

Brief report

Provision of Antenatal Smoking Cessation Support: A Survey With Pregnant Aboriginal and Torres Strait Islander Women

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Abstract

Introduction: Guidelines recommend assessment of smoking status, with advice and support for smoking cessation, as a routine and integral part of antenatal care. Approximately 50% of pregnant Australian Aboriginal and Torres Strait Islander women smoke through pregnancy, 3 times the rate of other pregnant Australian women. This study describes smoking cessation assessment and support reported by pregnant Aboriginal and Torres Strait Islander women.

Methods: Surveys of 261 pregnant Aboriginal and Torres Strait Islander women in New South Wales and the Northern Territory, Australia assessed women's reports of assessment, advice and support for smoking cessation from antenatal providers.

Results: The majority of women (90%, 95% CI = 85, 93) reported being asked their smoking status; 81% (95% CI = 73, 87) of smokers reported being advised to stop smoking and 62% (95% CI = 53, 71) of smokers reported being offered support to quit.

Conclusions: Despite most pregnant women who smoke reporting advice and support to quit, the persisting high prevalence of smoking suggests that this support is insufficient to overcome the many factors pushing women to smoke. Improving the support provided to women will require empowering the antenatal providers with adequate skills, appropriate resources and effective interventions. Current guidelines are based on research from non-Indigenous populations, as there are no published effective interventions for Indigenous pregnant women. Trials of interventions designed specifically for pregnant Aboriginal and Torres Strait Islander women are urgently needed, as are approaches aimed at reducing uptake of smoking.

Introduction

Approximately 50% of pregnant Australian Aboriginal and Torres Strait Islander women smoke through pregnancy, three times the rate of other pregnant Australian women, contributing to the disparity in birth and other health outcomes for Indigenous Australians.¹ Similarly elevated rates of antenatal smoking exist among colonized Indigenous women in New Zealand, Canada, and the United States.² Antenatal smoking increases the risk of numerous adverse outcomes for the mother and baby. Risks for the mother include

premature labor, premature rupture of membranes, and placental abnormalities.^{3,4} For the baby, the consequences can be even greater, with increased risk of perinatal death, low birth weight, preterm birth, and sudden infant death syndrome.^{3,4} Smoking is the single most important modifiable cause of adverse foetal outcomes in western countries, and consequently, addressing antenatal smoking is a critical component of antenatal care.⁵ Guidelines recommend assessment of smoking status, with advice and support for smoking cessation, as a routine and integral part of antenatal care.^{6,7}

There is evidence that despite guideline recommendations, provision of smoking cessation advice and support during antenatal care is sub-optimal. A recent review of studies assessing health care providers self-reported provision of antenatal smoking cessation care found that assessment of smoking status is common (73%–100% in the 14 studies included).⁸ However, offers of support to achieve cessation are lower, ranging from 27%–99% for assistance with quitting, and 6%–42% for arranging follow-up care.⁸ Pregnant women also report receiving low rates of assessment and support. An Irish study found that 86% of women attending for their first antenatal visit reported being assessed for smoking, compared to only 18% of women attending for subsequent visits.⁹ Among smokers, only 25% reported being advised to stop smoking.⁹ Australian studies with pregnant women have reported reasonably high rates of assessment of smoking status (80%–89%), with lower rates of advice to quit (37%–75%) or offers of advice on how to achieve cessation (22%–65%).^{10–12} There have been no studies asking pregnant Aboriginal and Torres Strait Islander women about the advice and support they have received for smoking cessation from their antenatal providers.

The aim of this article is to describe smoking cessation assessment and support provided by antenatal care providers, as reported by pregnant Aboriginal and Torres Strait Islander women.

Methods

This paper uses data from surveys with pregnant Aboriginal and Torres Strait Islander women in New South Wales (NSW) and the Northern Territory (NT), Australia. The detailed methods have been previously reported.^{13,14} Briefly, pregnant Aboriginal and Torres Strait Islander women receiving antenatal care through community-based antenatal services and a large hospital antenatal clinic completed a questionnaire on use of tobacco and other substances during pregnancy. Data collection took place in 2009 in NSW and 2010–2011 in the NT. The project was guided by a community reference group (CRG) of Aboriginal women and service providers from rural NSW to enhance cultural security. Ethical approval for the research was provided by the Human Research Ethics Committees of the University of Newcastle; Hunter New England Health; the Aboriginal Health and Medical Research Council; and the NT Department of Human Services and Menzies School of Health Research.

