



OPEN ACCESS

Australia's \$40 per pack cigarette tax plans: the need to consider equity

Katherine T Hirono,^{1,2} Katherine E Smith³

¹Centre for Health Equity Training, Research and Evaluation, University of New South Wales, Liverpool, New South Wales, Australia

²Ingham Institute, Liverpool, New South Wales, Australia

³Global Public Health Unit, Social Policy, School of Social & Political Science, University of Edinburgh, Edinburgh, UK

Correspondence to

Ms Katherine T Hirono, Centre for Health Equity Training, Research and Evaluation, University of New South Wales, 1 Campbell St, Liverpool BC 1871, New South Wales, Australia; k.hirono@unsw.edu.au

Received 21 December 2016

Revised 12 February 2017

Accepted 7 March 2017

ABSTRACT

In May 2016, the Australian Government announced that it would implement annual increases in tobacco excise of 12.5% up to and including 2020, raising the cost of a pack of cigarettes to \$A40. This increase will lead to Australia having one of the highest prices of cigarettes in the world. Increasing the cost of tobacco is considered by public health experts to be one of the most effective strategies to reduce tobacco use, and is generally well supported by the public. However, tobacco tax increases differentially impact various subgroups of the population. Based on a review of existing literature, this paper examines some of the potential (unintended) consequences of the tax to individual and family income; illicit trade; social stigma and opportunities for lobbying by the tobacco industry. In light of these considerations, we offer strategies that might be used by policymakers to mitigate potential harms. While this paper focuses on the impacts primarily on populations in Australia, the consequences and strategies offered may be useful to other countries implementing tobacco excise increases.

INTRODUCTION

It is now firmly established that increases in the cost of tobacco lead to decreases in tobacco consumption,^{1–3} with WHO describing tobacco taxation as ‘the single most effective way to encourage tobacco users to quit and prevent children from starting to smoke’.⁴ In contrast to many other types of taxation, tobacco taxes tend to be widely supported by the public.^{5,6} In May 2016, the Australian Liberal Government announced that the new budget would contain 12.5% annual increases in tobacco excise up to and including 2020.^{7,8} Currently, Australia has one of the highest prices for tobacco, around \$A22 per pack of cigarettes (this is equivalent to around US\$17), and this is expected to rise to up to \$A40 per pack by 2020.⁹ These excise increases have been widely praised by public health experts who claim that the increased cost will lead to a decrease in use. However, not all people will quit or substantially reduce consumption in response to the tax and, for those who do not, tobacco tax is regressive.¹⁰ This means that for less affluent smokers who do not quit, tobacco taxes can increase inequalities, potentially reducing income available for spending on housing, heating, food, etc. This is why, in direct contrast to the International Agency for Research on Cancer and WHO reviews, a 2010 UK Government-commissioned review of approaches to tackling health inequalities (led by Professor Sir Michael Marmot, a leading health inequalities researcher) judged tobacco tax increases in the UK (where tobacco taxes were already very high

compared with most countries, although somewhat lower than Australia) should *not* be supported.¹¹ Such a contrast highlights the importance of interpretation, judgement and ethics when it comes to tobacco taxation; deciding whether or not to keep increasing tobacco taxes depends on more than evidence of efficacy in reducing consumption and raising revenue. This short article considers the equity implications of Australia's commitment to substantial tax increases and considers how policymakers might take these kinds of equity issues into consideration when making decisions about the future of tobacco taxation.

DESCRIPTION OF THE TAX INCREASE

Australia's decision to implement the 12.5% annual increase in tobacco excise until 2020 was a rare example of an intervention with unanimous political support. While the opposing parties remained critical of each other's budget proposals, there was undivided support for the tobacco excise increase, with the Liberal (centre-right) party adopting the Labour (centre-left) party's proposal.⁸ Although the 12.5% annual increase will greatly raise the cost of a pack of cigarettes, this is not the first time that Australia has increased tobacco taxes, nor is it the largest increase. In 2010, the Federal Government implemented a singular increase of 25%, and executed an annual 12.5% increase each year from 2013 to 2016. The current proposal is therefore a continuation of a long-term recent policy trajectory.

