

HEATED TOBACCO PRODUCTS: Policy Guidance

Heated tobacco products (HTPs) are:

- Addictive tobacco products that emit tobacco smoke.^{1,2}
- Heavily marketed to young people as lifestyle products.
- A serious health risk to people who smoke them.
- Not proven to be “reduced risk” or less harmful to health as compared to conventional cigarettes.^{3,4,5}

Therefore, HTPs should play *no* role in a government’s strategy to reduce tobacco use and nicotine addiction, and governments should reject tobacco industry lobbying to regulate HTPs less strictly than conventional tobacco products.

To prevent the tobacco industry from undermining progress in tobacco control, governments should select and effectively enforce one of two regulatory options:

- Ban the sale of HTPs entirely
- Regulate HTPs, including tobacco inserts and devices, strictly, using measures that align with the WHO Framework Convention on Tobacco Control (WHO FCTC)

HTPs and the WHO FCTC

Parties to the WHO FCTC have recognized that consumption of and exposure to any tobacco product causes death, disease, and disability and have adopted as a guiding principle the need “to decrease the consumption of tobacco products in any form.”⁶ In 2018, Parties to the WHO FCTC agreed that they should “regulate, including restrict, or prohibit” novel and emerging tobacco products.”⁷

This resource sets out a three-step process to assist governments in determining which regulatory approach fits their country circumstances while prioritizing public health considerations:

1 PURSUE PUBLIC HEALTH POLICY GOALS

The public health policy goals for any government regulating HTPs should be to:

- 1.1 Prevent HTP use, particularly among youth
- 1.2 Minimize health risks to HTP users and non-users
- 1.3 Prevent HTPs from undermining progress in preventing and reducing tobacco consumption and nicotine addiction
- 1.4 Protect public health policy from the commercial interests of the tobacco industry
- 1.5 Assist smokers and HTP users to quit and avoid use of multiple tobacco and

2 ASSESS COUNTRY-SPECIFIC CIRCUMSTANCES

- 2.1 Existing product market
- 2.2 Existing tobacco control measures
- 2.3 Government capacity and resources, including regulatory infrastructure

3 SELECT REGULATORY OPTION

- 3.1 Complete sales ban
- 3.2 Regulate strictly applying WHO FCTC measures to HTPs, including tobacco inserts and devices

1. Pursue Public Health Policy Goals

The reasons and evidence supporting the public health policy goals are set out below. For more details on the evidence, see [HTPs: Evidence and Health Harms](#).

1.1 Prevent HTP use, particularly among youth

Marketing and sales practices by tobacco companies target young people.

- Tobacco companies target an unlimited audience of mostly young people on social media to promote their brands and re-normalize addictive products through a combination of influencer marketing, paid advertisements, brand pages, concerts, events, and contests.⁸⁻¹²
- Tobacco companies have organized off-line branded promotional events and parties that appeal to young people.^{13,14}
- Products are sold at sleek, trendy product stores (resembling popular tech stores), with young-looking staff and free HTP trials.¹³
- Novel device designs tap into young people's passion for cutting-edge technology.¹⁵
- HTPs are sold in a variety of fruity and minty/menthol flavored variants. The use of flavors in tobacco products, as well as flavor descriptors on packaging, is associated with the appeal and uptake of tobacco products in young people.⁵
- Tobacco companies rely on the product names, sleek appearance, packaging, and trendy product stores to position HTPs as a “high-demand status symbol” that attracts youth.¹⁶

Young people are generally more likely to use HTPs than older people.

- HTP use is more prevalent among younger individuals in Japan, the United Kingdom, Hong Kong (SAR), and Italy.¹⁷⁻²¹
- A systematic review of representative cross-sectional studies on HTP use found that HTP users are more likely to be young adults than any other age category.²²

Evidence demonstrates non-smokers have initiated HTP use.

