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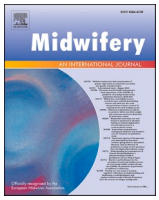

"It's a big conversation": Views of service personnel on systemic barriers to preventing smoking relapse among pregnant and postpartum Aboriginal and Torres Strait Islander women – A qualitative study

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ABSTRACT

Background: Providing smoking cessation care has not successfully prevented women who quit smoking during pregnancy from relapsing due to multi-level barriers.
Aim: This paper explores systemic barriers to providing smoking cessation care, focusing on relapse prevention among pregnant and postpartum Aboriginal and Torres Strait Islander women (hereafter Aboriginal).
Methods: Twenty-six interviews were conducted between October 2020 and July 2021 with health professionals, health promotion workers and managers working in Aboriginal smoking cessation across six Australian states and territories. Data were thematically analysed.
Findings: Themes emerging from the data included: (a) limited time, competing priorities and shortage of health professionals; (b) a need for more knowledge and skills for health professionals; (c) influences of funding allocations and models of smoking cessation care; (d) lack of relevance of anti-tobacco messages to pregnancy and postpartum relapse; and (e) ways forward. Several barriers emerged from policies influencing access to resources and approaches to smoking cessation care for Aboriginal women. Individual-level maternal smoking cessation care provision was often under-resourced and time-constrained to adequately meet Aboriginal women's needs. Identified needs for health professionals included more time, knowledge and skills, better cultural awareness for non-Indigenous health professionals, and salient anti-tobacco messages for pregnant women related to long-term cessation.
Conclusion: To drive smoking cessation in pregnant and postpartum Aboriginal women, we recommend adequately reimbursing midwives and Aboriginal Health Workers/Professionals to allow them to provide intensive support, build confidence in Quitline, continue health professionals' capacity-building and allocate consistent funding to initiatives that have been efficacious with Aboriginal women.

Introduction

Internationally, smoking during pregnancy persists as a grave public health concern, with about 90 % of women who give up smoking during pregnancy resuming smoking within the first year after delivery (Meernik and Goldstein, 2015). In addition to ongoing harm to women who smoke, smoking postnatally exposes babies to second-hand smoke, associated with an increased risk of respiratory, neurological and immunological morbidity; (Zhang and Wang, 2013) sudden infant death syndrome; (Zhang and Wang, 2013) ear infections; (Zhou et al., 2014) and adverse behavioural and cognitive outcomes (Zhou et al., 2014). Thus, the implications of maternal smoking relapse can be enduring.

Maintaining smoking abstinence can be challenging, partly due to tobacco dependence (Shiffman et al., 1996). Other risk factors

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associated with resuming smoking postpartum in the general population include being less educated, having a partner or a household member who smokes, high levels of stress, depression and anxiety, lacking confidence in maintaining abstinence, being younger, multiparity, not breastfeeding, and intending to quit smoking only for pregnancy and postpartum periods (Orton et al., 2018). First Nations women in high-income countries, who share similar experiences of European colonisation, have higher smoking rates in pregnancy than their general population counterparts (Gould et al., 2017) and postpartum relapse is common (Patten et al., 2019). Although Aboriginal and Torres Strait Islander women (hereafter Aboriginal) often make multiple quit attempts while pregnant, very few of them succeed in staying abstinent post-delivery (Bovill et al., 2020). Aboriginal peoples are more likely to make a quit attempt than the general Australian population but are less likely to stay abstinent (Nicholson et al., 2015). Despite relapse being a well-researched aspect of tobacco dependence, in general, relapse prevention interventions are yet to be shown as beneficial (Meernik and Goldstein, 2015; Livingstone-Banks et al., 2019)

Quitting smoking during pregnancy and early postpartum periods can be difficult due to faster nicotine metabolism during this time (Bowker et al., 2015). Furthermore, health behaviours are highly contextual and thus, are subject to interplaying influences from different and relevant levels of the socioecological setting (Sallis et al., 2015). Although Aboriginal women experience similar barriers to quitting smoking compared with non-Aboriginal pregnant women, they face unique systemic barriers. For instance, racism and the enduring legacy of colonisation in policies perpetuating inequity influence Aboriginal women's smoking and smoking cessation experiences to a significant extent. Smoking cessation experiences of Aboriginal women need to be understood in the context of colonial policies enabling dependence through using tobacco as payment for labour and as rations in the past, and a lack of cultural salience in existing smoking cessation care (SCC) (Rahman et al., 2021). Thus, Aboriginal women require tailored support to meet their long-term smoking cessation needs built on empowerment and autonomy (Rahman et al., 2021; Askew et al., 2019)

SCC for pregnant and postpartum women is intended to be embedded in maternal care in Australia. However, health professionals providing SCC in the maternal care setting experience barriers in providing this support in ways that meet Aboriginal women's smoking cessation needs. Major challenges include: perception that providing SCC is not part of their professional role, a lack of confidence to deliver SCC to the expected extent, (Tzelepis et al., 2017) and time constraints (Bar-Zeev et al., 2017). Clearly, there remains inadequacy in individual-level SCC provision for pregnant and postpartum Aboriginal women, thus hindering long-term abstinence.