Cumulatively, these consistent increases in tobacco excise have led to a more than 340% increase in the cost of tobacco in Australia over the past 20 years.¹² Prior to 2010, tobacco excise was indexed to inflation. Since then, the cost of cigarettes has far surpassed the increases in costs for other consumer goods. For example, tobacco has increased in cost by 343% since 1996, while gas/household fuel increased 181%, and the cost of bread and milk rose 76% and 38%, respectively.^{12,13}

THE RATIONALE UNDERPINNING THE \$A40 PER PACK TAX TARGET

Increases in the cost of tobacco have been strongly promoted by the Australian public health community in the context of the considerable, and growing, evidence that demonstrates that increasing the cost of tobacco is an effective strategy for getting people to decrease their use or quit,¹⁴ and for preventing uptake among children and youth.^{3,15} For these reasons, tobacco tax increases are one of the strategies supported by the Australian National Preventative Taskforce¹⁶ and the WHO Framework Convention on Tobacco



CrossMark

To cite: Hirono KT, Smith KE. *Tob Control* Published Online First: [please include Day Month Year]. doi:10.1136/tobaccocontrol-2016-053608

Control,¹⁷ to which Australia is a party. The available evidence demonstrates that substantial, sudden tax increases are more effective, from a tobacco control perspective, than incremental changes³ and, for the same reasons, evidence also demonstrates that tobacco industry actors are most concerned about sudden, large tax increases.¹⁸ Reflecting this, evidence following the 2010 Australian tax increase indicated that there was a significant increase in people quitting immediately following the increase (22% in the month following the increase versus 13% in the previous month).² Studies from the USA,¹⁹ Germany²⁰ and Mexico²¹ have also shown increased cessation activity following price increases.

Tax increases to support tobacco reduction are also supported by the majority of the general population in Australia. Evidence from the Australian 2013 National Drug Strategy Household Survey (NDSHS) shows that over 67% of those surveyed supported increased taxes on tobacco products to discourage smoking.²² In the same survey, 46.9% of people who had quit said that the cost was a major factor in motivating their quitting behaviour.⁵

Although Australia is not one of the growing number of countries to have made commitments to being 'tobacco free' by a particular year (in contrast to New Zealand and Scotland, eg, which have set respective target dates of 2025 and 2034), the advanced state of tobacco control in Australia means the number of alternative tobacco control policy options being considered is limited. This means that tobacco tax increases are a central component of Australia's efforts to continue the downward trend in smoking rates. Recent trends are positive in this regard; the rates of tobacco use in Australia have declined significantly from 24.3% in 1991 to 12.8% in 2013.⁵ However, while rates of use have declined across the population as a whole, there are still populations where rates of tobacco use remain high. Twenty-four per cent of people categorised as being in the least advantaged socioeconomic bracket smoke; 26.5% of people experiencing unemployment smoke and 36% of Aboriginal and Torres Strait Islander people smoke.⁵ Further data suggest that there are other disadvantaged populations (many of which overlap),^{23 24} such as people experiencing a mental illness,⁵ incarcerated populations,²⁵ people with a substance use disorder²⁶ and people experiencing homelessness²⁷ with disproportionate smoking rates. While rates of tobacco use have declined more sharply over the same time period (1991–2013) for some of these populations (Aboriginal and Torres Strait Islander populations, eg, decreased by 19%),⁵ compared with the general population, the fact that rates of smoking remain so high indicates that previous tobacco control measures have been insufficient to enable these populations to quit.

International reviews of the population impacts of tobacco tax suggest that poorer groups are more price sensitive, which makes tobacco taxes one of the few popular tobacco control policy levers to offer a means of addressing tobacco-related inequalities.²⁸ However, the large differences in smoking rates between the general Australian population and multiple disadvantaged groups, even after previous tax raises have taken effect,⁵ suggests that these groups have not sufficiently benefited from Australia's population-level tobacco control policies, including the tobacco tax increases. If Australia is to achieve decreases in tobacco use across its population, these patterns suggest that health policies need to be adapted to better serve these populations. In the following sections, we consider, first, the relevance of concerns raised about the unequal impacts of tobacco taxes to the Australian case, and second, how future policies (in Australia and elsewhere) might address these concerns.

