Midwives' and women's views on accessing dental care during pregnancy: An Australian qualitative study

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ABSTRACT

Background: Maternal behaviours during pregnancy are likely to play a significant role in the development of dental caries in children. Although midwives are well placed to discuss oral health and provide information to women, dental attendance by women during pregnancy is minimal. This study aimed to explore midwives' experience of facilitating pregnant women's access to dental care and to document women's experience of receiving dental information and care during pregnancy.

Methods: Focus groups with midwives and telephone interviews with women, who were referred to Monash Health Dental Services, were conducted to explore their perspectives and experiences. The qualitative data was thematically analysed.

Results: Three focus groups with 13 midwives and telephone interviews with eight women, who recently gave birth, were conducted. Three key themes were identified: maternal oral health knowledge; barriers to accessing dental information and care during pregnancy, and suggested recommendations.

Conclusion: This study highlighted the barriers that exist for midwives to discuss oral health with women and refer women to dental care, and women's experiences of accessing dental

care during pregnancy. Ongoing collaboration between the maternity and dental services is required to strengthen midwives' knowledge, confidence and practice in supporting women to access dental care during pregnancy.

Keywords: Dental care, Health services, Maternal oral health, Pregnancy, Qualitative

INTRODUCTION

Dental caries is a common chronic childhood disease; however, it is mostly preventable.[1] If left untreated, dental caries can result in pain and infection, and can also affect speech, eating, sleep, school performance, and self-esteem.[2] While the aetiology of dental caries is multifactorial, maternal characteristics can significantly contribute to its pathogenesis. Factors such as family dietary patterns and oral hygiene practices can impact on the development of dental decay in children.[3] In addition, smoking and vitamin D deficiency during pregnancy also compromise tooth development in infants, increasing their susceptibility towards dental decay.[4]

Poor maternal oral health during pregnancy has been linked to an increased risk of poor obstetric outcomes, such as preterm birth and low birth weight.[5] Further, disparity in maternal and child oral health outcomes is experienced in people of lower socioeconomic positions,[6, 7] indigenous and migrant backgrounds, as well as other vulnerable and disadvantaged populations.[8-10] Hence, taking preventative measures to improve maternal oral health and educate pregnant women about their own and subsequently their child's oral hygiene, can decrease susceptibility to dental caries. The Australian Pregnancy Practice Guidelines[11] suggest that pregnant women's first antenatal visit offers a prime opportunity to provide oral health advice to all pregnant women, and to facilitate access to dental care. The evidence-based guidelines recommend that all women seek dental care and necessary treatment early in pregnancy, and highlight the important role of midwives in initiating this. Current evidence demonstrates that midwives do believe it is important to discuss oral health with pregnant women as part of antenatal care.[12, 13] However, barriers such as limited knowledge of maternal oral health, time constraints, and competing health and social issues for women have been identified.[14, 15] The absence of referral pathways has also been acknowledged as a significant barrier for midwives to facilitate women's access to antenatal dental care.[14, 15] Despite this, current evidence indicated that midwives are willing

to participate in professional development to enhance their skills and knowledge in this area.[12-15]

Victorian public dental care policy

Across Australia, approximately 30 percent of women, of lower socioeconomic status, report having accessed dental care during pregnancy.[7, 16] In the state of Victoria, pregnant women with a Health Care Card (HCC), are entitled to access public dental services and are recognised as a 'priority group'.[17] According to Dental Health Services Victoria, they are entitled to next-available appointments and cost-subsidised dental care (fee of $28.00 per visit).[18] Despite the policy, the overall number of pregnant women receiving oral health information, discussing oral health with their midwife and accessing dental care remains low.[15, 19-21]

AIM

The aim of this study was to: 1) identify the barriers and facilitators for midwives to facilitate pregnant women's access to dental care and 2) identify the barriers and facilitators for women to access dental care during pregnancy.

METHODS

A qualitative approach was used to understand the current perspectives of women and midwives regarding pregnant women's access to dental care. Focus groups with midwives and telephone interviews with women were chosen to obtain perspectives from both groups.

