No smoker left behind: it's time to tackle tobacco in Australian priority populations

A truly comprehensive approach to tobacco control should include interventions targeting high risk groups

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Australia is a world leader in tobacco control as a result of implementing the strong tobacco control strategies in the World Health Organization Framework Convention on Tobacco Control (http://www.who.int/fctc/en). The Australian adult daily smoking prevalence is 14%[1] compared with 31% in 1986,[2] with a government goal to reduce this prevalence to 10% by 2020.[3] Recently employed tobacco control strategies include increased taxation and plain cigarette pack legislation, supported by strong legislative, economic and community commitment to significantly reduce tobacco use in our society. These strategies motivate smokers to quit. For example, data from the 2007 National Drug Strategy Household Survey[4] indicate that high cigarette prices are a key motivator to attempt to quit or reduce the number of cigarettes smoked.

An estimated 2.7 million Australians still smoke daily,[1] and the impact of smoking on their health and wellbeing is significant. Tobacco use is a leading modifiable risk factor in terms of its impact on the total burden of disease and injury in Australia. In 2016, the Australian Institute of Health and Welfare[5] found that tobacco use contributed to 36% of respiratory diseases, 22% of cancers, and 12% of cardiovascular diseases. Across all these conditions, 76% of the burden was due to premature mortality. The health care costs attributed to tobacco use were more than $300 million in Australia between 2004 and 2005. Reducing and ultimately eliminating tobacco smoking in Australia will result in significant benefits to individuals, their families, communities and society as a whole.

One area remains a challenge for tobacco control in Australia (and in similar high income countries) — tobacco smoking remains remarkably high among a number of population subgroups. Our whole-of-population data show a strong social gradient in smoking rates, with decreasing socio-economic status associated with higher smoking prevalence.[6] The most disadvantaged quintile of the population has more than twice as many smokers as the least disadvantaged quintile (24% *v* 10%).[6] Up to 67% of those with a severe mental illness[7] and 84% of those recently incarcerated[8] smoke tobacco. Tobacco smoking prevalence is 1.7 times greater in remote areas of Australia than in major cities.[1] Tobacco use is also widespread among Aboriginal and Torres Strait Islander people, with the national prevalence of daily smoking in adults aged $\geq$ 15 years reported to be 39% in 2014–15.[9] In some population subgroups, smoking prevalence has not changed in over 30 years. For example, in people with high impact psychosis, the smoking prevalence was 65% in 1998 and 67% in 2010.[10]

Globally, countries are setting hard time-framed goals in an effort to halt the cigarette epidemic. For example,

New Zealand's Smokefree Aotearoa 2025 initiative aspires to reduce smoking prevalence to less than 5% of the adult population by 2025, while the United Kingdom's goal is to achieve a tobacco-free UK by 2035. Modelling studies suggest that current tobacco control measures, even if they are greatly accelerated in countries that are tobacco control leaders (like Australia), will not achieve these goals. It appears that to reach the proposed goals, tobacco policy innovation beyond "business as usual" is required.[11]

We agree with a recent *Tobacco Control* editorial,[11] which argued that interventions targeting population groups where tobacco smoking is now concentrated are crucial for achieving a tobacco endgame. However, evidence to guide solutions in these settings is inadequate. Priority populations encompass a number of overlapping social, racial, economic and cultural groups with significant comorbidities and complex needs. We know that these groups do not lack motivation to quit. Smokers from disadvantaged groups make as many quit attempts as smokers from more advantaged groups, but they have greater difficulty converting attempts into sustained abstinence.[12] A comprehensive review identified the barriers to smoking cessation for priority populations: heavier nicotine dependence, lower self-efficacy, lower use of evidence-based cessation aids including pharmacotherapies, pro-smoking social contexts and communities, stress and financial stress, and cultural factors.[12] Until very recently, our health system has promoted smoking among people within mental health facilities, substance use treatment centres and homeless shelters, by using cigarettes to strengthen therapeutic bonds, to relieve boredom in the absence of other care options, and as a reward; while smoking cessation support was rarely provided. In this article, we present what we believe to be priorities for tobacco control to reduce smoking rates in priority populations in Australia.