Evidence on strategies that might help Aboriginal women to quit smoking in pregnancy is limited (Chamberlain et al., 2017), more so with relapse prevention, with no such intervention for First Nations people identified in a Cochrane review on relapse prevention published in 2019 (Livingstone-Banks et al., 2019). While the National Tobacco Strategy (2023–2030) identifies addressing Aboriginal smoking in pregnancy as a priority, the rate of smoking in pregnant Aboriginal women is alarmingly high at 42 % (Care ADoHaA. National Tobacco Strategy 2023). Such high smoking prevalence has implications for meeting the *Close the Gap* target to increase the proportion of Aboriginal babies with a healthy birthweight to 91 % by 2031 (Commonwealth of, 2021) as smoking in pregnancy is a major contributor to low birthweight in Aboriginal peoples (Smith et al., 2019). Anti-smoking activities or pregnancy-specific interventions do not appear to have an effect on smoking in pregnancy in general, (Havard et al., 2018) and research on the impact of relevant policies on Aboriginal smoking in pregnancy is rare. To address this gap in the evidence, this study explores the systemic barriers i.e., service- and policy-level barriers to provision of SCC, focusing on relapse prevention, among Aboriginal women in the context of pregnancy. The evidence presented in this study offers insight into required policy-level actions that can potentially enable the delivery of SCC in pregnancy to be more aligned with Aboriginal women's cessation needs. Policies can be targeted at service-level to foster an equitable smoking cessation experience for Aboriginal women at an at individual-level to facilitate long-term abstinence.

Methods

This research employed a pragmatic inquiry approach that aimed to generate knowledge and inform action and propose solutions to the problems being studied, considering time and resource constraints (Patton, 2015). In qualitative research guided by a pragmatic approach, the researchers would ask practical questions to gather answers that would be actionable and could be translated into solutions to the problem under investigation. This approach also allows for flexibility in making methodological decisions as the study progressed (such as using mixed-methods and adapting data collection), to achieve the study objectives within limited timeframes and resources (Patton, 2015). Data were collected via key informant interviews and were analysed thematically using an inductive approach (Patton, 2015).

Recruitment

Individuals providing SCC to pregnant and postpartum Aboriginal women in Australia, in any capacity, were eligible to participate. Participants were invited to take part in the study if they provided smoking cessation support to Aboriginal women and/or managed smoking cessation programs within their professional roles. A variety of key informants were purposively approached: health promotion workers, doctors, midwives, nurses, Aboriginal Health Workers, Quitline (a free nationwide telephone smoking cessation counselling service, with a dedicated stream known as Aboriginal Quitline to provide SCC to Aboriginal people) counsellors, tobacco treatment specialists, tobacco control officers and management staff of Aboriginal Medical Services (AMSs). Participants were based in the following Australian states/territories: New South Wales, Queensland, Victoria, Western Australia, Australian Capital Territory and Northern Territory.

A pragmatic sampling approach was employed to include a diversity of perspectives from SCC providers. Representation of a range of SCC providers were ensured by utilising a multipronged recruitment strategy. Firstly, TR, a non-Aboriginal researcher promoted the study via an electronic study brief and a flyer to professional networks of MK, an Aboriginal academic and GSG, a non-Aboriginal academic and clinician. Secondly, TR invited participation from SCC providers who attended a special roundtable discussion on maternal smoking among Aboriginal women, convened by the Australian Government Department of Health in 2020. Thirdly, a snowballing sampling technique was used whereby participants were encouraged to promote the study to potential participants. The attainment of data saturation guided recruitment. Participants had an opportunity to win a prize draw upon completion of the study.

Participants were recruited from the following avenues of support available to pregnant and postpartum Aboriginal women under the current model of SCC in Australia:

(i) A national tobacco control initiative entitled Tackling Indigenous Smoking (TIS) program that operated to provide community outreach to Aboriginal communities in certain areas across Australia, employing a population health approach. It offered health promotion and information to pregnant and postpartum Aboriginal women via group activities, community events, opportunistic personal interception (i.e., meeting by chance and initiating a conversation), and promotion of environmental changes such as smoke-free homes and cars (Australian Government Department of Health 2021).

(ii) Health professionals who provided brief smoking cessation interventions as part of routine care, i.e., doctors, midwives, nurses, Aboriginal Health Worker, Tobacco Treatment Specialist or Tobacco Control Officer, and Quitline counsellors via AMSs, mainstream health

facilities and telephone counselling services. In the clinical setting, guidelines recommend that health professionals provide SCC to individual women, which ideally involves screening for smoking, assessing tobacco dependence and readiness or motivation to quit, respectfully advising on quitting smoking, assisting women according to their needs, arranging to follow up with them, and provision of Quitline referrals if necessary (Australian Government Department of Health 2019).

Data collection

Data were collected between October 2020 and July 2021 by online (on Zoom) or telephone interviewing due to COVID-19 related restrictions concerning face-to-face data collection. Interviews were audio-recorded with the participants' consent. Before the interviews, participants were provided with the participant information sheet and the consent form via a Research Electronic Data Capture link, which they could access using a computer or any mobile device (Harris et al., 2019). TR conducted the interviews following a study specific interview topic guide (Supplementary file), informed by the systemic barriers to smoking cessation that Aboriginal women experience (Sallis et al., 2015; Rahman et al., 2021). Interviews were 45 minutes long on average. Audio records were transcribed verbatim using a professional transcription service. Transcriptions were sent back to participants for a member check if they were willing to do so.

