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Nurses' and general practitioners' perspectives on oral health in primary care: a qualitative study

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ABSTRACT

Introduction. Integrating oral health into primary health care (PHC) is recommended, thereby ensuring comprehensive patient care. Primary care teams are well placed to promote and protect patients' oral health, and frequently see oral health-related complaints, and so need to be sufficiently knowledgeable to manage such presentations. There is limited local evidence to inform acceptable and feasible ways of integrating oral health into PHC in Aotearoa New Zealand. **Aim.** To explore the views of doctors and nurses on the place of oral health, and how to improve its inclusion, in PHC. **Methods.** Focus groups with nurses and doctors from six practices were conducted. Data were analysed thematically. **Results.** Several factors influenced the inclusion of oral health in PHC and management of oral health presentations, at individual, professional and system levels: low oral health knowledge, skill and confidence in managing presentations, and lack of communication with local dental services (individual level); considering oral health as out-of-scope of practice, competing priorities, time constraints and ethical considerations (professional level); and lack of affordable and timely definitive oral health care and referral pathways (systems level). Suggestions to facilitate integration of oral health in PHC included information sessions on oral health, developing relationships with local dental professionals, and health system changes. **Discussion.** Primary care practitioners are open to incorporating oral health into their practice; however, several barriers exist to do so sustainably. For effective integration, a series of individual-, professional- and system-level changes are likely required.

Keywords: dental presentations, doctors, focus groups, general practitioners, nurses, oral health knowledge, primary care, qualitative.

Introduction

Recommendations that oral health be an integral part of primary health care (PHC) services aim to ensure the efficient delivery of comprehensive, patient-centred and effective health care.[1–3] Good oral health is fundamental to good general health. Although (mostly) not life-threatening, oral diseases affect eating and communicating, education, finding employment, undertaking activities of daily living, overall quality of life, and health.[4] Further, they are costly and burdensome for individuals, whānau, the health system and society.[4,5]

Prevention and treatment of oral conditions are primarily dealt with by oral health professionals (OHP). Nevertheless, PHC practitioners – doctors, practice nurses and nurse practitioners – are well placed to contribute to their patients' oral health and wellbeing. People attend their medical centre more often than they do a dentist. In Aotearoa New Zealand (NZ), over 85% of adults are enrolled with a PHC provider,[6] whereas only 67% report seeing the same OHP, of whom only 39% usually visit for a check-up.[7] In addition, many chronic conditions, including dementia, cancer, stroke, diabetes and mental health,[8,9] share disease risk factors (such as diet, tobacco and alcohol use), and, along with their treatments, have oral health implications.[4]

Primary healthcare teams can also provide initial management of patients' oral health problems. Indeed, PHC practices are the first port-of-call for a substantial proportion of

WHAT GAP THIS FILLS

What is already known: Primary healthcare teams are well positioned to promote and protect patients' oral health, and it is likely that more people at risk of oral disease or needing oral health care will present at primary healthcare practices. Primary healthcare teams need to have sufficient knowledge and confidence to address patients' oral health complaints.

What this study adds: Doctors and nurses appear open to incorporating oral health in their day-to-day practice. Integrating oral health in primary health care in Aotearoa New Zealand will require changes at the individual, professional and systems levels.

people with dental problems, especially acute complaints.[10–13] Further, significant disparities in oral health and access to oral health care exist in NZ, especially for Māori, Pacific, rural and disabled populations, largely owing to accessibility issues, particularly lack of service availability and high cost.[7,14] In NZ, adults' oral health care is predominantly privately-funded, and unlike care for almost all medical conditions, eligibility for (very limited) publicly-funded care is primarily determined by an individual's comorbidities, complex healthcare needs, and income.[15,16] The relatively lower cost of medical care, 'permanency'[17 (p. e880)] with a PHC team (likely among frequent attenders with long-term condition(s)) and the belief that medical practitioners are better able to diagnose and treat oro-facial infections, are some key reasons for oral health presentations to their PHC providers.[17,18]

Opportunities frequently arise in PHC to ask patients about their oral health, incorporate oral health in the management of chronic conditions, provide advice on oral health and hygiene, financial assistance, and child oral health services enrolment, or facilitate referrals to a dentist. In doing so, PHC practitioners can contribute to reducing the risk and impact of oral conditions, and oral health inequities. However, general practitioners report lacking the necessary training to address most oral conditions, leaving them feeling underprepared and frustrated when presented with oral complaints,[12,19] and managing them with temporary, and not always appropriate, solutions such as antibiotics.[12,13,19,20] Further, they rarely or never engage patients in discussions about their oral health.[20]