- A 2019 study found that nearly half of all ever-users of Philip Morris' HTP product IQOS in Italy had never smoked conventional cigarettes.²³
- Research in the Republic of Korea found that HTPs were likely to attract young people who had not previously used tobacco.²⁴
- Surveys in Canada, England, and the United States found that non-smokers were interested in trying HTPs.²⁵

1.2 Minimize potential health risks to HTP users and non-users

Industry claims that HTPs are “reduced risk” are unproven.

- Multiple evidence reviews and government agencies have concluded there is insufficient evidence to show that HTPs are less harmful compared to conventional cigarettes.^{3,4,5,26}
- In 2020, the US Food and Drug Administration (FDA) found that there is evidence of *reduced exposure* to some chemicals in emissions from one brand of HTPs (IQOS) as compared to emissions from conventional cigarettes. However, FDA also found that there is no overall

reduced risk of health harms from use of the product. FDA was clear that it did not find that IQOS is safe, or even safer than conventional cigarettes, nor did it find that IQOS can help people quit smoking conventional cigarettes.³ In 2024, Philip Morris International (PMI) requested FDA to renew its reduced exposure claims for IQOS. PMI's renewal application is pending as of this publication date.

- WHO has stated that “reducing exposure to harmful chemicals in [HTPs] does not render them harmless, nor does it translate to reduced risk to human health.”²⁷

Smoke from HTPs poses serious health risks.

- The smoke inhaled from HTPs contains dangerous chemicals. WHO has stated that “[i]ndeed, some toxins are present at higher levels in HTP aerosols than in conventional cigarette smoke, and there are some additional toxins present in HTP aerosols that are not present in conventional cigarette smoke.”²⁷ This is important to consider, as many existing studies assessing the toxicology of HTP emissions look only at the FDA’s list of harmful constituents of tobacco and do not consider measuring the impact of other harmful chemicals that are not found in conventional tobacco smoke.⁵ In at least one widely sold brand, these additional toxins include “four chemicals that are possibly cancer-causing and 15 potentially damaging to the genetic structure.”¹⁶ Other research suggests that as many as 20 harmful chemicals, such as propylene glycol, are found in greater concentrations in HTP smoke than in conventional cigarette smoke.²⁸

- A large-scale study of non-smoking participants living in Japan reported that exposure to secondhand emissions from HTPs was associated with increased reports of respiratory symptoms including asthma attacks, asthma-like symptoms, and persistent cough, compared to study participants not exposed to HTP emissions. Notably, the prevalence of these respiratory symptoms in study participants increased as the frequency of exposure to HTP emissions increased.²⁹ The same study suggests that exposure to secondhand HTP emissions may cause similar rates of asthma attacks and chest pain than exposure to secondhand smoke from conventional cigarettes.³⁰

HTP use exposes bystanders to smoke.

- While more research is needed on non-users’ exposure to HTP secondhand smoke, current evidence suggests that non-users are exposed to particulates, nicotine, and other constituents that are often found in conventional cigarette smoke, which may put such individuals at risk.^{5,31}

1.3 Prevent HTPs from undermining progress in preventing and reducing tobacco consumption and nicotine addiction

The introduction of HTPs has not resulted in reductions in rates of tobacco use.

- In Italy, the introduction of HTPs and e-cigarettes resulted in a halt of the downward trend in smoking prevalence. Use of HTPs was more likely to lead to non-smokers starting to use conventional cigarettes than to existing smokers quitting. In fact, 2019 was the first year that an increase in overall nicotine use (conventional cigarettes, HTPs, and e-cigarettes) was observed.³²
- A study of the impact of HTPs on the tobacco market in the Republic of Korea found that: (1) the decline in smoking rates slowed or even rose in some groups; (2) the decline in total cigarette sales slowed; and (3) the number of visitors to cessation clinics decreased after the introduction of HTPs.³³
- Another Korean study from 2021 showed that users of HTPs were more likely to make quit attempts but less likely to successfully stop smoking conventional cigarettes.¹⁷

