

Table 1 Summary of the topic guide for patient interviews

Topics	Prompts
Introductions and background	Aims of study; check outstanding questions; confirm consent
Context	Describing practice; describing visiting history
Attending for check-ups	• Frequency of check-ups; changes in check-up frequency; discussion with dental teams about check-ups • Attending for check-ups; making the appointment; attending with family members • Information about check-up frequency; information needs about check-ups; satisfaction with check-up frequency
Decision making regarding time between check-ups	What discussion is there? Who makes the decision?
Knowledge about dental check-ups	Opinions about length of time between check-ups; awareness of non-six-monthly recall
Social influences	Friends; family members
Preferred decision-making style	Preferences regarding decision making in decisions about oral health; decisions to be involved in; decisions not to be involved in; disagreement with decisions in the past; agreement with decisions in the past; disagreement with dentists
Changing the length of time between check-ups	Advantages of less frequent check-ups; disadvantages of less frequent check-ups; advantages of more frequent check-ups; disadvantages of more frequent check-ups

Analysis

The interviews were transcribed verbatim and analysed according to the Braun and Clarke's principles of thematic analysis.[15] One-fifth of transcripts were double-coded by other members of the study team (FW and NJW). Dentist and patient transcripts were analysed separately.

Results

In total, 25 GDPs and 25 patients were interviewed. Just over half of the dentists were men (14/25), almost two-thirds (15/25) were associates and the majority had qualified following the publication of NICE Guideline CG19 on recall intervals in 2004 (see Table 1 in Part 1 for further information).[2] The majority of patients (18/25) were 48 years and older and 14 out of 25 were women. Over half attended the dentist every six months (14/25) (Table 2).

Interviews generally lasted around 15–20 minutes for patients and around 20–30 minutes for dentists.

Presented below are the themes relating to: 1) patient preferences regarding recall intervals and decisions about dental recall; and 2) dentists' attitudes towards SDM and decisions about dental recall interval. Themes relating to GDPs' attitudes to the NICE Guideline on recall interval and their implementation are discussed in Part 1.

Patients

Preferences regarding dental recall intervals

The majority of patients were satisfied with their current recall interval. Most reported that they would be happy to change how often they attended, if reasonable justification was given. However, patients on six-month recalls were typically more willing to consider going annually than reducing their recall interval to three months. Concerns about attending more frequently included time off work, the inconvenience of travel and, in some cases, direct cost of care:

- *'If you're going regularly, you're going to have to find that time and £14 every year isn't much, but if you're doing that and treatment on top of it throughout the year, it could get costly'* (Patient4, female, 38–47 years, 12-month recall)
- *'Going more frequently means that you're going to have more awkward appointments which exacerbates the problem with needing to take time off and needing to travel longer distances'* (Patient19, male, 18–27 years, 9-month recall).

Almost all patients wanted to attend at least once a year. Concerns about extending recall intervals primarily related to the late diagnosis of oral disease, particularly dental decay or oral cancer:

- *'About two years ago there was something picked up [...] that turned out to be a small cancerous growth [...] if it was any longer than 12 months this might not have been picked up [...] I mean, there was no other symptoms really. There's something I'm concerned about'* (Patient24, male, 58–67 years, 6-month recall).

Preferences regarding recall interval decision making

In nearly every instance, patients reported that the decision regarding their recall interval had been made by their dentist. Most had never discussed their recall interval with their practitioner. A minority were not aware that dental recall intervals could be anything other than six-monthly:

- *'I just felt that that was what we did in the national health, so I didn't think it was me or my dentist, it was just something that I've always got every six months'* (Patient22, male, 58–67 years, 6-month recall).

Most believed that decisions about dental recall intervals should primarily be based on clinical factors and expected their dentist to make a recommendation about when they should next attend. A few expressed a strong desire to more actively participate in decisions about recall, while most wanted to be guided by their dentist and to better understand the reasons underlying their choice of recall interval. This contrasted with discussions about operative treatment, where patients expressed a greater desire to play an active role in decision making:

- *'I think if I went in and they said, "I think there are some issues and we may need to see you more frequently", then I accept that [...] I just take their advice. They know [...] they see hundreds of people a week and they're very well-trained and knowledgeable. I don't know a great deal about teeth, so I take their professional advice [...] if we were talking about having a crown or something that could be very expensive and there was a cheaper solution but the cheaper solution might not last as long, or was cosmetically not as attractive, then I'd want to be involved in those sorts of decisions'* (Patient21, male, 48–57 years, 12-month recall).