EQUITY CONCERNS SURROUNDING HIGH TOBACCO TAXES

In keeping with reviews of available evidence in Australia^{2 29 30} and internationally,³¹ Australia's proposed tax increases are likely to lead to many smokers either decreasing their use or quitting altogether. There is the potential for significant health benefits for those who quit, as well as those who may not start smoking to begin with due to the high price. The results of an international systematic review of tobacco control policies, which found that cost increases are particularly effective for low-income workers, people with higher education levels, adolescents and college students and some black and minority ethnic group communities,¹⁴ suggest Australia's tax increases may also have a particularly high impact on some of the disadvantaged communities in which tobacco rates remain high. However, for those who do not quit or decrease their rate of smoking, there are strong possibilities of negative impacts, both financially (in terms of having less income available to spend on basic needs) and socially (in terms of the increased sense of stigma associated with smoking).

Within public health, it has been argued that, while tobacco taxes may be regressive in economic terms, *tobacco tax increases* are not necessarily so, 'because poorer smokers are more price responsive than more affluent smokers' meaning that 'a tax increase will cause more poorer smokers to quit smoking'.³² In addition, a widely cited article by Warner in *Tobacco Control* goes on to argue that:

'[G]iven that in industrialised nations poorer smokers suffer disproportionately from the diseases caused by smoking, a larger proportion of the eventual health benefits of quitting will accrue to the low-income population. In this regard, increasing the cigarette tax is clearly a 'progressive' public health policy'.³²

Warner's claims are evidence-based and have been supported by the analysis of others,^{33–36} but it is important that we distinguish between arguments regarding progressivity from a health perspective and those relating to progressivity in economic terms. From a public health perspective, interventions that are effective in encouraging smokers to quit (or smoke less) are obviously beneficial and to be welcomed, particularly when they seem to have the greatest impact on groups who smoke most, but this does not mean we should avoid acknowledging less desirable aspects of such interventions. As Warner points out, 'even if a cigarette tax increase were regressive, it might well be justified on other grounds, with other components of a country's tax system determining the overall degree of progressivity'.³² Available research does not sufficiently address the question of whether, among low-income smokers, the overall benefits of further tobacco price increases (ie, quitting, cutting down, reduced smoking uptake, lower secondhand smoke exposure and more available money among those who quit) outweigh the risk of harm from financial hardship for those who do not quit or reduce their smoking.

So, while this article is not intended to criticise Australia's policy efforts to reduce tobacco use through taxation, we identify four reasons to be cautious about the impact of current plans on disadvantaged groups, before suggesting possible ways forward.

1. Potential impacts on individual and family income

There are economic and wider spending consequences for individuals (and their families) who do not quit or reduce their consumption as a result of tax increases. Australia's tax increases are so large that it will not be possible for smokers to avoid paying more by switching to cheaper (legal) products. They will therefore end up spending more of their income on tobacco

products and, consequently, less of their income on other necessities.³⁷ Indeed, this 'opportunity cost' (in economic terms) may have been an underpinning rationale for the steep tax rises. Yet, we also know that not everyone will quit (or even substantially reduce their consumption) in response to tax increases and that those living with greater levels of socioeconomic disadvantage find it harder to make behavioural changes such as stopping smoking.³⁸ Reflecting this, a small-scale qualitative study focusing on how low-income smokers have responded to tax increases in neighbouring New Zealand found that low-income smokers who continued smoking following sustained tobacco tax increases faced considerable financial hardship.³⁹ This is important from a health, as well as ethical and financial perspective, since financial hardship is a recognised determinant of poor health.⁴⁰ The Australian example provides an opportunity to begin empirically addressing the question outlined above: do the overall benefits of further tobacco price increases outweigh the risk of harm from financial hardship among low-income populations?

2. Potential impacts on illicit trade

Available evidence suggests that tax increases are not usually the main determinant underlying illicit trade^{39 41} and Australia's geographical location offers some protection against illegal imports. However, higher prices can play a role in stimulating demand for illicit products, particularly in poorer communities.^{14 42-44} This means that it will be essential to monitor illicit trade in Australia in the context of the increasing cost of legal tobacco products and it may make sense to spend some of the additional revenue on enforcement in this area.