Targeted whole-of-population approaches

A truly comprehensive approach to tobacco control in Australia should include targeted campaigns in high smoking prevalence populations. An examination of Australian socio-economically disadvantaged smokers' views of the health warning messages on cigarette packs and televised campaigns revealed that highly emotive warnings delivering messages of negative health effects were most likely to capture the attention of these smokers.[13] Articles published in this Journal show that smoke-free legislation targeted within prisons can be implemented with minimum incident and impact on reducing smoking.[8,14] Targeted mass media campaigns have been designed for Indigenous Australians and research suggests they have been equally effective in motivating smokers to try to quit, but this has not translated into equivalent success rates.[9]

Novel targeted smoking cessation interventions

While targeted population-wide tobacco control strategies are important, novel, intensive and tailored smoking cessation interventions are likely to lead to the greatest impact on smoking rates in priority populations by translating quit attempts into sustained cessation. There is limited evidence of the effectiveness of current best practice in smoking cessation interventions for priority populations and much more intervention research is needed. For example, for people with severe mental illness, evidence for brief advice approaches is weak and instead, repeated sessions of clinician-delivered cognitive behaviour therapy are more effective.[15] The national Tackling Indigenous Smoking initiative is a comprehensive tobacco control and smoking cessation targeted program to reduce Indigenous smoking rates. The Talking About The Smokes project, reported in a 2015 *MJA* supplement, describes in detail how increased attention to and increased funding for tobacco control is working in Aboriginal community controlled health services and communities.[9]

Testing tobacco harm reduction

One likely mechanism leading to the lower success rates in disadvantaged populations is the combination of many stressors, few resources and a paucity of other rewards in their lives, thus making the transitory "pleasures" of smoking and the challenges of nicotine withdrawal more salient. For those for whom the "loss of smoking" is too great, tobacco harm reduction approaches, such as switching to non-smoked nicotine products, should be considered. We accept that it is an approach that some find challenging because of health risks, especially to lung health, and concerns about vaping leading to cigarette smoking among youth and the renormalisation of smoking.[16] However, given the methodological limitations of the studies examining these issues, it is an approach that requires objective testing with priority populations. Our Australian research shows that vaporised nicotine products are acceptable to smokers from priority populations.[17] Data from a New Zealand trial of vaporised nicotine for smoking cessation suggests that for people with mental illness and for Māori people, vaporised nicotine may be at least as effective and safe as nicotine patches.[18] There is a need for more policy relevant data and evidence of their effectiveness and safety with various population subgroups.

Increasing delivery of evidence-based interventions

There is also an urgent need to improve delivery of evidence-based smoking cessation care in settings with reach into populations that have high smoking prevalence, such as community social services, mental health services, drug and alcohol treatment centres, and Aboriginal medical services. Practice change and organisational change interventions may need to be multicomponent, including strategies such as policy development, staff training, provision of resources and tools, nicotine replacement therapy grants and re-engineering organisational systems to support routine delivery of smoking cessation care. For example, the Cancer Council New South Wales Tackling Tobacco Program has increased the delivery of smoking cessation support within welfare agencies, homelessness services, drug and alcohol services, and mental health services in NSW.[19] Recognising the importance of these types of interventions, the New Zealand government set goals that "95% of hospitalised smokers and 90% of patients who smoke in primary care"[20] should be provided with brief advice to quit or referred to other cessation services. After meeting the 95% target for several years, the hospital component is no longer reported as a health target, further highlighting the effectiveness and importance of practice change and organisational change interventions. Health providers' performances against these goals are published. This is a model that Australia should adopt.

Surveillance tools to measure policy impact

Priority groups are typically of low population prevalence and geographically dispersed. Efforts to establish partnerships between health and welfare organisations and Centrelink are needed to both provide a framework for monitoring smoking and to better understand and ameliorate the problems faced by priority groups in successfully quitting. Combined datasets allow researchers to answer the questions unable to be addressed within individual trials, such as whether intervention effects are transferable across priority populations, or whether intervention effects vary according to priority population.

Tobacco is a significant contributor to health inequities in Australia. If we are truly concerned about this issue, we must focus more attention on the groups that are being left behind. In doing so, we are likely to develop insights of relevance to ameliorating other determinants of disadvantage and poor health. Research with hard-to-reach groups is challenging and hence sparse. Action is required not only by the tobacco control and health communities but by local, state and national government, as this is a multifaceted problem requiring health, economic and social policy change.

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References are available online at www.mja.com.au.

1 Australian Institute of Health and Welfare. National Drug Strategy Household Survey detailed report, 2013 (AIHW Cat. No. PHE 183; Drug Statistics Series No. 28). Canberra: AIHW, 2014. http://aihw.gov.au/WorkArea/DownloadAsset.aspx?id=60129549848 (accessed Dec 2016).