Midwifery management informed researchers that focus groups were ideal to accommodate the busy roles of midwives. Moreover, the exploratory nature of focus groups was selected to enable open discussion, where participants could share their experiences and learn from each other.

At the time of this study, eligible women were likely to have an infant to care for. Telephone interviews were considered appropriate to enable women to participate at a time that suited them and without having to leave their house with a newborn.

The Murdoch Childrens Research Institute in partnership with the University of Melbourne and Monash Health Dental Services conducted this study in 2016. Ethical approval was obtained from the Royal Children's Hospital (34010C), The University of Melbourne (1647236.1) and Monash Health (16309C).

Setting

The study was set in outer south-east Melbourne at Monash Health (MH), which is a large network of public health services in this area including maternity and dental services. The population is culturally diverse with clients coming from more than 180 countries with 100 different languages.[22] All women who are booked to give birth at MH see a midwife for at least one appointment during their pregnancy. Monash Health maternity services (Monash Women's) provide care to over 9,000 women annually across three sites (Monash Medical Centre, Dandenong Hospital and Casey Hospital).[23]

Monash Health Dental Services (MHDS) deliver public dental care to 32,000 patients annually across seven community-based dental clinics. Despite the high number of pregnant women to whom MH provides care to, data available from the dental service suggests that only 59 women accessed dental care during their pregnancy, in 2014.

Thus, in August 2015, MHDS collaborated with Monash Women's to provide professional development (PD) to approximately 100 Monash Women's staff (including midwives, obstetricians and management). The aim of the PD was to increase midwives' knowledge, confidence in discussing oral health with women and processes for referring women to the MHDS to, therefore, increase uptake of pregnant women accessing dental care. A total of three PD sessions were delivered by the MHDS Clinical Project Officer (PM). The professional development included: evidence of poor maternal oral health and obstetric outcomes; the Victorian dental policies, and the referral processes to refer a pregnant woman to MHDS. Post-PD in-house evaluation reported that midwives' knowledge of priority access to dental services for pregnant women increased from 71% to 98%. The percentage of midwives who rated themselves 8 or more (out of 10), in terms of their confidence in discussing oral health with pregnant women, also increased from 24% to 83%,

following the PD. However, despite an initial increase in referrals to the dental service, referrals were not sustained over time.

Recruitment and data collection

Midwives

All midwives employed at Monash Medical Centre, were invited to participate, as this was the site of the PD. Midwifery managers sent invitations, via email with the Plain Language Statement and Consent Form to all midwives, inviting them to participate in the study. At three staff meetings, midwives were briefed about the project and were invited to participate in focus groups. Participation was voluntary and consent forms were signed prior to each focus group. Incentives were not provided. A semi-structured question guide was used to facilitate the focus groups. Discussion topics included: midwives' experience of the PD, maternal oral health knowledge, oral health discussions with women, referral processes, and recommendations. Each focus group was audio-recorded using a digital recorder and was 30 to 40 minutes in duration.

Women

Women, attending Monash Women's for their pregnancy care and who were referred by their midwives during pregnancy to MHDS, were invited to participate in a telephone interview. A MHDS staff member contacted the women by telephone and invited them to participate. Interpreting services were available and offered to women; however, all women chose to converse in English. Verbal consent was sought before the commencement of the interview. Interviews were conducted by the student investigator (SYL) either immediately at the point of first contact, or at a subsequent time convenient to the women. Two semi-structured interview guides with both open and closed questions were used depending on women's attendance at MHDS. One was used for women who were referred and attended a dental appointment, whilst the other was used for women who were referred but did not attend a dental appointment. Questions within the interview guides varied depending on whether the woman attended her dental appointment. For example, women, who attended their dental appointment during pregnancy, were asked to share their experience of receiving dental care during pregnancy. Women, who did not attend their dental appointment, were asked to report barriers that prevented them from attending. The

interview guides were formatted as pre-prepared templates and handwritten notes were taken. This format allowed the student to comprehensively document women's responses whilst conducting the telephone interviews. Overall, the interview guides were designed to explore: women's knowledge of maternal oral health; their experience of discussing oral health with their midwife; being referred by their midwife to MHDS, and recommendations. The interviews were 10-15 minutes in duration and were not audio-recorded.

