Targeting a new generation – time for a greater focus on smoking uptake prevention?

28 May 2020

Richard Edwards, Janet Hoek, Andrew Waa

The theme of this year's World No Tobacco Day (WNTD) is how the tobacco industry continues to target young people and recruit new generations to smoking. It is accompanied by a call to action to recruit young people to join the fight for them to become a tobacco-free generation. So how could this year's WNTD theme inform New Zealand's smokefree activities and, specifically, how does it relate to efforts to achieve a Smokefree Aotearoa? In this blog, we argue for greatly increasing actions to minimise smoking uptake by youth and young

adults so we can achieve a Smokefree Aotearoa equitably and sustainably.

The importance of supporting smoking cessation

Discussions about how to achieve a Smokefree Aotearoa often focus on how to increase successful quitting among current smokers. This stance is understandable as rapid reductions in smoking prevalence needed to realise the Smokefree goal, will require large numbers of existing smokers to quit.[1] Also, there is a strong ethical case for providing excellent cessation support, given that most smokers desperately want to quit, and smoking is increasingly denormalised and may result in stigma.[2] [3] Furthermore, smokers are greatly impacted by the health harms caused by smoking, as well as by social and financial disadvantage. The latter is exacerbated by high tobacco excise taxes. Despite the high tobacco tax levels, the expenditure on services to assist smokers to quit is only a tiny fraction of the tax revenue collected.[4] [5]

Recent Government initiatives have often emphasised interventions supporting individual cessation such as reconfiguring the national Quitline and smoking cessation services.[6] Whilst these measures are important from a clinical and social justice perspective, they are unlikely to greatly affect smoking prevalence due to limited reach and cost-effectiveness.[7] In order to greatly increase quitting at the population level, policy measures such as tobacco tax increases, mandated denicotinised cigarettes and dramatic reductions in tobacco product availability which prompt and motivate quitting among all smokers, will be required.[8,9] Such measures could act synergistically with the availability of effective alternative nicotine products like vaping devices for smokers who are unable or unwilling to stop using nicotine products.[10]

Why is a greater focus on preventing smoking uptake required?

So what are the arguments for focusing more on preventing smoking uptake? We outline three main reasons. Firstly, young adult smoking prevalence remains high, particularly among Māori. Secondly, minimising smoking uptake is a priority from a societal and public health perspective, and is necessary to achieve and sustain a Smokefree Aotearoa for all peoples. Thirdly, additional population-focused and evidence-based measures exist which could feasibly reduce smoking uptake to minimal levels among future generations.

What is happening with youth and young adult smoking in Aotearoa?

Figure 1 shows recent trends in daily smoking overall and among Māori and Pacific students. There has been a dramatic decline in smoking among adolescents since 1999,[11-13] although prevalence may have plateaued since 2015, and may even be starting to increase.[14]

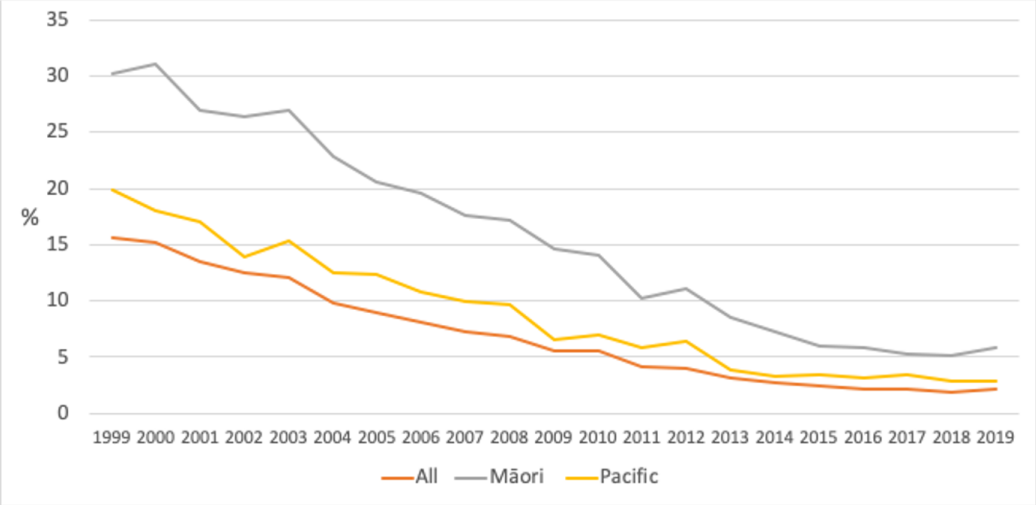

Figure 1 – Daily smoking prevalence 1999-2019 among all and Māori and Pacific Year 10 students aged 14 to 15 years (ASH Snapshot Survey)

