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THE TOBACCO LANDSCAPE IN INDIA: AN ARGUMENT FOR HARM REDUCTION

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INTRODUCTION

Tobacco use in India is a persistent and multifaceted problem. About a third of the Indian population uses some form of tobacco. Combustible and smokeless forms of tobacco are popular in the country, and these products are available in an array of varieties. In an effort to decrease use, the Indian government has instituted a range of different tobacco control laws since the 1970s; however, implementation has proven inconsistent.

Given the large proportion of the population that uses tobacco, India is a prime location for applying tobacco harm reduction strategies. However, many reduced-risk tobacco products, such as e-cigarettes, are banned in the country. By preventing access to alternative nicotine delivery systems, the Indian government has eliminated the chance of effective tobacco harm reduction in a country that needs to use all available means to decrease its smoking and tobacco use rates.

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TOBACCO USE IN INDIA

India's population has the second highest proportion of tobacco users in the world.¹ This comes from use of both combusted forms of tobacco and smokeless products. In 2017, about 28.6 percent of the Indian population used some form of tobacco.² The most commonly used form of combusted tobacco is bidis, a type of tobacco hand-rolled in temburni leaf.³ The tar produced by bidis is five times greater than that of manufactured, combustible cigarettes.⁴ An estimated 7.7 percent of Indians currently used bidis, according to the World Health Organization's 2016-2017 Global Adult Tobacco Survey (GATS).⁵ Manufactured, combustible cigarettes and hand rolled cigarettes are the second most commonly used form of combusted tobacco, with 4 percent of Indians currently smoking some type of cigarette.⁶

Smoking behaviors differ by gender, socioeconomic status and geographic area. Women smoke both bidis and combustible cigarettes at much lower rates than men.⁷ Those who are poorer, less educated or members of lower castes tend to smoke all forms of tobacco, except commercially manufactured, combustible cigarettes, at higher rates than their

1. Lazarous Mbulo, et. al., "Patterns and Related Factors of Bidi Smoking in India," *Tobacco Prevention & Cessation* 6:28 (May 4, 2020). <http://www.tobaccoprevention-cessation.com/Patterns-and-related-factors-of-bidi-smoking-in-India.119053.0.2.html>.

2. Priya Mohan, et. al., "Assessment of Tobacco Consumption and Control in India," *Indian Journal of Clinical Medicine* 9 (2018), pp. 1-8. <https://journals.sagepub.com/doi/pdf/10.1177/1179916118759289>.

3. Mbulo, et. al., May 4, 2020. <http://www.tobaccopreventioncessation.com/Patterns-and-related-factors-of-bidi-smoking-in-India.119053.0.2.html>.

4. Mohan, et. al. <https://journals.sagepub.com/doi/pdf/10.1177/1179916118759289>.

5. New Delhi, India: Ministry of Health and Family Welfare, "Global Adult Tobacco Survey Fact Sheet: India 2016-17" World Health Organization, 2018. https://www.who.int/tobacco/surveillance/survey/gats/GATS_India_2016-17_FactSheet.pdf.

6. Ibid.

7. Ibid.

more well-off counterparts.⁸ Use of commercially manufactured, combustible cigarettes is more common among men with higher amounts of education and wealth.⁹ Bidi smoking, tends to be more prevalent among people living in rural areas, those with less education and members of lower castes.¹⁰ Smoking rates also differ by state. In 2017, the smoking rate for all of India was about 10.7 percent; however, across the states, smoking prevalence ranged from 3.8 percent to 34.4 percent.¹¹

Smokeless tobacco products are also popular in India. GATS data from 2016–2017 showed that 21.4 percent of Indians currently used smokeless tobacco products.¹² Various types of smokeless tobacco are used in India and each one requires different tobacco leaf preparation. The method of consumption also differs by product, with chewing being the most common method of consumption. There are also products that are rubbed on the teeth and gums or sniffed.¹³ Some of the most common forms of smokeless tobacco products are *mawa*, *gukka*, *paan*, *paan masala*, *betel quid*, *khaini* and *mishri*.¹⁴

