

## **Exhibit 1**

## **Department of Health and Human Services**

In Re: Cigar Association of America's Petition for Stay of Action of Substantial Equivalence Report Deadline, Pursuant to Section 319 of the Public Health Service Act, 42 U.S.C. § 247d(d).

### **[PROPOSED] ORDER**

1. The United States and abroad are currently facing a public health emergency due to the COVID-19 pandemic. On January 31, 2020, pursuant to Section 319 of the Public Health Service Act, codified at 42 U.S.C. § 247d, I declared a public health emergency due to the pandemic. On March 13, 2020, President Donald J. Trump also declared a national emergency in response to the the COVID-19 pandemic. In accordance with Centers for Disease Control & Prevention guidelines, the President has urged all but the most essential employees to work from home to the extent possible and has further recommended that Americans not gather in any setting in groups of greater than 10 people. *See* Ctrs. for Disease Control & Prevention, *Coronavirus Disease 2019 (COVID-19) Situation Summary*. This public health emergency has closed offices and factories, restricted or prohibited travel, and (in many cases) confined people to their homes both in the United States and internationally.

2. The COVID-19 pandemic, and its resulting effects on businesses, is impacting the ability of companies to comply with the upcoming May 12, 2020 FDA deadline by which time certain cigar and other tobacco product manufacturers must submit substantial equivalence reports to the FDA (the "May 12, 2020 Deadline").<sup>1</sup>

3. This Order is in response to the Petition submitted by Petitioner Cigar Association of America ("CAA"), seeking an extension of no less than 90 days for the May 12, 2020 Deadline. Petitioner seeks this extension for all companies that are impacted by the current public health emergency caused by COVID-19.

4. Section 319 of the Public Health Service Act, codified at 42 U.S.C. § 247d, authorizes me to extend deadlines for regulatory schemes under my supervision when regulated entities are "unable to comply with deadlines for the submission to the Secretary of data or reports required under any law administered by the Secretary" due to a public health emergency. 42 U.S.C. § 247d(d). I may grant such extensions "as the circumstances reasonably require." *Id.* I also "may waive . . . any sanctions otherwise applicable to such failure to comply." *Id.* § 247d(d). To extend any deadline or waive any sanction associated with missing a report deadline, I must determine that "individuals or public or private entities are unable to comply with" the relevant deadline "wholly or partially as a result of a public health emergency" declared by the Secretary. *Id.*

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<sup>1</sup> FDA's Final Deeming Rule deemed cigars and other tobacco products subject to the Tobacco Control Act, *Deeming Tobacco Products To Be Subject to the Federal Food, Drug, and Cosmetic Act, as Amended by the Family Smoking Prevention and Tobacco Control Act; Restrictions on the Sale and Distribution of Tobacco Products and Required Warning Statements for Tobacco Products*, FDA-2014-N-0189, 81 Fed. Reg. 28,973 (May 10, 2016), and thus required cigar and other tobacco product manufacturers to submit to the FDA certain reports before beginning or continuing to market their products. *See* Family Smoking Prevention and Tobacco Control Act of 2009, Pub. L. 111-31, 123 Stat. 1776 *et seq.*; Federal Food, Drug and Cosmetic Act §§ 905(j), 910 (21 U.S.C. §§ 387e(j), 387j).

5. Petitioner has demonstrated that these criteria are met. On January 31, 2020, I declared a public health emergency, pursuant to 42 U.S.C. § 247d. The COVID-19 pandemic and the responses thereto have had a significant impact on the operations of businesses nationally and internationally. Offices and factories are subject to mandatory shutdowns, employees are required to work from home, travel is restricted or completely prohibited, and (in many cases) people are confined to their homes to the greatest extent possible. For example, simply among member companies of Petitioner CAA, offices are closed in Pennsylvania, Virginia, and many areas of Florida. Additionally factories are closed in Honduras, the Dominican Republic and Nicaragua, all of which manufacture products for members of CAA. Further, to the extent members of Petitioner CAA are not yet under government order to shut down, such members have done so on their own, or reduced their staff, in order to protect their employees from infection and “flatten the curve” of the virus, as the federal, state and local governments have advised is critical.

6. The above-referenced impacts of the COVID-19 pandemic are preventing companies from having the ability to work on the timely submission of substantial equivalence reports before the May 12, 2020 Deadline.

7. Based on the foregoing, I find that the COVID-19 pandemic, and the national and international governmental responses thereto, have rendered members of Petitioner CAA, and others impacted by COVID-19, “unable to comply with [the] deadline[ ] for submission of” substantial equivalence reports “to the Secretary.” 42 U.S.C § 247d(d). I find that these “circumstances reasonably require” the May 12, 2020 Deadline be extended for no less than 90 days. *Id.* I also find that the “circumstances reasonably require” the waiver of “sanctions otherwise applicable to the failure to comply” with the substantial equivalence deadline as set forth below.