Data analysis

All focus group recordings were transcribed verbatim by SYL directly after each focus group. Handwritten notes from the telephone interviews were transferred to an electronic version of the interview guide immediately after each interview by SYL. The transcripts were then imported into NVivo 10[24] and thematically analysed. SYL coded all the transcripts by assigning descriptive labels to segments of the transcripts, and then related codes were organised into categories, which were then grouped into distinct key themes. As this study was a student project, thematic analysis was overseen by the student's supervisors (ER and NK). The research team (SYL, ER, NK, PM, RS) met several times to discuss and finalise the themes. The service-based members of the research team provided clinical and contextual input that informed the themes as they were being finalised.

RESULTS

Participant characteristics

Three focus groups were conducted with 13 midwives. Of these, five had participated in the PD whilst eight did not. Midwives' length of employment at MH ranged from 1.5 years to 12 years.

Of the 25 women contacted, seven declined, six telephone numbers were disconnected and four were unanswered. Thus, a total of eight telephone interviews were conducted with women from various ethnic backgrounds (Australia, New Zealand, Egypt and Afghanistan). Six of the eight women had attended a dental appointment during their recent pregnancy (Table 1). The two women who did not attend, were booked for an appointment but missed it as they gave birth earlier than expected.

Maternal oral health knowledge

Amongst the five midwives who participated in the PD, all found it informative as they had not previously considered the importance or impact of oral health during pregnancy.

I was interested to find out just how frequent dental health is a problem in pregnancy. – focus group 1

Midwives demonstrated some knowledge by recalling the relationship between poor maternal oral health and poor birth outcomes, such as increased risk of preterm labour and low birth weight. However, it was evident that, irrespective of whether they had attended the PD, midwives' knowledge of maternal oral health was limited, with most reporting that they would struggle to answer questions about oral health that women might ask.

It's trying to explain to women why would it help and [how poor oral health can] lead to low birth weight babies, so I can't really answer that well enough. And when they ask why, I just get a bit vague. – focus group 3

Midwives attributed their lack of confidence in discussing oral health with women to not having enough information about it.

I just think that we haven't had a lot of information on it. – focus group 2

Interestingly, all women who participated in a telephone interview, recalled receiving oral health information, from their midwife, between eight weeks and six months into their pregnancy. Most reported that they were surprised to learn about the relationship between poor maternal oral health and poor obstetric outcomes.

It wasn't something that I was aware of until my second pregnancy – when my midwife told me about it. – P6

Barriers to accessing dental information and care during pregnancy

Referral to Monash Health Dental Services

Despite the positive feedback from midwives about the PD, most could not recall the referral process to the dental services. Only one midwife continued to refer women to the dental services as she remembered seeing information about the referral process on a staff noticeboard. Other midwives reported to not have seen the information on the noticeboard. One midwife highlighted that midwives, who are unfamiliar with the referral processes to the dental services, avoid making referrals as they are worried that it would take too long. One midwife reported that she was unable to apply what she learnt from the PD into practice because she had not started working in the antenatal clinic at the time. Overall, midwives reported that they would value ongoing PD about oral health during pregnancy and how to refer women to MHDS.

Most midwives were either unaware, unsure of, or had forgotten about the 'priority access' policy; therefore, they were unable to share the information with women. If a dental concern arose for women, midwives advised women to see 'their dentist', as they assumed that women would have a dentist that they see privately. In line with this, all women who participated in an interview were initially unaware of the dental policy; women reported that it was their midwife who explained it to them and referred them to MHDS during their recent pregnancy.

Initial concerns

Most women reported that concern about the cost of dental treatment had previously deterred them from seeking dental care in the past. Further, one woman reported that she had avoided dental care in her previous pregnancies due to the perceived cost, despite having a HCC. However, she had sought dental treatment during her recent pregnancy after being informed by her midwife that she was eligible for cost-subsidised dental care.