- A study of Mexican adult smokers found no significant association between frequency of HTP use with either changes in conventional cigarette consumption or cessation behaviors.³⁴
- Data from the International Tobacco Control Policy Evaluation Project (ITC Project) shows that most smokers in Japan who start HTP use become dual users, therefore increasing their total tobacco consumption.³⁵
- ITC Project data from Japan also found a greater likelihood of exclusive cigarette smokers transitioning to long-term dual cigarette and HTP use than to exclusive HTP use. Moreover, the data did not show an association between long-term HTP use and a greater likelihood of quitting cigarettes, and smokers who ever used HTPs were less likely to quit all forms of tobacco than smokers who never used HTPs.³⁶

1.4 Protect public health policy from the commercial interests of the tobacco industry

The tobacco industry has a profit motive.

- HTPs are tobacco products, which are produced by the tobacco industry. Tobacco manufacturers have a profit motive, not a public health motive. Their primary goal is to sell as many products as possible and maintain or grow their customer base.

HTPs are part of the tobacco industry's new global strategy.

- Industry investments in HTPs can be interpreted as a strategic business decision to compensate for a shrinking customer base — global cigarette consumption has been steadily declining since 2012 and is forecasted to continue to fall.³⁷
- Tobacco companies' investments in HTP products and marketing³⁸ raise serious concerns given their history of targeting youth, deceiving the public about the deadly consequences of using tobacco products and the addictiveness of nicotine, and fighting against proven tobacco control measures.³⁹

Despite the tobacco industry's claims, HTPs are NOT smokeless tobacco products.

- The emissions from HTPs include chemicals produced from pyrolysis, such as volatile aldehydes, and fall within the scientific definition of "smoke."^{1,2}

The industry lobbies governments and policymakers to seek favorable HTP regulation.

- Tobacco companies are lobbying lawmakers and regulators and running public relations campaigns in countries around the world to seek favorable HTP regulation.⁴⁰⁻⁴³

1.5 Assist smokers and HTP users to quit and avoid use of multiple tobacco and nicotine products

There is evidence that, rather than quitting smoking altogether, many smokers who use HTPs continue smoking conventional cigarettes (dual use) in countries where HTPs are sold.

- Surveys have shown very high rates of dual use of HTPs and conventional cigarettes — 67.8% in Japan, 81% in Italy, and 96.25% in one province in the Republic of Korea.^{33,44,45}

HTPs do not assist people to quit cigarettes. HTPs are smoked tobacco products and not cessation products.

- Even if people who smoke conventional cigarettes switch entirely to using HTPs, this is not quitting smoked tobacco.
- A Cochrane Review concluded that, "[n]o studies reported on the use of heated tobacco for cigarette smoking cessation, so their effectiveness for this purpose remains uncertain."⁴⁶

- A national longitudinal study of more than 7,000 adults in Japan, which is one of the largest markets for HTPs, found that HTP use decreased cessation in current smokers and increased relapse in former smokers.⁴⁷
- A comprehensive systematic review that included prospective studies found that in real life, HTPs are not effective smoking-cessation tools. In fact, several studies found that current conventional cigarette smokers who use HTPs were less likely to quit altogether.²²
- As referenced in Section 1.3, a 2021 Korean study showed that although users of HTPs were more likely to make quit attempts, they were less likely to successfully stop smoking conventional cigarettes.¹⁷

2. Assess Country-Specific Circumstances

Several factors should be considered by governments when determining the best way to regulate HTPs given the unique situation in each country. *However, no single factor will dictate the best regulatory option. Instead, the circumstances must be considered together to determine the soundest policy approach.*

2.1 Existing product market

Whether there is an existing market for HTPs is a factor in determining how to regulate these products.

Limited or small market in HTPs:

Governments should consider banning their sale before their use becomes established in the population. There is no public health reason to allow yet another type of highly addictive tobacco product to enter a country's market where that product category does not currently exist. HTPs are not "reduced risk" products and should not be part of a government's strategy to prevent and reduce tobacco use and nicotine addiction.