**NOW, THEREFORE, IT IS HEREBY ORDERED**, pursuant to 42 U.S.C. § 247d(d), that:

- a. The Petition for Stay of Action of Substantial Equivalence Report Deadline for Cigars, submitted pursuant to the Public Health Service Act, 42 U.S.C. § 247d(d), is **GRANTED**.
- b. The pending May 12, 2020 Deadline for substantial equivalence reports, required as a result of the Final Deeming Rule, is hereby extended until \_\_\_\_\_, 20\_\_\_\_, for any and all companies subject to such deadline and impacted by the COVID-19 pandemic.
- c. Further, any sanctions otherwise applicable to the failure of any and all companies impacted by the COVID-19 pandemic to comply with requirements to submit substantial equivalence reports by the May 12, 2020 Deadline are within the scope of this extension. Those sanctions would include any fines or penalties or provisions of law that would render products for which such reports have not been submitted eligible to be considered “adulterated” under Section 902, “misbranded” under Section 903, or for “recall” pursuant to Section 908(c). *See* Act §§ 902 (21 U.S.C. § 387b), 903 (21 U.S.C. § 387c), 908(c) (21 U.S.C. § 387h(c)).

**SO ORDERED.**

Dated: \_\_\_\_\_

\_\_\_\_\_  
ALEX M. AZAR II

Secretary

## **Exhibit 2**

## **Food and Drug Administration**

In Re: Petition for Stay of Action of Substantial Equivalence Report Deadline, Required as a Result of the *Final Deeming Rule, Deeming Tobacco Products To Be Subject to the Federal Food, Drug, and Cosmetic Act, as Amended by the Family Smoking Prevention and Tobacco Control Act; Restrictions on the Sale and Distribution of Tobacco Products and Required Warning Statements for Tobacco Products*, FDA-2014-N-0189, 81 Fed. Reg. 28,973 (May 10, 2016)

To Be Filed in Docket Nos. FDA-2014-N-0189, FDA-2016-N-3818, FDA-2017-D- 2834, FDA-2017-N-6107, and FDA-2019-D-0661; and with the Secretary of the Department of Health and Human Services pursuant to the Public Health Service Act.

### **[PROPOSED] ORDER**

1. The United States and abroad are currently facing a public health emergency due to the COVID-19 pandemic. On January 31, 2020, pursuant to Section 319 of the Public Health Service Act, codified at 42 U.S.C. § 247d, Secretary of Health and Human Services Alex Azar declared a public health emergency due to the pandemic. On March 13, 2020, President Donald J. Trump also declared a national emergency in response to the COVID-19 pandemic. In accordance with Centers for Disease Control & Prevention guidelines, the President has urged all but the most essential employees to work from home to the extent possible and has further recommended that Americans not gather in any setting in groups of greater than 10 people. *See* Ctrs. for Disease Control & Prevention, *Coronavirus Disease 2019 (COVID-19) Situation Summary*. This public health emergency has closed offices and factories, restricted or prohibited travel, and (in many cases) confined people to their homes both in the United States and internationally.

2. The COVID-19 pandemic, and its resulting effects on businesses, is impacting the ability of companies to comply with the upcoming May 12, 2020 FDA deadline by which time certain cigar and other tobacco product manufacturers must submit substantial equivalence reports to FDA (the “May 12, 2020 Deadline”).<sup>1</sup>

3. This Order is in response to the Petition submitted by Petitioner Cigar Association of America (“CAA”), seeking an extension of no less than 90 days for the May 12, 2020 Deadline. Petitioner seeks this extension for all companies that are impacted by the current public health emergency caused by COVID-19.

4. Petitioner has demonstrated good cause for the stay it seeks. The COVID-19 pandemic and the responses thereto have had a significant impact on the operations of businesses

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<sup>1</sup> FDA’s Final Deeming Rule deemed cigars and other tobacco products subject to the Tobacco Control Act, *Deeming Tobacco Products To Be Subject to the Federal Food, Drug, and Cosmetic Act, as Amended by the Family Smoking Prevention and Tobacco Control Act; Restrictions on the Sale and Distribution of Tobacco Products and Required Warning Statements for Tobacco Products*, FDA-2014-N-0189, 81 Fed. Reg. 28,973 (May 10, 2016), and thus required cigar and other tobacco product manufacturers to submit to the FDA certain reports before beginning or continuing to market their products. *See* Family Smoking Prevention and Tobacco Control Act of 2009, Pub. L. 111-31, 123 Stat. 1776 *et seq.*; Federal Food, Drug and Cosmetic Act §§ 905(j), 910 (21 U.S.C. §§ 387e(j), 387j).

nationally and internationally. Offices and factories are subject to mandatory shutdowns, employees are required to work from home, travel is restricted or completely prohibited, and (in many cases) people are confined to their homes to the greatest extent possible. For example, simply among member companies of Petitioner CAA, offices are closed in Pennsylvania, Virginia, and many areas of Florida. Additionally factories are closed in Honduras, the Dominican Republic and Nicaragua, all of which manufacture products for members of CAA. Further, to the extent members of Petitioner CAA are not yet under government order to shut down, such members have done so on their own, or reduced their staff, in order to protect their employees from infection and “flatten the curve” of the virus, as the federal, state and local governments have advised is critical.

