Philip Morris International’s (PMI) IQOS and other heated tobacco products are among the latest iteration of tobacco products introduced by tobacco companies.

IQOS is currently marketed in at least 38 countries. Unlike in most other countries, PMI must first obtain an order from the U.S. Food and Drug Administration (FDA) to market and sell IQOS in the United States. FDA issued a marketing order for PMI to sell IQOS on April 30, 2019, and the company plans to begin sales of the product in Atlanta, GA in the third quarter of 2019.

What are heated tobacco products?

While traditional cigarettes rely on the combustion of tobacco to create the inhaled smoke, heated tobacco products (HTPs), sometimes called “heat-not-burn” products by the tobacco industry, use an electronic device to heat a stick (or plug) of compressed tobacco and other chemicals to a high enough temperature to produce an inhalable aerosol, but below the temperature required for full combustion. The aerosol contains nicotine and varying amounts of other chemicals that can also be found in cigarette smoke.

Heated tobacco products are not entirely new to the United States. In the late-1990s, Philip Morris test-marketed a product similar to IQOS called Accord, but it was not well-accepted by consumers and the company dropped it.1 In the mid-1990s, Reynolds American marketed Eclipse, a cigarette with a charcoal tip that is lit with a lighter to heat the tobacco. Reynolds American test-marketed a similar product, Revo, in 2015, but ended sales of both products after minimal interest.2 Now owned by British American Tobacco, Reynolds American has received a substantial equivalence order from FDA to market a new version of Eclipse and Eclipse menthol.3

A recent study found that less than one percent of U.S. adults surveyed had ever used a heated tobacco product, but more were aware of the products.4 The very low use rates are reflective of the fact that heated tobacco products, particularly the newest generation, are not yet officially on the market in the U.S.

Currently, most of the major transnational tobacco companies sell heated tobacco products in various countries: British American Tobacco (parent company of Reynolds American Tobacco) markets glo, Japan Tobacco International sells Ploom TECH, KT&G (Korea) markets lil, and Imperial Tobacco is test-marketing Pulze.

What is IQOS?

Philip Morris International (PMI) started selling IQOS products in 2014 in Japan, and has expanded sales to at least 38 countries. In the countries where the products are currently for sale, newer versions of IQOS have been released since the initial launch.

Consumers buy a device kit, which comes with a charging pack, a heating device, and components such as cleaner brushes and charging cords. HeatSticks, branded in some countries as Marlboro HeatSticks and branded in others as HEETS, come in packs of 20, like cigarettes, and are sold and marketed separately from the devices. Depending on the country, HeatSticks or HEETS are available in a variety of flavors, including berry, menthol and menthol varieties (“Smooth Menthol”), and less obvious options such as “Amber Label,” “Yellow Label,” and “Turquoise Label.” HeatSticks contain approximately half the amount of tobacco in a traditional cigarette.
In order to sell IQOS in the United States, PMI applied for and received a marketing order from FDA. PMI has contracted with Altria to market IQOS in the United States. Altria has announced IQOS will be introduced in the third quarter of 2019 in Atlanta, GA, with an IQOS store in Lenox Square mall and Marlboro HeatSticks available in a variety of convenience stores such as Circle K, Murphy USA, QuikTrip, RaceTrac, and Speedway.  

PMI has also submitted a separate modified risk tobacco product (MRTP) application with FDA, requesting to make claims in its marketing materials about the risk of using IQOS relative to using cigarettes. An order from FDA is required before the company can make such claims, and that decision is still pending.

**What is known about IQOS?**

There is a big knowledge gap about both the short and long term health impacts of HTPs. They have not been on the market long enough to be extensively studied under real-world conditions, and there is very little independent evidence to demonstrate that they are less harmful than conventional tobacco products or that they can help smokers quit smoking entirely.

The majority of currently available evidence on potential health-effects is industry-funded, and the tobacco industry has a long history of funding research to support its business objectives. The tobacco industry claims that by heating the tobacco, rather than burning it as with conventional cigarettes, the harms associated with combustion are significantly reduced. This makes review by FDA and other independent scientists critical. PMI provided FDA with more than 2 million pages of research as part of its MRTP application. As part of that process, FDA’s Tobacco Product Scientific Advisory Committee (TPSAC) also analyzed that research. Independent studies on the product are slowly being published, including some that challenge results submitted by PMI to FDA.

