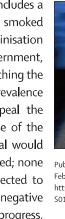
## Harnessing tobacco harm reduction

Harm reduction is a successful public health strategy, for example, in minimising the harms of drug use.¹Tobacco harm reduction<sup>2</sup> should, therefore, be a central strategy of the WHO Framework Convention on Tobacco Control (FCTC) in addition to the measures for demand and supply reduction which are necessary, but not sufficient. WHO FCTC has been influential in encouraging a global response to tobacco control,3.4 but it has been challenging to show a strong and consistent association between the implementation of FCTC measures and smoking prevalence and cigarette consumption outcomes.<sup>5,6</sup> The FCTC does not prohibit harm reduction approaches but leaves it up to countries to decide how to regulate e-cigarettes and other novel nicotine products.3 WHO's lack of endorsement of tobacco harm reduction limits healthier choices for the 1.3 billion people globally who smoke and who are at an increased risk of early death.4

There is no scientific justification for WHO's position that e-cigarettes and other novel nicotine products should be treated in the same way as tobacco products.<sup>7,8</sup> This position overlooks a risk-proportionate approach. We believe WHO needs to provide positive leadership and technical support to countries as they consider the use of e-cigarettes and other nicotine delivery devices, including snus, pouches, and heated and smokeless tobacco.9 WHO's current approach to these lowerrisk products<sup>10</sup> is to reward countries, such as India, for banning e-cigarettes;11 34 countries, primarily low-income and middle-income countries, now ban e-cigarettes.10

In some countries, substantial reductions in smoking prevalence have coincided with the uptake of novel nicotine products. In New Zealand, for example, the prevalence of adult daily smoking plummeted from 13.3% in 2017–18 to 6.8% in 2022–23<sup>12</sup> after e-cigarettes became widely available, a 49% decline in 5 years. In the same period, and with the support of the government and regulation of vaping,13 the prevalence of adult daily vaping increased from 2.6% to 9.7%.12 New Zealand's recent decline in smoking occurred in the absence of any other major tobacco control policy, apart from the annual cost-of-living price increases.<sup>14</sup> The decrease in smoking during this period in New Zealand shows what can be achieved and exceeds the WHO smoking prevalence reduction goals of 30% over 15 years from 2010 to 2025.15





Published Online February 1, 2024 https://doi.org/10.1016/ 50140-6736(24)00140-5

The New Zealand 2022 smoke-free legislation includes a "tobacco-free generation", a 90% reduction in smoked tobacco retail outlets, and compulsory denicotinisation of retail tobacco.16 The New Zealand Government, elected in November, 2023, is committed to reaching the Smokefree 2025 goal of 5% (or less) smoking prevalence for the adult population, but intends to repeal the 2022 smoke-free legislation.<sup>17.</sup> However, because of the implementation timelines, fears that this repeal would jeopardise the Smokefree 2025 goal can be allayed; none of the three headline measures would be expected to have an impact before 2025 and might have had negative unintended consequences.<sup>18</sup> Based on recent progress, New Zealand's Smokefree 2025 goal looks likely to be reached by consent rather than coercion and by further support for switching to smoke-free nicotine products.<sup>19</sup>

Other high-income countries have also succeeded in reducing smoking prevalence in association with the use of a range of lower-risk nicotine delivery devices to complement FCTC demand and supply reduction measures. Sweden, with a long tradition of snus use, has the lowest prevalence of adult daily smoking in the world, down to 6% in 2022, accompanied by low mortality from tobacco-related diseases.20 Norway has had similar success with reducing smoking prevalence in the context of increased use of snus and e-cigarettes,21 and in England vaping is helping adults to quit smoking.<sup>7,22</sup> The substantial decline in cigarette consumption in Japan is associated with the rapid uptake of products that heat, rather than burn, tobacco.23 Less progress has been made in low-income and middle-income countries where tobacco control capacity and political will to advance tobacco control measures are weaker, and the potential of tobacco harm reduction is not being realised.5

Two concerns suggest why tobacco harm reduction is not more actively embraced, despite its association with reduced smoking prevalence. The first is that, compared with cigarettes, where the damage has been known for more than half a century, the long-term effects of e-cigarettes are unknown. Although vaping may not be risk-free, especially for people who do not smoke,<sup>22</sup> the risks of there being substantial long-term harm from the constituents of e-cigarettes are likely to be low, especially when compared with the damage caused by smoked tobacco.7

The second concern is that the widespread availability of e-cigarettes in the absence of adequate controls and regulations encourages youth nicotine dependence and enables the vaping industry to act unethically.<sup>24</sup> There is little evidence to suggest that vaping leads to smoking among youth, and although the proportion of non-smoking youth who vape is increasing, it remains at a fairly low level.<sup>25,26</sup> Stricter regulations, including enforcing sales restrictions, and appropriate health-promoting campaigns are needed to prevent vaping by young people, but these measures must be balanced with the health needs of older adults who smoke and require support to quit.