2 Greenhalgh EM, Bayly M, Winstanley MH. 1.3 Prevalence of smoking—adults. In: Scollo MM, Winstanley MH, editors. Tobacco in Australia: facts and issues. Melbourne: Cancer Council Victoria, 2015. http://www.tobaccoinaustralia.org.au/chapter-1-prevalence/1-3-prevalence-of-smoking-adults (accessed July 2017).

3 Intergovernmental Committee on Drugs. National Tobacco Strategy 2012—2018. Canberra: Commonwealth of Australia, 2012. http://www.nationaldrugstrategy.gov.au/internet/drugstrategy/publishing.nsf/Content/D4E3727950BDBAE4CA257AE70003730C/$File/National%20Tobacco%20Strategy%202012-2018.pdf (accessed Dec 2016).

4 Australian Institute of Health and Welfare. 2007 National Drug Strategy Household Survey: detailed findings (AIHW Cat. No. PHE 107). Canberra: AIHW, 2008. http://www.aihw.gov.au/publication-detail/?id=6442468195 (accessed Dec 2016).

5 Australian Institute of Health and Welfare. Australian Burden of Disease Study: Impact and causes of illness and death in Australia 2011 (Australian Burden of Disease Study Series No. 3; BOD 4). Canberra: AIHW, 2016. http://www.aihw.gov.au/WorkArea/DownloadAsset.aspx?id=60129555176 (accessed Dec 2016).

6 Australian Bureau of Statistics. National Health Survey: first results, 2014-15 (Cat. No. 4364.0.55.001). Canberra: ABS, 2016. http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4364.0.55.001Main+Features1000122014-15?OpenDocument (accessed Dec 2016).

7 Baker AL, Ivers RG, Bowman JA, et al. Where there's smoke, there's fire: high prevalence of smoking among some sub-populations and recommendations for intervention. *Drug Alcohol Rev* 2006; 25: 85-96.

8 Butler TG, Yap L. Smoking bans in prison: time for a breather? *Med J Aust* 2015; 203: 313. https://www.mja.com.au/journal/2015/203/8/smoking-bans-prison-time-breather

9 Couzos S, Nicholson AK, Hunt JM, et al. Talking About The Smokes: a large-scale community-based participatory research project. *Med J Aust* 2015: 202 (10 Suppl): S13-S19. https://www.mja.com.au/journal/2015/202/10/talking-about-smokes-large-scale-community-based-participatory-research-project

10 Cooper J, Mancuso S, Borland R, et al. Tobacco smoking among people living with a psychotic illness: the second Australian survey of psychosis. *Aust N Z J Psychiatry* 2012; 46: 851-863.

11 Malone RE. The race to a tobacco endgame. *Tob Control* 2016; 25: 607-608.

12 Twyman L, Bonevski B, Paul C, et al. Perceived barriers to smoking cessation in selected socioeconomically disadvantaged groups: A systematic review of the qualitative and quantitative literature. *BMJ Open* 2014; 4: 1-15.

13 Guillaumier A, Bonevski B, Paul C. Tobacco health warning messages on plain cigarette packs and in television campaigns: a qualitative study with Australian socioeconomically disadvantaged smokers. *Health Educ Res* 2015; 30: 57-66.

14 Walters EH, Barnsley K. Tobacco-free generation legislation. *Med J Aust* 2015; 202: 509. https://www.mja.com.au/journal/2015/202/10/tobacco-free-generation-legislation

15 Baker AL, Richmond R, Kay-Lambkin FJ, et al. Randomized controlled trial of a healthy lifestyle intervention among smokers with psychotic disorders. *Nicotine Tob Res* 2015; 17: 946-954.

16 Franck C, Filion KB, Kimmelman J, et al. Ethical considerations of e-cigarette use for tobacco harm reduction. *Respir Res* 2016; 17: 53.

17 Twyman L, Bonevski B, Paul C, et al. Electronic cigarettes: awareness, recent use, and attitudes within a sample of socioeconomically disadvantaged Australian smokers. *Nicotine Tob Res* 2016; 18: 670-677.

18 O'Brien B, Knight-West O, Walker N, et al. E-cigarettes for smoking reduction or cessation in people with mental illness: secondary analysis of data from the ASCEND trial. *Tob Induc Dis* 2015; 13: 5.

19 Bonevski B, Guillaumier A, Shakeshaft A, et al. An organisational change intervention for increasing the delivery of smoking cessation support in addiction treatment centres: study protocol for a randomized controlled trial. *Trials* 2016; 17: 290.

20 Ministry of Health. Health targets: better help for smokers to quit. http://www.health.govt.nz/new-zealand-health-system/health-targets/about-health-targets/health-targets-better-help-smokers-quit (accessed July 2017). ■