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Smoking cessation and e-cigarettes in China and India

E-cigarette regulation must prioritise smoking cessation among adults

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The Chinese and Indian governments have taken steps to restrict access to electronic cigarettes. ¹² The motivation has been to protect young people from e-cigarette use and possible lifelong addiction and, less altruistically, lobbying by domestic cigarette industries. Protecting young people is a laudable goal but it must be scrutinised using epidemiological evidence relevant to each country.

Prolonged tobacco smoking causes about a million deaths annually in both China and India. ³⁻⁵ China and India have about 300 million and 100 million smokers, respectively, about a third of the global total of 1.3 billion smokers. Although smoking prevalence has fallen in India over the past decade, in China it is mostly unchanged. Few women smoke in either country. ⁶ Importantly, among people aged 30-59—an age when adults often consider quitting—there are about 250 million Chinese and Indian men who currently smoke but only about 30 million former smokers. In China, only 10% of male smokers have tried quitting in the past year. ⁶ By contrast, in high income countries, around age 50 there are as many former smokers as current smokers. ³

Quitting before the age of 40 (and preferably earlier) avoids 90% of the risk of continued smoking.³ Reductions in tobacco deaths in these two countries (and globally) over the next few decades will require large increases in cessation rates. Preventing children from starting to smoke would reduce mortality only after 2050. E-cigarettes produced higher cessation rates than more standard nicotine replacement therapy in a randomised trial⁷ and seem to have raised adult smoking cessation in England.⁸

Notably, less than a third of male cigarette smokers in China and India start before age 18, whereas in the US and UK most regular smokers start before this age. Moreover, female smoking at ages 18-24 years is low and probably falling. This is relevant as most (but not all) studies in high income countries find that e-cigarette experimentation occurs mostly among cigarette smokers and is low among people who have never smoked. E-cigarettes might be contributing to historically rapid declines in cigarette smoking by US high school students.

China and India have implemented some of the provisions in the Framework Convention on Tobacco Control, most notably by banning smoking in public places and restricting tobacco advertising or promotion. However, both have mostly neglected high excise taxes, the single most effective intervention to raise adult cessation and deter young people from starting. ^{3 11} Rapid income growth, especially in China, means that cigarettes are now more affordable. The profile of smoking in China and India suggests a debate is needed on the role of e-cigarettes, with much greater attention given to the challenge of raising the low cessation rates among middle aged adults. Paradoxically, the tight restrictions on e-cigarettes in China and India represent an opportunity for a more deliberate and measured approach to e-cigarettes than has been possible in many high income countries.

Opportunities

Any future liberalisation of access to e-cigarettes should focus on helping adult smokers quit and preventing experimental use by curious adolescents. Banning child friendly flavours and use in public places are essential, along with advertising restrictions similar to those for cigarettes.

Both countries could also regulate competition between e-cigarettes and manufactured cigarettes or, in the Indian case, bidis. This would involve strictly prohibiting entry of the multinational cigarette manufacturers and China's state owned tobacco company into the e-cigarette market. We should all be alarmed by multinational tobacco companies' excitement about e-cigarette markets, given the large marketing and promotion advantages that big tobacco companies bring. It would be far better to allow sales only through small scale local enterprises, which would be more likely to compete to encourage adult cigarette smokers to quit.

Each country has an extensive government apparatus to track consumer products, and this could be used to ensure safe, high quality production and tracing of e-cigarettes (including bar coded, GPS traceable products, which could eventually be extended to standard cigarettes). The devices must be made tamper-proof given that deaths reported among users in the US seem to be associated with the addition of non-nicotine products, including marijuana, to e-cigarette liquids.

Most importantly, both countries should increase the excise tax on cigarettes by large amounts. A rapid tripling of excise taxes, paired with announcements of future increases, would

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substantially accelerate quitting³ and could tilt the market towards cessation. Price elasticity studies of e-cigarettes are few,¹² but it would be prudent to adopt a sufficiently high tax to deter price sensitive youth from experimenting.

The United Nation's sustainable development goals for 2030 call for a one third reduction in mortality from heart attacks, stroke, and respiratory disease among adults.¹³ This goal can be met only if China and India make progress against these smoking related diseases.³⁻⁵ Both governments must not hesitate to use all effective price and non-price interventions to increase tobacco cessation and avoid tens of millions of premature deaths.^{3 11}

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- Dyer O. India bans e-cigarettes by executive order. BMJ 2019;366:l5649. 10.1136/bmi.l5649.31537546
- 2 China and India turn against vaping. But Europe sees it as safer than cigarettes. Los Angeles Times 2019 Sep 23. https://www.latimes.com/business/story/2019-09-19/chinaindia-turn-against-vaping-but-europe-sees-it-as-safer-than-cigarettes
- india-turn-against-vaping-but-europe-sees-it-as-safer-than-cigarettes

 Jha P, Peto R. Global effects of smoking, of quitting, and of taxing tobacco. *N Engl J Med* 2014;370:60-8. 10.1056/NEJMra1308383 24382066

- Jha P, Jacob B, Gajalakshmi V, etal. RGI-CGHR Investigators. A nationally representative case-control study of smoking and death in India. N Engl J Med 2008;358:1137-47. 10.1056/NEJMsa0707719 18272886
- 5 Chen Z, Peto R, Zhou M, etal. China Kadoorie Biobank (CKB) collaborative group. Contrasting male and female trends in tobacco-attributed mortality in China: evidence from successive nationwide prospective cohort studies. *Lancet* 2015;386:1447-56. 10.1016/S0140-6736(15)00340-2 26466050
- 6 Asma S, Mackay J, Song SY, etal . The GATS atlas. CDC Foundation, 2015.
- Hajek P, Phillips-Waller A, Przulj D, etal . A randomized trial of e-cigarettes versus nicotine-replacement therapy. N Engl J Med 2019;380:629-37. 10.1056/NEJMoa1808779 30699054
- 8 Beard E, West R, Michie S, Brown J. Association between electronic cigarette use and changes in quit attempts, success of quit attempts, use of smoking cessation pharmacotherapy, and use of stop smoking services in England: time series analysis of population trends. BMJ 2016;354:i4645. 10.1136/bmj.i4645 27624188
- 9 Warner KE. How to think—not feel—about tobacco harm reduction. Nicotine Tob Res 2018;21:1299-309. 10.1093/ntr/nty084. 29718475
- Miech RA, Schulenberg JE, Johnston LD, Bachman JG, O'Malley PM, Patrick ME. National adolescent drug trends in 2018. Monitoring the future. 2018. http://www.monitoringthefuture. org
- 11 Jha P, MacLennan M, Chaloupka FJ, etal . Global hazards of tobacco and the benefits of smoking cessation and tobacco taxes. In: Gelband H, Jha P, Sankaranarayanan R, Horton S, eds. Cancer: disease control priorities. Vol 3, 3rd ed. 2015. https://www.ncbi. nlm.nih.gov/books/NBK343639.
- 12 Grace RC, Kivell BM, Laugesen M. Estimating cross-price elasticity of e-cigarettes using a simulated demand procedure. *Nicotine Tob Res* 2015;17:592-8. 10.1093/ntr/ntu268 25548256
- Norheim OF, Jha P, Admasu K, etal . Avoiding 40% of the premature deaths in each country, 2010-30: review of national mortality trends to help quantify the UN sustainable development goal for health. *Lancet* 2015;385:239-52. 10.1016/S0140-6736(14)61591-9 25242039

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