While smoking tobacco is considered taboo in India, chewing tobacco is much more socially accepted, especially for women.¹⁵ Nevertheless, more men than women use smokeless tobacco products; however, smokeless tobacco use by women is rising.¹⁶ According to 2016–2017 GATS data, 29.6 percent of men and 12.8 percent of women use smokeless tobacco products in India.¹⁷ The prevalence of smokeless tobacco use increases with age for both men and women.¹⁸ Other demographic characteristics associated with smokeless tobacco use are living in a rural area, having lower levels

of education and belonging to socially-disadvantaged casts.¹⁹ Furthermore, many see smokeless tobacco as a cessation method for smoking.²⁰

THE TOBACCO MARKETPLACE

The tobacco product marketplace in India is quite complex. While three companies account for 94 percent of cigarette sales, the smokeless tobacco and bidi marketplaces show greater segmentation.²¹ Smokeless tobacco products are available in a wide range of brands and varieties, and most are available in single-serve packets.²² The majority of smokeless tobacco products used in India are produced in India and sold at traditional markets and through informal markets, such as street vendors.²³ Since 2012, *gukka* and *paan* containing tobacco have been banned in most Indian states.²⁴ Yet, even in states where all smokeless tobacco products are banned, most are still easily available to consumers.

Bidi manufacturing and sales networks are even more informal and decentralized than those for smokeless tobacco. Although there are registered bidi manufacturers—those producing more than 2 million bidis per year—many bidi manufactures are unregistered entities.²⁵ Because of this, it is challenging to collect accurate data on bidi manufacturing and sales.²⁶ Most bidi manufacturing is contracted to small-scale, local producers (many of them women who live below the poverty line).²⁷ The shift towards more informal bidi manufacturing is largely due to the requirement that registered manufacturers pay taxes on their products and obey labor laws, whereas unregistered entities are not held to the same standards.²⁸ Also, since most bidis are produced

8. Sujay Shah, et. al., "Socioeconomic and Cultural Impact of Tobacco in India," *Journal of Family Medicine and Primary Care* 7:6 (2018), pp. 1173-1176. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6293949>.

9. Ibid.

10. Lazarous Mbulo, et. al. <http://www.tobaccopreventioncessation.com/Patterns-and-related-factors-of-bidi-smoking-in-India.119053.0.2.html>.

11. New Delhi, India: Ministry of Health and Family Welfare. https://www.who.int/tobacco/surveillance/survey/gats/GATS_India_2016-17_FactSheet.pdf.

12. Ibid.

13. Sujay Shah et al. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6293949>.

14. See, e.g., Kamal Niaz, et. al., "Smokeless Tobacco (Paan and Gutkha) Consumption, Prevalence, and Contribution to Oral Cancer," *Epidemiology and Health*, 39:e2017009, March 9, 2017. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5543298>; Supriya Lahoti and Priyanka Dixit, "Declining Trend of Smoking and Smokeless Tobacco in India: A Decomposition Analysis," *PLOS One* 16:2: e0247226 (February 25, 2021). <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0247226#abstract0>; J. S. Thakur and Ronika Paika, "Determinants of Smokeless Tobacco Use in India," *The Indian Journal of Medical Research* 148:1 (2018), pp. 41-45. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6172920>.

15. Sujay Shah, et. al. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6293949>.

16. Ibid.

17. New Delhi, India: Ministry of Health and Family Welfare. https://www.who.int/tobacco/surveillance/survey/gats/GATS_India_2016-17_FactSheet.pdf.

18. Mohan, et. al. <https://journals.sagepub.com/doi/pdf/10.1177/1179916118759289>.

19. Ibid.

20. Ibid.

21. Kevin Welding et al., "The Market for Bidis, Smokeless Tobacco, and Cigarettes in India: Evidence From Semi-Urban and Rural Areas in Five States," *International Journal of Public Health* 66:1604005 (May 12, 2021). <https://www.ssph-journal.org/articles/10.3389/ijph.2021.1604005/full>.

22. Ibid.

23. "India Country Report," The Foundation of a Smoke-Free World, July 2020. <https://www.smokefreeworld.org/wp-content/uploads/2020/07/India-Country-Report-1.pdf>.