Given the high (and anticipated rise in) chronic disease prevalence,[21,22] and expected continued improvements in natural tooth retention among people of all ages,[7] it is likely that more people at risk of oral disease or needing oral health care will present at PHC practices. It is critical, then, that PHC teams are knowledgeable and appropriately skilled in managing oral health presentations, and supported to do so, and that acceptable and feasible ways of integrating oral health into PHC practice and policies are found. There is limited local evidence to inform such strategies in NZ. This study aimed to address this gap by exploring doctors' and nurses' perspectives on the place of oral health, and how to improve its inclusion, in PHC.

Methods

This study took a qualitative approach. The general practices of a large primary health organisation (PHO) were purposively selected to include a range of practice profiles (by socioeconomic status, ethnicity and age of enrolled patient base). Practice managers or clinical leads were approached to gauge interest in participating. Nurses and doctors from interested practices were then invited to attend a practice-based focus group at a time and location convenient to them.

Six focus groups, guided by a semi-structured interview schedule (Supplementary Fig. S1), were conducted by two registered dentists – one a public health researcher (MS) and the other a hospital clinician (EH). Areas of questioning included the nature of oral health presentations, participants' knowledge of oral health and relevant services, the factors that influence them to consider oral health in their day-to-day practice and manage oral health-related presentations, and suggested actions on how to include oral health in PHC. Participants' years of practice, gender, ethnicity, age, and practitioner type (nurse, doctor) were also collected. The interview schedule was piloted during the first focus group, after which questions and topic areas were modified accordingly. New, emergent themes identified as data collection progressed were incorporated into the interview schedule. Data from the first focus group were included in the analysis. Data saturation was achieved by the final two focus groups. Focus group discussions were recorded (with consent) and transcribed verbatim. Data were collected from February to April 2018. Participants received no remuneration, but refreshments were provided.

Data were coded using NVivo 12 (Lumivero Denver, Colorado, USA, https://lumivero.com/products/nvivo/) and analysed thematically.[23] MS and EH read the transcripts, and identified and compared initial patterns and themes within each transcript and then across transcripts. Discordant views on codes were discussed until a consensus was reached. The transcripts were then coded according to the agreed coding schedule and analysed. Ethical approval was obtained from the University of Otago Human Ethics Committee (D18/015).

Results

The six focus groups comprised 4–15 participants (44 total) each; most were female and doctors, and just over half had 20 + years' practice experience. Three practices had high enrolments of people on low incomes; one each had high enrolments of Pasifika, youth and older people (Table 1).

Table 1. Focus group characteristics.

Focus group (FG)	*N*	Patient-based characteristics	Practitioner type		Sex		Experience (years)		
			Nurse	Doctor	Female	Male	<10	11–19	20+
1	8	Low income	0	8	4	4	1	2	3
2	4	High income	0	4	3	1	0	1	3
3	15	Low income; Pacific	7	8	13	2	9	1	5
4	6	Low income; youth	3	3	5	1	3	2	1
5	5	High income	2	3	5	0	0	0	5
6	6	High income; older people	0	6	1	5	0	1	5
Total	44		12	32	31	13	13	7	22

Data are presented as *n*.

Themes were categorised as: current practice, and barriers and facilitators to engaging in oral health. Participants' quotations are presented to illustrate key findings; additional quotations are presented in Supplementary Tables S1 and S2. Unless otherwise stated, 'participants' includes all practitioner types.

Current practice

Nature of oral health presentations

Participants in all groups confirmed seeing patients with oral health problems, most commonly toothache and infections, but also 'trauma, ulcers, oral thrush' (FG2), 'lumps and bumps' (FG5) and, in young people, pain associated with wisdom teeth. Several added that they were more likely to see such presentations in practices in low-income communities, saying, 'there is quite a big difference between the two [practice types]' (FG6) and 'when I used to work in a lower decile area…it [dental presentations] was far more frequent' (FG6). Further, unlike in high-income communities, participants practising in low-income communities said that, generally, their patients could not afford to see a dentist or did not have a regular dentist.