Analysis

TR and JB, an Aboriginal academic and clinician, individually coded six interviews to develop a codebook. They exchanged their codebooks to compare and identify concordance and discrepancies and developed a unified codebook. Disagreements about emerging codes were resolved via frequent discussion between TR and JB and guidance from MK. Subsequently, TR coded the remaining interviews following the codebook. JB randomly checked 20 % of those interviews for consistency. TR then performed a higher-level analysis to reach emergent themes according to the study objectives, with frequent reflexive discussions with MK, GSG and ALB, a non-Aboriginal academic and clinical psychologist. These discussions involved iterative examination of the themes to address the influence of researchers' own experiences and perspectives on the interpretation of the evidence to reduce level of bias and thus, ensure transparency in the analysis. MK provided cultural oversight and guidance in answering the research question and analysing the evidence. MK, ALB and GSG provided overall guidance regarding data analysis and reporting of the evidence. Reflexivity was iteratively practised at all stages of the study; TR maintained a diary and met co-authors as required. Evidence has been reported using the Standards for Reporting Qualitative Research checklist (O'Brien et al., 2014)

Results

Twenty-six participants were recruited (Table 1). Participants were predominantly female. The proportion of Aboriginal and non-Aboriginal participants was equal.

Five major themes emerged from the data: (a). Limited time, with competing priorities and shortage of health professionals; (b). A need for more knowledge and skills for health professionals; (c). Influence of funding allocation and models of SCC; (d). Lack of relevance of anti-tobacco messages to pregnancy and postpartum relapse; and (e). Way forward. The influence of the themes on the service and policy levels barriers were not mutually exclusive as barriers grouped across themes were often interlinked and collectively appeared to impact Aboriginal women's smoking cessation experienced as noted by the participants. Thus, an interplay among themes was observed.

Table 1
Demographic characteristics of participants ($N = 26$).

Characteristics	Numbers
Age (Years)	
≤44	13
45–59	11
≥60	1
Chose not to respond	1
Sex	
Female	21
Male	5
Ethnicity	
Aboriginal	13
Non- Aboriginal/Torres Strait Islander	13
Experience in tobacco control (years)	
≤10	20
11-< 15	5
≥15	1
Category of roles	
Service	22
Research	1
Service and policy	2
Service and research	1
Category of smoking cessation care providers	
Tackling Indigenous Smoking Staff	17
Midwives/ Aboriginal Health Worker/ Clinical nurse/ Doctor/ Manager	6
Aboriginal Quitline counsellor/ Tobacco Treatment Specialist/Tobacco Control Officer	3

Limited time, with competing priorities and shortage of health professionals

Pregnant and postpartum Aboriginal women typically receive one-to-one smoking cessation advice during their antenatal and postnatal visits from health professionals who provide this support as part of their role in maternal care. The first antenatal visit was acknowledged as a critical time to initiate a conversation about smoking cessation. The visit would aim to include screening for smoking status; assessing the level of smoking and views about quitting; explaining or reinforcing the necessity of cessation and available cessation options; discussing family and life circumstances; and offering cessation support or referral, depending on individual woman's needs. However, initial antenatal consultations would primarily focus on clinical aspects such as monitoring blood pressure, arranging screening tests, assessing foetal growth, and risks (e.g., gestational diabetes). Thus, the level of support pregnant Aboriginal women required for quitting smoking for the long-term was often constrained by competing priorities within the allocated time for the first antenatal appointment.

> "There's so much to get through on the first visit … We're spending about 10–15 min working out how much the lady smokes and where she's at in wanting to quit. Introducing her to the subject and explaining, then letting her ask questions. It's a big a conversation… In the model of care I work in, I feel like we're doing too much." (Participant-22, Midwife)

Participants reported that in antenatal consultations antenatal care aspects such as monitoring blood pressure, arranging screening tests, assessing growth of the foetus, and risks such as gestational diabetes took precedence.

> "The appointments (are) really focused on pregnancy and making sure they don't miss anything…there's all the scans and blood tests. So, it's (smoking cessation) just added on … another thing for them (Aboriginal women)" (Participant-23, Tobacco Control Officer)

Additionally, during antenatal consultations a care provider would also discuss the life circumstances of the women seeking care. This makes discussing all the relevant care aspects with a brief span of time more difficult.

> "The first visit or two, and it's so much for us to say on that first visit. If they have relationship issues, if they have an unplanned pregnancy, if they have, um, such a lot of housing stress, um, things like that. It is too much to do in one visit. The smoking goes on the back burner. And it doesn't get enough time to mention it. You've got to prioritise things according to the woman's needs not ours." (Participant-22, Midwife)

Discussing smoking cessation was even more challenging when Aboriginal women were accompanied by their young children who needed constant attention. Due to its sensitive nature smoking cessation conversation required a culturally safe, respectful, and non-judgmental setting, which may be limited by time and concern about being judged. Cultural safety involves trust building, helping Aboriginal women who smoke feel comfortable to discuss their smoking experiences and life circumstances, which can be deeply personal, and providing support either in managing their smoking or their cessation needs accordingly: these often required additional time.