5. The above-referenced impacts of the COVID-19 pandemic are preventing companies from having the ability to work on the timely submission of substantial equivalence reports before the May 12, 2020 Deadline.

6. Granting a stay will not raise countervailing issues of public health that will outweigh the economic hardship caused by requiring Petitioners to meet the May 12, 2020 deadline during the COVID-19 pandemic. *See* 21 C.F.R. § 10.35(e)(4).

7. I also find that the petition meets the requirements for a mandatory stay under 21 C.F.R. § 10.35(e):

- (a) Members of Petitioner and other companies impacted by COVID-19 will suffer irreparable harm absent such a stay. The COVID-19 pandemic renders compliance with the May 12, 2020 deadline impossible. Should FDA enforce the May 12, 2020 Deadline, it will lead cigar and other tobacco product manufacturers to cease sales of their product, possibly close their businesses, and cause substantial job losses.
- (b) To the extent that pending litigation is a factor triggering a mandatory stay, the Petitioner and other associations seeking similar (though not identical) relief are maintaining lawsuits against the FDA challenging the substantial equivalence process, in which there is a pending motion for summary judgment. *Cigar Ass’n. of Am. v. U.S. Food & Drug Admin.*, No. 16-cv-1460 (D.D.C.), ECF Nos. 178, 180, 185-86, 188.
- (c) “[T]here are sound public policy grounds supporting [a] stay.” 21 C.F.R. § 10.35(e)(3). In the absence of a stay, it will be impossible for cigar and other tobacco product manufacturers to comply with the May 12, 2020 Deadline. FDA has recognized this reality for other regulated products, and has already extended regulatory reporting deadlines.
- (d) “[T]he delay resulting from the stay is not outweighed by public health other public interests.” 21 C.F.R. § 10.35(e)(4). A stay of no less than 90 days, narrowly tailored to alleviate impacts of the COVID-19 pandemic, will not raise countervailing issues

of public health that would outweigh the economic and other distress caused by the maintenance of the May 12, 2020 Deadline in the midst of the COVID-19 pandemic.

8. I find that the petition is timely, even though it was filed later than 30 days after the date of the decision involved. 21 C.F.R. § 10.35(b), (g). The COVID-19 pandemic was not extant within the 30 days after the decisions involved. The intervention of the COVID-19 pandemic is good cause for accepting and granting the petition more than 30 days after the decisions involved.

**NOW, THEREFORE, IT IS HEREBY ORDERED**, pursuant to 42 U.S.C. § 247d(d), that:

- a. The Petition for Stay of Action of Substantial Equivalence Report Deadline for Cigars is **GRANTED**.
- b. The pending May 12, 2020 Deadline for substantial equivalence reports, required as a result of the Final Deeming Rule, is hereby extended until \_\_\_\_\_, 20\_\_\_\_, for any and all companies subject to such deadline and impacted by the COVID-19 pandemic.

**SO ORDERED.**

Dated: \_\_\_\_\_

\_\_\_\_\_  
STEPHEN M. HAHN  
Commissioner



## **Exhibit 3**



**Fox Rothschild** LLP  
ATTORNEYS AT LAW

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March 17, 2020

**VIA E-MAIL AND FEDERAL EXPRESS**

Ann Simoneau, J.D.  
Director  
Office of Compliance and Enforcement  
Center for Tobacco Products  
Food and Drug Administration  
Document Control Center  
10903 New Hampshire Avenue  
Building 71, Room G335  
Silver Spring, MD 20993-0002

**Re: Request for Extension May 2020 Substantial Equivalence Deadline**

Dear Sir or Madam:

The Cigar Association of America, Inc. (CAA) is a leading national trade association representing the interests of cigar manufacturers, importers, distributors, retailers and major suppliers to the industry. CAA was founded in 1937 as a non-profit trade organization. Today, its member companies come from all sectors of the industry and include manufacturers of both hand-made premium cigars and machine made cigars. CAA members manufacture a significant share of the premium, large, little and filtered cigars sold in the United States, and also include internet retailers of cigars, as well as leaf and other suppliers to the cigar industry. CAA is a key stakeholder in the implementation of any regulations of cigars as these regulations significantly affect its members' ability to conduct business.

We write today to request an extension of the May 12, 2020 deadline for the filing of Substantial Equivalence (SE) Reports. The deadline was, until recently, August 2021 – a date FDA set to give industry adequate time to prepare quality reports. That deadline was moved to May 12, 2020 as a result of a court order. According to the January 2, 2020 Guidance, the May 12 deadline is one FDA would not have imposed on cigars absent the court order, and it poses significant challenges

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California Colorado Delaware District of Columbia Florida Georgia Illinois Minnesota Nevada  
New Jersey New York North Carolina Pennsylvania South Carolina Texas Virginia Washington

March 17, 2020

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to industry. As the agency is aware, the cigar industry has relied on the August 2021 deadline is undertaking work necessary to complete the types of SE Reports FDA expects. CAA's member companies have nevertheless worked diligently towards preparing such reports, in time to file by May 12. As outlined below, recent events relating to the COVID-19 pandemic have now made the challenges insurmountable. Accordingly, CAA and its members request an extension of the May 12 deadline, for at least 90 days, pending further developments regarding this public health crisis.