Raising oral health with patients

Participants in all groups said that, typically, they did not raise oral health with patients directly; the only time they might do so or consider looking at their patient's teeth or mouth was if a patient presented with an oral health complaint or had a diet- or nutrition-related condition; for example,

> I might do something like ask someone how their eating is…and if they say they're not eating very well then that might trigger specifically thinking about teeth, but certainly teeth aren't the first thing I go check. (FG1)

Most participants said that they usually did not need to specifically ask patients about their oral health, having noticed their patient's poor dentition during a consultation.

Barriers to engaging in oral health

Participants raised a range of individual, professional and system-level factors that influenced their capacity to consider oral health in their day-to-day practice and manage oral health presentations.

Oral health knowledge, skill and confidence (individual)

All groups agreed on the importance of good oral health. Almost all participants could describe the broad wellbeing and quality-of-life consequences of poor oral health. Although some participants knew about oral health connections with bisphosphonates and endocarditis, most were uncertain of the specifics; for example, 'there's something in the back of my mind that says, if someone's got heart disease you should make sure their teeth are ok, but that's as far as it goes' (FG2). More typically, almost all readily admitted that there were 'quite big gaps' (FG1) in their oral health knowledge, and that 'inside the mouth is just a bit of a mystery' (FG6).

When asked about their confidence in addressing oral health-related presentations, typical responses from all groups were: 'I have zero confidence to be honest' (FG4) and 'I don't have a lot of confidence about teeth things' (FG5). The ability of most participants to identify oral disease appeared limited to severe dental caries and periodontal disease, and soft tissue lesions. Care provision for acute presentations was restricted to prescribing antibiotics and pain relief, and recommending the patient see a dentist. Several participants expressed frustration and helplessness at their inability to adequately help patients resolve their presenting issue and knowing that it was unlikely the underlying issue was being definitively treated. The few doctors who had spent time in hospital dental, or ear, nose and throat departments appeared to have a better understanding of oral health problems than their colleagues who had not.

Few participants knew about oral health services located close to their practice. Most groups could not recall the location of dentists nearby and described their interaction

with dental colleagues as 'not much' (FG1) or 'virtually never' (FG6). Although most were aware of the local hospital's dental service, they did not know user-eligibility or how to access it.

Out-of-scope of practice (professional)

Most doctors did not consider oral health to be within their scope of practice. Rather, the responsibility for oral health care lay primarily with dentists: 'My job is everything else, I think that's probably enough'. (FG6)

Competing priorities and time constraints (professional)

Many participants explained that their role was to prioritise a patient's presenting complaint (which, mostly, was not oral health), rather than issues that as practitioners they thought important or a priority,

> For general health it is whatever the patient is coming in for and it is usually acute. They are seen by a nurse or they have booked purposefully an appointment to talk about an issue. And then with oral health is at the bottom of the list compared to everything else that is at the top for them and their family. (FG3)

Almost all participants said that including oral health in consultations would further burden their already time-constrained consultation times. In their view, addressing patients' often complex and immediate health needs, and potentially life-threatening medical issues, in the short time available to them, were of greater urgency and importance than oral health: 'To be honest there's usually so much other stuff to cover, that dental would be quite down there' (FG1).

Ethical considerations (professional)

Most doctors thought that raising oral health with their patients would present an ethical dilemma. This view appeared to be based not only on lack of knowledge and confidence, but also their feeling that there were few timely and affordable care pathways: 'I always feel a bit weird about asking 'cos then I feel like there's nothing I can actually do rather than suggest places where [they can try to access dental care]' (FG4). Several participants felt that it was unethical to identify and know about a problem, and then not resolve it.

Lack of affordable definitive care (system)

Many participants described the challenges that their patients had in accessing affordable dental care (eg 'It's still up to them to have the cost…that's what I just think is a huge barrier' (FG4)) or accessing funding for dental care through Work and Income NZ, describing the latter as 'not a simple procedure' (FG1) and typically of insufficient value (eg 'Often they'll get a quote [from a dentist] and it's like $3,000, and then they take it to Work and Income, Work and Income might say we'll pay $300' (FG1)).

Lack of oral health referral pathways (system)

Discussions on affordability prompted several groups to highlight the difference between the provision of oral health services and funding and almost all other general medical conditions and areas of health. Practitioners from all groups commented that the lack of referral pathways for oral health care and the challenges patients faced when navigating publicly-funded oral health services were unique in health practice.