> "In a clinical appointment, we don't always have a lot of time for women to feel safe enough to not be judged." (Participant-25, Aboriginal Health Worker)

Some participants mentioned that regular screening for smoking status at every visit "might not be happening as well as it should because of the shortage of medical care and patients were being pushed through very quickly" (Participant-10, TIS Staff), clearly a missed opportunity to identify relapse. Antenatal visits were often far apart. Following up with Aboriginal women between two antenatal appointments, usually over the phone, could be difficult when the women had other priorities such as caring for young children.

For AMSs, the postpartum period could be a difficult time to engage with Aboriginal women as contacting the AMSs after having a baby was "still probably voluntary" (Participant-25, Aboriginal Health Worker). Most TIS staff members mentioned that they engaged postpartum Aboriginal women through providing health promotion information in established groups such as mothers and babies groups at AMSs.

A need for more knowledge and skills for health professionals

Not all health professionals providing SCC to pregnant and postpartum Aboriginal women may be conversant with the latest evidence, knowledge and skills, or feel sufficiently confident. These skills were reported being "not instant" and needed to be "acquired" (Participant-7, Doctor) to provide SCC to the extent that may prevent relapse. One health professional revealed a gap in the undergraduate medical curriculum, with SCC being left out when they studied. This participant also mentioned that combined with time limitations, some health professionals, particularly doctors, might not have perceived providing SCC as their "core business", and a "cultural change" needed to happen via educating health professionals: "there is scope to embed it into the medical degree curriculum" (Participant-7, Doctor). Another health professional highlighted a need for Aboriginal-specific resources to help non-Aboriginal health professionals understand the "different socio-political limits for Aboriginal patients" and the skills to apply this knowledge into practice (Participants-24, Doctor). To be able to provide SCC according to Aboriginal women's needs in a culturally safe manner health professionals require knowledge of the social, political historical context of commercial tobacco use in Aboriginal communities. A lack of the skill to apply the knowledge into practice was a concern. For instance, good communication skills were deemed to be critical to tailor SCC, avoiding "negative interaction", making Aboriginal women "feel comfortable enough to discuss their smoking" (Participant-24, Doctor) and working out a shared plan. However, education alone was not always considered to be sufficient to empower health professionals with the confidence required to support Aboriginal women, especially if women experienced a high level of stress. Some health professionals found that a woman may say *"No"* to help because "saying yes to help is too hard, with relationship issues, housing issues, poverty… and not knowing where they're going to be living in a few weeks' time" (Participant-22, Midwife). One health professional reported being cautious about discussing smoking cessation as it might discourage Aboriginal women from attending subsequent antenatal visits.

More training and regular refresher courses were deemed necessary to ensure that health professionals were equipped with up-to-date, evidence-based knowledge "because research changes often" (Participant-25, Aboriginal Health Worker). However, further training for health professionals might not be equitably rolled out and covered by paid work time. In some states and territories, midwives can attend training and workshops within their paid working hours. In addition, it was suggested that doctors often find themselves trading off between professional development and clinical hours, potentially feeling less motivated to attend training "because that takes them away from clinical time" (Participant-7, Doctor).

Influence of funding allocation and models of smoking cessation care

> "There's no systematic way of funding and resourcing this particular initiative (smoking cessation in pregnancy)." (Participant-21, Management staff)

The funding model for SCC among Aboriginal peoples, in general, influenced the availability and extent of SCC care for pregnant and postpartum Aboriginal women. While TIS program using a population health approach that "historically funded some AMSs across the country" (Participant-21, Management staff), this only provided access to funding for tobacco control and population health activities in specific AMSs. The way individual-level SCC for pregnant and postpartum Aboriginal women was resourced appeared to impact the capacity of services to support them towards long-term abstinence. Lack of targeted funding for SCC in pregnancy (i.e., services that did not receive TIS program or any other SCC in pregnancy-related funding) was said to impede the consistency and continuation of SCC initiatives. Although there appeared to be sufficient resources such as nicotine replacement therapy and educational materials, the inconsistent availability of trained staff prevented the optimum use of such resources towards achieving long-term abstinence among Aboriginal women.

Thus, the need for identified SCC positions or targeted programs to address smoking in pregnancy context was reported. Perceiving SCC as "everyone's business" (Particular-21, Management Staff) seemed to disregard the specialised knowledge, expertise and dedicated effort required to support change in smoking behaviour during pregnancy. Having relevant staff members have the basic knowledge and skills of SCC helped encourage pregnant and postpartum Aboriginal women to discuss their smoking. However, the actual process of assisting cessation and its maintenance needed individualised support from expert care providers, "who has got the right knowledge, has got the right things in their tool bags" (Participant-21, Management staff). Additionally, some TIS participants highlighted that "there's no guarantee of funding" (Participant-13, TIS Staff) and the program's longevity. This uncertainty contributed to staff shortages and made it difficult to retain experienced staff members.

