

## **Supplementary Material**

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

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**Supplementary Table S1. Individual, professional and system-level factors influencing inclusion of oral health in primary health care**

Theme	Sub theme	Comments
Raising oral health with patients	<i>Notice oral health problems</i>	<p>You asked how often we'd notice people with dental problems, well every day. It won't always be the reason for consultation, it wouldn't always even be addressed in the consultation, but we're likely to notice it. (FG3)</p> <p>You notice it because they've come in with something and they've obviously got terrible dental health so you'd pick that up. (FG4)</p>
	<i>Asking about oral health problems</i>	<p>Participant A: if they're telling you about something around their teeth I'll have a look, but if it isn't a symptom which could be related to teeth I wouldn't.</p> <p>Participant B: I never look at someone's teeth for the sake of looking at their teeth. (FG1)</p> <p>The most I'd be looking at is the back of throats like for sore throats and things and to be honest I don't know how much attention, if they haven't mentioned anything that I wouldn't pay attention to their teeth unless they've specifically said. (FG4)</p> <p>I must say I don't [ask], it's not something that comes into my head, when I'm seeing people with like diabetes or... (FG2)</p> <p>If someone comes in and says they want a general checkup, that for me does not include teeth, it just doesn't trigger teeth, there are other things I would do, with no real reason to do it, might listen to your chest, they haven't come in with chest symptoms but they want a general checkup, I will listen to their chest, I'll listen to their heart, I'll take their blood pressure. I'll probably look in their ears, but it wouldn't occur to me to actually look at their teeth, specifically as part of a general check, it just doesn't twig the radar really, maybe it should? (FG2)</p>
<b><i>Individual</i></b>		
Oral health knowledge, confidence and skill	<i>Importance of oral health</i>	<p>[Oral health is] an indicator of someone's general health, so often goes hand-in-hand if someone's oral health is not great, usually not all the time but usually general health is lacking as well. (FG1)</p> <p>There's a whole lot of issues if you've got bad teeth you don't smile at people, and you don't talk to people, because you feel self-conscious, so it has a huge impact on interaction with the world and probably self-esteem as well. (FG1)</p>

*Frustration and helplessness*

“Then it’s more Amoxil you’re giving [because patient didn’t get the underlying problem treated by a dentist]” (FG4).

Participant A: Mostly what we can do with confidence is give them pain relief, we can't solve the problem. We can have a look in there and see if there's a massive great hole, you know two cusps and their fillings have all fallen out, but mostly it's a matter of just tai ho'ing [temporarily stopping pain] with symptomatic treatments or they can see the dentist.

Participant B: And knowing that they're probably not going to go and see the dentist.

Participant C: That's the thing isn't it? You give them their antibiotics, warn them that this is only a temporary solution to the abscess but, most of the time I get the feeling, I don't think they're going to go on to see [a dentist] (FG1)

***Professional***

Out of scope of practice

But it's also the fact I'm the Dr of everything except the mouth, and the dentist is the doctor of the mouth, I think like that you know, it's their job. (FGXX)

Basically, because most treatments of things in the mouth, are pretty specialised, we're not really in the business of treating [teeth]. (FG2)

Competing priorities and time constraints

It doesn't happen to be one of the areas which is my job to keep an eye on, that's kind of I guess how I see that, but that doesn't mean it's less important, but it might mean that it's not so high on my priority. (FG1)

We're working all the time with what people’s priorities are, for themselves, and we're constantly having to sort of negotiate that with them, so there are some things which are more obviously high priority you know, a person with chest pain, that we think could be their heart, but there are so many things which people have going on for them which might be wrong, but the priority really comes from what they care about, rather than what we care about. (FG1)

Participant 1: If you don’t have time to spend after ten minutes, you need to manage multiple problems and oral health is probably not the number one....

Participant 2: I probably don’t think about dentistry as much as I should because...there will be ten other chronic conditions; poorly controlled diabetes, heart disease and not taking their medication, mental health and social state and it just falls right down the list. (FG3)

Ethical considerations

Participant 1: People can't afford it anyway, you know 'have you seen the dentist, no I can't afford it' can you refer me, just opens a whole can of 'I can't do anything about it' so leave it alone.

Participant 2: Yeah...there actually has to be a viable option to do something to make a question [about oral health] valuable.

Participant 3: Yeah sorry I mean it's not really ethical to in a way, to ask for a screening without having a realistic action that could be taken. (FG1)

## System

Lack of affordable definitive care

I think most times they don't really go and see the dentist, so they come and get the painkillers and the antibiotics so it subsides and then it comes back again, because they can't afford to see a dentist—a private dentist. (FG3)

I find it hard to find a low-cost service that they [patient] will go to" (FG4).

After [the hospital dental service] sees them for their acute pain they say 'that now continue and find your own dentist'. But where are they going to find one? They can't afford [it]. (FG3)

Lack of oral health referral pathways

[Dentists are] sort of this mysterious group that we don't really know about, and it's hard to get hold of...we have no idea what you're doing, and we can refer patients and patients if they're lucky, might get to see you. (FG1)

I've tried calling [the hospital] and no one ever picks up and like you know I can understand why some people after five days of calling up trying to get an appointment just go 'oh fuck it I'll just deal with the pain or get some pain meds from someone'. (FG4)

It seems to me you can't get seen in dental [hospital service] unless it is acute and end-stage treatment...I think there is a difference in terms of thresholds and referrals. (FG3)

I'm going to send them off to get their acute appendicitis dealt with, if there was a, I mean that's what we're trying to do with the dental stuff isn't it, just sort of send them off to get their dental problem dealt with. But it kind of doesn't work quite like that. (FG1)