Low priority of oral health (system)

Oral health's low priority or visibility in both the PHC system and the health system overall was another barrier some participants identified. Consequently, PHC practitioners are not conditioned to think about oral health or be aware of it. As an example, some participants cited their ability to refer diabetic patients for funded biannual eye or foot checks, if needed, whereas they could not for oral health.

Facilitators to engaging in oral health

When asked for views on facilitating PHC engagement in oral health, individual-, professional- and system-level suggestions were proposed and discussed.

Continuing medical education (individual)

Continuing medical education sessions on oral health topics relevant to PHC, including referral pathways, were favoured by almost all participants. Some added that local dentists could run 'some shared training together, because then you get to know who your dentists are' (FG2).

Interprofessional learning (professional)

Most groups also thought that developing relationships with local dentists would support their clinical decision-making. Many said they would appreciate having 'somebody we can call that we can ask' (FG3) for advice as 'reassurance is also useful' (FG5), and 'some sort of feedback from the dental surgeon would be really helpful so that we know that we're on the right track' (FG4). Participants in a few groups also commented on the potential benefits of inter-professional undergraduate training, principally that it would likely help to improve practitioners' knowledge and understanding of oral health.

Co-location (professional)

The consensus view on having oral health practitioners at medical centres was summarised by a doctor who said, 'there's always benefits when you work side by side' (FG2). This was confirmed by a few participants who had

previously worked in or near practices with dentists, and others compared it to their experiences with other health disciplines, 'we have got physio and podiatry here and it is really good because you talk to people and you find out things.…co-location really helps I think. It's getting conversations going' (FG5). Such benefits included opportunities to improve practitioners' oral health knowledge and confidence, sharing information about mutual patients, enable 'easier…faster communication' (FG3), and improve dentist–doctor relationships.

Some participants thought co-location might also raise the profile and importance of oral health in PHC and contribute to its normalisation; two participants from different groups thought it would, 'increase[s] awareness that this [oral health] might be a good thing to do without needing to know much' (FG6) and 'if it [oral health] was more involved in primary care then it might actually become a more usual thing to do' (FG4). Some groups also discussed the benefits of co-location for patients, saying that it would provide them with 'easy accessibility [to dental care]…coming in all the time to have all their various other needs met it would be a perfect location' (FG4). Almost all groups added that the lack of physical space and funding as potential barriers to co-location, and a few preferred the status quo.

System changes

Overall, the discussion prompted some participants, particularly nurses, to question their practice and to consider promoting or asking about oral health when attending to a patient. On reflection, most participants agreed that including oral health prompts in patients' care pathways and management tools, particularly those being managed for long-term conditions, would be possible. A few participants suggested that similar systems to those for eyes and feet in diabetes checks could be established for oral health; for example, 'it wouldn't be difficult for us to say you are entitled to a free check by a dentist every 2 years or every year or so' (FG6). Others raised concerns about the unintended consequences of doing so and the systems-based challenges to realising the idea. Again, using diabetes to illustrate the point, a doctor said it would be 'a matter of saying how important it is in the overall scheme of things in terms of diabetes and complications of diabetes – where it ranks and therefore what the benefit is of putting money and time into that' (FG6). A few others thought that for practitioners to action oral health checks, 'financial incentives [for practitioners] to get involved in it' (FG6) would be necessary.

Discussion

This study explored the views of doctors and nurses from selected NZ PHC practices on the place of oral health, and how to improve its inclusion, in PHC. As published elsewhere,[11–13,19,24] our participants reported regularly seeing oral health-related presentations, typically pain and infection, and/or for whom some oral health care would be beneficial. There was general agreement on the importance of good oral health for people's overall health.

Consistent with previous research,[20,24–27] our participants' oral health knowledge and confidence to address oral health presentations were low, largely owing to a lack of education and training opportunities during and following their undergraduate training. As in other countries,[24] not knowing how to manage or appropriately refer oral health problems, lack of referral pathways, and timely and affordable services available for referral frustrated and distressed our participants. Welsh study participants described the dissonance of either focussing on patients' immediate needs and prescribing antibiotics or withholding antibiotics to nudge the patient towards visiting a dentist for definitive treatment.[12]

Lack of timely and affordable oral health services also appeared to prevent several participants raising oral health with patients. They felt ethically bound to then address any issues raised, an obligation they could not fulfil because they perceived there was little they could further recommend or do. This 'ethical dilemma' barrier has not been reported previously; it may be unique to NZ owing to its adult oral healthcare system. In 2022, a government grant for dental treatment for low-income adults increased from NZ$300 to $1000 and the scope of treatments available expanded to include '*essential and urgent*' care. Initial indications of this much-needed change suggest that it has had a positive effect for intended recipients (R Clarke, pers. comm.). Exploring its impact on PHC practitioners' views on raising oral health with their patients is warranted.

