Understanding Smoking by Pregnant Aboriginal Women

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Submitted for the degree of Doctor of Philosophy

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School of Medicine and Public Health
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VOLUME 1
**Statements**

**Statement of originality**

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. I give consent to the final version of my thesis being made available worldwide when deposited in the University’s Digital Repository, subject to the provisions of the Copyright Act 1968.

**Statement of authorship**

I hereby certify that this thesis is submitted in the form of a series of published papers of which I am a joint author. I have included as part of the thesis a written statement from each co-author, endorsed by the Faculty Assistant Dean (Research Training), attesting to my contribution to the joint publications.

**Acknowledgement of collaboration**

I hereby certify that the work embodied in this thesis has been done in collaboration with other researchers, and carried out in other institutions. I have included as part of the thesis a statement clearly outlining the extent of collaboration, with whom and under what auspices.

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24th June 2014

Megan Passey       Date
Statement regarding collaboration

Consistent with guiding principles for conducting research in Aboriginal and Torres Strait Islander health, the research for this thesis was conducted in collaboration with community representatives and with relevant health services. Specifically, it was conducted in collaboration with members of the project’s Community Reference Group, composed of representatives from the Aboriginal Communities in the North Coast of New South Wales, and with the Aboriginal Maternal and Infant Health Service team at Ballina. Additionally, the research was undertaken in collaboration with staff at the University Centre for Rural Health – North Coast, University of Sydney, where I was employed for the duration of the research. The relevant staff are named co-authors on the published papers, or have been acknowledged in those papers.
Acknowledgements

Many people have travelled this journey with me, and helped me along the road, with its many ups and downs. I thank everyone who helped at any stage, but in particular I want to thank and acknowledge a few special people.

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I would have totally given up and walked away without the guidance and support of the members of the Community Reference Group – Delta, Careena, Laurel, Virge, Brenda, Catherine, Janina, Dana, Joyce, Akarna, Edith, Cathy and Aunty Bertha. Thank you from the bottom of my heart; six years is a very long time to hang in on a project like this. Not all of you made it all the way, but many of you did, and I thank you each for your contribution. We had a lot of laughs, ate some great food, came up with wonderful ideas and suggestions and even produced a few beautiful babies! I also want to thank Sue Rogers and Paula Craig for being willing to trust us all and be involved in the pilot testing of the smoking cessation program we developed. Although it was not part of this thesis, your willingness to give it a go was very motivating as I was writing up the included papers.

Thanks also to my colleagues at the University Centre for Rural Health, Janelle, Cathy and Jenny, who worked with me in various ways on this research. Jenny, I thank you
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Thanks to my parents who inspired me and who have always exemplified a strong sense of social justice and equity, curiosity about the how and why of this wonderful world we live in, and a strong work ethic. They raised me to believe anything was possible; as a girl growing up, it never occurred to me that my life options were in any way different from my brothers’. Thanks for that safe, loving and nurturing beginning, and your ongoing support.

And finally, huge thanks to John and Ben who supported me day and night for the past six years in doing this work. John, thank you for stepping in, keeping the household going and making sure the wheels didn’t fall off. And also thank you for reading and commenting, for being there to discuss the issues and the challenges, and for having faith in me and keeping me grounded in my values and beliefs. Ben, who has never known a life without both of his parents working full-time while one of them also studied – you poor neglected soul. But thank you for being supportive, for making our road trips more fun and for being such a great kid/teenager. I’ll try to make sure the next phase involves more adventures.
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<th>Description</th>
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<tbody>
<tr>
<td>ACCHS</td>
<td>Aboriginal Community Controlled Health Service</td>
</tr>
<tr>
<td>ACT</td>
<td>Australian Capital Territory</td>
</tr>
<tr>
<td>AHEO</td>
<td>Aboriginal health education officer</td>
</tr>
<tr>
<td>AHW</td>
<td>Aboriginal health worker</td>
</tr>
<tr>
<td>AMIHS</td>
<td>Aboriginal Maternal Infant Health Service</td>
</tr>
<tr>
<td>AMS</td>
<td>Aboriginal Medical Service</td>
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<tr>
<td>CI</td>
<td>Confidence interval</td>
</tr>
<tr>
<td>CINAHL</td>
<td>Cumulative Index to Nursing and Allied Health Literature</td>
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<tr>
<td>CRG</td>
<td>Community reference group</td>
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<tr>
<td>DALY</td>
<td>Disability adjusted life year</td>
</tr>
<tr>
<td>DHF</td>
<td>Department of Health and Family</td>
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<tr>
<td>IUGR</td>
<td>Intra-uterine growth retardation</td>
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<tr>
<td>LBW</td>
<td>Low birth weight</td>
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<tr>
<td>NACCHO</td>
<td>National Aboriginal Community Controlled Health Organisation</td>
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<tr>
<td>NATSIHS</td>
<td>National Aboriginal and Torres Strait Islander Health Survey</td>
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<tr>
<td>NATSISS</td>
<td>National Aboriginal and Torres Strait Islander Social Survey</td>
</tr>
<tr>
<td>NCAHS</td>
<td>North Coast Area Health Service</td>
</tr>
<tr>
<td>NHMRC</td>
<td>National Health and Medical Research Council</td>
</tr>
<tr>
<td>NPDC</td>
<td>National perinatal data collection</td>
</tr>
<tr>
<td>NRT</td>
<td>Nicotine replacement therapy</td>
</tr>
<tr>
<td>NSW</td>
<td>New South Wales</td>
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<tr>
<td>NT</td>
<td>Northern Territory</td>
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<tr>
<td>OR</td>
<td>Odds ratio</td>
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<tr>
<td>RDH</td>
<td>Royal Darwin Hospital</td>
</tr>
<tr>
<td>SIDS</td>
<td>Sudden infant death syndrome</td>
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List of papers included in this thesis