The impact of a shift to the population health approach within the TIS program was particularly highlighted. The TIS program essentially moved funding away from one-to-one SCC support, except for TIS teams that "had the flexibility to offer one-to-one support in remote areas" (Participant-3, TIS Staff). The majority of TIS staff members felt that there was a need for more individual-level support along with health promotion population-based activities. While group and community-based activities were recognised as raising awareness of tobacco related harms, there were perceived drawbacks: "but, that (group) setting where you might be judged or other people know your stuff" (Participant-18, TIS Staff); individual-level support was deemed "second

to none" (Participant-12, TIS Staff). While Aboriginal Quitline is a source of individual-level counselling over the phone, many participants reported that Aboriginal women prefer talking to someone they "know and trust" (Partcipant-13, TIS Staff). Knowing the individual who was supporting them mattered for Aboriginal women. Most participants, both health professionals and TIS staff members, observed a strong preference for in-person interaction rather than with an "entity that lives up in the clouds and that has no face, no name" (Participant-10, TIS Staff). This was despite the consistent effort to promote Quitline services by participants from both service and health promotion settings. A relationship established on trust was deemed essential. "Smoking can be a personal issue" (Participant 24, Doctor). Therefore, speaking to a stranger and discussing smoking may not "necessarily (be) the most effective way to (go) about it" (Participant-24, Doctor) for Aboriginal women. Participants had also heard from Aboriginal women that they did not answer a phone call from unidentifiable numbers.

> "[Aboriginal] Quitline would ring me back and say I've tried to ring them three times, they've never answered their phone. And when I talk to them, they said, oh I don't know that number. Why would I answer it?" (Participants-3, TIS Staff)

Additionally, the following factors were mentioned as barriers in relation to the Quitline service: a shortage of Aboriginal counsellors; lack of counsellors who could speak Aboriginal languages in the communities they served; and time discrepancies negating the utility of after-hours services due to differing time zones.

Lack of relevance of anti-tobacco messages to pregnancy and postpartum relapse

Anti-tobacco messages are generally either fear-based such as messages that speak of "what this toxic substance could be doing" (Participant-20, Aboriginal Quitline Counsellor) to one who smokes or hope-based, such as messages that are "uplifting, inspirational and empowering" (Participant-20, Aboriginal Quitline Counsellor). Participants raised that fear-based health messages may not be appropriate for Aboriginal smokers, including pregnant and postpartum women, due to the lasting impact of the intergenerational trauma caused by colonisation. "For a person who has experienced trauma, fear can be paralysing" (Participant-20, Aboriginal Quitline Counsellor). Therefore, pregnant and postpartum Aboriginal women might not find the existing anti-tobacco messages relatable. Most participants found anti-tobacco messages, in general, to be lacking an emphasis on taking a long-term approach to quitting, strategies to avoid relapse, and explaining the normalcy of relapse and resuming a quit attempt after starting to smoke again.

> "I don't know that there's anything addressed to relapse at all. All the stuff that I recall is about quitting. And I'm going back ten years now...there was a series of health promotion brochures, and the first one said, 'You're a non-smoker. Keep up the good work.' " (Participant-19, Tobacco Treatment Specialist)

Likewise, the participants also reported that there was a lack of relevance to long-term abstinence for pregnant and postpartum Aboriginal women in current anti-tobacco messages.

> "I wouldn't say that we have now a lot of focus on relapse. So, we would have to complement smoking in pregnancy, bringing something through on relapse and how addiction works" (Participant-18, TIS Staff)

While anti-tobacco messages appeared to be one of the critical tools in supporting quitting, such messages often did not adequately align with pregnant and postpartum Aboriginal women's context of smoking and their cessation needs.

Ways forward

Participants were asked to provide suggestions for improving practice and policy going forward. Many participants emphasised the necessity of funding for dedicated staff who can provide high-level expertise in SCC for pregnant and postpartum Aboriginal women. "If we can make it (budget) more accessible in developing a program that can be run in a clinic at an AMSs with one employee, rather than having every employee educated in it but no one having the time to do it." (Participant-25, Aboriginal Health Worker). To address the challenge regarding limited appointment times, the introduction of a standalone appointment "all on its own" (Participant-22, Midwife) for smoking cessation was suggested. Participants recommended a separate "billing number within Medicare" (Participant-19, Tobacco Treatment Specialist) under publicly funded health care so that health professionals were empowered to offer extended consultations to Aboriginal women based on their need.

More training and skill building for clinicians providing one-to-one SCC to pregnant and postpartum Aboriginal women were recommended with a focus on non-Aboriginal SCC providers' cultural awareness, understanding of the social determinants of health for Aboriginal peoples, and trauma-informed approaches to care. An increase in trained Aboriginal health professionals, who were considered able to deliver SCC more effectively as "receiving messages from their own mob in positions of authority and power, seem to have more impact than if it was coming from a non-Indigenous (*Aboriginal*) health provider." (Participant-7, Doctor).

The majority of TIS staff members appreciated the previous form of the program when one-to-one SCC was allowed along with health promotion and indicated that combining health promotion and individual-level support may be more comprehensive.