24. Gaurav Kumar and Pradeep Kumar, "Ban on Gutka in India: Symbolic Victory or Actual End-Game for Smokeless Tobacco. Large-Scale Household Survey in Delhi Finds out!," *Tobacco Induced Diseases* 16(1):A36 (2018). <http://www.tobaccoinduced-diseases.org/Ban-on-Gutka-in-India-symbolic-Victory-or-actual-end-game-for-smokeless-tobacco-Large.83876.0.2.html>.

25. Monika Arora, et. al., "The Indian Bidi Industry: Trends in Employment and Wage Differentials," *Frontiers in Public Health* 8:572638 (Oct. 7, 2020). <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7577084>.

26. Foundation for a Smoke-Free World. <https://www.smokefreeworld.org/wp-content/uploads/2020/07/India-Country-Report-1.pdf>.

27. See, e.g., Kevin Welding, et. al. <https://www.ssph-journal.org/articles/10.3389/ijph.2021.1604005/full>; "India Country Report." <https://www.smokefreeworld.org/wp-content/uploads/2020/07/India-Country-Report-1.pdf>; Arora et al. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7577084>.

28. Arora, et. al. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7577084>.

by unregistered entities, they do not display health warning labels the same way that manufactured combustible cigarettes do.²⁹

The largest manufacturer for commercial combustible cigarettes in India is the Indian Tobacco Company (ITC), with about 80 percent of the market share.³⁰ The Indian government owns around 8 percent of the ITC, and government owned insurance companies own another 16 percent.³¹ Godfrey Phillips India Ltd. and Vazir Sultan Tobacco Company Ltd. constitute another 18 percent of the market share.³² Another feature of the India's tobacco marketplace is that 55-75 percent of manufactured combustible cigarettes are sold as single sticks.³³

Prices of tobacco products in India vary widely. A 2021 study found that the median price per stick, converted to U.S. dollars, for bidis was \$0.01, and the price per gram of smokeless tobacco was \$0.01, as well.³⁴ Manufactured combustible cigarettes were much more expensive, with a median price per stick of \$0.14.³⁵ Regulations require that the maximum retail price (MRP) be printed on all tobacco product packages; however, the study found that only 6 percent of bidis displayed an MRP, whereas 90 percent of smokeless tobacco products and manufactured, combustible cigarettes displayed an MRP.³⁶

India also has a fairly substantial market for illegal tobacco products. In addition to the sale of banned products, such as *gukta* and *paan* that contain tobacco, products that do not display current health warning labels, products not intended for sale in India, products that do not say “inclusive of all taxes” and products that do not display a MRP on their packaging are considered illegal.³⁷ One study found that 55 percent of bidi packs, 43 percent of smokeless products and 25 percent of manufactured, combustible cigarettes were illegal

and 2 percent of smokeless products and 10 percent of commercially manufactured combustible cigarettes were illicit.³⁸ This study classified illegal products as those having out of date health warning labels and illicit products as those not intended for sale in India or those with no or foreign health warning labels. Another study that used slightly different methodology estimated that 2.73 percent of manufactured combustible cigarettes were illegal.³⁹ When it comes to the pricing of illegally manufactured combustible cigarettes, one study found that the median price of illegal products was twice that of legal products.⁴⁰

INDIA'S TOBACCO CONTROL LEGISLATION

Over time, India has enacted a number of tobacco control policies at the national and state level. The first piece of tobacco control legislation—the Cigarettes Act—was enacted in 1975. The crux of the legislation was that it mandated all cigarette packages and advertisements display the warning, “Cigarette Smoking is Injurious to Health.”⁴¹ This legislation only applied to commercially manufactured combustible cigarettes, not other forms of combusted tobacco, such as bidis.