The majority of cigars sold in the US are manufactured overseas. Acquiring necessary information therefore often requires overseas travel; not only does such travel pose health risks to those taking such trips, but some travel is now prohibited by actions taken by the federal government. In addition, factories in certain cigar-producing countries (such as Honduras, Nicaragua, and Honduras) are either closed as are expected to close as a result of COVID-19. Finally, many of the offices with information necessary to completing the SE Reports, both in the US and overseas, are closed in an effort to contain the spread of the virus. Given these and other factors, an extension of the deadline is not only necessary but required to protect the public health.

Thank you for your attention to and assistance with this request.

Very truly yours,



Barry S. Schaevitz

## **Exhibit 4**

Visit [CDC.gov](https://www.cdc.gov) for **Coronavirus (COVID-19) Public Health Updates**  
Read the **15 Days to Slow the Spread Guidance (Versión en Español)**

# HHS.gov

U.S. Department of Health &amp; Human Services

**FOR IMMEDIATE RELEASE****January 31, 2020****Contact: HHS Press Office****202-690-6343****[media@hhs.gov](mailto:media@hhs.gov)**

## Secretary Azar Declares Public Health Emergency for United States for 2019 Novel Coronavirus

Health and Human Services Secretary Alex M. Azar II declared a public health emergency for the entire United States to aid the nation's healthcare community in responding to 2019 novel coronavirus.

"While this virus poses a serious public health threat, the risk to the American public remains low at this time, and we are working to keep this risk low," Secretary Azar said. "We are committed to protecting the health and safety of all Americans, and this public health emergency declaration is the latest in the series of steps the Trump Administration has taken to protect our country."

The emergency declaration gives state, tribal, and local health departments more flexibility to request that HHS authorize them to temporarily reassign state, local, and tribal personnel to respond to 2019-nCoV if their salaries normally are funded in whole or in part by Public Health Service Act programs. These personnel could assist with public health information campaigns and other response activities.

The Centers for Disease Control and Prevention is working closely with state health departments on disease surveillance, contact tracing, and providing interim guidance for clinicians on identifying and treating coronavirus infections. HHS is working with the Department of State to assist in bringing home Americans who had been living in affected areas of mainland China. HHS divisions also are collaborating with industry to identify and move forward with development of potential diagnostics, vaccines, and therapeutics to detect, prevent, and treat 2019-nCoV infections.

In declaring the public health emergency, Secretary Azar acted within his authority under the Public Health Service Act. This declaration is retroactive to January 27, 2020.

This U.S. public health emergency declaration follows a declaration by the World Health Organization that spread of the virus constituted a public health emergency of international concern.

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*Secretary Azar signs the Public Health  
Emergency Declaration*

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Note: All HHS press releases, fact sheets and other news materials are available at <https://www.hhs.gov/news>.

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Last revised: January 31, 2020

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## **Exhibit 5**

**PROCLAMATIONS**

# Proclamation on Declaring a National Emergency Concerning the Novel Coronavirus Disease (COVID-19) Outbreak

Issued on: March 13, 2020



In December 2019, a novel (new) coronavirus known as SARS-CoV-2 (“the virus”) was first detected in Wuhan, Hubei Province, People’s Republic of China, causing outbreaks of the coronavirus disease COVID-19 that has now spread globally. The Secretary of Health and Human Services (HHS) declared a public health emergency on January 31, 2020, under section 319 of the Public Health Service Act (42 U.S.C. 247d), in response to COVID-19. I have taken sweeping action to control the spread of the virus in the United States, including by suspending entry of foreign nationals seeking entry who had been physically present within the prior 14 days in certain jurisdictions where COVID-19 outbreaks have occurred, including the People’s Republic of China, the Islamic Republic of Iran, and the Schengen Area of Europe. The Federal Government, along with State and local governments, has taken preventive and proactive measures to slow the spread of the virus and treat those affected, including by instituting Federal quarantines for individuals evacuated from foreign nations, issuing a declaration pursuant to section 319F-3 of the Public Health Service Act (42 U.S.C. 247d-6d), and releasing policies to accelerate the acquisition of personal protective equipment and streamline bringing new diagnostic capabilities to laboratories. On March 11, 2020, the World Health Organization announced that the COVID-19 outbreak can be characterized as a pandemic, as the rates of infection continue to rise in many locations around the world and across the United States.

The spread of COVID-19 within our Nation’s communities threatens to strain our Nation’s healthcare systems. As of March 12, 2020, 1,645 people from 47 States have been infected with the virus that



causes COVID-19. It is incumbent on hospitals and medical facilities throughout the country to assess their preparedness posture and be prepared to surge capacity and capability. Additional measures, however, are needed to successfully contain and combat the virus in the United States.