Women were invited to participate by the antenatal team providing their care, or by a trained female Aboriginal research assistant. Women were eligible if they were pregnant and if they or their partner were Aboriginal and/or Torres Strait Islander; and were excluded if they were aged 16 years or less (as these girls would require parental or guardian consent), were being treated for mental illness, or were unable to provide informed consent. All women provided written consent to participate.

A draft questionnaire was developed based on a literature review of smoking during pregnancy and smoking among Indigenous people. The draft questionnaire was reviewed by the CRG and colleagues with expertise in Indigenous health research and questionnaire design. Following revisions, the questionnaire was pilot tested with pregnant Aboriginal and Torres Strait Islander women in Western Australia and NSW, with further changes made in consultation with the CRG. The final questionnaire took approximately 15–20 min to complete and had a Flesch-Kincaid reading level of grade 6. Women were offered assistance to complete the questionnaire if desired. The questionnaire covered demographic and obstetric characteristics, self-reported substance use (tobacco, alcohol, cannabis), changes

in substance use in pregnancy, knowledge of risks and attitudes to smoking in pregnancy and views on potential strategies to support pregnant women to quit smoking.

In this article we report women's responses to the questions:

1. Has your doctor, health worker or midwife asked you whether you smoke tobacco in this pregnancy? Response options were: "Yes," "No," or "I don't remember."

Women who smoked were then asked to answer two additional questions:

1. If you are a smoker, did they advise you to quit smoking during the pregnancy?
2. If you are a smoker, did they offer to support you to quit smoking during the pregnancy?

For these two questions, the response options were: "Yes," "No," "I don't remember," or "I'm not a smoker."

Summary statistics of respondent characteristics were calculated. Data were analyzed to calculate proportions and 95% confidence intervals for each response to the questions on care received. Analysis for the latter two questions was restricted to those indicating they were smokers. Univariate associations of respondent characteristics with reported care received were examined using the Pearson's chi-square statistic for categorical explanatory variables and the non-parametric Mann-Whitney test for continuous explanatory variables.

Results

In total, 264 women completed questionnaires. Response rates for the entire sample are not known as some sites recruiting women did not return their participation logs. Among those sites returning participation logs, the response rate was 88% in the community sites and 78% in the hospital antenatal clinic.

Of the 264 women completing the survey, 261 answered the questions reported here. Characteristics of the participants are provided in [Table 1](#).

Responses to the questions related to assessment and support for smoking cessation are presented in [Table 2](#). There were high levels of routine assessment (90%), with 81% of women reporting advice to quit but only 62% reporting offers of support to do so. There were no differences by age, education, or parity, with the exception that women who were primiparous were more likely to report being offered support to quit (72%) compared to 59% of women of higher parity ($p = .025$) (data not shown in table).

Discussion

The results suggest that the majority of Aboriginal and Torres Strait Islander women participating in these surveys were routinely assessed for their smoking status, and that advice to quit smoking and support to do so were offered to most smokers. The results are similar to those reported from a major metropolitan Australian hospital following an implementation strategy to enhance assessment and support for smoking cessation in which approximately 75% of women reported being advised to quit smoking and 65% reported being offered support.¹¹ The rate of assessment is also similar to that reported from a statewide survey in Victoria following a guideline implementation program, in which 89% of women reported being asked their smoking status.¹²

The high levels of assessment are to be expected, as smoking status of pregnant women is now routinely collected and reported in Australian national datasets,¹⁵ requiring providers to assess smoking status for all women. However, while guidelines recommend advising smokers to quit, with ongoing support,⁷ data on advice and support are not routinely collected.