Two women reported that they were concerned about the safety of dental treatment during pregnancy; however, they were reassured by the dentist that it was safe.

> *I thought that the x-ray would harm the baby, but the dentist explained to me that it was safe and that it wouldn't harm the baby. – P6*

Overall, women felt that knowing about the importance of oral health and the services available, earlier in their pregnancy would have encouraged them to be more proactive about their dental health and seek dental care early in their pregnancy.

If they [women] know how important it is, they will go. – P4

Oral health not prioritised

During antenatal appointments, midwives reported that oral health is generally not a priority topic on their prescribed checklist of topics to discuss with women, and they would only consider discussing oral health if time permitted. On the occasion that oral health was discussed, the discussions were brief.

We've got limited time with women, and we talk about it where we can. – focus group 2

There's so much to do, it's just like 'tick'-I've-done-that. – focus group 3

She [midwife] mentioned dental health at the end of the appointment, since it was on the checklist but didn't go into details. – P6

Some midwives felt that it was difficult to engage with women about their oral health because women do not understand the importance of oral health, and do not prioritise it during pregnancy.

Some women are really closed off about it and go "oh yes, it's all fine". – focus group 3

In contrast, all interviewed women were keen to learn about the implications of poor oral health from their midwives, and they felt it was important to be advised early in the pregnancy to make an appointment to see a dentist.

It was my last pregnancy. The midwife gave me information very late [in pregnancy] but I didn't find it useful by then. – P3

Additional barriers

Midwives also commented that interacting with women with limited English is an additional challenge, as the focus during appointments is usually on organising social and financial support. Often these appointments required working with interpreters; as such, appointments become rushed due to limited time and oral health is, then, not discussed. However, one Afghan woman highlighted that for many people in Afghanistan, dental care during pregnancy is not often considered at all. She believed that midwives have an important role in raising awareness and facilitating access for women of migrant background to attend dental services.

Suggested recommendations

All midwives suggested that further PD and supporting resources to identify and refer eligible women to public dental care was needed.

We obviously need more education for the midwives because it's just something we read [oral health information for women in the pregnancy booklet] but don't really understand the whole implications of [poor maternal oral health]. – focus group 2

I just feel like I actually need to understand what it is about and not just be told to do this. – focus group 3

Midwives felt that frequent PD reminded them of the topics that they should be discussing with women, and that it would also help boost their confidence in raising and discussing oral health with women.

There's just so much to think about and after a while, certain things go from your priority list, and then you'll have a new in-service [PD] on something…and it would be a priority for a while and then you forget about it again. – focus group 1

Midwives also reported that being equipped with clear and short responses about maternal oral health would help them answer women's questions.

All participants (both midwives and women) agreed that an increased awareness of maternal oral health within the MH setting is needed. Firstly, having information available about the importance of oral health and the dental policy and eligibility for subsidised dental care, for both midwives and women, would be helpful. Both participant groups suggested that this information could be delivered via brochures and posters, which could be displayed in the hospital to encourage both midwives and women to raise oral health discussions during antenatal appointments.

Secondly, including team leaders in any PD activities as they are well placed to remind midwives of the referral processes and encourage individual staff to refer women to the dental services. Midwives explained that team leaders regularly conduct meetings to discuss trending issues, and incorporating oral health into these discussions could support awareness of the referral processes.

Thirdly, midwives suggested that oral health information and information on the referral processes can be added to existing MH systems to benefit midwives and women. For example, incorporating fax numbers to dental services to midwives' list of existing referral information would assist midwives to refer to dental services as part of routine practice. For women, midwives suggested adding oral health information to the Monash Women's website to assist in the dissemination of information to women.

> *If you had a thing on the website, it would grab people's attention and…to see that information again just reinforces the need to go and access dental care. – focus group 2*

> *A video on the website would be good because these days most people don't read things, they like to watch things. – focus group 3*

Lastly, given that MH provides care to women from an array of cultural backgrounds, midwives felt that information needs to be available in multiple languages, as the current information given to women, via the pregnancy pack, is predominately in English.