Dentists

Shared decision making in dental consultations

Dentists placed value on involving patients in decisions about their care. Many felt that it was particularly important that patients should be involved in decisions to do with operative treatment or that had long-term impact. Understanding of SDM varied, with some believing it to be the way in which they communicated their decision to the patient, rather than a collaborative undertaking. Despite this, many dentists believed that involving patients in the decision making process instilled ownership of dental health in patients and could also motivate them to take better care of their teeth.

One of the principal barriers to engaging patients in such discussions was time and the potential impact on their ability to

Table 2 Patient participant characteristics

Characteristic	Frequency (n = 25)
Sex	
Female	14
Male	11
Age (years)	
18–27	1
28–37	2
38–47	4
48–57	6
58–67	3
68–77	8
78+	1
Reported dental recall interval	
3 months	0
6 months	14
9 months	2
12 months	8
Unsure	1

deliver health promotion activities, such as oral health education. They expressed that some decisions required greater time and patient engagement, such as those around the placement of fixed prostheses (crowns, bridges or implants) or dental extractions, whereas others, such as dental recall interval, may be briefer and patients more likely to accept practitioners' recommendations:

- *'I bring it up and I mention it, but I think I'd rather spend my time talking about how they brush, or diet and stuff like that, rather than spending too long talking about recall'* (GDP8, female, dental associate, qualified post-NICE Guideline CG19 publication).

Some practitioners expressed uncertainty about how the balance of professional expertise *versus* patients' personal values should be achieved in SDM. There were concerns that patients may favour treatments that the dentist did not consider to be in their best interests or may have unrealistic expectations of treatments. Several believed that the more involved a patient was, the greater the potential for such discussions to cause undue anxiety and worry, particularly among patients who were dentally phobic:

- *'I think, when it comes to their dental health, I think the dentist's decision is going to be much better informed than the patient [...] if you wanted to do the absolute best for their teeth, I think that, if I'm being honest, it should come from the dentist'* (GDP5, male, dental associate, qualified post-NICE Guideline CG19 publication).

Decisions about dental recall intervals

Most decisions about dental recall intervals were clinically led, with dentists making recommendations to patients about suggested recall intervals following a formal or informal assessment of risk. Although practitioners were willing to explain to patients why they were being allocated a particular recall interval, typically they would only engage in a detailed discussion about recall interval if questioned by a patient:

- *'If I say a year, they will say, "oh, I would like to come every six months just to keep on top of things." And I'm trying to explain, "the reason I'm offering you one year is because you're a low-risk patient and you can always give me a call and come over if something breaks"'* (GDP18, male, dental associate, qualified pre-NICE Guideline CG19 publication).

Some practitioners expressed a desire to involve patients more actively in decisions about dental recall. However, others felt this should be a clinically-led decision or had concerns about the potential effects of involving patients in what was perceived to be a 'low stakes' decision. Similarly, it was recognised that while some patients would like to be involved in decisions about how often they attended for check-ups, others would wish to defer this decision to their practitioner:

- *'I think there's a conversation, you know, we have that conversation with the patient, "look you're high risk [...] I need to see you every three months." I don't think it's a two-way conversation that needs to happen [...] we have to be careful, if you're telling us that the patient should have the decision on the input for their recall period [...] I can understand if someone's not happy with a filling they're having done or treatment. But then we're then opening the floodgates for something as simple as how often a patient should come. In the grand scheme of everything, it's definitely low down there compared to some other things I suppose'* (GDP21, female, practice owner, qualified post-NICE Guideline CG19 publication)
- *'I think it can depend from patient to patient. Some people like to be told. Some people like to make their own decision on the information you give them'* (GDP6, male, practice owner, qualified post-NICE Guideline CG19 publication).

Discussion

This study sought to explore the potential role for SDM in dental recall interval settings in NHS general dental practice. Most patients were willing to be guided by their dentist in decisions about recall intervals. This contrasted with the desire to actively participate in decisions about operative treatment. Most patients would be happy to accept small changes to their recall interval having considered the impact on time, travel and cost of care. However, most would be unhappy to extend recall intervals beyond 12 months. Although dentists' understanding of SDM varied, practitioners placed importance on involving patients in decisions about their dental care. However, since having in-depth discussions about treatment options was time-consuming, dentists sought to prioritise the extent to which they engaged patients on different decisions.

While some patients may actively defer to their dentist and have no desire to be involved in the recall decision, it is apparent from the current work and from previous studies[3] that some patients do have preferences about how frequently they would like to attend. This was articulated as concerns about late diagnosis of disease if the recall was increased and practical concerns about transportation to appointments and time off work if the interval was reduced. Practitioners may therefore be misjudging their patients' desire for involvement in decision making.[16,17] Dentists generally expressed a desire to involve patients in decisions about their care, although few engaged in SDM with regards to decisions around the dental recall interval setting. This may be driven by beliefs that the primary driver of recall intervals should be clinical risk, rather than patient preference. If practitioners believe that engaging patients in collaborative decision making may lead to decisions that result in adverse oral health outcomes, they may be less likely to do so.[18] This may result in tension between beliefs that patients should be involved in decisions about their care and concerns about implementing recall intervals that are incongruent with clinical guidelines. However, since uncertainty about the most clinically effective and cost-effective dental recall strategy still exists, review of the NICE Guideline CG19 should take into consideration whether greater emphasis should be placed on eliciting patient preference in relation to decisions about dental recall.