Paper Two: Passey ME, D’Este CA, Stirling JM, Sanson-Fisher RW. Factors associated with antenatal smoking among Aboriginal and Torres Strait Islander women in two jurisdictions. Drug and Alcohol Review, 2012; 31:608-616.


Paper Five: Passey ME, Sanson-Fisher RW. Antenatal smoking cessation support reported by pregnant Aboriginal and Torres Strait Islander women. Unpublished paper – currently under editorial review


Other reports and presentations related to this thesis are listed in Appendix 2.
I warrant that I have obtained permission from the copyright owners to use my own published work in which copyright is held by another party (Appendix 1.2.2).
*Synopsis*

This thesis by publication is composed of an introduction, seven papers and a final chapter with conclusions. All papers relate to developing an understanding of the factors contributing to the high prevalence of smoking among pregnant Aboriginal and Torres Strait Islander women, or to approaches to supporting women to quit smoking. At the time of submission of this thesis, six of the seven papers have been published or accepted for publication in peer-reviewed journals, and the other paper is under review.

The **Introduction** provides an overview of Aboriginal health, situating it within an historic context and a social determinants framework. It discusses the contribution of tobacco smoking to poor health outcomes, and the factors contributing to the high prevalence of smoking among Aboriginal and Torres Strait Islander peoples. This chapter then discusses antenatal smoking in more detail, including the associated harms and the opportunities that pregnancy provides for addressing smoking. Finally, this chapter discusses the approach taken in the research for this thesis, including addressing the criteria for research with Aboriginal and Torres Strait Islander peoples.

**Paper One**, “It’s almost expected”: rural Australian Aboriginal women’s reflections on smoking initiation and maintenance: a qualitative study, is a qualitative study in northern New South Wales (NSW), Australia, involving interviews with 22 Aboriginal women, and focus groups with 14 Aboriginal women and service providers. The paper reports their perceptions of the factors contributing to smoking initiation among Aboriginal girls. The findings locate the initiation of smoking within the broader social context of smoking within Aboriginal communities, which is in turn influenced by historical, cultural and contemporary societal factors, including discrimination and marginalisation. Young girls are influenced by their exposure to tobacco smoking within their extended families and initiate smoking to attain status and to assert membership within their social groups. While parents may dislike their children smoking, they feel disempowered and unable to prevent it. Perceptions of limited life
opportunities result in a focus on pleasure seeking in the present, and smoking is one component of this. The paper provides information in which to situate an understanding of the factors contributing to the high prevalence of smoking among rural Aboriginal women of reproductive age, and highlights the importance of addressing these factors in strategies to reduce smoking initiation. This paper has been published as an open access article in *BMC Women’s Health*.