Lack of capacity and rising complexity of care are key issues weighing on PHC practitioners;[28–30] workload and time constraints are key barriers to integrating oral health in PHC.[20,24,27] Our participants described oral health as being one more thing in a long list of conditions that they would need to address in a time-limited consultation. Unless a patient presented with a specific problem with their teeth or mouth, oral health was not routinely part of our participants' practice. Vernon *et al.*[25] found that, although all study participants thought oral health was important, less than one-quarter of them examined for it. Moreover, some doctors in our study considered oral-related matters to be the exclusive domain of dentists. General practitioners' views of their responsibilities in this arena are mixed in the literature.[27] Informing PHC practitioners about the intersection of oral care with medicine, and providing them with clear guidance on how they can protect and promote patients' oral health may facilitate PHC practitioners' consideration of oral health in their practice.[27]

Despite the challenges, the discussions prompted some participants to recognise oral health as a neglected area of

PHC; most reflected that it had a place in PHC for the good of their patients. Given the likelihood that more people with, or at risk of, oral health issues, will present to medical centres, and in the absence of any forthcoming substantive changes to the provision and funding of oral health care in NZ, there is a growing need for PHC practitioners to include oral health in their day-to-day practice.

Encouragingly, as in other studies,[27] most participants expressed interest in learning more. Oral health education programmes for non-oral health practitioners have been successful in many settings, improving confidence in examining the mouth[20,31] and referring to oral health providers.[32] As with non-oral health professionals in other countries, both nurses and doctors in our study could not recall learning about oral health and the oral cavity in their undergraduate training. If it were, many of the challenges in integrating oral health in PHC might be overcome; how to go about this in the NZ context warrants further exploration.

Interprofessional collaboration benefits both patients and practitioners.[33] Similar to the findings of Barnett *et al.*,[19] our participants had little communication with, and were unsure how to refer to, dentists. As our participants indicated, establishing clear referral pathways to publicly-funded oral health care, with the criteria on par with those for virtually all other medical conditions, is required. This pathway could include screening or monitoring oral health in existing tools used in PHC, as suggested by our participants and others.[24]

Financial support and a shared strategic vision giving oral health greater visibility and priority in PHC and the health system nationally at a systems-level, are effective facilitators in integrating oral health in PHC.[27] For some time now, practitioners and academics have called for oral health to be an integral part of PHC in NZ;[1,3] doing so would contribute to reducing the current inequities in access to oral health care in NZ.[7,14] Although steps can be taken at individual and professional levels, achieving integration will be challenging unless the current inadequacies in referral pathways for definitive treatment and access to affordable dental care, and other fundamental systematic issues with oral healthcare service provision in NZ, are addressed.

Strengths and limitations

To the best of our knowledge, this is the first such investigation in NZ; the findings contribute to a growing body of literature[27] on progressing comprehensive health care, as recommended nationally[1] and internationally.[34,35] Although our study sample was recruited from one PHO, it is large in practice numbers and geographic distribution, and our sampling strategy enabled the recruitment of a range practices and practitioners with respect to patient base, and data saturation was reached after four focus groups. As such, the findings are likely recognisable and transferable to PHC teams in other PHOs, and practitioners in other medical disciplines. For example, NZ emergency department (ED) doctors and nurses are equally ill-equipped to manage acute dental-related presentations, and frustrated at the lack of pathways and funding for definitive oral care.[36] Although data were collected in 2018, we are not aware of any interventions or programmes to date addressing the oral health gap in PHC. Finally, although the interviews were conducted by dentists, which may have influenced participants' responses, the discussions and comments made during the focus groups did not reflect bias in this regard.

Conclusion

Primary healthcare practitioners believe oral health is important and are open to incorporating it into their practice; however, barriers to sustainably incorporating some oral health oversight into PHC exist. For effective integration, a series of individual-, professional- and system-level changes are required.

Supplementary material

Supplementary material is available online.

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