For older age groups, smoking prevalence has decreased steadily, particularly since 2011/12 (see figure 2). Reductions in prevalence in the last few years have been less impressive and appears to have stalled for 15-17 year olds. A figure of almost 15% smoking prevalence among 18-24 year olds is still far too high. Recent data for Māori and Pacific young adults are not available from the New Zealand Health Survey, but in the 2013 census, smoking prevalence reached 40% among Māori 20-24 year olds.[15]

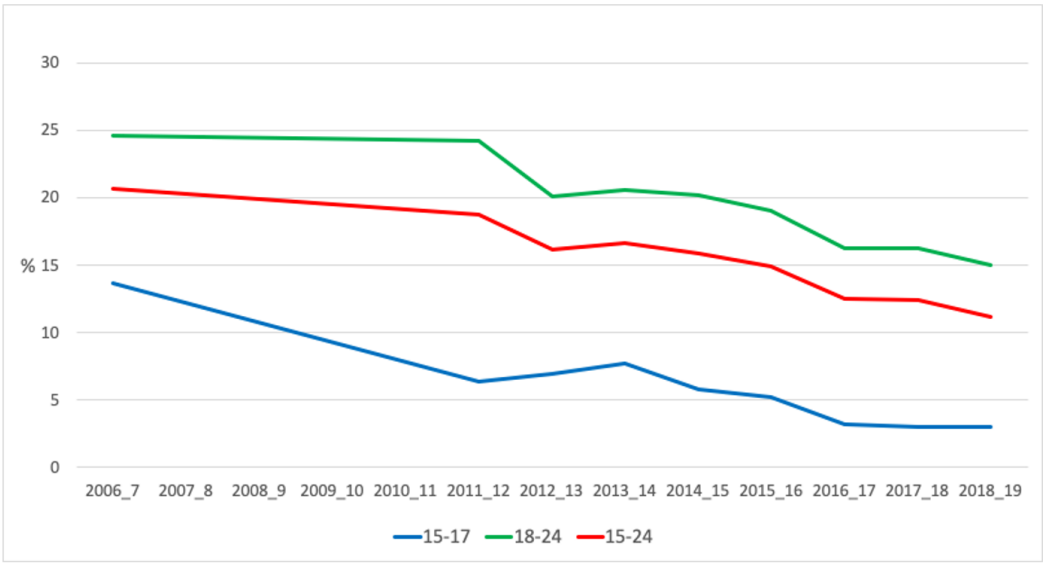

Figure 2 – Daily smoking prevalence among 15-24 year olds (New Zealand Health Survey)

What is the case for action to address smoking uptake as a priority?

There are at least five arguments for making uptake prevention a priority in efforts to achieve a Smokefree Aotearoa.

First, smoked tobacco products are highly addictive and established smokers find it difficult

to quit.[16] Long-term tobacco use results in premature death in up to two thirds of users.[17] There is persisting high prevalence of smoking, particularly among Māori and Pacific young adults, and evidence that initiation and uptake occurs almost wholly before 25 years of age.[18] There is therefore a strong ethical case for prioritising measures to protect minors and young people from the risk of becoming addicted to smoking. New Zealand is a signatory to the UN Convention on the Rights of the Child, Article 24 of which states that countries must 'recognize the right of the child to the enjoyment of the highest attainable standard of health' and requires governments, including the NZ Government, to implement all practicable effective measures to minimise smoking uptake.[19]

Second, modelling studies indicate that uptake prevention could have a key role to play in getting to a Smokefree Aotearoa. For example, Gartner and colleagues demonstrated that whilst increased quitting has the greatest impact on short to medium term reductions in smoking prevalence, reducing uptake has the greatest impact in achieving and sustaining low prevalence long-term.[1] A New Zealand study modelled the impact of a purely uptake focused measure – the 'tobacco-free generation' (TFG) strategy relative to interventions affecting both uptake and cessation, such as annual tobacco tax increases and substantial tobacco retail outlet reductions.[20] The TFG strategy was estimated to have the biggest impact on reducing smoking prevalence, particularly over the longer term, and also had the greatest effect on reducing ethnic disparities in smoking.[9]

Third, there is very strong public support (including among young people)[21] for measures that protect children and young people from smoking uptake and the impacts of smoking. For example, there is overwhelming (around 90%) support for legislation prohibiting smoking in cars carrying children among the public.[22] The New Zealand ITC study investigated smokers' and recent quitters' support for policy measures to help achieve the Smokefree Aotearoa goal, and found this was very high for measures focused on preventing smoking uptake and preventing children being exposed to secondhand smoke, such as smokefree cars legislation (92%), the TFG strategy (78%), and raising the legal age of purchase for tobacco products to 21 years (69%).