NOW, THEREFORE, I, DONALD J. TRUMP, President of the United States, by the authority vested in me by the Constitution and the laws of the United States of America, including sections 201 and 301 of the National Emergencies Act (50 U.S.C. 1601 *et seq.*) and consistent with section 1135 of the Social Security Act (SSA), as amended (42 U.S.C. 1320b-5), do hereby find and proclaim that the COVID-19 outbreak in the United States constitutes a national emergency, beginning March 1, 2020. Pursuant to this declaration, I direct as follows:

Section 1. Emergency Authority. The Secretary of HHS may exercise the authority under section 1135 of the SSA to temporarily waive or modify certain requirements of the Medicare, Medicaid, and State Children's Health Insurance programs and of the Health Insurance Portability and Accountability Act Privacy Rule throughout the duration of the public health emergency declared in response to the COVID-19 outbreak.

Sec. 2. Certification and Notice. In exercising this authority, the Secretary of HHS shall provide certification and advance written notice to the Congress as required by section 1135(d) of the SSA (42 U.S.C. 1320b-5(d)).

Sec. 3. General Provisions. (a) Nothing in this proclamation shall be construed to impair or otherwise affect:

(i) the authority granted by law to an executive department or agency, or the head thereof; or

(ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This proclamation shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) This proclamation is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

IN WITNESS WHEREOF, I have hereunto set my hand this thirteenth day of March, in the year of our Lord two thousand twenty, and of the Independence of the United States of America the two hundred and forty-fourth.

DONALD J. TRUMP

## **Exhibit 6**



101 Park Avenue, 17th Floor  
New York, NY 10178  
Tel (212) 878-7900 Fax (212) 692-0940  
www.foxrothschild.com

BETH G. OLIVA  
Direct No: 646.601.7632  
Email: [BOliva@FoxRothschild.com](mailto:BOliva@FoxRothschild.com)

March 23, 2020

Ann Simoneau, J.D.  
Director  
Office of Compliance and Enforcement  
Center for Tobacco Products  
Food and Drug Administration  
Document Control Center  
10903 New Hampshire Avenue  
Building 71, Room G335  
Silver Spring, MD 20993-0002

**Re: Request for Extension of May 2020 Substantial Equivalence Deadline**

Dear Ms. Simoneau:

The Pipe Tobacco Council (“PTC”) is the leading national trade association representing pipe tobacco and smoking pipe manufacturers, importers, distributors and retailers. PTC is a key stakeholder in the implementation of any regulation of pipe tobacco as these regulations significantly affect its members’ ability to conduct business.

We write today to request an extension of the May 12, 2020 deadline for the filing of Substantial Equivalence (SE) Reports. The deadline was, until recently, August 2021 – a date FDA set to give industry adequate time to prepare quality reports. That deadline was moved to May 12, 2020 as a result of a court order. According to the January 2, 2020 Guidance, the May 12 deadline is one FDA would not have imposed on pipe tobacco absent the court order, and it poses significant challenges to industry. As the agency is aware, the pipe tobacco industry has relied on the August 2021 deadline and is undertaking work necessary to complete the types of SE Reports FDA expects. PTC’s member companies have nevertheless worked diligently towards preparing such reports, in time to file by May 12. As outlined below, recent events relating to the COVID-19 pandemic have now made the challenges insurmountable. Accordingly, PTC and its members request an extension of the May 12 deadline, for at least 90 days, pending further developments regarding this public health crisis.

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New Jersey   **New York**   North Carolina   Pennsylvania   South Carolina   Texas   Virginia   Washington

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A large portion of the pipe tobacco sold in the US is manufactured overseas, particularly in Europe. Acquiring necessary information therefore often requires overseas travel; not only does such travel pose health risks to those taking such trips, but some travel is now prohibited by actions taken by the federal government, or the local governments. Many US manufacturers are being faced with potentially having to suspend operations. Finally, many of the offices with information necessary to completing the SE Reports, both in the US and overseas, are closed in an effort to contain the spread of the virus. Given these and other factors, an extension of the deadline is not only necessary, but required to protect the public health.

Thank you for your attention to and assistance with this request.

Very truly yours,



Beth G. Oliva

BGO:

## **Exhibit 7**



## **Letter to Industry on COVID-19**

March 23, 2020

Dear Medical Device Establishments:

In response to the Coronavirus Disease 2019 (COVID-19) public health emergency,<sup>1</sup> FDA's Center for Devices and Radiological Health (CDRH) has taken the steps described in this letter to prioritize work that advances the nation's response during this national emergency.<sup>2</sup> These steps seek to address the impact of the COVID-19 public health emergency on day-to-day operations in CDRH and in the medical device industry, while ensuring that government and private sector efforts to respond to this national emergency receive the highest priority.