Not a priority in primary care system

I think traditionally we probably haven't prioritised it as much as we should – we know that. (FG3)

I must say, for diabetics and things you know [patients] come in for an annual diabetes review, there's no mention of oral health in the review, it's a pathway you've got to tick the boxes, eyes, feet, there's no mention of oral health, I don't think it ever gets mentioned. (FG2)

**Supplementary Table S2. Individual, professional and system-level participant suggestions for improving inclusion of oral health in primary health care**

Theme	Subtheme	Comments
<b><i>Individual</i></b>		
Continuing medical education	<i>Oral health education</i>	<p>Enough [information]...to intelligently refer someone. (FG1)</p> <p>Basic things...things that people are likely to present with, you know like know when to prescribe antibiotics you know perhaps what you're looking for too you know like infection and decay. (FG4)</p>
<b><i>Professional</i></b>		
	<i>Interprofessional learning</i>	<p>Participant A: it would improve the collegiality between doctors and dentists and oral health specialists and that would be great.</p> <p>Participant B: And we'd probably learn from them as well. (FG4)</p>
	<i>Co-location</i>	<p>We would learn from each other, you know in the similar way that you know we have a specialist visiting, we don't have to ask, the endocrinologist quite so many questions because we have [specialist's name] coming here once every week, our skills go up with each question we ask, so that could be on both directions, presumably there'd be some synergy from doctors to dentists as well as from dentists to doctors. (FG1)</p> <p>Having access to somebody that you can ask for advice and getting direct feedback on things is always going to be helpful. (FG5)</p> <p>I think in principle it is great, co-location of various professionals and works with pharmacists and other things like physio. The other practical difficulty is that most general practices have got a finite amount of space and no space for extension without high cost and so that is an obstacle...(FG6).</p> <p>[It] was convenient that it [dental] was co-located, but it probably wouldn't have mattered if it was next door or round the block, as long as it was close enough, and the referral process was straightforward. (FG1)</p> <p>The current model of 'I find something and refer it'...works perfectly well in terms of degree of teamwork, for most of the dental problems I'm seeing, and so having them co-located and sharing tea rooms, is not as high a</p>

		priority as some other professionals. (FG1).
<b><i>System-level</i></b>		
Pathways and prompts		<p>Clinical pathways, what are the pathways? What resources are out there? We can't get to A, we can't go to B, can we go to C? What is out there that we can offer our patients because I think it is about giving options. They can't access it because of the capacity at hospital, then its private practice they go to. (FG3)</p> <p>I think it's practical to have services, how do you access them and who should be accessing them (FG6)</p>
		<p>An analogy you know with someone with diabetes gets their retinal screening for example, which is on a program and monitored, there's probably quite a few situations where a dental screening, you know program should be in place. (FG1)</p> <p>Put [oral health] into the mix as a list of priorities that need to be dealt with along with eye screening and podiatry and the bunch of controls obviously. You know, monitoring and that sort of thing – so it is pretty simple to build it into the system if it is important. (FG6)</p> <p>What if we train our nurses when giving vaccinations, to do a mouth check at the same time and discuss it? (FG6)</p>

## Supplementary Figure S1.



# Medical practitioners' engagement in oral health Focus Group Semi-structured Interview Guide

Date and place of focus group:

Consent: Have you read the information and consent sheets? Have you filled in participant info sheet? Are you happy for me to record this interview for later transcription? Do you have any questions? (obtain verbal consent). You do not have to participate if you do not want to and you are free to leave at any time.

Thank you for agreeing to take part in this research. As we have discussed, I would like to ask you some questions about general health care practitioners' understanding and views of oral health care.

The first set of questions is about your understanding of the oral health and the links with general health

### *Understanding of oral health and links with general health*

Are you aware of any links between oral health and general health?

If yes: what are they? [ask the group to list what they know]

If no: why not?

How important is oral health in people's general health?

Prompts: Not important/important/very important [ask group to indicate their views and count number]

Why or why not?

### *Oral health in your practice*

*Now I would like to ask you about oral health and your clinical practice*

Thinking about when you see patients, how often would you look in someone's mouth as part of an examination for a medical problem?

What are the common issues patients report about oral health?

How confident are you about examining someone's mouth or diagnosing dental problems?

What are your views on

nurses and doctors and other general or specialist health care professionals playing a role in patients' oral health?

including oral health care practitioners in PHO and medical centres?

*Referrals and oral health services*

*Now I would like to ask you about oral health referrals and services.*

How often would you refer people for oral health problems?

Who do you refer them to?

How often would you get someone calling into the medical centre about an oral health problem?

What would your advice be to them?

How often would you discuss a mutual patient with a dentist or other oral health care provider?

How often would your practice regularly engage with the local dental service providers?

If not often or ever, then why not?

How might your engagement with them be improved?

How often would you provide oral health care advice or recommend a patient seek dental care as part of their medical management?

Do you know about the following oral health services and programmes?

Bee Healthy, Lift the Lip, B4 School Checks, hospital referrals

What do you know about them?

*Oral health training*

Was oral health part of your undergraduate or postgraduate medical or nursing training?

If yes: how much and what did you learn about?

With hindsight, do you think was enough training?

If not, then what more do you think should have been included?



Have you ever been offered oral health as part of your continuing education courses or at conferences?

Should oral health be part of undergraduate or postgraduate training for general health or specialist health care professionals?

What suggestions do you have to better integrate the two areas of health or improve collaboration between practitioners from both sectors?

### **Concluding questions**

1. Do you have any other comments?
2. Would you mind if I contact you if I have any further questions?

*Thank you for helping me with this study.*