DISCUSSION

Maternal behaviours during pregnancy can contribute to a developing child's oral health.[3, 4] For example, poor intake of nutrients (e.g. vitamin D) during pregnancy can affect baby's tooth development. In addition, poor oral health during pregnancy has been linked to adverse birth outcomes.[5] Intervening early in pregnancy could modify behaviours and outcomes for mothers and their children. Although six out of the eight women interviewed in this study attended their dental appointments, overall utilisation of dental care by pregnant women remains low.[7, 15] This study identified enablers and obstacles faced by midwives in discussing oral health with women and referring them to dental services, and heard from women about their experience of receiving dental health information, from their midwife, during pregnancy.

Engaging women about their oral health during pregnancy

Midwives in the current study understood the potential benefits of incorporating oral health discussions into the conversations with women during their antenatal visits. However, they reported that they often prioritise other discussion topics, such as childbirth and breastfeeding over dental care due, in part, to time constraints as well as a lack of confidence. Women, however, reported that some of their midwives had informed them of the importance of oral health and supported them with a referral to the dental service. As reflected in previous research,[19, 20] women are keen to discuss oral health with their midwives and receive oral health information. Furthermore, prioritising oral health discussions during antenatal visits provides opportunities for midwives to inform women of the available dental services during pregnancy. This can alleviate women's concerns around cost and safety of dental treatment during pregnancy, both of which have been reported as factors that deterred pregnant women from seeking dental treatment.[15, 16, 25, 26]

Time constraints has previously been reported as a barrier for midwives to incorporate oral health discussion into antenatal appointments.[15] To address this issue, midwives in this study highlighted the need for brief and clear information that they can relay to women.

Having specific questions to ask women could help ensure that all midwives do actually ask women about their dental health.[14] Becoming familiar with the dental referral process would also help midwives to make the most of their limited time with women. As a result, midwives' confidence in discussing oral health with pregnant women would, potentially, increase.

The midwives in this study suggested that increasing the awareness of maternal oral health within the broader MH setting would be beneficial. Uniquely, they suggested engaging with and involving team leaders in disseminating dental information and providing instructions regarding the referral process, would provide them with additional motivation and support.

Although six out of eight women interviewed attended a dental appointment, women reported wanting information about their oral health during the early stages of pregnancy. Previous literature highlighted that women's lack of oral health knowledge corresponds with limited awareness of the importance of oral health and motivation to seek dental care during pregnancy.[16, 20] Women in this study, reported attending their dental appointments during pregnancy because they were informed by their midwives of the implications of poor oral health and the health of their baby. They were also advised of their eligibility to access public dental care.

Although the women in this study accessed dental care during pregnancy, they still felt they did not have enough information regarding their oral health and how this could influence their child's oral health. There is a broader need to improve women's oral health literacy to support women to seek dental information and care, particularly in disadvantaged populations where health literacy is low and oral health issues are prevalent.[27] Addressing oral health literacy has been described as a multifaceted issue that requires efforts from multiple stakeholders.[28] The present study offers an opportunity for maternity and dental services to collaborate to improve the way in which oral health information and care is provided to women. By making small changes to clinical practice, the barriers encountered by women and midwives could be reduced. When women are provided information about the importance of their oral health during pregnancy, they are motivated to practise oral

health promoting behaviours, seek oral health advice and likely to educate friends and family within the community.

Interdisciplinary collaboration to sustain change in practice

Although the PD was described as insightful, many of the midwives who attended had forgotten the information that they had been given, including that around the dental referral processes and still lacked confidence discussing oral health with women. The absence of a clear referral pathway was problematic for midwives, which is also reflected in the literature.[14, 15] In a previous Australian study,[14] it was reported that the inability to provide further assistance to women, regarding their oral health and available services, discouraged midwives from raising the topic at all. While further training for midwives has been suggested, in both this and previous studies[14, 15] as a potential way to increase midwives' confidence in raising and discussing oral health with women, the present study suggests that the PD alone is insufficient.