There is understandable scepticism about the motives of the tobacco industry in selling smoke-free products while continuing to expand tobacco markets in low-income and middle-income countries.<sup>24</sup> To remain profitable, the tobacco industry will eventually need to migrate its global business to less harmful alternatives since cigarettes will no longer monopolise the delivery of nicotine.

The WHO FCTC Conference of the Parties 10 (COP10), the governing body of the FCTC, will be held in Panama on Feb 5–9, 2024. The critical background papers to COP10 recommend treating nicotine products as equivalent to cigarettes and regulating them in a similar way.<sup>27,28</sup> This approach is a retrograde step because they are not comparable products in terms of the damage they cause; after all, it is the burning of tobacco that causes harm, not nicotine.<sup>29</sup> Worse, such a strategy would ultimately favour the global cigarette market and may discourage vaping.

The focus must remain on the central public health problem—the damaging health effects of tobacco consumption. Reducing cigarette smoking is the most effective way to prevent tobacco-related deaths<sup>15</sup> and tobacco harm reduction is the fastest and fairest way to lower smoking prevalence. WHO needs to embrace these innovations in nicotine delivery. Countries that are reaping the benefit of tobacco harm reduction, such as New Zealand, Sweden, Norway, England, and Japan, should encourage participating countries at COP10 to support proposals that will quickly reduce smoking rates. The world's 1·3 billion people who smoke, half of whom will die early, deserve this leadership.

We declare no competing interests. RBe is the Chair of ASH, Action for Smokefree 2025, an incorporated society that campaigns to eliminate the death and harm caused by tobacco. The views expressed in this Comment are those of the authors.

## \*Robert Beaglehole, Ruth Bonita r.beaglehole@auckland.ac.nz

University of Auckland, Private Bag 9201, Auckland, New Zealand

- 1 Harm Reduction International. What is harm reduction? 2024. https://hri. global/what-is-harm-reduction/ (accessed lan 23, 2024).
- 2 Hatsukami DK, Carroll DM. Tobacco harm reduction: past history, current controversies and a proposed approach for the future. Prev Med 2020; 140: 106099.
- 3 Arnott D, Lyndoff K, Goddard A. Tobacco control: the FCTC provides the route to the finish line. Lancet 2022; 400: 427.
- 4 Ghebreyesus TA. Progress in beating the tobacco epidemic. *Lancet* 2019; 394: 548–49.
- Warner KR. Understanding the association between the WHO Framework Convention on Tobacco Control, adoptions of tobacco control policies, and reduction in smoking prevalence. Lancet Public Health 2017; 2: e158–59.
- 6 Hoffman SJ, Poirier MJP, Van Katwyk SR, et al. Impact of the WHO Framework Convention on Tobacco Control on global cigarette consumption: quasi-experimental evaluations using interrupted time series analysis and in-sample forecast event modelling. BMJ 2019; 365: 12287.
- McNeill A, Simonavičius E, Brose LS, et al. Nicotine vaping in England: an evidence update including health risks and perceptions, September 2022. A report commissioned by the Office for Health Improvement and Disparities. London: Office for Health Improvement and Disparities, 2022. https://assets.publishing.service.gov.uk/media/633469fc8fa8f5066 d28e1a2/ Nicotine-vaping-in-England-2022-report.pdf (accessed lan 23, 2024).
- 8 Akiyama Y, Sherwood N. Systematic review of biomarker findings from clinical studies of electronic cigarettes and heated tobacco products. Toxicol Rep 2021; 8: 282–94.
- 9 Beaglehole R, Bates C, Youdan B, Bonita R. Nicotine without smoke: fighting the tobacco epidemic with harm reduction. Lancet 2019; 394: 718–20.
- 10 WHO. WHO global report on the global tobacco epidemic, 2023: protect people from tobacco smoke. Geneva: World Health Organization, 2023. https://iris.who.int/bitstream/handle/10665/372043/9789240077164-enq.pdf?sequence=1 (accessed Jan 23, 2024).
- Mordani S. WHO honours Harsh Vardhan on World No Tobacco Day for banning e-cigarettes. India Today. May 31, 2022. https://www.indiatoday. in/india/stony/who-honours-harsh-vardhan-on-world-no-tobacco-dayfor-banning-e-cigarettes-1809113-2021-05-31 (accessed Jan 23, 2024).
- 12 Ministry of Health, New Zealand Government. New Zealand Health Survey, 2022–2023. https://minhealthnz.shinyapps.io/nz-health-survey-2022-23-annual-data-explorer/\_w\_258fbcdd/#!/explore-topics (accessed Jan 23, 2024).
- 13 New Zealand Government. New Zealand Smokefree Environments and Regulated Products (Vaping) Amendment Act 2020. https://www.legislation.govt.nz/act/public/1990/0108/latest/DLM223191.html (accessed Jan 23, 2024).
- 14 Ministry of Health, New Zealand Government. Vaping and smoke free history and timelines. Aug 22, 2023. https://www.health.govt.nz/ourwork/preventative-health-wellness/smokefree-2025/smokefree-andvaping-history/vaping-and-smokefree-history-and-timelines#sfjou (accessed Jan 27, 2024).
- 15 WHO. WHO global action plan for the prevention and control of noncommunicable diseases 2013–2020. Geneva: World Health Organization, 2013. https://www.who.int/publications/i/ item/9789241506236 (accessed Jan 23, 2024).
- 16 New Zealand Government. New Zealand Smokefree Environments and Regulated Products (Smoked Tobacco) Amendment Act 2022. https://www.legislation.govt.nz/act/public/2022/0079/latest/LMS708154.html (accessed Jan 23, 2024).
- 17 Luxon C, Peters W. Coalition Agreement between the New Zealand National Party and the New Zealand First Party. Nov 24, 2023. https:// assets.nationbuilder.com/nationalparty/pages/18466/attachments/ original/1700778597/NZFirst\_Agreement\_2.pdf?1700778597 (accessed Jan 25, 2024).
- 18 Bates C, Bonita R, Youdan B, et al. Review of: Tobacco endgame intervention impacts on health gains and Māori:non-Māori health inequity: a simulation study of the Aotearoa-New Zealand Tobacco Action Plan. Qeios 2022; published online Nov 6. https://doi.org/10.32388/8WXHOJ.
- 19 Beaglehole R, Youdan B. Smokefree laws: New Zealand well on track to be smoke free next year. New Zealand Herald. Jan 11, 2024. https://www. nzherald.co.nz/nz/smokefree-laws-new-zealand-is-well-on-track-to-besmokefree-next-year/XECMRVXB6JCMFIAQCDAGK2SL6U/ (accessed Jan 27, 2024).