It was not until 1981 that the Indian government implemented the next major tobacco control initiative. In an attempt to address the harms from second-hand smoke, the Prevention and Control of Pollution Act classified smoke as an air pollutant.⁴² What followed was the passage of the Motor Vehicle Act of 1988, which banned smoking on public transportation displaying a notice prohibiting smoking.⁴³

Until 1990, regulation focused on preventing the harms associated with combustible tobacco products.⁴⁴ An amendment to the Prevention of Food Adulteration Act of 1955 was the first legislation to impact smokeless tobacco products.⁴⁵

29. Solanki Jitender, et. al., “Bidi Smoking: An Underestimated Issue of Indian Society,” *Journal of Experimental Therapeutics & Oncology* 12:1 (2017), pp. 73-81. <https://pubmed.ncbi.nlm.nih.gov/28472568>.

30. “India Country Report.” <https://www.smokefreeworld.org/wp-content/uploads/2020/07/India-Country-Report-1.pdf>.

31. Ibid.

32. Ibid.

33. See, e.g., Rijo M. John and Hana Ross, “Illicit Cigarette Sales in Indian Cities: Findings from a Retail Survey,” *Tobacco Control* 27:6 (November 2018), pp. 684-688. <https://pubmed.ncbi.nlm.nih.gov/29222108>; Pranya Lay, et. al., “The Single Cigarette Economy in India - a Back of the Envelope Survey to Estimate its Magnitude,” *Asian Pacific Journal of Cancer Prevention* 16 (2015), pp. 5579-5582. http://journal.waocp.org/article_31295_9ebd3981652934bbf5d78ec066b6a39d.pdf.

34. Kevin Welding, et. al. <https://www.ssph-journal.org/articles/10.3389/ijph.2021.1604005/full>.

35. Ibid.

36. Ibid.

37. See, e.g., John and Ross. <https://pubmed.ncbi.nlm.nih.gov/29222108>; Welding, et. al. <https://www.ssph-journal.org/articles/10.3389/ijph.2021.1604005/full>.

38. Kevin Welding, et. al. <https://www.ssph-journal.org/articles/10.3389/ijph.2021.1604005/full>.

39. Rijo M. John and Hana Ross. <https://pubmed.ncbi.nlm.nih.gov/29222108>.

40. Jennifer Brown, et. al., “An Analysis of Purchase Price of Legal and Illicit Cigarettes in Urban Retail Environments in 14 Low- and Middle-Income Countries,” *Addiction* 112 (2017), pp. 1854-1860. <https://onlinelibrary.wiley.com/doi/pdf/10.1111/add.13881>.

41. See, e.g., Mohan, et. al. <https://journals.sagepub.com/doi/pdf/10.1177/1179916118759289>;

Jagdish Kaur and D. C. Jain, “Tobacco Control Policies in India: Implementation and Challenges,” *Indian Journal of Public Health* 55:3 (2011), pp. 220-227. <https://www.ijph.in/article.asp?issn=0019-557X;year=2011;volume=55;issue=3;spage=220;epage=227;aulast=Kaur>.

42. Mohan, et. al. <https://journals.sagepub.com/doi/pdf/10.1177/1179916118759289>.

43. See, e.g., Government of India, *Motor Vehicles Act of 1988*, p. 59. <https://legislative.gov.in/sites/default/files/A1988-59.pdf>; Mohan, et. al. <https://journals.sagepub.com/doi/pdf/10.1177/1179916118759289>.

44. See, e.g., Mohan, et. al. <https://journals.sagepub.com/doi/pdf/10.1177/1179916118759289>; Kaur and Jain. <https://www.ijph.in/article.asp?issn=0019-557X;year=2011;volume=55;issue=3;spage=220;epage=227;aulast=Kaur>.

45. Ibid.

The amendment mandated that smokeless tobacco products warn users that chewing tobacco is injurious to health.⁴⁶ What followed, in 1992, was an amendment to the Drug and Cosmetics Act of 1940 that banned tobacco in tooth pastes and tooth powders.⁴⁷ Additionally, the Food Safety and Standards (Prohibition and Restrictions on Sales) Regulation of 2011 and the Food Safety and Standards Act of 2006 banned nicotine in any food product.⁴⁸

Another key component of tobacco control is regulating advertising of tobacco products. The Cable Television Networks Amendment Act of 2000 prohibited the advertisement of alcohol and tobacco on state-run television, publications and other electronic media.⁴⁹