Significant or well-established legal adult market in HTPs:

Governments should consider strict regulation and enforcement using WHO FCTC measures rather than banning HTP sales. If there is already a well-established legal adult market for HTPs, a ban might be impractical and potentially raise concerns about creating an illicit market.

2.2 Existing tobacco control measures

Fully implementing WHO FCTC measures and giving them time to produce results is the most effective approach for preventing and reducing tobacco use and nicotine addiction. These proven policies encourage and assist people to quit tobacco use while also preventing initiation of the use of tobacco and/or nicotine products.

Comprehensive WHO FCTC measures regulating tobacco products have not yet been fully implemented, or more time is needed for measures to take effect:

Governments should consider banning the sale of HTPs. This would allow time to maximize the number of people who quit tobacco use completely. In addition, if HTPs are allowed onto the market and regulated under less-than-comprehensive WHO FCTC measures, the tobacco industry will be able to aggressively market their products to broad audiences, including youth.

Comprehensive WHO FCTC measures have been fully implemented for tobacco products, with time given for them to take effect:

Governments could consider strictly regulating HTPs in accordance with those comprehensive measures, ensuring that the law is drafted in such a way that those measures would apply to both tobacco inserts and devices.

2.3 Government capacity and resources, including regulatory infrastructure

Effective regulation of tobacco and nicotine products requires the responsible health agency to have the authority, capacity, and resources for:

- Effective enforcement of rules for the manufacture, sale, and marketing of tobacco and nicotine products;
- Effective surveillance of population use patterns (including youth initiation and dual/poly use), marketing of, and consumer attitudes towards HTPs; and
- Government-led messaging around the health risks and harms of HTP use.^{48,49}

Limited capacity and resources devoted to enforcement, surveillance, and messaging:

Governments should consider prohibiting the sale of HTPs at least until such time that the appropriate infrastructure is in place and ensure that the relevant enforcement authorities are adequately resourced to implement, monitor, and enforce this measure.

Sufficient capacity and resources devoted to enforcement, surveillance, and messaging:

Governments could consider allowing HTPs onto the market and strictly regulating them using WHO FCTC measures. Devoting sufficient resources as described above will help governments minimize initiation of HTP use, particularly among young people.

3. Select Regulatory Option

Taking into account the public health policy goals and country-specific circumstances, the following regulatory options should be considered:

3.1 Complete sales ban

HTPs may not be sold.

Factors that favor this option:

- The existing market in HTPs is sufficiently small to make effective enforcement of a ban feasible.
- Strong WHO FCTC measures are not yet in place, OR strong measures are in place but need more time to take effect.
- The government has limited capacity to implement, monitor, and enforce the strict regulation of HTPs using WHO FCTC measures.
- The precautionary principle is applied: HTPs are relatively new. While HTPs are not harmless, the evidence on the extent of their harm and their long-term health risks/effects is continuing to develop. There is certainty that tobacco consumption in any form causes death, disease, and disability.

At least 24 countries ban the sale of HTPs. Many of these countries also ban their manufacture and importation.

In addition to a ban on sale, several of these countries prohibit the use of HTPs in public and their advertising, promotion, and sponsorship. This is advisable to remove any uncertainty as to whether their use and promotion are permitted.

3.2 Regulate strictly applying WHO FCTC measures to HTPs, including tobacco inserts and devices

HTPs — including **tobacco inserts** and **devices** are subject to requirements that fully align with WHO FCTC measures.

Factors that favor this option:

- There is a well-established existing legal market in HTPs, making effective enforcement of a ban difficult.
- Strong WHO FCTC measures are in place, have had time to take effect, and the effects are being monitored.
- The government has sufficient capacity and resources to implement, monitor, and enforce the strict regulation of HTPs using WHO FCTC measures, and a strong commitment to government-led messaging about the health risks and harms of all tobacco use, including HTPs.