- 20 Swedish National Institute of Public Health. The use of tobacco and nicotine products by adults. Dec 15, 2022. https://www.folkhalsomyndigheten.se/livsvillkor-levnadsvanor/andts/utveckling-inom-andts-anvandning-och-ohalsa/anvandning/anvandning-av-tobaks-och-nikotinprodukter/vuxnas-bruk-av-tobaks-och-nikotinprodukter/ (accessed Jan 23, 2024).
- 21 Norwegian Directorate of Health. Tobacco control in Norway. 2022. https://www.helsedirektoratet.no/english/tobacco-control-in-norway (accessed Jan 23, 2024).
- 22 Jackson S, Bullen C. UK report underscores potential of e-cigarettes to reduce smoking harms. Lancet 2022; 400: 1747–50.
- 23 Cummings KM, Nahhas GJ, Sweanor DT. What is accounting for the rapid decline in cigarette sales in Japan? Int J Environ Res Public Health 2020; 17: 3570–71.
- 24 Lee K, Egbe CO, Bianco E, et al. The 20th anniversary of the WHO Framework Convention on Tobacco Control: hard won progress amid evolving challenges. Lancet 2023; 402: 592–94.
- 25 ASH. Year 10 Snapshot Survey 2023. Topline—youth smoking and vaping. 2023. https://assets.nationbuilder.com/ashnz/pages/70/attachments/ original/1702170472/2023\_ASH\_Y10\_Snapshot\_Topline\_smoking\_and\_ vaping\_FINAL.pdf?1702170472 (accessed Jan 27, 2024).

- 26 Action on Smoking and Health. Use of e-cigarettes among young people in Great Britain. 2023. https://ash.org.uk/uploads/Headline-results-ASH-Smokefree-GB-adults-and-youth-survey-results-2023.pdf?v=1684400380 (accessed Jan 23, 2024).
- 27 Conference of the Parties to the FCTC Tenth Session. Documents. 2024. https://storage.googleapis.com/who-fctc-cop10/Main%20documents/ index.html (accessed Jan 23, 2024).
- 28 WHO Framework Convention on Tobacco Control. Tenth session of the Conference of the Parties (COP10) to the WHO FCTC. 2024. https://fctc. who.int/who-fctc/governance/conference-of-the-parties/tenth-session-of-the-conference-of-the-parties (accessed Jan 28, 2024).
- 29 Russel MAH. The future of nicotine replacement. Brit J Addiction 1991; 86: 653–58.