Although India passed several laws regulating tobacco products and tobacco advertisements, none of the laws constituted a comprehensive approach to tobacco control. The first major piece of comprehensive tobacco control legislation to pass in India was the Cigarettes and Other Tobacco Products Act (COTPA) in 2003.⁵⁰ COTPA prohibited the advertisement of tobacco products, sale to and by people under 18 years of age, smoking in public places, and smoking and sale of tobacco products within 100 yards of an educational institution.⁵¹ In addition to these prohibitions, COTPA mandated the display of pictorial health warning labels and the testing of tobacco products for tar and nicotine content.⁵² COTPA did not just apply to manufactured, combustible cigarettes, it applied to bidis, cigars and all smokeless tobacco products.⁵³

Following COTPA, India ratified the World Health Organization's (WHO) Framework Convention on Tobacco Control

(FCTC) in 2004.⁵⁴ Countries that have ratified the FCTC are “determined to promote measures of tobacco control based on current and relevant scientific, technical and economic considerations.”⁵⁵ The FCTC seeks to address both the supply of and the demand for tobacco products.

The demand reduction measures cited in the FCTC are price and tax measures; protection from second-hand smoke; regulation of contents of tobacco products and tobacco product disclosures; regulation of tobacco product packaging and labeling; education, communication, training and public awareness; regulation of tobacco advertising, promotion and sponsorship; and support for dependence and cessation.⁵⁶ Supply side reduction measures include prevention of illicit trade, limitation of sale to and by minors and provision of support for economically viable alternative activities.⁵⁷ After ratifying the FCTC, India took a leadership role in implementing and promoting its provisions in Southeast Asia.⁵⁸

To improve enforcement of COTPA and implement the FCTC, India's central government created the National Tobacco Control Programme (NTCP).⁵⁹ One of the significant aspects of the NTCP is that it, for the first time, provided funding to states to implement tobacco control measures.⁶⁰ The NTCP made several meaningful contributions to tobacco control in India, including the creation and dissemination of a mass media campaign to increase awareness about the harms of tobacco use and participation in GATS, which established data collection on smoking, smoking cessation and second-hand smoke exposure.⁶¹ Despite the NTCP, many tobacco control activities still take place at the state and district level, which leads to unequal implementation and enforcement.⁶²

One of the more recent national-level tobacco control measures in India was a complete ban on e-cigarettes that

46. Ibid.

47. Ibid.

48. Indian Council of Medical Research, “White Paper on Electronic Nicotine Delivery System,” *The Indian Journal of Medical Research* 149:5 (2019), pp. 574-583. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6702703>.

49. See e.g., Mohan, et. al. <https://journals.sagepub.com/doi/pdf/10.1177/1179916118759289>; Kaur and Jain. <https://www.ijph.in/article.asp?issn=0019-557X;year=2011;volume=55;issue=3;spage=220;epage=227;aulast=Kaur>.

50. “The Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Trade, Production, Supply, and Distribution) Act, 2003,” *The Gazette of India*, May 19, 2003. <http://www.iitk.ac.in/doip/data/COTPA/COTPA-Act-2003.pdf>.

51. See e.g., Mohan, et. al. <https://journals.sagepub.com/doi/pdf/10.1177/1179916118759289>; Kaur and Jain. <https://www.ijph.in/article.asp?issn=0019-557X;year=2011;volume=55;issue=3;spage=220;epage=227;aulast=Kaur>; “The Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Trade, Production, Supply, and Distribution) Act, 2003,” Ministry of Law and Justice, May 19, 2003. <http://www.iitk.ac.in/doip/data/COTPA/COTPA-Act-2003.pdf>.

52. Ibid.

53. “The Cigarettes and Other Tobacco Products Act, 2003” <http://www.iitk.ac.in/doip/data/COTPA/COTPA-Act-2003.pdf>.

54. See, e.g., Mohan, et. al. <https://journals.sagepub.com/doi/pdf/10.1177/1179916118759289>; Jagdish Kaur and D. C. Jain. <https://www.ijph.in/article.asp?issn=0019-557X;year=2011;volume=55;issue=3;spage=220;epage=227;aulast=Kaur>; “WHO Framework Convention on Tobacco Control,” World Health Organization, 2003. https://www.who.int/fctc/text_download/en.