At least 103 countries have taken specific action to regulate HTPs (either tobacco inserts, devices, or both) using WHO FCTC measures.

Governments SHOULD NOT consider regulating HTPs less strictly than conventional cigarettes

Tobacco companies argue that HTPs should be subject to different and less restrictive regulation than conventional cigarettes⁵⁰ because they claim HTPs are “reduced risk”⁵¹ products (relative to conventional cigarettes), should be used as part of a tobacco “harm reduction” approach, and that HTP emissions do not constitute smoke, among other arguments.

Key reasons for rejecting this option:

- There is no independent, credible evidence showing that smoking HTPs instead of conventional cigarettes reduces the risk of disease or death.
- HTP emissions are unambiguously smoke and contain dangerous chemicals known to increase the risk of serious health issues.
- The WHO FCTC makes no provision for applying measures less strictly to certain tobacco product categories.

For more information about the tobacco industry’s false tobacco “harm reduction” arguments, see the [Perspective of the Campaign for Tobacco-Free Kids on Harm Reduction](#).

For more information, see:

[HTPs: Global Regulation and Recommended Measures](#)

Further details on countries’ existing laws regulating HTPs are available at:

www.tobaccocontrolaws.org

References

1. FCTC/COP/10/9. *Challenges posed by and classification of novel and emerging tobacco products*. Paragraphs 8-12. July 11, 2023. Accessed December 17, 2025. <https://iris.who.int/server/api/core/bitstreams/99526a9c-c372-4b42-86e3-f3401be3ebd9/content>
2. Uguna CN, Snape CE. Should IQOS Emissions Be Considered as Smoke and Harmful to Health? A Review of the Chemical Evidence. *ACS Omega*. 2022; 7(26):22111–22124. doi:10.1021/acsomega.2c01527
3. US Food and Drug Administration. *Modified Risk Orders for Philip Morris Products SA for Marlboro heatsticks, Marlboro Smooth menthol heatsticks, Marlboro fresh menthol heatsticks, and IQOS system holder and charger*. July 7, 2020. Accessed December 17, 2025. <https://www.fda.gov/tobacco-products/advertising-and-promotion/modified-risk-orders>
4. Ministero della Salute. *Prevenzione e Controllo Del Tabagismo*. May 2020. Accessed December 17, 2025. https://www.salute.gov.it/imgs/C_17_pubblicazioni_2916_allegato.pdf
5. World Health Organization. *WHO Study Group on Tobacco Product Regulation: report on the scientific basis of tobacco product regulation: eighth report of a WHO study group*. May 4, 2021. Accessed December 17, 2025. <https://iris.who.int/server/api/core/bitstreams/509bee89-da79-4381-b439-852f50778021/content>
6. WHO Framework Convention on Tobacco Control. Preamble and Article 4(2)(b). Accessed October 3, 2025. <https://iris.who.int/server/api/core/bitstreams/264104b3-241a-4e48-88f9-aa7120779ffc/content>
7. FCTC/COP8(22) *Novel and emerging tobacco products*, paragraphs 5 (g) and (h). October 6, 2018. Accessed December 17, 2025. [https://fctc.who.int/docs/librariesprovider12/meeting-reports/fctc_cop8\(22\).pdf](https://fctc.who.int/docs/librariesprovider12/meeting-reports/fctc_cop8(22).pdf)
8. Chapman M. New Products, Old Tricks? Concerns Big Tobacco is Targeting Youngsters. *The Bureau of Investigative Journalism*. February 21, 2021. Accessed December 17, 2025. <https://www.thebureauinvestigates.com/stories/2021-02-21/new-products-old-tricks-concerns-big-tobacco-is-targeting-youngsters>
9. Shukman H. British American Tobacco used young Instagram stars in its ads. *The Times*. August 17, 2019. Accessed December 17, 2025. <https://www.thetimes.co.uk/article/british-american-tobacco-used-young-instagram-stars-in-its-ads-hs6wgf5z2>