Professional development is a valuable tool for building midwives' confidence in discussing oral health with women.[12] However, a recent Australian study by Yelland et al[29] demonstrated that PD, accompanied by a focus on quality improvement, can further support staff to bring about change to their practice. Often, staff attend PD and are motivated by the content to change their practice; however, without the support and understanding from colleagues and, specifically, management, individual staff are limited in being able to implement change in their practice. A quality improvement initiative can provide a structured approach to improve clinical care that involves making a change in practice to lead to better patient outcomes.[30] Such an initiative could be designed, implemented and monitored in a collaboratively way between MH dental and maternity services. Such collaboration could support staff to engage in dialogue to develop a shared understanding about resources, processes and available services.

Furthermore, a partnership between MH dental and maternity services could support the delivery of relevant and ongoing PD for midwives. Both management and staff involvement would determine how best to support midwives in raising oral health with women, and refer women to the dental services as part of routine practice. Collaboration could involve an inter-service PD where midwives provide feedback on what works, and what does not

work for them, and solutions designed together. Furthermore, midwives require opportunities to practise having conversations with women, for example, how to raise the topic in appointments and respond to women's questions. This could be incorporated into the PD as an interactive component. As part of the quality improvement initiative, midwives could test-out questions and answer scenarios with input from dental staff to ensure accuracy. This could be trialled with a small number of midwives in clinical practice before scaling it up to include additional staff. As reported by Yelland et al, collaboration between services to co-design a change in practice, followed by a small-scale trial, has proven to be an effective strategy in maternity services.[29] The process of a small trial followed by refinement via feedback is crucial in establishing a sustained change in practice.[31]

Strengths and limitations

A strength of this study was the involvement of both midwives, and women who had recently had their baby. This permitted triangulation of data where feedback about access to dental care during pregnancy was obtained from both midwives and women. However, there are limitations.

This study was completed as part of an Honours program, and therefore, was small and exploratory. The total sample of participants, both midwives and women, was limited. Of the approximate 100 staff who attended the PD, only five participated in the focus groups. This could be a result of midwives no longer working with MH, working at a different site, electing not to attend the focus groups or being unavailable at the time of the focus groups. The sample of women in this study was limited to those who were referred by their midwife to MHDS, those who refused referral or were not offered a referral, were not contacted. The telephone interviews were not audio-recorded and although protocols were in place, we cannot ensure that the handwritten notes were verbatim. Furthermore, this study considered one health service in one geographic region of Melbourne; therefore, the findings may not be transferable to other services and regions.

Further research involving a larger sample is required. As this study was limited by the telephone interviews, future research could consider conducting face-to-face interviews in

the women's home or inviting women to attend a focus group where they are welcome to bring their infants or appropriate child care is offered.

CONCLUSION

This study identified barriers and facilitators for midwives to facilitate pregnant women's access to dental care and for women to access dental care during pregnancy. For midwives, there was little awareness of and ambiguity about the dental services within MH. For women, early oral health intervention, to inform women about the implications of poor oral health on their pregnancy and available services, can promote women to seek dental care during pregnancy. This study has highlighted that midwives require confidence in discussing oral health with women and knowledge of referral processes, in order to provide appropriate information and advice and facilitate pregnant women's access to dental care.

The limited uptake of pregnant women to dental services reflects a policy-practice gap. Changing practice in busy antenatal settings is challenging; therefore, ongoing collaboration between maternity and dental services is vital for addressing maternal oral health, and to bring about a sustained change in practice. By improving women's access to dental care during pregnancy, oral health outcomes of children may also improve in the longer-term.

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Table 1. Women who participated in telephone interviews

P = participant

	Country of birth	Attended dental appointment during pregnancy
P1	Afghanistan	Yes
P2	New Zealand	No
P3	Australia	Yes
P4	New Zealand	No
P5	Australia	Yes
P6	Egypt	Yes
P7	Afghanistan	Yes
P8	Afghanistan	Yes