**Paper Two**, *Factors associated with antenatal smoking among Aboriginal and Torres Strait Islander women in two jurisdictions*, reports the results of a survey with pregnant Aboriginal and Torres Strait Islander women in NSW and the Northern Territory (NT), Australia, exploring their self-reported behaviour related to smoking tobacco during pregnancy, and the factors associated with different patterns of use. Slightly less than half the women reported currently smoking, and among these, the majority had reduced the amount they smoked, while one-fifth of those smoking at the beginning of their pregnancies reported quitting. Poor knowledge of smoking-related risks, stressful life circumstances and indicators of social disadvantage were associated with continuing to smoke. The paper concludes that improving women’s knowledge will be helpful, but insufficient to reduce antenatal smoking unless other social and environmental stressors are also addressed. This paper has been published in *Drug and Alcohol Review*.

**Paper Three**, *Tobacco, alcohol and cannabis use during pregnancy: clustering of risks*, reports additional findings from the survey with pregnant Aboriginal and Torres Strait Islander women in NSW and the NT, exploring the use of alcohol and cannabis and the relationship between use of these substances and tobacco. The paper confirms high rates of reported substance use (tobacco 46%, alcohol 21% and cannabis 15%), with marked clustering of use of these substances among a sub-set of vulnerable and disadvantaged women. The paper highlights the need to consider use of other substances and the social realities of women’s lives when addressing tobacco smoking in pregnancy. This paper has been accepted for publication in *Drug and Alcohol*
Dependence as an open access article, and is currently available as an early view article online.

**Paper Four**, *Knowledge, attitudes and other factors associated with assessment of tobacco smoking among pregnant Aboriginal women by health care providers: a cross-sectional survey*, provides results from a survey of antenatal care providers who provide care to Aboriginal and Torres Strait Islander women in NSW and the NT. The majority of respondents reported routinely assessing the smoking status of all their pregnant clients, and had good knowledge of the risks of smoking during pregnancy. However, their knowledge of smoking cessation was poor, and those with poorer knowledge were less likely to assess women’s smoking status routinely. The paper recommends further training in smoking cessation for these providers, including training in effective counselling, in order to improve their confidence and skills in this area. The paper has been published as an open access article in *BMC Public Health*.

**Paper Five**, *Antenatal smoking cessation support reported by pregnant Aboriginal and Torres Strait Islander women*, is a short paper reporting further information from the survey with pregnant Aboriginal and Torres Strait Islander women in NSW and the NT. This paper focuses on the women’s reports of the care they received in relation to smoking cessation, with 90% of women reporting being assessed for smoking. Among smokers, 81% reported being advised to quit, and 62% reported offers of assistance to do so. This paper provides additional evidence for the need for additional training for antenatal providers to improve their smoking cessation support and its effectiveness. It also argues for improved reporting in trials of antenatal smoking, with the need for more detail of the intervention provided, in order to facilitate integration into practice. The paper has not been published but has been submitted to a peer-reviewed journal.

**Paper Six**, *Supporting pregnant Aboriginal and Torres Strait Islander women to quit smoking: views of antenatal care providers and pregnant Indigenous women*, draws on data from the surveys with both the pregnant women and their antenatal care providers in NSW and the NT. The paper presents results on the views of women who
smoke, ex-smokers and antenatal providers regarding the helpfulness of a list of possible strategies for supporting pregnant women to quit smoking. In general, the smokers were least positive about the strategies and the providers most positive, and there were both similarities and differences in the order in which the strategies were rated. All agreed that support for the family to help others quit, and advice from all health care providers were likely to be helpful. However, ex-smokers and current smokers rated rewards for cessation more highly than the providers did. The study provides insight into the approaches likely to be acceptable to women and to providers and therefore have potential for routine implementation. The paper has been accepted for publication as an open access article in *Maternal and Child Health Journal* and is currently available as an early view article online.

**Paper Seven, How will we close the gap in smoking rates for pregnant Indigenous women?** presents the results of a systematic review of smoking cessation interventions for pregnant Indigenous women. The review was able to identify only two relevant studies, with neither trial reporting an effect of the intervention. The paper discusses the implications of this and makes recommendations for approaches that could be included in future trials. The paper has been published in the *Medical Journal of Australia* as an open access article. An additional table, not published with the article, is included as an appendix (Appendix 6) to this thesis.

The **final chapter, Conclusions, lessons learnt and next steps**, discusses the findings from these papers under three conceptual areas: the social and structural drivers of smoking; the role of individual characteristics; and support from antenatal providers. For each area it identifies the implications of reducing maternal smoking and suggests areas where future research is required. It argues for more intervention research in this field and discusses the challenges inherent in achieving this.