### **CDRH Has Converted In-Person Meetings with Industry to Teleconferences**

Where possible, CDRH is leveraging technology to host teleconferences rather than in-person meetings with industry scheduled through April 30, 2020. We are converting each meeting to a teleconference to be held at the same date and time. We believe we have contacted all parties with meetings scheduled through April 30, 2020 to provide teleconference information. If you have not received teleconference information, please reach out to the CDRH staff member who originally scheduled your meeting. We will continue to assess whether any in-person meetings scheduled later than April 30, 2020 should be converted to teleconferences and will provide periodic updates.

### **Processing of Incoming Documents**

The Document Control Center continues to receive and process incoming documents.

In order to ensure the security of your information, we are generally unable to accept incoming submissions via email. In addition, existing systems have file size limitations associated with email. We are looking into electronic options other than email. We regret any delays this may cause you.

### **Extension of Response Due Dates for Marketing Applications Currently on Hold**

For marketing applications on hold as of March 16, 2020, where the response due date is on or before April 30, 2020, CDRH has extended response due dates by 60 days for Premarket Notifications (510(k)s), Premarket Approval (PMA) applications (original and supplements), Humanitarian Device Exemption (HDE)

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<sup>1</sup> On January 31, 2020, the Secretary of Health and Human Services Alex M. Azar, issued a declaration of a public health emergency related to COVID-19 and mobilized the Operating Divisions of HHS, Determination that a Public Health Emergency Exists. Jan. 31, 2020. (Accessible at <https://www.phe.gov/emergency/news/healthactions/phe/Pages/2019-nCoV.aspx>).

<sup>2</sup> On March 13, 2020, the President declared a national emergency in response to COVID-19. President Donald J. Trump, Proclamation on Declaring a National Emergency Concerning the Novel Coronavirus Disease (COVID-19). Mar. 13, 2020. (Accessible at <https://www.whitehouse.gov/presidential-actions/proclamation-declaring-national-emergency-concerning-novel-coronavirus-disease-covid-19-outbreak/>).



applications (original and supplements) and De Novo classification requests. CDRH intends to extend this due date automatically; no extension requests are necessary to be submitted.

For additional submission types where a response or report is due (e.g., Post Approval or 522 Study reports, Investigational Device Exemption annual reports, PMA reports), we encourage you to submit the response or report when possible.

Please address any questions about response due dates to [CDRHPremarketProgramOperations@fda.hhs.gov](mailto:CDRHPremarketProgramOperations@fda.hhs.gov).

### **How to Submit an Inquiry or Request for an Emergency Use Authorization**

On February 4, 2020, the HHS Secretary determined that there is a public health emergency that involves the virus that causes COVID-19. On that same date, the Secretary declared that circumstances exist justifying the authorization of emergency use of in vitro diagnostics for detection and/or diagnosis of the virus that causes COVID-19 and on March 4, 2020, the Secretary made the declaration with respect to personal respiratory protective devices. Under FDA's emergency use authorities, the FDA Commissioner may allow unapproved medical products or unapproved uses of approved medical products to be used in certain emergencies to diagnose, treat, or prevent serious or life-threatening diseases or conditions caused by CBRN threat agents when there are no adequate, approved, and available alternatives. We strongly encourage applicants to submit pre-EUAs to discuss technologies that might help address this emergency.

More information about [current EUAs](#) is on the FDA's Emergency Use Authorization web page.

For inquiries related to EUAs for in vitro diagnostics (IVDs), contact [CDRH-EUA-Templates@fda.hhs.gov](mailto:CDRH-EUA-Templates@fda.hhs.gov)

For inquiries related to EUAs related to non-IVD medical devices, contact [CDRH-NonDiagnosticEUA-Templates@fda.hhs.gov](mailto:CDRH-NonDiagnosticEUA-Templates@fda.hhs.gov)

For more information about the EUA program, please see the guidance, [Emergency Use Authorization of Medical Products and Related Authorities](#).

### **COVID-19 Related Guidance Documents**

FDA has issued immediately in effect guidance documents related to COVID-19. For the latest information, please see the [FDA's COVID-19 Related Guidance Documents web page](#).

### **Postmarket and Compliance Activities**

CDRH continues to process and work on mission critical post-market and compliance activities.

Medical devices play an essential role in advancing public health in the response to the COVID-19 national emergency. As such, our work in supporting the availability of critically-needed medical devices is our highest priority.





If you have any questions about this communication, please contact the Division of Industry and Consumer Education (DICE) at [DICE@FDA.HHS.GOV](mailto:DICE@FDA.HHS.GOV), 800-638-2041 or 301-796-7100.