55. “WHO Framework Convention on Tobacco Control.” https://www.who.int/fctc/text_download/en.

56. Ibid.

57. Ibid.

58. See, e.g., Mohan, et. al. <https://journals.sagepub.com/doi/pdf/10.1177/1179916118759289>; Kaur and Jain. <https://www.ijph.in/article.asp?issn=0019-557X;year=2011;volume=55;issue=3;spage=220;epage=227;aulast=Kaur>.

59. Ibid.

60. Ibid.

61. Ibid.

62. Mohan, et. al. <https://journals.sagepub.com/doi/pdf/10.1177/1179916118759289>.

occurred in September 2019.⁶³ In May of 2019, the Indian Council of Medical Research produced a report concluding that, in accordance with the precautionary principle, along with their findings, India should ban e-cigarettes and other electronic nicotine delivery systems.⁶⁴ Notably, the report did not include any primary data collection or research and relied on only 43 sources.⁶⁵

TOBACCO HARM REDUCTION IN INDIA

Harm reduction is a strategy used to mitigate risk from a number of risky behaviors when a person cannot or does not want to abstain from the risky behavior. From seatbelts in cars to exchanging unused syringes for people who inject drugs, harm reduction aims to help people take actions that make risky behaviors less harmful. For tobacco, harm reduction consists of encouraging people to choose products that are lower on the continuum of risk compared to the product they currently use.

While not harmless, there are tobacco products that are less harmful than others are. Combustible products are considered the most harmful products because of the more than 7000 chemicals in combustible cigarette smoke.⁶⁶ Using e-cigarettes, heat-not-burn products, and snus or nicotine pouches are some of the ways that people who smoke can decrease their exposure by eliminating combustion. E-cigarettes heat and aerosolize a nicotine-containing liquid, and heat-not-burn products heat sticks of tobacco to aerosolize the nicotine without burning the tobacco. Both of these products mimic the experience of using combustible cigarettes. Snus is a form of moist snuff. Packaged in small sachets, users place it under the lip. Commonly used in Sweden, it has long-term epidemiologic data supporting its safety relative to combustible cigarette smoking.⁶⁷ Nicotine pouches are similar to snus in design; however, they do not contain tobacco leaf, only nicotine extracted from tobacco leaves. The challenge for applying tobacco harm reduction in India is that e-cigarettes and heat-not-burn products are banned, and snus is effectively banned because it is classified as a food product.⁶⁸

63. Joy Kumar Chakma et al., "The E-cigarettes Ban in India: An Important Public Health Decision," *The Lancet Public Health* 5:8 (2020) pp. 426. [https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667\(20\)30063-3/fulltext](https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667(20)30063-3/fulltext).

64. Ibid.

65. Ibid.

66. "Chemicals in Cigarettes: From Plant to Product to Puff," U.S. Food and Drug Administration, June 3, 2020. <https://www.fda.gov/tobacco-products/products-ingredients-components/chemicals-cigarettes-plant-product-puff>.

67. Elizabeth Clarke, et. al., "Snus: A Compelling Harm Reduction Alternative to Cigarettes," *Harm Reduction Journal* 16:62, (2019). <https://doi.org/10.1186/s12954-019-0335-1>.

68. Samrat Chowdhery, "Why India Is Tobacco Harm Reduction's Most Important Frontier," *Filter*, Sept. 26, 2018. <https://filtermag.org/why-india-is-tobacco-harm-reductions-most-important-frontier>.

Regardless of the ban, people in India have found ways to access e-cigarettes. A study conducted in 2015 showed that six online retailers of e-cigarettes appeared in the first ten pages of Google results in India.⁶⁹ One limitation of the study is that the authors excluded all websites that sold exclusively e-cigarettes from their analysis.⁷⁰ Another limitation that the authors note is that the e-commerce marketplace was in its early stages, although developing quickly.⁷¹ The study shows that there was at least limited availability of e-cigarettes in India as early as 2015. Data from GATS also shows that only 0.02 percent of Indians used e-cigarettes in 2015.⁷²