10. Chapman M. How British American Tobacco sells nicotine to young people. *The Bureau of Investigative Journalism*. February 24, 2021. Accessed December 17, 2025. <https://www.campaignlive.co.uk/article/british-american-tobacco-sells-nicotine-young-people/1708259>
11. Kirkham C. Exclusive: Philip Morris suspends social media campaign after Reuters exposes young ‘influencers.’ *Reuters*. May 10, 2019. Accessed December 17, 2025. <https://www.reuters.com/article/us-philipmorris-ecigs-instagram-exclusive/exclusive-philip-morris-suspends-social-media-campaign-after-reuters-exposes-young-influencers-idUSKCN1SH02K>
12. Stanford University. *Research into the Impact of Tobacco Advertising. Heat Advertising Themes*. Accessed December 17, 2025. <https://tobacco.stanford.edu/heats/>
13. Jackler RK, Ramamurthi D, Axelrod A, et al. *Global Marketing of IQOS The Philip Morris Campaign to Popularize “Heat Not Burn” Tobacco*. February 21, 2020. Accessed December 17, 2025. <http://tobacco.stanford.edu/iqosanalysis>
14. Eshuis N. Dutch influencer hired to promote BAT’s Glo health-cigarette on Instagram. *The Investigative Desk*. No date. Accessed December 17, 2025. <https://exposetobacco.org/wp-content/uploads/Dutch-influencer-hired-to-promote-Glo-The-Investigative-Desk.pdf>
15. Kim M, Watkins SL, Koester KA, et al. Unboxed: US Young Adult Tobacco Users’ Responses to a New Heated Tobacco Product. *Int. J. Environ. Res. Public Health*. 2020;17(21):8108. doi:10.3390/ijerph17218108
16. FCTC/COP/10/10. *Comprehensive report on research and evidence on novel and emerging products, in particular heated tobacco products, in response to paragraphs 2(a)-(d) of decision FCTC/COP8(22)*. Paragraphs 13, 20. July 23, 2021. Accessed December 17, 2025. <https://iris.who.int/server/api/core/bitstreams/3741502f-a85e-458d-94a7-2cde7c26759a/content>
17. Kim J, Lee S, Kimm H, et al. Heated tobacco product use and its relationship to quitting combustible cigarettes in Korean adults. *PloS One*. 2021;16(5):e0251243. doi:10.1371/journal.pone.0251243
18. Tabuchi T, Gallus S, Shinozaki T, Nakaya T, Kunugita N, Colwell B. Heat-not-burn tobacco product use in Japan: its prevalence, predictors and perceived symptoms from exposure to secondhand heat-not-burn tobacco aerosol. *Tob Control*. 2018; Jul;27(e1):e25–e33. doi:10.1136/tobaccocontrol-2017-053947
19. Liu X, Lugo A, Spizzichino L, et al. Heat-not-burn tobacco products: concerns from the Italian experience. *Tob Control*. 2019;28:113–114. doi:10.1136/tobaccocontrol-2017-054054
20. Wu YS, Wang MP, Ho SY, et al. Heated tobacco products use in Chinese adults in Hong Kong: a population-based cross-sectional study. *Tob Control*. 2020;29:277–281. doi:10.1136/tobaccocontrol-2018-054719
21. Brose LS, Simonavicius E, Cheeseman, H. Awareness and Use of ‘Heat-not-burn’ Tobacco Products in Great Britain. *Tob Regulatory Sci*. 2018; vol. 4, no. 2. Accessed December 17, 2025. https://kclpure.kcl.ac.uk/ws/portalfiles/portal/86957869/Awareness_and_Use_of_BROSE_Published2018_GOLD_VoR.pdf
22. Scala M, Dallera G, Gorini G, et al. Patterns of Use of Heated Tobacco Products: A Comprehensive Systematic Review. *Journal of Epidemiology*. 2025;35(5):213–221. doi:10.2188/jea.JE20240189
23. Liu X, Lugo A, Spizzichino L, et al. Heat-Not-Burn Tobacco Products Are Getting Hot in Italy. *J. Epidemiol*. 2018;28(5):274–275. doi:10.2188/jea.JE20180040
24. Kang H, Cho S. Heated tobacco product use among Korean adolescents. *Tob Control*. 2020;29:466–468. doi:10.1136/tobaccocontrol-2019-054949
25. Czoli CD, White CM, Reid JL, et al. Awareness and interest in IQOS heated tobacco products among youth in Canada, England and the USA. *Tob Control*. 2020;29:89–95. doi:10.1136/tobaccocontrol-2018-054654