Sincerely,

/s/

William Maisel, MD, MPH  
Director, Office of Product Evaluation and Quality  
Center for Devices and Radiological Health  
U.S. Food and Drug Administration

## **Exhibit 8**

**From:** Hayes, Ruth L. (CDC/DDNID/NCCDPHP/OSH) (CTR) <[aro5@cdc.gov](mailto:aro5@cdc.gov)>

**Sent:** Thursday, March 26, 2020 10:38 AM

**To:** NCCD/OSH/Federal Cigarette Labeling and Advertising Act (CDC) <[nccdoshfclaa@cdc.gov](mailto:nccdoshfclaa@cdc.gov)>

**Subject:** [EXT] CDC Update re FCLAA and CSTHEA reporting

**Importance:** High

To Manufacturers, Packagers, Importers, or Designated Representatives:

The purpose of this correspondence is to inform you that the Centers for Disease Control and Prevention (CDC), Office on Smoking and Health (OSH) is extending the March 31<sup>st</sup> deadline for submissions required under the Federal Cigarette Labeling and Advertising Act and the Comprehensive Smokeless Tobacco Health Education Act for cigarettes and smokeless tobacco products. Though applicable Federal Register Notices [ <https://www.federalregister.gov/documents/2018/08/21/2018-17978/proposed-data-collection-submitted-for-public-comment-and-recommendations>; <https://www.federalregister.gov/documents/2018/08/22/2018-18053/proposed-data-collection-submitted-for-public-comment-and-recommendations>]

provide that ingredient reports are due annually on March 31<sup>st</sup>, due to the current public health response to COVID-19 and related issues, OSH is not able to accept any ingredient submissions and will not be issuing Certificates of Compliance at this time. CDC will be communicating this information to state government entities. CDC will re-evaluate this approach as necessary.

To the extent there are questions or concerns that CDC can address, please contact OSH through [nccdoshfclaa@cdc.gov](mailto:nccdoshfclaa@cdc.gov). For questions on implications regarding state-specific statutory or regulatory requirements, please contact the states directly.

Further information will be provided concerning any updates, including amending the Federal Register Notices accordingly.

Thank you for your attention to this matter,  
Office on Smoking and Health

## **Exhibit 9**

## **FDA STATEMENT**

# **Coronavirus (COVID-19) Update: FDA Focuses on Safety of Regulated Products While Scaling Back Domestic Inspections**

### **For Immediate Release:**

March 18, 2020

### **Statement From:**

Commissioner of Food and Drugs - Food and Drug Administration  
Stephen M. Hahn M.D.

Protecting the health and safety of our staff and their families is of paramount concern to the U.S. Food and Drug Administration. As a nation we must do everything we can to help slow the spread of the virus and help flatten the curve of the COVID-19 pandemic. Now more than ever, the American people are depending on us. We must ensure our workforce remains healthy to carry out the FDA's critical public health mission to keep Americans safe.

In keeping with the White House Coronavirus Task Force and cross-government guidance, this week we directed all eligible FDA employees to begin teleworking. While this does not apply to those carrying out non-portable activities, such as certain lab activities or the monitoring of imported products, we will continue to adjust our approach to a number of activities, including facility inspections for all FDA-regulated products such as food, animal feed, drugs, biological products, devices and tobacco.

Earlier this month, we announced (</news-events/press-announcements/coronavirus-disease-2019-covid-19-update-foreign-inspections>) that we are postponing most foreign facility inspections through April and that inspections outside the U.S. deemed mission-critical will be considered on a case-by-case basis as this outbreak continues to unfold.

Today, we're announcing that for the health and well-being of our staff and those who conduct inspections for the agency under contract at the state level, and because of industry concerns about visitors, we have temporarily postponed all domestic routine surveillance facility inspections. These are facility inspections the FDA traditionally conducts every few years based on a risk analysis. Importantly, all domestic for-cause inspection assignments will be evaluated and will proceed if mission-critical. We will continue to respond to natural disasters, outbreaks and other public health emergencies involving FDA-regulated products.

I want to assure the American public that we have full confidence in the safety and quality of the products we all use every day and that the FDA will continue to leverage all available authorities to continue to ensure the integrity of the products we regulate.

Importantly, during this interim period we're evaluating additional ways to conduct our inspectional work that would not jeopardize public safety and protecting both the firms and the FDA staff. This can include, among other things, evaluating records in lieu of conducting an onsite inspection on an interim basis when travel is not permissible, when appropriate.

In fact, inspections are just one part of a robust and multi-pronged approach to overseeing the safety and quality of FDA-regulated products, however inspections are not what cause quality to happen. Safety and quality need to be owned by the industry and firms have the primary responsibility to reliably produce quality products. For example, the medical product and food industries we regulate are subject to certain reporting requirements about their facilities and also must adhere to Current Good Manufacturing Practice (cGMP) requirements pertaining to, for example, operating procedures, manufacturing, sanitation, and processing controls, as well as preventive controls to reduce or eliminate food safety hazards.

From our experience across the agency, we also believe FDA-regulated firms understand and appreciate their shared responsibility to ensure the integrity of the supply chain and we will continue to communicate with them during this time to underscore this partnership. In fact, in last fiscal year, the overall domestic violation rate was only about 5%.

The FDA remains committed to using all available tools to oversee the safety and quality of FDA-regulated products for American patients and consumers. As this remains a dynamic situation, we will continue to assess and calibrate our approach as needed and we stand ready to resume any postponed inspections as soon as feasible.