Strengths of this study include the use of qualitative interviews, which allowed participants to give full, detailed accounts of their experiences of the dental recall interval setting. The study recruited 25 dentists and 25 patients which facilitated a rich description of the principal themes. However, the community settings which agreed to distribute recruitment materials meant that participants largely fell into the older age groups, so the perspectives of younger adults were less well-represented. Similarly, no patient participants were on a recall interval of less than six months, so the views of patients at increased risk of dental disease may not have been captured. As part of their interview, patients were asked to indicate their typical recall interval, but this was not checked against dental records.

The motivation of health professionals to engage in SDM is known to be a key facilitator to its use.[18] However, in order for dental professionals to routinely incorporate SDM into their consultations, not only do they need to be motivated, they also need to have the capability and opportunity to do so.[19] Incomplete understanding of SDM among the dentists participating in this study may represent an unmet educational need among the profession and may be limiting dental practitioners' capacity to confidently and effectively engage patients in decisions about their care. However, while there have been many attempts to increase the use of SDM by healthcare professionals, there is still uncertainty about how this is best achieved.[20] Research from medical care has shown that interventions which are able to change the attitudes of professionals towards the use of SDM may be the most successful at embedding collaborative decision making in everyday practice.[21] There is, therefore, a need for research to address how educational interventions, such as those currently available to dental professionals,[22] could increase dentists' understanding of and attitudes towards SDM.

While patients expressed a desire to actively participate in decisions about their dental care, particularly decisions about operative treatment, this study has highlighted other barriers to SDM in dental settings. Time constraints have frequently been identified as a barrier to implementing SDM across a variety of healthcare settings.[18] However, recent evidence about the time required to engage in a SDM process in practice is conflicting.[23,24] Similarly, dentists expressed concern that increasing the emphasis on patient preference may lead to poorer patient outcomes and that nervous patients could be adversely affected by engaging in SDM. This mirrors previous research in medical practice.[18] Nevertheless, there are currently opportunities to prioritise the implementation of SDM in general dental practice via NHS dental reform programmes in Wales and England.[25,26] One of the key principles of the General Dental Services Reform Programme in Wales is the use of SDM in care planning.[27] These programmes should seek to highlight that involving patients in decisions about their care should not be about isolated conversations and is a step beyond informed consent. Instead, there should be an ongoing dialogue about disease susceptibility, health-related behaviours and the risks and benefits of treatment options between dental teams and their patients. Similar to informed consent, SDM shouldn't start at the point at which a decision needs to be made but from the beginning of a patient-focused risk assessment process.

Conclusions

Since uncertainty remains about the most clinically effective and cost-effective recall strategy, greater consideration should be given to the potential role patient preference may play in these decisions. Patients may want to be involved in decisions about recall intervals once they are aware that these opportunities exist. Although dentists are willing to involve patients in decisions about recall, they have concerns about the time this could take, the potential impact on other discussions regarding oral health and achieving the correct balance between patient preference and professional expertise. In time-limited dental consultations, patients and dentists may prioritise decisions about operative care and health education discussions over detailed discussions about recall interval. The promotion of educational resources related to SDM and NHS dental reform programmes, which emphasise the importance of eliciting patients' values and involving them in decisions about their care, could together facilitate the delivery of more patient-centred dental care.

Ethics declaration

The authors declare that they have no competing interests.

Funding information

This study was funded by Health and Care Research Wales (RfPPB-17-1375(T)). Health and Care Research did not contribute to the design of the study, analysis of data, or writing of this manuscript.

Acknowledgements

The authors would like to thank the dentists and patients who took part in this study.

Author contributions

Hannah Scott conducted the interviews, analysed results and drafted the article. Anwen L. Cope devised the concept of the study, designed the study, analysed results and drafted the article. Fiona Wood and Natalie Joseph-Williams contributed to the design and analysed results. Ivor G. Chestnutt, Anup Karki and Emyr M. Roberts contributed to the design and provided dental expertise. Candida Lovell-Smith contributed to the design and provided the patient and public perspective. All authors were involved in writing and revising the article for intellectual content and contributed to the steering group where the conduct of the study and its findings were discussed. All authors gave final approval of the version to be published.

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