> "When we'd done that (one-to-one and health promotion) we were promoting health but with a focus on pathways to community-controlled health services, we saw more people refer to the quit support … then we changed the model … if you keep changing the goalposts, it impacts our ability to understand whether we're getting something really wrong or really right." (Participant-13, TIS Staff)

Participants made recommendations for making pregnancy-specific smoking cessation messages more targeted for enduring impact.

> "Statistics and numbers, that's really easy just to wash off. We're story people. When you start developing that story in mum's mind, that's where you get her a little bit more interested in the outcomes." (Participant-25, Aboriginal Health Worker)

Taken together these recommendations demonstrate practical considerations to accommodate the barriers previously expressed of time constraints, lack of resources and culturally nuanced approaches to develop SCC workforce.

Discussion

Qualitative evidence collected through 26 key informant interviews with health professionals, managers, and tobacco-related health promotion workers offered important insights into the systemic barriers to SCC and their effects on long-term smoking cessation outcomes of pregnant and postpartum Aboriginal women. The major themes that emerged from the data were time constraints in implementing SCC within the current model of care; a need for empowering health professionals continually with advanced knowledge and skills; the influence of funding allocations; the salience of anti-tobacco messages to pregnancy and postpartum relapse; and the opportunities for improvement. The themes were interlinked and the complex interplay among them warrants being understood holistically. Ensuring cultural safety in SCC for pregnant and postpartum Aboriginal women was deemed critically important for effectively supporting them to achieve long-terms

smoking abstinence. Most participants noted the interrelationship between smoking and the enduring impact of colonisation that reflects on the socioeconomic inequities and complex intergeneration trauma Aboriginal women often experience. They also noted the importance of establishing a trusted relationship and creating a safe and non-judgemental environment at SCC providing settings. However, SCC providers, particularly non-Aboriginal providers who not always be equipped with appropriate knowledge and expertise to provide SCC to Aboriginal women to the extent that it empowers them to quit smoking and maintain abstinence. SCC within antenatal and maternity care settings is constrained by the limited time and this is compounded by the intensive SCC that pregnant and postpartum Aboriginal women may require to continue abstinence from tobacco smoking.

Pregnant women may need intensive support to quit smoking due to the physiological changes during pregnancy increase nicotine metabolism and potentially increase cravings, making quitting more challenging (Bowker et al., 2015). Furthermore, Aboriginal women are often faced with difficult life circumstances and heightened stress during pregnancy, therefore, they require more holistic support to stay abstinent (Askew et al., 2019). Three different women-centred, culturally-based, social and emotional wellbeing oriented, and trauma-informed programs in New South Wales, Queensland and Western Australia found that Aboriginal women found it difficult to stay abstinent when they were stressed (Askew et al., 2019; Wyndow et al., 2020; Clapham et al., 2019). Thus, supporting Aboriginal women through stressful life circumstances was challenging even within more holistic SCC provisions. Our participants maintained that SCC in pregnancy requires a dedicated and longer consultation time. The recent inclusion of specific smoking cessation item numbers (in person and telehealth) on the Medicare Benefits Schedule allows a new scope for consultations of varying duration to support SCC from medical professionals (i.e., general practitioners) (Australian Government Department of Health 2021). However, this does not allow healthcare professionals such as midwives and Aboriginal Health Workers who are often key provider of SCC in maternal health care setting to provide longer consultations under the above provision.

Individual-level SCC was deemed critical to meaningfully support pregnant and postpartum Aboriginal women to be smoke-free for the long-term. A Cochrane review found psychosocial interventions, including one-to-one behavioural counselling to increase the quit rate in late pregnancy (Chamberlain et al., 2017). Another review, however, could not identify any specific strategy for relapse prevention among pregnant women (Livingstone-Banks et al., 2019). One review found group-based interventions employing behaviour change techniques increased the quit rate (Mersha et al., 2023). However, participants in our study observed that one-to-one SCC from a trusted health professional was preferred and acceptable to Aboriginal women. This might explain why Aboriginal women were considered to have a lower preference in availing SCC from unknown counsellors on the Quitline.

Our findings suggest that access to consistent funding affects staff retention at AMS settings and within TIS teams. While tobacco control, health promotional activities and the Quitline receive dedicated funding, under the current public funding model, there is minimal scope for ensuring individual-level, one-to-one SCC provision by trained experts that is critical for achieving long-term abstinence (Australian Government Department of Health 2021). The preliminary TIS evaluation in 2017 highlighted that funding uncertainty led to the discontinuation of contracts of trained staff members (Cultural and Indigenous Research Centre Australia 2017). The TIS funding cycles were deemed too short and variable. Over the years, the TIS program contributed immensely to achieving significant progress in tobacco control in Aboriginal communities, (Thomas and Calma, 2020; Cohen et al., 2021) with better reporting of smoking status creating the potential for individual-level interventions. However, our data suggested that changes in the policy directive in favour of a population health based approach to SCC within TIS program (Australian Government Department of Health 2014) may not have benefited pregnant and postpartum Aboriginal women needing individual-level SCC to achieve and maintain cessation. Participants in this study observed a need for further individual-level support for pregnant and postpartum Aboriginal women to give up smoking and maintain abstinence.