**Characteristics of the Product and Health Risks**

- Heated tobacco products deliver a significant level of nicotine to the user.
- Studies have demonstrated that heated tobacco products contain many of the same chemicals found in cigarette smoke, but that most of the chemicals identified are present at significantly reduced levels. In reviewing the evidence presented to FDA, TPSAC found sufficient evidence to support the statement, “Scientific studies have shown that switching completely from cigarettes to the IQOS system significantly reduces your body’s exposure to harmful or potentially harmful chemicals.”
- Even though studies demonstrate that some heated tobacco products can reduce exposure to chemicals for those using the product exclusively, the extent to which this reduces harm is still unclear. At the present time, there is insufficient evidence to support claims that heated tobacco products reduce the risks of tobacco-related disease. In its marketing order for IQOS, FDA noted that the reduced exposure from IQOS use could be associated with reduced risk even though studies provided by PMI did not show that result. However, when it met in January 2018, TPSAC voted that the evidence provided by PMI did not adequately support its proposed claim that “Switching completely to IQOS presents less risk of harm than continuing to smoke cigarettes.”
- A recent systematic review of literature on heated tobacco products found discrepancies in findings on measured tar, tobacco-specific nitrosoamines (TSNAs), and secondhand emissions from aerosol from IQOS between independent studies and manufacturer-funded studies, with the manufacturer’s studies generally showing results more favorable to IQOS. Specifically, the independent studies showed lower levels of tar, but manufacturer’s studies showed lower levels of TSNAs and no particulate matter from secondhand emissions. This underscores the need for independent studies.

**Smoking Cessation and Potential for Dual Use:**

- Even if use of heated tobacco products does reduce exposure to harmful chemicals, these benefits would not be realized unless smokers switch completely.
- Studies provided by PMI show large rates of dual use in other countries.
In its decision summary for the marketing order for IQOS, FDA noted, "Dual use of CC [conventional cigarettes] and IQOS appears likely."19 Previously, TPSAC had found that, based on the evidence provided by PMI, it was unlikely that smokers in the U.S. would switch completely to IQOS and there is a significant likelihood that smokers would become long-term dual users of IQOS and traditional cigarettes.20

Available evidence raises concerns that heated tobacco products are being used by some non-smokers.21 At the population level, even use by one percent of all adult non-smokers translates into millions of users.

**Effect on Youth:**

- Philip Morris did not provide FDA with any evidence about the impact of the product on non-smoking youth.22 Even if IQOS is less harmful and reduces the number of adult smokers, any progress would be undermined if more youth start using these products, which would increase their exposure to nicotine and other hazardous chemicals.

- Although heated tobacco products are already on the market in numerous countries, little data are available on youth use of the products.
  - Data from one Japanese study published in 2015 showed higher use rates of IQOS and Ploom (another heated tobacco product) among adolescents and young adults than among older adults.23
  - A recent study from South Korea, with data from the Korea Youth Risk Behavior Survey collected in June 2018 found that 2.8 percent of youth (12-18 years old) had ever used HTPs (including IQOS, Ploom, and Korean Tobacco Group’s lil) in the year since the products first appeared in the country. That uptake rate is higher than what was seen when e-cigarettes were first introduced in Korea. In addition, analysis showed a lack of association between HTP use by youth cigarette smokers and quit rates, meaning youth cigarette smokers were not using HTPs to quit. Unlike in Japan, e-cigarettes are readily available in Korea, not unlike the U.S., and dual use and multiple product use rates between HTPs, e-cigarettes, and cigarettes are relatively high: of ever HTP users, 75.5% also currently smoked cigarettes; 45.6% also currently used e-cigarettes, and 40.3% currently used cigarettes and e-cigarettes.24

- The importance of determining the likely impact of new heated tobacco products on young people is underscored by the recent youth uptake of e-cigarettes in the U.S., to the extent that e-cigarette use among the young now exceeds use of cigarettes and other tobacco products in the U.S.25