Despite the complete ban of e-cigarettes and other electronic nicotine delivery products, there is evidence that these products are still in use by at least some portion of the Indian population. A 2020, first-of-its-kind, cross-sectional survey that recruited e-cigarette users from the eight most populous metropolitan areas explored the characteristics of 3000 Indian e-cigarette users.⁷³ The study found that e-cigarette users were predominantly male and had completed at least a university degree.⁷⁴ It also found that the average age of e-cigarette users was 29 years old.⁷⁵ About sixty-seven percent of e-cigarette users surveyed reported smoking boxed or roll-your-own cigarettes prior to using e-cigarettes, 1.1 percent reported using bidis and 10.5 percent reported using both products.⁷⁶ Of the e-cigarette users, 17.5 percent reported that the first tobacco product they ever tried was an e-cigarette.⁷⁷

Further, the study found that prefilled cartridges systems and refillable tank systems were the most commonly used products.⁷⁸ Similarly, most participants said that they use pre-mixed e-liquid in either bottled or cartridge form, although about a quarter reported mixing their own liquids.⁷⁹ Regarding flavor preferences, the majority of participants reported using either tobacco or mint/menthol flavored e-liquids both currently and at initiation; nevertheless, 59 percent reported

69. Vickrant R. Mohanty, et. al., "Electronic Nicotine Delivery Systems (ENDS): Mapping the Indian Online Retail Market," *Nicotine & Tobacco Research* 19:11 (2017), pp. 1386-1389. <https://pubmed.ncbi.nlm.nih.gov/28199725>.

70. Ibid.

71. Ibid.

72. Rajeshwar Nath Sharan, et. al., "Patterns of Tobacco and E-cigarette Use Status in India: A Cross-Sectional Survey of 3000 Vapers in Eight Indian Cities," *Harm Reduction Journal* 17:21 (March 30, 2020), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7106589>.

73. Ibid.

74. Ibid.

75. Ibid.

76. Ibid.

77. Ibid.

78. Ibid.

79. Ibid.

using at least one non-tobacco or mint/menthol flavor and more than 60 percent said they use two or more flavors regularly.⁸⁰

The study also asked participants where they purchased their e-cigarettes and e-liquids. Fifty-seven percent reported getting their products online, 53 percent purchased their products from street shops, 35 percent purchased from department stores and 28 percent bought abroad.⁸¹ The study does not state the dates of data collection, so it is unclear if this reflects purchasing patterns before or after India instituted the ban on e-cigarettes.

From a harm reduction standpoint, the most interesting finding from this paper is how e-cigarette use affected use of other tobacco products. The survey found that after initiating e-cigarette use, 30 percent of participants quit smoking and 38.8 percent quit using smokeless tobacco products.⁸² Another 41 percent of participants reported reducing their smoking and 30 percent reported reducing their smokeless tobacco use.⁸³ Finally, another 13.2 and 21.9 percent of participants quit, but subsequently relapsed, to smoking or smokeless tobacco use, respectively.⁸⁴

The survey of e-cigarette users in India points to some of the potential benefits of adopting a harm reduction approach to tobacco control in India. For one, the proportion of respondents who reported quitting smoking and/or smokeless tobacco products points to the potential these products have as cessation devices. In a country where tobacco use rates are declining by about 2 percent every two years, allowing the use of e-cigarettes and other reduced-risk products could help boost these rates.⁸⁵ This is particularly true because, despite the availability of nicotine replacement therapy (e.g. nicotine gum, patches, inhalers, lozenges) and pharmaceutical cessation products (e.g. varenicline and bupropion), only 38 percent of smokers attempted to quit in 2009 and 2017 and most of these attempts were made without cessation support.⁸⁶

Embracing reduced-risk products in India could help prevent some of the 800,000 to 900,000 tobacco related deaths

the country faces each year.⁸⁷ Furthermore, with estimated economic costs from tobacco use totaling \$22.4 billion in 2011, there are significant cost savings associated with decreasing the harm caused by tobacco products.⁸⁸

Although there are many potential benefits to applying tobacco harm reduction in India, there are also some barriers. The biggest barrier is that the government banned all reduced-risk products. Aside from this, cultural norms and socioeconomic factors may affect the application of tobacco harm reduction in India. Since smoking is not especially socially acceptable, the population may be less likely to embrace e-cigarettes and heat-not-burn products.⁸⁹ However, with the popularity of smokeless tobacco products, oral, reduced-risk products, such as snus or nicotine pouches, may be more culturally acceptable. Additionally, the cost of some reduced-risk products may be a barrier to use for less affluent Indians. Since e-cigarettes and heat-not-burn products require the user to purchase a device prior to use, the initial investment may dissuade use among people with lower incomes.