Fourth, the tobacco industry has long recognised the vital role of smoking uptake in maintaining its supply of new recruits to the pool of its addicted consumers:

"Thus, today's younger adult smoking behaviour will largely determine the trend of Industry volume over the next several decades. If younger adults turn away from smoking, the Industry must decline, just as a population which does not give birth will eventually dwindle." [23]

Finally, focusing on prevention has a compelling logic. Daily smoking is rare among 14-15 year olds, but subsequent uptake results in much higher prevalence among older youth and young adults. Because smoking is so addictive and young Māori and Pacific people, in particular, face barriers to quitting,[24] many of these young people may be unable to quit and will become long-term smokers. By contrast, because initiation of smoking is uncommon after the age of 24 years,[18] a person who reaches 25 years of age as a non-smoker will, on current trends, almost certainly remain a lifelong non-smoker. Hence preventing people from starting in the first place is likely to be a highly effective and cost-effective way to reduce smoking prevalence long-term. Furthermore, due to the younger age structure of Māori and Pacific populations and their much greater uptake of smoking as youth and young adults, disparities are created among these age groups. Successful uptake prevention could thus greatly reduce inequalities in smoking and smoking-related harm.

What needs to happen?

The third set of reasons for increasing the focus on prevention is that there are many feasible, effective and innovative population-based measures that could reduce uptake. Many were proposed in the Achieving a Smokefree Aotearoa Action Plan.[25]

These include new policy measures that specifically aim to limit uptake among young people. The TFG approach mentioned above would introduce legislation to increase the legal age of purchase each year, creating a generation of people who could never legally buy tobacco products.[20] This idea originated in Singapore and was proposed, but so far failed to progress, in Tasmania.[26,27] It has been briefly implemented in Balanga City in the Philippines, but was stalled by a legal case taken by the Philippine Tobacco Institute (PTI), a tobacco industry trade organisation. More successfully, the USA has seen a rapid spread of Tobacco 21 laws, which raise the legal age for purchasing tobacco products to 21 years.[28,29] Hundreds of local jurisdictions and 23 States have now implemented such laws and, in December 2019, Federal legislation made it unlawful for any retailer in the US to sell a tobacco product to a person aged under 21 years.

Other measures that may reduce uptake by youth and young adults include greatly reducing availability by decreasing substantially the number of outlets that sell tobacco products. Greater outlet density is associated with increased youth smoking prevalence.[30,31] Making retailers that sell tobacco products into R18 (or R21) venues, may further limit youth access to smoked tobacco products.

Mandated product regulation could also greatly reduce uptake of smoking among young people. Such measures include removing the nicotine from tobacco products to make them less addictive, prohibiting additives like menthol to make them less palatable and harsher to smoke, and banning design innovations like capsule cigarettes which appear to be developed by the tobacco industry as a means to attract young people.

Other measures could include youth-focused media campaigns, including hard-hitting social marketing to denormalise smoking among this age group. An example was the ‘Smoking Not Our Future’ campaign, which began in 2007. Uptake of smoking among young adults may often occur in workplace settings, suggesting that there is scope to introduce workplace-based prevention interventions in occupations with high smoking prevalence and large numbers of younger employees. Finally, there is a very strong association between smoking and drinking alcohol.[32-34] Introducing completely smokefree bars and pubs and prohibiting the sales of tobacco products where alcohol is sold could also help reduce smoking uptake among young adults.

Interestingly, despite the tobacco industry’s espoused support for minimising youth smoking, they vigorously oppose such measures, as the experience from Balanga demonstrates. A recent Philip Morris International (PMI) internal strategy document illustrated this double-face and outlined PMI’s opposition to almost all of the policy measures for smoked tobacco products mentioned above, including: product innovation bans, bans on menthol and other additives, restrictions on nicotine content, smokefree cars, the TFG proposal and raising the legal age of purchase above 18 years.[35]

The role of e-cigarettes and vaping and the newer heated tobacco products in increasing or reducing youth and young adult smoking, is much debated. Positive impacts are possible; for example, if large numbers of young smokers switch to vaping. However, there are also potential negative impacts, for example if these products are used by people who would

not have become smokers and, worse, if the ‘gateway hypothesis’, i.e. that these products increase the risk of becoming a smoker in the future, proves to be correct.