**IQOS Marketing and Messaging**

PMI has implemented an extensive marketing plan in countries where it currently sells IQOS. In presenting its U.S. marketing plan to FDA’s TPSAC, the Vice President of Heated Tobacco Products for Philip Morris USA, Sarah Knakmuhs, stated, “we’ve also had the opportunity to learn from PMI’s introduction of IQOS in markets outside the U.S.”26

IQOS is being marketed as a sophisticated, high-tech, and aspirational product.27 Because youth and young adults are interested in such product categories, this approach raises concern about youth appeal. PMI heavily markets IQOS in certain countries, often in ways that it cannot market its conventional tobacco products, including through outdoor advertisements, public displays, point of sale displays, sponsored parties and cultural events, product ‘launch events,’ partnerships with other businesses particularly related to fashion and design, branded vehicles, and social media.”

**IQOS Stores.** Located in popular shopping areas, these stores use modern and sleek designs that mimic technology stores like Apple stores that are highly appealing to youth and young adults. As one design firm stated, these aim to create an “extraordinary so-called ‘consumer experience.’”28 IQOS representatives in the stores are meant to introduce potential consumers to the product and show how to use them.

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1. Examples of IQOS marketing in various countries described below are available at: [https://www.tobaccofreekids.org/assets/content/press_office/2019/IQOS-mktg.pdf](https://www.tobaccofreekids.org/assets/content/press_office/2019/IQOS-mktg.pdf).
Marketing to the General Public. Philip Morris USA stated that “we want to limit our reach to unintended audiences such as nonsmokers and youth,” but it is clear from PMI’s actions abroad that the company seeks a broad audience for its marketing. PMI has set up IQOS kiosks and extensive advertisements in shopping malls, train stations, airports, and other locations with ample exposure to non-smokers, including kids and teenagers.

IQOS displays have been placed in locations such as gyms, barber shops, and hotels, which have broad reach and clearly do not limit exposure to adult smokers. In addition, PMI has placed outdoor ads for IQOS in shopping areas and set up IQOS lounges at public festivals, auto shows, and sporting events that are attended by people of all ages. For instance, at a street food festival in Kyiv, Ukraine, where children were present, PMI associates interacted with people throughout the festival, not limited to the IQOS space, and were offering free samples. PMI hosted an IQOS stage at the 2017 Belgrade Beer Festival.

Sponsored Social Events and Parties. PMI hosts elaborate IQOS-branded social events and parties, sometimes hiring popular music artists, DJs, and celebrities linked to the art, fashion, or design world, to associate the product with a party lifestyle. In Romania, the company sponsors a series of parties hosted by A Brunch Affair and sponsors a beach bar. At a party to launch the new IQOS 3 device in Milan, Italy, musician Jamiroquai performed. Rather than educating attendees about the product, these events renormalize and re-glamorize tobacco use. It is unclear if PMI verifies that all attendees are adult smokers, but in at least one case, an attendee who was a non-smoker thanked PMI over social media for inviting her to the event.

IQOS + Fashion. To glamorize the product and link it to sophistication and fashion, PMI has sponsored fashion and design events, such as Mercedes-Benz Fashion Days in Ukraine; partnered with designers such as Karim Rashid to create limited-edition IQOS charger covers; and entered into partnerships with several women’s magazines, including in Russia and Italy, for projects that include designing IQOS covers and empowering women in the workplace. Other special edition or limited edition IQOS devices and chargers include “motor edition,” to tie the products with the PMI-sponsored Formula One race car.

Paid Social Media Marketing. Images posted on social media platforms feature influencers and “IQOS team” members who have been paid by PMI to model with products, speak about and otherwise promote products, and attend glamorous parties, group dinners, or engage in other exciting activities that make IQOS look like part of a desirable lifestyle.† Though the posts originate from outside of the U.S., the influencers have enough Americans followers that one post can potentially reach 1.06 million Americans. This means that, even before receiving the order from FDA allowing PMI to market IQOS in the U.S., PMI already engaged in paid practices that advertise the product to a U.S. audience. PMI has the ability to minimize the exposure of those posts to Americans, but has not taken action to do so.