In this study the majority of smokers report being provided with advice and offers of support for cessation, although the quality of this advice and support is not known from the very limited questions included in our survey. Previous surveys with antenatal providers caring for pregnant Aboriginal and Torres Strait Islander women have identified poor knowledge of smoking cessation, with some expressing low levels of confidence in their skills.¹⁶ There is also little evidence for effective approaches to supporting pregnant Indigenous women to quit smoking, with no successful trials yet published.¹⁷ The only published trial of a smoking cessation intervention specifically designed for pregnant Aboriginal and Torres Strait Islander women did not demonstrate a significant effect of the intervention.¹⁸ Thus, current antenatal smoking cessation guidelines are not specific to Aboriginal and Torres Strait Islander women, for whom the drivers of continued smoking, and the barriers to cessation, are particularly powerful. These include a high prevalence of smoking within the household, numerous personal and social stressors, socioeconomic disadvantage, low priority placed on smoking cessation relative to other issues, and use of other substances such as alcohol and cannabis.^{13,14,17,19–21} Similar issues have been identified among New Zealand Maori.²² Rather, the guidelines are based on evidence from non-Indigenous populations, do not address the common barriers to cessation experienced by Aboriginal and Torres Strait Islander women, and do not address issues of cultural security in provision of care.^{19,23} Trials of smoking cessation support programs specifically designed to address the issues faced by Aboriginal and Torres Strait Islander women are therefore urgently needed.

Until evidence specific to Aboriginal and Torres Strait Islander women becomes available, adaptation of approaches successfully used with other disadvantaged groups of pregnant women may assist. However, a recent Cochrane review on this topic found that although interventions provided to women of low socioeconomic status had similar effectiveness to those provided to other women, trials of interventions with pregnant women from ethnic minorities were all negative.² This suggests that care needs to be taken in adapting approaches from ethnic majority groups, and that further trials are needed for other ethnic minorities, including colonized Indigenous women such as Maori. A further barrier to implementation of effective interventions is the lack of sufficiently detailed information usually reported in clinical trials. A recent review of the quality of reporting of smoking cessation trials for pregnant women

Table 1. Characteristics of Survey Respondents (n = 261)

	n	%
Smoking status		
Current smoker	120	46
Ex-smoker	56	21
Never smoker	85	33
Age group (years)		
<20	56	21
20–24	86	33
25–29	61	23
≥30	58	22
Highest year at school ^a		
<10	76	30
10–11	133	52
12	45	17
Parity		
Primiparous	84	32
Multiparous	177	67
Gestation ^b		
≤20 weeks	57	23
>20 weeks	196	77
Planned pregnancy	73	28

^aMissing data for 7 respondents.

^bMissing data for 8 respondents.

identified clear gaps in the detail provided, with 77% of the trials not reporting the method of quit advice provided; 79% not providing details on training given; and 94% not reporting the type of care provided to women who relapsed.²⁴ This lack of detail is clearly a significant impediment to implementation and translation of effective interventions into policy and practice.

A strength of this study is the significant contribution from the CRG, ensuring cultural integrity and engagement with Aboriginal women. The sample size is adequate and the response rate was high, suggesting reasonable representativeness of pregnant Aboriginal and Torres Strait Islander women in the jurisdictions involved. However, the sample may not be generalizable to Aboriginal and Torres Strait Islander women in other states or to other Indigenous women internationally. Other limitations include the reliance on self-report, the broad range of gestations among the women and lack of data on the timing of cessation during pregnancy.

Other important considerations in reducing the rates of antenatal smoking include reducing initiation of smoking among young people. The “Tackling Indigenous Smoking” program funded by the Australian Government aims to reduce smoking rates through community-level initiatives. The outcomes are not yet known, but the high visibility of this program within the communities involved

Table 2. Assessment of Smoking Status and Advice and Support for Cessation Reported by Pregnant Indigenous Women

	Asked about smoking status (n = 261)			Advised to quit smoking (n = 120) ^a			Offered support to quit smoking (n = 119) ^b		
	n	%	95% CI	n	%	95% CI	n	%	95% CI
Yes	234	90	85, 93	97	81	73, 87	74	62	53, 71
No	17	7	4, 10	13	11	6, 18	19	16	10, 24
Don't remember	10	4	2, 7	10	8	4, 15	26	22	15, 30

CI = confidence interval.

^aOnly includes current smokers.

^bOne respondent did not answer this question.

make it likely that it will have influenced community perceptions and reduced uptake of smoking by young people.

Despite the majority of pregnant Aboriginal and Torres Strait Islander women who smoke being offered advice and support to quit, the persisting high prevalence of smoking suggests that this support is insufficient to overcome the many factors pushing women to smoke. Improving the support provided to women will require empowering the antenatal providers with adequate skills, appropriate resources and effective interventions. Trials of interventions designed specifically for pregnant Aboriginal and Torres Strait Islander women are urgently needed. There is also a need for more detailed reporting of interventions with pregnant women to enable adaptation and implementation.

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Declaration of Interests

None declared.

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