3. Potential increases in the stigma experienced by disadvantaged smokers

An increasing number of authors have raised concerns about the extent to which efforts to reduce tobacco consumption at a population level can unintentionally stigmatise disadvantaged communities in which tobacco use remains relatively high.⁴⁵⁻⁴⁷ In the UK, the characterisation of smokers is often conflated with stereotypes of poor, low class and disadvantaged groups, leading to stigmatisation of these populations for smoking and for being poor.⁴⁵ The small qualitative study focusing on how low-income smokers have responded to tax increases in New Zealand, referred to above, found that participants interpreted the tax increases 'as evidence of an uncaring state that punished its most disadvantaged citizens', noting that 'several viewed tobacco price increases as inequitable'.³⁹ Without research, we cannot know how low-income smokers in Australia view the recent tax increases there, but the concerns raised in New Zealand and the UK contexts suggest this is an issue that warrants empirical investigation.

4. Potential opportunities for tobacco industry lobbying

A systematic review of tobacco industry efforts to shape tobacco taxes found that the tobacco industry particularly dislikes the kind of substantial tax increases that Australia is implementing and it is therefore reasonable to expect tobacco interests to work to limit further increases and to reduce those already implemented.¹⁸ The same review identified the two most popular arguments deployed by industry interests against tobacco tax increases as being that tax increases: (1) stimulate illicit trade and (2) have regressive impacts.¹⁸ Both arguments have helped tobacco interests gain non-traditional allies and the illicit trade arguments contributed to a successful industry campaign to

reverse a tobacco tax increase in Canada in the early 1990s.⁴⁸ In reality, the industry was directly involved in smuggling.^{48 49} In the USA, one study found that the industry went as far as arguing tobacco tax increases would contribute to class warfare, pitting upper middle class liberals (mostly white) against lower middle class, working people (mostly minority ethnic groups).⁵⁰ This provides a further reason to pay heed to the equity impacts of Australia's tobacco tax increases and highlights the need to keep track of tobacco industry efforts to employ arguments relating to equity and the social determinants of health.⁵¹

WAYS FORWARD: RECOMMENDATIONS TO MITIGATE THE EQUITY CONCERNS ARISING FROM MAJOR TOBACCO TAX INCREASES

With evidence demonstrating the clear benefits of steep tobacco tax increases but with the above four concerns in mind, this section outlines strategies available to researchers and policy-makers to adopt to mitigate the potentially unequal impacts of high tobacco taxes.

1. Understanding potential harms and monitoring the impacts

While multiple studies have explored the impact of tobacco taxes on population health, far fewer examine the impacts from an equity perspective or from the perspective of low-income smokers.²⁸ When it comes to the desirability of very high tobacco taxes, researchers focusing on tobacco control and researchers focusing on health inequalities appear to disagree.^{4 11} If we are to improve knowledge in this area, it is essential for the equity impacts of Australia's substantial tax increases to be monitored. This could be partially achieved through existing population surveys, with a particular focus on high-risk groups, but supplementary qualitative research would help identify the potentially stigmatising impacts that qualitative study by Hoek and Smith in New Zealand picked up.^{18 39} When it comes to the potential for future, further tax increases, Equity-Focused Health Impact Assessment provides a potential policy analysis tool that can be used to identify the likely equity implications of proposals and offer recommendations to mitigate potential harms.⁵²

2. Spending the revenue

While revenue from Australia's tobacco excise increase is currently allocated to general spending, it could be decided to ringfence some of the revenue raised for measures supporting the most disadvantaged communities. Such a suggestion appears in line with public opinion; approximately 70% of respondents to the 2013 NDSHS said that an increase in tobacco tax should go towards the costs of treatment or to pay for health education.⁵ By way of an illustration, this might include providing additional support for those seeking to quit or reducing their smoking (eg, by making smoking cessation services and treatments more easily accessible, particularly to more disadvantaged communities, as has been tried in the UK) or by investing in other strategies that have proven to be effective at decreasing smoking in specific populations or in addressing key social determinants of health. The rapidly expanding array of harm reduction products, including e-cigarettes, may offer opportunities here, although more research is needed to understand the equity impacts of these products.