The 2018 TIS final evaluation report also acknowledged the relevance of and preference for one-to-one SCC (Mitchel et al., 2018). Individualised and tailored support, along with group-based activities for wider awareness, was found to be useful in helping Aboriginal women maintain abstinence in one of the pregnancy-specific programs funded through TIS Innovation Grants in regional New South Wales (Clapham et al., 2019). However, AMSs that do not receive TIS funding, have to explore funding from other sources, which can be competitive and limited. Therefore, SCC provisions initiated under the short-term funding that services may sporadically receive (e.g., having a dedicated smoking cessation staff member) may be forced to stop when the funding ends.

Allocation of funding has implications for the intensity of SCC that pregnant and postpartum Aboriginal women receive. The current practice of making SCC in pregnancy everyone's business (Australian Government Department of Health 2020) may create awareness by enabling opportunistic very brief interventions and nudging. However, a need for dedicated smoking cessation staff has been highlighted by many participants, from TIS staff members and health professional groups in this study. Aboriginal Health Workers/Practitioners may be well positioned to provide SCC in pregnancy (Kennedy et al., 2023). The Quit for New Life program implemented by the New South Wales state government between 2013 and 2018 for women who were having an Aboriginal baby aimed to embed best practice care within routine maternal care (Health, 2021). However, this program faced similar barriers to those stated by this study and a reported low preference for Quitline support among women.

The need for enhancement in knowledge and skills of non-Aboriginal health professionals highlighted in this study is in line with the literature (Bar-Zeev et al., 2017; Gould et al., 2020). While the need for further training aligns with evidence, time constraints may limit health professionals opportunities to apply their existing skills into practice. Anti-tobacco messages are an important part of tobacco control in Australia. Our results give strength to the evidence that while social marketing can influence behavioural change, the content needs to have personal and cultural relevance (Flemington et al., 2021). However, to achieve these goals, it is critical to address the social determinants of health and improve the socioeconomic conditions of Aboriginal women so that they are empowered to apply health practices for smoking abstinence.

Implications

To achieve the *Closing the Gap* target of reducing low birthweight in Aboriginal babies by 2031 will require smoking prevalence among Aboriginal women to become close to that of general pregnant populations (Commonwealth of, 2021). Holistic individual-level support, as mentioned in the National Tobacco Strategy (2023–2030), (Care ADoHaA. National Tobacco Strategy 2023) will require a higher investment in dedicated positions so that Aboriginal pregnant women who smoke during pregnancy receive the intensive and expert support that they clearly require. Effective smoking cessation initiatives in a priority area like pregnancy, which can contribute to generating intergenerational health benefits, can potentially contribute to reducing the heavy social cost of smoking as well (Whetton et al., 2019). From 2019–2022, the Australian government invested in a program to train the existing workforce about smoking cessation in pregnancy through the iSISTA-QUIT (implement Supporting Indigenous Smokers To Assist Quitting) program via the TIS national program and the program is now being scaled up (Gould et al., 2022). The scope of SCC item numbers on the Medicare Benefits Schedule created for health professionals needs to be

expanded to allow those who are likely to have more frequent interaction with pregnant and postpartum women such as midwives and Aboriginal Health Workers to be reimbursed for longer consultation to offer more intensive support to quit smoking. Kennedy and colleagues reported that Aboriginal Health Workers/Professionals may be well-placed to provide SCC to Aboriginal communities (Kennedy et al., 2023). Quitline operates a program in the state of Queensland, entitled Quit for you Quit for baby, dedicated to pregnant Aboriginal women (Queensland Governemnt 2021). Better coordination between Quitline and SCC provisions in clinical settings, and more engagement of Quitline counsellors with Aboriginal communities may be beneficial. Quitline referral from a trusted SCC provider and provision for the provider to accompany Aboriginal women in the first two call with Quitline to establish trust may be considered. This may help improve coordination between Quitline and the SCC provision available in the clinical settings.

Guided by our analysis, we make the following recommendations that can be implemented and assessed in the short-, medium-, and long-term (Table 2). Supporting pregnant and postpartum Aboriginal women to achieve long-term smoking abstinence would require systemic changes. These changes include committing to investments in SCC strategies that were found to be effective in assisting them to quit smoking, developing an Aboriginal SCC workforce, and empowering the SCC workforce providing care to Aboriginal women with relevant knowledge and skills to deliver culturally safe SCC. Changes required also include creating provision for adequately reimbursing critical SCC providers in maternal care settings (i.e. midwives and Aboriginal Health Workers) to ease the time constraints they often face in providing culturally safe SCC to Aboriginal women.