ADVANCING HARM REDUCTION IN INDIA

Paramount to advancing harm reduction in India is reversing the ban on electronic nicotine delivery systems and reduced-risk oral products. In doing so, the government has the opportunity to set up a regulatory framework to prevent use by youth and non-tobacco users. Part of this framework can include changing the taxation structure of tobacco products. India's tobacco taxation framework does not currently account for the relative risk a tobacco product presents to the population. For example, commercially manufactured, combustible cigarettes are taxed at the highest rate, while bidis are taxed at a lower rate and given taxation exemptions, despite bidis being at least as harmful as commercially manufactured, combustible cigarettes.⁹⁰ Introducing reduced-risk products and taxing them at levels that help make them more affordable compared to combustible products may encourage Indians who use more harmful tobacco products to switch to less harmful alternatives.

80. Ibid.

81. Ibid.

82. Ibid.

83. Ibid.

84. Ibid.

85. The World Bank, "Prevalence of Current Tobacco Use (% of Adults) - India," World Health Organization, Global Health Observatory Data Repository, last accessed July 15, 2021. <https://data.worldbank.org/indicator/SH.PRV.SMOK?locations=IN>.

86. "India Country Report." July 2020. <https://www.smokefreeworld.org/wp-content/uploads/2020/07/India-Country-Report-1.pdf>.

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89. Sujay Shah et al. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6293949>.

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In general, India's tobacco taxes are lower than the WHO recommends. Increasing taxes on existing tobacco products and adding new categories of taxed products would have the benefit of making more revenue available for tobacco cessation programs. In 2018 spending on tobacco control in India was around \$15.3 million USD, which is about 0.6 percent of the total annual national tax revenue from manufactured combustible cigarettes.⁹¹ This is minor compared to the costs associated with tobacco use in India. Designing and implementing a comprehensive education campaign after introducing reduced-risk products would be vital to getting smokers to switch products and the additional tax revenue could fund this campaign. A comprehensive education campaign would include, at minimum, youth use prevention efforts, adult education and additional funding for cessation assistance.

Finally, if India were to reverse their ban on reduced-risk products, they would need to set up a strong regulatory system to ensure the safety of newly introduced products. Ensuring that manufacturers must disclose, at minimum, ingredients and product lists would help ensure that products are monitored for safety. In addition to the regulatory system, establishing annual tobacco use surveys would help monitor the impact of these products on combustible and smokeless tobacco use and provide more comprehensive data about tobacco use patterns in India.

CONCLUSION

Quantifying the effect of different tobacco control policies on tobacco use prevalence in India presents challenges. Although national surveys, like GATS, are a step in the right direction, there are years between data points. Furthermore, GATS has only been conducted twice, which does not provide adequate data for longitudinal analyses. In addition to the challenge of identifying adequate data sets, the uneven implementation and enforcement of policies makes policy analysis difficult. In order to facilitate better understanding of tobacco use among the Indian population, putting in place more robust surveillance methods should be a priority. Moreover, more extensive data will allow for the evaluation of specific policies on tobacco use in India. Although often not the case, policies should be evaluated after implementation to ensure they have the desired results. Without adequate data, this is very difficult to accomplish.

Many policies to address tobacco control have been implemented in India, and it appears that some of them have contributed to decreases in tobacco use prevalence. Nevertheless, India's high rates of tobacco use make it a nation that could benefit greatly from tobacco harm reduction measures.

Due to the current bans, it will take a bold action from the Indian government to realize these possibilities. The first step is reversing the ban on reduced risk products and setting up a strong regulatory system to ensure consumer safety.

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