Currently, many smoking cessation programmes available in Australia are not tailored to high-risk populations which is important since existing evidence indicates that: (1) different strategies or communication approaches may be needed;^{53 54} (2) people living in more difficult circumstances are likely to find

Special communication

it harder to quit, may not be able to quit right away, or may require multiple quit attempts or a variety of approaches over a relatively long time frame^{55 56} and (3) some efforts to encourage smokers to quit risk stigmatising communities that are already heavily stigmatised.^{39 45}

Even if smoking cessation support measures are targeted, experiences in the UK suggest that the ability of such interventions to address inequities is limited.²⁸ It is therefore important for policymakers to consider how spending the additional revenue generated by the higher tobacco taxes might ameliorate inequities in health. Available reviews of evidence concerning health inequities suggest that social determinants of health, such as access to affordable healthcare, education, employment and income (ie, the broader environments in which people live, learn, work and play) all play a role.^{11 40} From this perspective, revenue from the tobacco tax increase would be best directed towards these areas (ie, welfare spending), particularly, systematic review evidence suggests, interventions relating to employment.⁵⁷

3. Deliberative approaches to engaging with disadvantaged communities

Given the concerns that have been raised about the potentially stigmatising impacts of very high tobacco taxes,³⁹ and the lack of clarity in available research regarding the equity impacts of population level tobacco policies, there is a particularly strong rationale for working collaboratively with disadvantaged communities when it comes to tobacco taxes.³⁹ Employing deliberative discussions about potential policy decisions regarding the revenue raised or even ‘participatory budgeting’, as trialled in the UK,⁵⁸ offers the potential to overcome people’s sense that they are being unfairly discriminated against by decisions made by people living in very different circumstances. As Australia moves towards developing a tobacco ‘end-game’, deliberative discussions with disadvantaged communities can also help explore how tobacco tax increases might be combined with other potential strategies (eg, other regulatory approaches, campaigns and/or cessation support programmes).

4. Monitoring tobacco industry responses and illicit trade

As summarised above, there is extensive evidence of strong tobacco industry resistance to steep tobacco increases of the type Australia is implementing so it will be essential for researchers and policymakers to carefully monitor tobacco industry activities and arguments (particularly those employing equity arguments) as well as to monitor illicit trade (and potential industry involvement).

CONCLUSION

Existing evidence provides strong grounds to predict that the 2016 Australian tobacco excise commitment to raising the tax on packets of cigarettes to \$A40 by 2020 will have substantial positive impacts, from both a population tobacco control perspective and in terms of raising revenue for public spending. In tobacco-specific terms, evidence also suggests the tax increases will have an equity-positive impact, reducing inequalities in smoking rates. The implications for broader inequalities (both health inequalities and socioeconomic inequalities) are, however, less clear.⁵⁹ Despite the fact, as we summarise in this paper, existing evidence provides grounds to believe that there may be some negative impacts from such a high tobacco tax for some of Australia’s most disadvantaged communities, there has been little discussion of these potentially undesirable consequences among public health researchers or policymakers in Australia.

Reducing inequalities in smoking rates is difficult in the context of: (1) limited evidence of successful strategies for tobacco control in disadvantaged populations and (2) knowledge about the wider social and economic determinants of health.²⁸ Assessing tobacco control policies through a social justice lens, the ethicist Voigt⁶⁰ notes the paradox that while, on the one hand, social justice concerns can ‘strengthen the case for tobacco control policies because such policies disproportionately benefit the health of the disadvantaged’, the ‘harms associated with such policies (...) too, will fall largely on the disadvantaged’. Research at the intersection of tobacco control, health inequalities and wider social and economic inequalities is urgently required if high-income countries, such as Australia, are to reduce tobacco use in disadvantaged communities as well as at a population level, while preventing harms from falling onto the most disadvantaged. Ideally, future approaches in research and policy would also do more to involve affected populations (eg,⁵⁸ and make clear the ethical dimensions of decisions in this area.⁶⁰

What this paper adds

This paper adds a health equity perspective to the recent Australian tobacco tax increase. It considers potential health equity impacts of the tax increase and proposes strategies to mitigate potential harms.