Strengths and limitations

This is the first study to explore systemic barriers to providing SCC to prevent relapse and maintain long-term abstinence among Aboriginal women from the perspectives of different SCC providers and related health service workers. It presents the perspectives of a major stakeholder group on smoking relapse prevention in pregnant and postpartum Aboriginal women, an area that has received limited attention. The policy recommendations (Table 2) draw on the views of SCC providers in pregnancy to inform relevant policies. However, further research should be conducted to consider wider perspectives of SCC recipients – pregnant and postpartum Aboriginal women. The majority of participants were TIS workers, so the findings may predominantly represent their views. Recruiting clinicians posed some challenges, with potential participants often having time constraints due to their professional commitments. For instance, only one-third (3/9) invited midwives/nurses/Aboriginal Health Workers could participate in the study. Overall, the number of Aboriginal Quitline counsellors was limited. Involving them in this research could result in a reduced availability of counsellors to support clients in their quitting journey. This posed an ethical dilemma, and participants were not recruited in such instances. Despite their small numbers, health professionals' perspectives offered deep insight. Participants did not include anyone working in the state of South Australia and Tasmania. Any unique barriers to supporting long-term smoking cessation in pregnant and postpartum Aboriginal women experienced by SCC providers in these two states were not reflected in the data. Therefore, this evidence may not be transferable to those state contexts. The study was conducted online via Zoom or over the phone, in compliance with COVID-19 pandemic enforced restrictions on research requiring in-person interaction. This prevented observation of non-verbal cues such as body language and gestures during interviews, potentially limiting opportunities for capturing important nuances and contexts for better understanding of the contexts.

Conclusion

In a qualitative study conducted with 26 health professionals, health

Table 2
Recommendations by implementation and evaluation terms and action levels.

Recommendations	Implementation and evaluation term	Action level
Clear national policy direction regarding further investment in the individual-level SCC for pregnant and postpartum Aboriginal women.	Medium-term	Policy
Consistent and identified funding support to facilities providing individual-level SCC to pregnant and postpartum Aboriginal women.	Medium-term	Policy
Consideration of reinvesting in strategies that were deemed effective previously, for instance, providing one-to-one counselling from trained TIS workers along with health promotion activities.	Long-term	Policy and research
Reimbursing midwives and Aboriginal Health Workers to provide longer consultation to Aboriginal women along with general practitioners (which is currently happening via Medicare Benefits Schedule SCC item numbers) and monitoring and evaluating the utilisation of this provision to assess its effectiveness in supporting pregnant and postpartum Aboriginal women.	Short-term	Policy, service and research
A separate and longer smoking cessation appointment with relevant health professionals with adequate reimbursement, where necessary, as a remedy for time limitations. Additional support services such as childcare facilities for Aboriginal women with young children attending antenatal or postnatal appointments may be considered.	Short-term	Policy, service and research
Creating dedicated smoking cessation worker positions to support pregnant and postpartum Aboriginal women to quit smoking and achieve long-term abstinence.	Long-term	Policy and service
Development of Aboriginal health workforce by training more Aboriginal peoples as health professionals (doctors, midwives, nurses, and Aboriginal Health Workers/Practitioners) who would have more understanding of the context of pregnant and postpartum Aboriginal women and their needs for smoking cessation support.	Long-term	Policy
Embedding smoking cessation in the undergraduate and postgraduate level medical training emphasising the link between smoking cessation and prevention of non-communicable diseases prevention and introducing specialised training in smoking cessation in pregnancy.	Long-term	Policy and research
Improved coordination among all aspects of SCC in supporting Aboriginal women to stay abstinent.	Short-term	Service
Dedicated sections for SCC within the health professional continuing professional development curriculum to better capture opportunities for intervention and regular refresher courses based on new evidence.	Short-term	Service and research
Exploration of Aboriginal women's barriers to using the Quitline and recommendations for enhancement in pregnancy. Initiatives such as sending text messages prior to calling Aboriginal women to optimise	Short-term	Research

(*continued on next page*)

Table 2 (*continued*)

Recommendations	Implementation and evaluation term	Action level
chances of reaching them and having trusted SCC providers to link Aboriginal women with Quitline in the first two calls may be considered to build their confidence in Quitline.		
Further exploration of additional systemic barriers in supporting pregnant and postpartum Aboriginal women in remote and very remote areas to make SCC more equitable.	Short-term	Research

service managers, and health promotion workers, service and policy-level barriers were found to have an impact on the adequacy of SCC pregnant and postpartum that Aboriginal women receive. Based on our findings, we argue that a coordinated care approach for all SCC providers is important. We recommend prioritising reimbursement for midwives and Aboriginal Heath Workers/Professionals, along with general practitioners, to create scope for them to provide intensive SCC to pregnant and postpartum Aboriginal women, building confidence in Quitline, continuing health professionals' capacity building and allocating consistent funding to SCC provisions that have been efficacious with Aboriginal women.

Ethical approval

Ethics approval was granted by the Human Research Ethics Committee of Aboriginal Health and Medical Research Council of New South Wales, Australia (ID: 1618/19; Approved on 9 March 2020). Subsequently, the study was registered with the Human Research Ethics Committee of the University of Newcastle (H-2020–0107).

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CRediT authorship contribution statement

Tabassum Rahman: Writing – original draft, Project administration, Investigation, Formal analysis, Data curation, Conceptualization. **Jessica Bennett:** Formal analysis. **Michelle Kennedy:** Writing – review & editing, Supervision, Methodology. **Amanda L. Baker:** Writing – review & editing, Supervision. **Gillian S. Gould:** Writing – review & editing, Supervision, Methodology.

Declaration of competing interest

None declared.

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Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.midw.2024.104163.

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