These arguments will not be described in detail here, but the accompanying blog argues that, if left to the tobacco industry, the impact of vaping and other ‘new generation products’ is likely to be the generation of new recruits to nicotine-product use. This then poses the very real danger that this will at least impair, if not reverse, efforts to reduce smoking uptake. Furthermore, heated tobacco products, which the tobacco industry are likely to strongly promote, will likely have greater health risks than vaping. For this reason, measures preventing marketing of these devices and reducing their accessibility to youth and young adults should be considered.

The degree of uncertainty about the impact of vaping and e-cigarettes and the limited evidence base about the impact of many interventions aiming to reduce youth and young adult smoking underlines the need for comprehensive monitoring. In addition, a programme of rigorous research and evaluation studies is needed to investigate trends and intervention impacts over time.

Conclusions

There are very strong grounds for policymakers and health workers to return to focussing on preventing smoking uptake. This approach should complement rather than replace measures that prompt and support current smokers to quit, and should be implemented as part of a comprehensive strategy to achieve the Smokefree Aotearoa goal. Continuing high rates of smoking uptake more than 50 years after the publication of landmark reports by the US Surgeon General and Royal College of Physicians, which established the substantial harms caused by smoking, represents a massive failure of successive governments. Māori experience a disproportionately high impact of this government failure to protect future generations from the ravages of smoking. Implementing measures to minimise smoking uptake will ensure that the pool of addicted smokers does not continue to be replenished by new recruits from future generations. It will also have a major impact on reducing disparities in smoking and achieving a Smokefree Aotearoa for all peoples.

References

1. Gartner CE, Barendregt JJ, Hall WD. Predicting the future prevalence of cigarette smoking in Australia: how low can we go and by when? *Tob Control*

2009;18(3):183-189.
2. Evans-Polce RJ, Castaldelli-Maia JM, Schomerus G, Evans-Lacko SE. The downside of tobacco control? Smoking and self-stigma: A systematic review. *Soc Sci Med* 2015;145:26-34.
3. McCool J, Hoek J, Edwards R, Thomson G, Gifford H. Crossing the smoking divide for young adults: Expressions of stigma and identity among smokers and non-smokers. *Nicotine Tob Res* 2013;15(2):552-556.
4. Ernst and Young. *Evaluation of the tobacco excise increases – Final Report – 27 November 2018.* Wellington: Ministry of Health; 2018.
5. Hoek J, Smith K. A qualitative analysis of low income smokers' responses to tobacco excise tax increases. *Int J Drug Policy.* 2016;37:82-89.
6. Edwards R, Hoek J, Beaglehole R, Wilson N, Thomson G, Cunningham C. Realignment of tobacco control services—will it be sufficient to achieve the nation's Smokefree 2025 Goal? *N Z Med J* 2015;128(1413):84-87.
7. Wilson N, Petrovic-van der Deen F, Edwards R, Waa A, Blakely T. Modelling the number of quitters needed to achieve New Zealand's Smokefree 2025 goal for Maori and non-Maori. *N Z Med J* 2018;131(1487):30-37.
8. van der Deen FS, Wilson N, Blakely T. A continuation of 10% annual tobacco tax increases until 2020: Modelling results for smoking prevalence by sex and ethnicity. *N Z Med J* 2016;129(1441):94-97.
9. van der Deen FS, Wilson N, Cleghorn CL, et al. Impact of five tobacco endgame strategies on future smoking prevalence, population health and health system costs: two modelling studies to inform the tobacco endgame. *Tob Control* 2018;27:278-286.
10. Edwards R, Blakely T, Cunningham C, et al. "Achieving Smokefree Aotearoa by 2025": a response to critiques. *Public Health Expert Blog* October 6, 2017. https://blogs.otago.ac.nz/pubhealthexpert/2017/10/06/achieving-smokefree-aotearoa-by-2025-a-response-to-critiques/
11. ASH New Zealand. *2018 ASH Year 10 Snapshot: topline results.* Auckland: ASH New Zealand 2019.
12. Ball J, Sim D, Edwards R. Addressing ethnic disparities in adolescent smoking: Is reducing exposure to smoking in the home a key? *Nicotine Tob Res* 2019;21(4):430-438.
13. Ball J, Sim D, Edwards R. Why has adolescent smoking declined dramatically? Trend analysis using repeat cross-sectional data from New Zealand 2002-2015. *BMJ Open* 2018;8(10):e020320.
14. Walker N, Parag V, Wong SF, et al. Use of e-cigarettes and smoked tobacco in youth aged 14–15 years in New Zealand: findings from repeated cross-sectional studies (2014–19). *Lancet Public Health* 2020;5(4):e204-e212.
15. Tu D, Newcombe R, Edwards R, Walton D. Socio-demographic characteristics of New Zealand adults smokers, ex-smokers and non-smokers: results from the 2013 Census. *N Z Med J* 2016;129(1447):43-56.
16. Chaiton M, Diemert L, Cohen JE, et al. Estimating the number of quit attempts it takes to quit smoking successfully in a longitudinal cohort of smokers. *BMJ Open* 2016;6(6):e011045.
17. Banks E, Joshy G, Weber MF, et al. Tobacco smoking and all-cause mortality in a large Australian cohort study: findings from a mature epidemic with current low smoking prevalence. *BMC Med* 2015;13(1).
18. Edwards R, Peace J, Carter K, Blakely T. An examination of smoking initiation rates by age: results from a large longitudinal study in New Zealand. *Aust NZ J Public Health* 2013;37(6):516-519.
19. United Nations General Assembly. *Convention on the Rights of the Child.* New York:

United Nations General Assembly; 1989.
20. Berrick AJ. The tobacco-free generation proposal. *Tob Control* 2013;22 Suppl 1:i22-26.
21. Jaine R, Healey B, Edwards R, Hoek J. How adolescents view the tobacco endgame and tobacco control measures: Trends and associations in support among 14–15 year olds. *Tob Control* 2015;24(5):449-454.
22. Jaine R, Edwards R, Ball B, Sim D, Thomson G, Beaglehole R. Overwhelming support for smokefree cars that are carrying children – is the Government listening? *N Z Med J* 2017;130(1465):104-106.
23. Burrows DS. Strategic Research Report: Young Adult Strategies and Opportunities. RJ Reynolds Market Research, February 29 1984. Accessed from Legacy Tobacco Documents Library, April 24 2020 – Bates number 501786397-501786428. Available at: https://www.industrydocuments.ucsf.edu/docs/lhld0083
24. Ministry of Health, Place. T. *Exploring why young Māori women smoke: Taking a new approach to understanding the experiences of people in our communities.* Wellington: Ministry of Health;2017.
25. Thornley L, Edwards R, Waa A, Thomson G. *Achieving Smokefree Aotearoa by 2025 (ASAP).* Wellington: University of Otago (ASPIRE 2025); August 2 2017 2017. Available at: https://aspire2025.org.nz/hot-topics/smokefree-action-plan/
26. Trainer E, Gall S, Smith A, Terry K. Public perceptions of the tobacco-free generation in Tasmania: adults and adolescents. *Tob Control* 2017;26(4):458-460.
27. Walters EH, Barnsley K. Tobacco-free generation legislation. *Med J Aust* 2015;202(10):509-510.
28. Winickoff JP, Gottlieb M, Mello MM. Tobacco 21–an idea whose time has come. *N Engl J Med* 2014;370(4):295-297.
29. Friedman AS. Tobacco-21 Laws: Insights From the US Experience. *Nicotine Tob Res* 2019.
30. Finan LJ, Lipperman-Kreda S, Abadi M, et al. Tobacco outlet density and adolescents' cigarette smoking: a meta-analysis. *Tob Control* 2019;28(1):27-33.
31. Marsh L, Vaneckova P, Robertson L, et al. Association between density and proximity of tobacco retail outlets with smoking: A systematic review of youth studies. *Health Place*. Advance publication March 5 2020.
32. Marsh L, Cousins K, Gray A, Kypri K, Connor JL, Hoek J. The association of smoking with drinking pattern may provide opportunities to reduce smoking among students. *Kōtuitui: New Zealand Journal of Social Sciences Online* 2016;11(1):72-81.
33. Noble N, Paul C, Turon H, Oldmeadow C. Which modifiable health risk behaviours are related? A systematic review of the clustering of Smoking, Nutrition, Alcohol and Physical activity ('SNAP') health risk factors. *Prev Med* 2015;81:16-41.
34. Wilson N, Weerasekera D, Kahler CW, Borland R, Edwards R. Hazardous patterns of alcohol use are relatively common in smokers: ITC Project (New Zealand). *N Z Med J* 2012;125(1348).
35. Philip Morris International. 10 Year Corporate Affairs Objectives and Strategies Internal document released as part of Reuters International investigation]. 2014. Available at: https://www.documentcloud.org/public/search/projectid:%2033738-the-philip-morris-files

Public Health Expert Briefing (ISSN 2816-1203)

---

ake-prevention