Acknowledgements We would like to thank Maya Ravis, VicHealth, for the initial conceptualisation of the paper, Becky Freeman, University of Sydney and Scott Walsberger, Cancer Council NSW, for their feedback on early drafts and three anonymous reviewers for very constructive feedback on the original manuscript we submitted. Any views expressed in this paper reflect only those of the authors.

Contributors Both authors contributed to the conceptualisation, writing and editing of the manuscript.

Competing interests None declared.

Provenance and peer review Not commissioned; externally peer reviewed.

Open Access This is an Open Access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited and the use is non-commercial. See: <http://creativecommons.org/licenses/by-nc/4.0/>

© Article author(s) (or their employer(s) unless otherwise stated in the text of the article) 2017. All rights reserved. No commercial use is permitted unless otherwise expressly granted.

REFERENCES

- Ross H, Blecher E, Yan L, *et al*. Do cigarette prices motivate smokers to quit? new evidence from the ITC survey. *Addiction* 2011;106:609–19.
- Dunlop SM, Cotter TF, Perez DA. Impact of the 2010 tobacco tax increase in Australia on short-term smoking cessation: a continuous tracking survey. *Med J Aust* 2011;195:469–72.
- International agency for research on cancer (IARC). *Effectiveness of tax and price policies for tobacco control: IARC handbook of cancer prevention volume 14*. France: Lyon, 2011.
- World Health Organization. Tobacco free initiative (TFI): Raise Taxes on tobacco. secondary tobacco free initiative (TFI): Raise Taxes on tobacco. 2016 http://www.who.int/tobacco/mpower/raise_taxes/en/.
- Australian Institute of Health and Welfare (AIHW). National drug strategy household survey detailed report: 2013: australian institute of health and welfare (AIHW). 2015.
- Campaign for tobacco free kids. voters across the country support large increases in tobacco Taxes. secondary voters across the country support large increases in tobacco Taxes (Fact sheet). 2013 <http://www.tobaccofreekids.org/research/factsheets/pdf/0309.pdf>.
- Metherell L. Tobacco tax increase will cut smoking rates, say public health experts. *ABC News* 2016.