26. US Food and Drug Administration, FDA. (2020, July 7). *Scientific Review of Modified Risk Tobacco Product Application (MRTPA) Under Section 911(d) of the FD&C Act -Technical Project Lead*. US Food and Drug Administration, FDA. Accessed December 17, 2025. <https://www.fda.gov/media/139796/download>.
27. World Health Organization. *WHO statement on heated tobacco products and the US FDA decision regarding IQOS*. July 27, 2020. Accessed December 19, 2025. <https://www.who.int/news/item/27-07-2020-who-statement-on-heated-tobacco-products-and-the-us-fda-decision-regarding-iqos>
28. Upadhyay S, Rahman M, Johanson G, Palmberg L, Ganguly K. Heated Tobacco Products: Insights into Composition and Toxicity. *Toxics*. 2023;11(8):667. doi:10.3390/toxics11080667
29. Yoshioka T, Shinozaki T, Hori A, et al. Association between exposure to secondhand aerosol from heated tobacco products and respiratory symptoms among current non-smokers in Japan: a cross-sectional study. *BMJ*. 2023;13:e065322. doi:10.1136/bmjopen-2022-065322
30. Imura Y, Tabuchi T. Exposure to Secondhand Heated-Tobacco-Product Aerosol May Cause Similar Incidence of Asthma Attack and Chest Pain to Secondhand Cigarette Exposure: The JASTIS 2019 Study. *Int J Environ Res Public Health*. 2021;18(4):1766. doi:10.3390/ijerph18041766
31. Simonavicius E, McNeill A, Shahab L, Brose LS. Heat-not-burn tobacco products: a systematic literature review. *Tob Control*. 2019;28(5):582-594. doi:10.1136/tobaccocontrol-2018-054419
32. Gallus S, Borroni E, Odone A, et al. The Role of Novel (Tobacco) Products on Tobacco Control in Italy. *Int J Environ Res Public Health*. 2021;Feb 16;18(4):1895. doi:10.3390/ijerph18041895
33. Lee CM. The impact of heated tobacco products on smoking cessation, tobacco use, and tobacco sales in South Korea. *Korean J of Fam Med*. 2020;41(5), 273-281. doi:10.4082/kjfm.20.0140
34. Cruz-Jiménez L, Barrientos-Gutiérrez I, Vidaña-Pérez D, et al. Heated tobacco product use frequency, smoking quit attempts, and smoking reduction among Mexican adult smokers. *Tob Induc Dis*. 2024;22(May):1-16. doi:10.18332/tid/187576
35. Gravely, S, et al. An Examination of Philip Morris International's Estimate of IQOS Consumers Who Have "Completely Transitioned" From Cigarettes: Findings from the 2018/19 and 2020 ITC Japan Surveys. Presentation at 2023 Society for Research on Nicotine and Tobacco Annual Meeting. March 3, 2023.
36. Fong, GT, et al. Transitions of Tobacco Product Use Among Adults Who Smoke Cigarettes and Adults Who Use Heated Tobacco Products (HTPs) in Japan: Initial Findings from Three Waves of the ITC Japan Cohort Survey (2018-20). Presentation at 2023 Society for Research on Nicotine and Tobacco Annual Meeting. March 3, 2023.
37. Euromonitor International.* Cigarettes in World. 2022. Accessed November 16, 2022.
38. Rossel S. A glimpse at patent registrations shows what the future of tobacco harm reduction may look like. *Tobacco Reporter*. April 2022. Accessed December 17, 2025. <https://tobaccoreporter.com/2022/04/01/in-the-pipeline/>