After Reuters reached out to PMI for comment on its extensive social media marketing in many countries using paid influencers, PMI abruptly announced that it would “suspend all of our product-related digital influencer actions globally” for IQOS. However, PMI also claimed that social media marketing was needed to reach adult cigarette smokers.

Although a spokesperson for Altria stated that the company “has a policy against using social media or influencers,” a job opening for a “digital marketing specialist” was posted on Altria’s career website requesting applicants with “experience with social media content and influencers” to help “develop the strategy for brand engagement, activations and deployment via digital channels specifically, e-commerce, owned websites, social media and influencers” for IQOS.

Reduced Risk Messages. Although, as mentioned above, TPSAC found there was sufficient evidence that “switching completely from cigarettes to the IQOS system significantly reduces your body’s exposure to harmful or potentially harmful chemicals,” the committee did not find that this evidence translates into reduced harm, nor that consumers would fully understand what that message meant. PMI acknowledges that consumers mistakenly believe that reduced exposure means that IQOS reduces harm. The

† Additional examples of IQOS marketing on social media are available at: https://www.tobaccofreekids.org/media/2019/iqos-marketing.
company has stated, “It appears likely that consumers will typically infer a degree of reduced disease risk, even where such inferences are explicitly contradicted by warning statements.” Separately, surveys and studies have found similar results. However, that has not stopped PMI from making such broad statements in company statements and other marketing materials.

Now that IQOS can be sold in the U.S., FDA must carefully monitor Altria’s marketing strategies to ensure that it does not make unwarranted health claims, and that it does not engage in the same marketing practices used abroad by PMI to broaden the appeal of IQOS beyond adult smokers to non-smokers, especially youth.

**Regulating and Taxing IQOS**

FDA has categorized IQOS and the Heatsticks as noncombustible cigarettes. In its marketing order for IQOS and Marlboro Heatsticks, FDA stated that IQOS would be subject to the same regulations as other new tobacco products under its jurisdiction, including packaging and labeling requirements, ingredient reporting requirements, and advertising requirements. FDA is also requiring post-market surveillance of IQOS sales, use, and advertising.

Marlboro Heatsticks would be categorized as cigarettes under the current definition of cigarettes in the federal tax code, and therefore would be subject to the federal excise tax for cigarettes. At the state level, definitions for cigarettes vary and while it is expected that the Heatsticks should be taxed as cigarettes, that may not be the case in every state. In addition, before receiving the marketing order for IQOS and Heatsticks, Altria approached state government officials in an effort to change the way Heatsticks would be taxed. In its 2017 second quarter earnings call, Altria’s CEO stated, “We have an engagement plan that we’re talking to public policy officials, to state tax officials and others...We are particularly pitching that in the states, but as you know, state excise tax structures are highly complex and idiosyncratic by state, so the reception varies from state to state. But we are out there sharing our views about that and trying as best we can to persuade people to be thoughtful about that.”

*Campaign for Tobacco-Free Kids, July 1, 2019*
Heated Tobacco Products: IQOS

Mall display, Bulgaria. Image taken June 2018.


Instagram post by IQOS brand ambassador @christina_ich (429k followers, nine percent in the US) that uses the hashtags #iqos and #ad. April 28, 2018, [https://www.instagram.com/p/BiH3JIrlmAq/](https://www.instagram.com/p/BiH3JIrlmAq/).


Social media post about an IQOS-sponsored party in Bucharest, Romania. This Instagram account is dedicated to this series of members-only themed parties thrown by IQOS, under the name, “The Brunch Affair,” and often includes IQOS-related hashtags. Instagram post from October 4, 2017, https://www.instagram.com/p/BZ0dfsOFtXl/?taken-by=the_brunch_affair.


9 See Heated Tobacco Products Supplement to Tobacco Control 27(Suppl 1), November 2018, available at https://tobaccocontrol.bmj.com/content/27/Suppl_1.


35 Popova, L, Lempert LK, & Glantz, SA, “Light and mild redux: Heated tobacco products’ reduced exposure claims are likely to be misunderstood as reduced risk claims,” Tobacco Control 27(Suppl 1):s87-s95, 2018.