- 8 Woodley N, Budget BE. Tobacco excise hike confirmed as Scott Morrison prepares to deliver election budget. *ABC News* 2016.
- 9 Piotrowski D. Australians already pay more for cigarettes than anyone else in the world - even before the government announced it would charge a massive \$40 a packet. *The Daily Mail Australia* 2016.
- 10 Remler DK. Poor smokers, poor quitters, and cigarette tax regressivity. *Am J Public Health* 2004;94:225–9.
- 11 Marmot M. Fair society, healthy lives. *The Marmot review: Strategic review of health inequalities in England post-2010*, 2010.
- 12 Ting I. Tobacco tax rise comes after cigarette prices soar 343 per cent in 20 years. *Sydney Morning Herald* 2016.
- 13 Australian Bureau of Statistics (ABS). *6401.0 - Consumer price index*. Australia, 2016.
- 14 Thomas S, Fayer D, Misso K, et al. Population tobacco control interventions and their effects on social inequalities in smoking: systematic review. *Tob Control* 2008;17:230–7.
- 15 Australian Government Department of Health. Taxation: the history of tobacco excise arrangements in Australia since 1901. secondary taxation: the history of tobacco excise arrangements in Australia since 1901. 2014 <http://www.health.gov.au/internet/main/publishing.nsf/content/tobacco-tax#1>.
- 16 National Preventative Health Taskforce. *The healthiest country by 2020. national preventative health strategy*. Australia: National Preventative Health Taskforce, 2009.
- 17 World Health Organization. *WHO framework convention on tobacco control*. Geneva, Switzerland: World Health Organization, 2003.
- 18 Smith KE, Savell E, Gilmore AB. What is known about tobacco industry efforts to influence tobacco tax? A systematic review of empirical studies. *Tob Control* 2013;22:e1.
- 19 Biener L, Aseeltine RH, Cohen B, et al. Reactions of adult and teenaged smokers to the massachusetts tobacco tax. *Am J Public Health* 1998;88:1389–91.
- 20 Hanewinkel R, Isensee B. Five in a row--reactions of smokers to tobacco tax increases: population-based cross-sectional studies in Germany 2001–2006. *Tob Control* 2007;16:34–7.
- 21 Saenz-de-Miera B, Thrasher JF, Chaloupka FJ, et al. Self-reported price of cigarettes, consumption and compensatory behaviours in a cohort of mexican smokers before and after a cigarette tax increase. *Tob Control* 2010;19:481–7.
- 22 Australian Institute of Health and Welfare (AIHW). NDSHS 2013 data & references: supplementary tables: australian institute of health and welfare (AIHW). 2013.
- 23 Butler T, Allnutt S, Cain D, et al. Mental disorder in the new south wales prisoner population. *Aust N Z J Psychiat* 2005;39:407–13.
- 24 Johnson G, Chamberlain C. Homelessness and substance abuse: which comes first? *Australian Social Work* 2008;61:342–56.
- 25 Australian Institute of Health and Welfare (AIHW). *The health of Australia's prisoners 2015*. Canberra: AIHW, 2015.
- 26 Stafford J, Sindicich N, Burns L, et al. AUSTRALIAN DRUG TRENDS 2008 findings from the illicit drug reporting system (IDRS) Australian drug trends series No. 19, 2011.
- 27 Kermode M, Crofts N, Miller P, et al. Health indicators and risks among people experiencing homelessness in Melbourne, 1995–1996. *Aust N Z J Public Health* 1998;22:464–70.
- 28 Hill S, Amos A, Clifford D, et al. Impact of tobacco control interventions on socioeconomic inequalities in smoking: review of the evidence. *Tob Control* 2014;23(e2):e89–e97.
- 29 Hurley S, Spittal M, Scollo M, et al. *Predicted impact of proposed tobacco control strategies*. Victoria: Cancer Council, 2009.
- 30 Scollo M. Trends in tobacco consumption. In: Scollo M, Winstanley M, eds. *Tobacco in Australia: facts and issues*. Melbourne, Australia: Cancer Council Victoria, 2012.
- 31 Chaloupka FJ, Yurekli A, Fong GT. Tobacco Taxes as a tobacco control strategy. *Tob Control* 2012;21:172–80.
- 32 Warner KE. The economics of tobacco: myths and realities. *Tob Control* 2000;9:78–89.
- 33 Cherukupalli R. A behavioral economics perspective on tobacco taxation. *Am J Public Health* 2010;100:609–15.
- 34 Townsend J, Roderick P, Cooper J. Cigarette smoking by socioeconomic group, sex, and age: effects of price, income, and health publicity. *Bmj* 1994;309:923–7.
- 35 Farrelly M, Bray J, ed. Morbidity and Mortality Weekly Report (MMWR): Centres for Disease Control and Prevention. *Response to increases in cigarette prices by race/ethnicity, income, and age groups-United States, 1976–1993*. Office on smoking and health USA, 1998:605–9.
- 36 Chaloupka F. Rational addictive behavior and cigarette smoking. *Journal of Political Economy* 1991;99:722–42.
- 37 Guillaumier A, Bonevski B, Paul C. 'Cigarettes are priority': a qualitative study of how Australian socioeconomically disadvantaged smokers respond to rising cigarette prices. *Health Educ Res* 2015;30:599–608.