39. US District Court. United States vs. Philip Morris USA, Inc., et. al., 99-CV-02396GK, Final Opinion (2006). Accessed December 17, 2025. https://www.justice.gov/sites/default/files/civil/legacy/2014/09/11/amended%20opinion_0.pdf
40. Cave T, Stockton B, Davies M, Chapman M. PMI sidesteps global health treaty to lobby councils. March 20, 2020. Accessed December 17, 2025. <https://www.thebureauinvestigates.com/stories/2020-03-20/philip-morris-sidesteps-who-treaty-to-lobby-local-councils>
41. The Philip Morris Files. Part 4. How Philip Morris is selling regulators on its hot new smoking device. *Reuters*. December 21, 2017. Accessed December 17, 2025. <https://www.reuters.com/investigates/special-report/tobacco-iqos-marketing/>
42. Eckford R, Severini G, Sebríe EM, et al. United States Food and Drug Administration's authorization of reduced exposure claims for IQOS: implications for regulation in Latin America. *Rev Panam Salud Publica*. 2022;46:e155. doi:10.26633/RPSP.2022.155
43. Watts C, Burton S, Freeman B. Creating a market for IQOS: analysis of Philip Morris' strategy to introduce heated tobacco products to the Australian consumer market. *Tob Control*. 2022 May;31(3):458-463. doi:10.1136/tobaccocontrol-2020-056057
44. Sutanto E, Miller C, Smith DM, et al. Prevalence, Use Behaviors, and Preferences among Users of Heated Tobacco Products: Findings from the 2018 ITC Japan Survey. *Int J Environ Res Public Health*. 2019; 16(23):4630. doi:10.3390/ijerph16234630
45. Hwang JH, Ryu DH, Park SW. Heated tobacco products: Cigarette complements, not substitutes. *Drug Alcohol Depend*. 2019;204: 107576. doi: 0.1016/j.drugalcdep.2019.107576
46. Tattan-Birch H, Hartmann-Boyce J, Kock L, et al. Heated tobacco products for smoking cessation and reducing smoking prevalence. Cochrane Tobacco Addiction Group, ed. *Cochrane Database of Systematic Reviews*. 2022;2022(4). doi:10.1002/14651858.CD013790.pub2
47. Odani S, Tsuno K, Agaku IT, et al. Heated tobacco products do not help smokers quit or prevent relapse: a longitudinal study in Japan. *Tob Control*. Published Online First: February 27, 2023. doi:10.1136/tc-2022-057613
48. World Health Organization. *Tobacco product regulation: basic handbook*. 2018. Accessed December 17, 2025. <https://iris.who.int/server/api/core/bitstreams/f5826272-122c-4a93-9a36-b9a895f7660b/content>
49. World Health Organization. WHO Study Group on Tobacco Product Regulation: report on the scientific basis of tobacco product regulation: fifth report of a WHO study group. *World Health Organ Tech Rep Ser*. 2015;(989):1-234. Accessed December 17, 2025. <https://apps.who.int/iris/handle/10665/161512>
50. Bialous SA, Glantz SA. Heated tobacco products: another tobacco industry global strategy to slow progress in tobacco control. *Tob Control*. 2018;27(Suppl 1):s111-s117. doi:10.1136/tobaccocontrol-2018-054340
51. McKelvey K, Baiocchi M, Halpern-Felsher B. PMI's heated tobacco products marketing claims of reduced risk and reduced exposure may entice youth to try and continue using these products. *Tob Control*. 2020;29(e1):e18-e24. doi:10.1136/tobaccocontrol-2019-055318