

**GRAPHIC HEALTH WARNINGS ON AUSTRALIAN
CIGARETTE PACKETS:
EVALUATION OF A SOCIAL MARKETING INTERVENTION**

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Thesis Abstract

Tobacco-related illness remains the single greatest preventable burden of morbidity and mortality in Australia. Reducing tobacco use is a major public health imperative. This thesis investigates the impact of a public policy intervention designed to inform smokers of the harms associated with smoking and to reduce tobacco use; namely graphic consumer warnings labels on cigarette packets, introduced in Australia in March 2006. The specific aim of this thesis is to examine the impact of these warnings.

Social psychology provided a theoretical framework, with models predicting that behaviour can be influenced by new information. This thesis poses questions focussed on the relationship between such information, smokers' beliefs and attitudes, their behavioural intentions and their actual behaviour.

The first question examined is practical: *What occurred during the introduction and implementation of graphic consumer warnings labels on Australian cigarette packets?* This was asked with a view to (i) offering lessons for interested policy-makers in other countries; and (ii) documenting the intervention under study. The second question is: *Did the warnings attract the attention of smokers and communicate information about smoking to change smokers' beliefs?* Thirdly: *Were there attitude changes or other changes predictive of quitting?* and fourthly *Did behaviour change occur?*

Firstly, studies monitored press coverage about the new warnings and the pace of the roll-out into shops. Results (presented in Chapter 2) document tobacco industry lobbying and its apparent influence in delaying the introduction of the warnings in Australia. The nature of the Australian legislation created further opportunities for delay.

The second question is addressed in Chapters 2 and 3. Chapter 2 reports on a smoker intercept study; conducted once new warnings were prevalent. Chapter 3 presents smokers' awareness of new warnings and their beliefs about a range of smoking-related health effects, from a series of cross-sectional population surveys spanning 4 years.

Chapters 4 and 5 look in detail at the third and fourth research questions i.e. the impact of on smokers' attitudes, intentions to quit and quitting behaviour. Chapter 4 presents the short-term marker of success - calls to the Quitline. Chapter 5 applies Fishbein & Ajzen's[1] Reasoned Action Approach with a cohort of smokers; using the model to

investigate the influence of graphic warnings on smokers' quitting behaviour and its precursors.

Taken as a whole, this thesis provides a case study of the roll-out of Australian graphic cigarette packet warning labels and evidence of their impact on smokers. Australia was the 8th country to introduce such warnings. A further 31 countries have since adopted them with many more planning to. Very little is published about the process of implementation and this information from the Australian roll-out offers insight for other policy-makers. This thesis also contributes very strong evidence that Australia's graphic warnings labels were successful in attracting smokers' attention and in communicating information that influenced their beliefs about the consequences of smoking. There is also good evidence of translation into interest in quitting and some evidence of quitting behaviour, the ultimate aim of the public policy intervention.

Thesis Declaration

This work contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution to Caroline Louise Miller 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.

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Caroline Louise Miller

Signed: _____

Date: 10 July 2011

Publications contributing to this thesis:

1. Miller CL, Hill DJ, Quester PG, Hiller JE. Response of mass media, tobacco industry and smokers to the introduction of graphic cigarette pack warnings in Australia. **European Journal of Public Health** 2009, **19(6)**:644-649.
[see Chapter 2 & Appendix 2]
2. Miller CL, Quester PG, Hill DJ, Hiller JE. Smokers' recall of Australian graphic cigarette packet warnings & awareness of associated health effects, 2005-2008 **BMC Public Health**, 2011. **11**:238.
[see Chapter 3 & Appendix 3]
**Note: Rated "Highly accessed" by journal
3. Miller CL, Hill DJ, Quester PG, Hiller JE. Impact on the Australian Quitline of new graphic cigarette pack warnings including the Quitline number. **Tobacco Control** 2009, **18(3)**:235-237.
[see Chapter 4 & Appendix 4]
4. Miller CL, Hill DJ, Quester PG, Hiller JE. The impact of Australia's new graphic cigarette packet warnings on smokers' beliefs and attitudes. **Australasian Marketing Journal** 2011,**19**:181-188.
[see Chapter 5 & Appendix 5]

Conference presentations arising out of this thesis:

1. Miller, C., Hill, D., Quester, P., and Hiller, J. (2010) Australia's graphic cigarette packet warnings - implementation and impact, **Behavioural Research in Cancer Control**, Freemantle, Perth, Australia.
2. Miller, C., Hill, D., Hiller, J., & Quester, P. (2010) Australia's Graphic Cigarette Pack Warning: Implementation and Impact. **2008 World cancer congress**. Shenzhen, China.
3. Miller, C., Quester, P., Hiller, J., & Hill, D. (2009). Australia's Graphic Cigarette Pack Warnings. **2009 State Population Health Conference**. Adelaide, Australia.
**Note: Awarded best paper
4. Miller, C., Hill, D., Hiller, J., Quester, P., Hickling, J., & Byrnes, M. (2008). Graphic Cigarette Pack Warning: Impact on the Australian Quitline. **2008 World cancer congress**. Geneva, Switzerland.
5. Miller, C., Hill, D., Hiller, J., Quester, P., & Hickling, J. (2007). Impact on the Quitline of Australia's New Graphic Cigarette Pack Warnings. **2007 Oceania Tobacco Control Conference**. Auckland, New Zealand.
6. Miller, C., Hiller, J., Hill, D., & Quester, P. (2007). Impact on the Quitline of Australia's New Graphic Cigarette Pack Warnings. **2007 State Population Health Conference**. Adelaide, Australia.

Coverage of findings from this thesis in media

SMOKING More seek help, in *The (Adelaide) Advertiser*, 04 Feb 2009, p2.

Statement of contributions to publications

This work contains four papers for publication in peer-reviewed journals, three of which have been published and one of which is in press.

All four papers are authored by Caroline Louise Miller (CLM) and her 3 supervisors. In each instance, CLM is the first author.

In each instance, all authors participated in the conceptual development of the work reported in these manuscripts and the broad study designs. CLM was responsible for the detailed study designs and for implementation of the research projects, including the data collection. CLM performed the statistical and other analyses and interpreted the results. CLM drafted the manuscripts which were then edited by the co-authors and supervisors. CLM acted as corresponding author, dealing with revisions and responses to reviewers' comments, with contributions from and final approval of all co-authors and supervisors.

I certify that the statement of contribution is accurate.

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