- 38 Reid JL, Hammond D, Boudreau C, et al. Socioeconomic disparities in quit intentions, quit attempts, and smoking abstinence among smokers in four western countries: findings from the international tobacco control four country survey. *Nicotine Tob Res* 2010;12 Suppl:S20–S33.
- 39 Hoek J, Smith K. A qualitative analysis of low income smokers' responses to tobacco excise tax increases. *Int J Drug Policy* 2016;37:82–9.
- 40 Commission on Social Determinants of Health. *Health equity through action on the social determinants of health*. Geneva, Switzerland: World Health Organization, 2008.
- 41 Joossens L, Raw M. Cigarette smuggling in Europe: who really benefits? *Tob Control* 1998;7:66–71.
- 42 Shelley D, Cantrell MJ, Moon-Howard J, et al. The \$5 man: the underground economic response to a large cigarette tax increase in New York city. *Am J Public Health* 2007;97:1483–8.
- 43 Wiltshire S, Bancroft A, Amos A, et al. "They're doing people a service"-qualitative study of smoking, smuggling, and social deprivation. *BMJ* 2001;323:203–7.
- 44 Pellegrini B, Fry TRL, Aitken CK. Understanding the motivations of contraband tobacco smokers. *Drugs* 2011;18:387–92.
- 45 Graham H. Smoking, Stigma and Social Class. *Journal of Social Policy* 2012;41:83–99.
- 46 Burgess DJ, Fu SS, van Ryn M. Potential unintended consequences of tobacco-control policies on mothers who smoke: a review of the literature. *Am J Prev Med* 2009;37:S151–S58.
- 47 Bayer R, Stuber J. Tobacco control, stigma, and public health: rethinking the relations. *Am J Public Health* 2006;96:47–50.
- 48 Kelton MH, Givel MS. Public policy implications of tobacco industry smuggling through native american reservations into Canada. *Int J Health Serv* 2008;38:471–87.
- 49 Breton E, Richard L, Gagnon F, et al. Fighting a tobacco-tax rollback: a political analysis of the 1994 cigarette contraband crisis in Canada. *J Public Health Policy* 2006;27:77–99.
- 50 Koh HK. An analysis of the successful 1992 massachusetts tobacco tax initiative. *Tob Control* 1996;5:220–5.
- 51 Clifford D, Hill S, Collin J. Seeking out 'easy targets'? Tobacco companies, health inequalities and public policy. *Tob Control* 2014;23;
- 52 Simpson S, Mahoney M, Harris E, et al. Equity-focused health impact assessment: a tool to assist policy makers in addressing health inequalities. *Environ Impact Assess Rev* 2005;25:772–82.
- 53 Southwell BG. *Social networks and popular understanding of science and health: sharing disparities*: JHU Press, 2013.
- 54 O'Brien J, Salmon A, Geikie A, et al. Integrating smoking care in community welfare agencies to reach disadvantaged people: findings from the smoking matters project. *Health Promot J Austr* 2010;21:176.
- 55 Federico B, Costa G, Kunst AE. Educational inequalities in initiation, cessation, and prevalence of smoking among 3 italian birth cohorts. *Am J Public Health* 2007;97:838–45.
- 56 Barbeau EM, Krieger N, Soobader MJ. Working class matters: socioeconomic disadvantage, race/ethnicity, gender, and smoking in NHIS 2000. *Am J Public Health* 2004;94:269–78.
- 57 Bamba C, Gibson M, Sowden A, Amanda S, et al. Tackling the wider social determinants of health and health inequalities: evidence from systematic reviews. *J Epidemiol Community Health* 2010;64;
- 58 Department for Communities and Local Government. *Communities in the driving seat: a study of participatory budgeting*. England London: Department for Communities and Local Government, 2011.
- 59 Institute of Public Affairs. Labor tobacco tax hike will hit the poor. *Media Release* 2015.
- 60 Voigt K. Smoking and social justice. *Public Health Ethics* 2010;3:91–106.



Australia's \$40 per pack cigarette tax plans: the need to consider equity

Katherine T Hirono and Katherine E Smith

Tob Control published online April 10, 2017

Updated information and services can be found at:
<http://tobaccocontrol.bmj.com/content/early/2017/04/07/tobaccocontrol-2016-053608>

These include:

References

This article cites 35 articles, 8 of which you can access for free at:
<http://tobaccocontrol.bmj.com/content/early/2017/04/07/tobaccocontrol-2016-053608#ref-list-1>

Open Access

This is an Open Access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited and the use is non-commercial. See: <http://creativecommons.org/licenses/by-nc/4.0/>

Email alerting service

Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Notes

To request permissions go to:
<http://group.bmj.com/group/rights-licensing/permissions>

To order reprints go to:
<http://journals.bmj.com/cgi/reprintform>

To subscribe to BMJ go to:
<http://group.bmj.com/subscribe/>