The FDA, an agency within the U.S. Department of Health and Human Services, protects the public health by assuring the safety, effectiveness, and security of human and veterinary drugs, vaccines and other biological products for human use, and medical devices. The agency also is responsible for the safety and security of our nation's food supply, cosmetics, dietary supplements, products that give off electronic radiation, and for regulating tobacco products.

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## Inquiries

### Media:

✉ Michael Felberbaum (mailto:Michael.felberbaum@fda.hhs.gov)

☎ 240-402-9548

**Consumer:**

📞 888-INFO-FDA

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## Related Information

- Coronavirus Disease 2019 (COVID-19) (/emergency-preparedness-and-response/mcm-issues/coronavirus-disease-2019-covid-19)

🔗 [More Press Announcements \(/news-events/newsroom/press-announcements\)](/news-events/newsroom/press-announcements)



CENTER FOR TOBACCO PRODUCTS

# CTPNEWS

## Domestic Inspections

Like all of government, private companies and organizations, protecting the health and safety of our staff and their families is of paramount concern.

In keeping with the White House Coronavirus Task Force and cross-government guidance, this week FDA directed all eligible employees to begin teleworking. While this does not apply to those carrying out non-portable activities, such as certain lab activities or the monitoring of imported products, FDA will continue to adjust its approach to a number of activities, including facility inspections for all FDA-regulated products such as food, animal feed, drugs, biological products, devices and tobacco.

Earlier this month, FDA [announced](#) that it is postponing most foreign facility inspections through April and that inspections outside the U.S. deemed mission-critical will be considered on a case-by-case basis as this outbreak continues to unfold.

Yesterday, FDA [announced](#) that for the health and well-being of our staff, and those who conduct inspections for the agency under contract at the state level, that the Agency has temporarily postponed all routine domestic facility inspections. All domestic for-cause inspection assignments will be evaluated and will proceed if mission-critical. And the Agency will continue to respond to natural disasters, outbreaks, and other public health emergencies involving FDA-regulated products.

To be consistent with the Agency's position, CTP is issuing a partial stop work order to the entities we contract with at the state level for activities such as compliance checks and vape shop inspections.

Although these inspections will cease immediately, administrative work can continue for two weeks, and the entire situation will be reevaluated over the coming four weeks.

I will continue to keep you all apprised of these types of programmatic changes as they occur.

Please stay safe.  
Mitch Zeller  
CTP Director





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## **Exhibit 10**

**PURCHASING PATTERNS AND DEMOGRAPHICS OF ONLINE PREMIUM CIGAR  
CUSTOMERS**

**Expert Report Prepared For:**

Cigar Association of America, Inc.  
Cigar Rights of America  
International Premium Cigar and Pipe Retailers Association

**Prepared By:**

Richard P. Voith, Ph.D., CRE  
Peter Angelides, Ph.D., AICP  
Econsult Solutions, Inc.  
Philadelphia, Pennsylvania

July 25, 2018

## **1.0 Econsult Solutions, Inc.**

Econsult Solutions, Inc. is a Philadelphia-based economic consulting firm that provides businesses and public policy makers with economic consulting services in urban economics, real estate economics, transportation, public infrastructure, development, public policy and finance, community and neighborhood development, planning, as well as expert witness services for litigation support. Its principals are nationally recognized experts in urban development, real estate, government and public policy, planning, transportation, non-profit management, business strategy and administration, as well as litigation and commercial damages. Staff members have outstanding professional and academic credentials, including active positions at the university level, wide experience at the highest levels of the public policy process and extensive consulting experience.

President and Principal Dr. Richard Voith is a well-known expert in real estate economics, transportation, and applied microeconomics. Prior to joining Econsult Solutions, Dr. Voith held the position of Economic Advisor at the Federal Reserve Bank of Philadelphia. Dr. Voith has taught courses at the Wharton School of the University of Pennsylvania and continues as a Faculty Fellow at the University of Pennsylvania's Institute for Urban Research.

Dr. Peter Angelides, Senior Vice President and Principal, is an experienced economist concentrating in real estate, transportation, and economic development. Dr. Angelides also serves as a lecturer at the University of Pennsylvania, teaching courses in Urban Economics, Project Finance, and Infrastructure Investment in the Department of City and Regional Planning in the Fels School of Government. In addition to these positions, Dr. Angelides is a member of the American Economics Association, the American Institute of Certified Planners, and the Urban Land Institute.

Both Dr. Voith and Dr. Angelides have extensive experience providing analysis and testimony in support of litigation matters. The bios of Dr. Voith and Dr. Angelides are attached as Appendix A and B.

## **2.0 Scope of Work**

On March 26, 2018, the Food and Drug Administration ("FDA") issued an Advance Notice of Proposed Rulemaking ("ANPRM") regarding the regulatory status of Premium Cigars. In the ANPRM, FDA requested "comments, evidence, information, data, and analysis that were not submitted in response to the proposed deeming rule, or that may have become available since then, that could further inform FDA's thinking about the regulation of premium cigars." (83 Fed. Reg. at 12,902).

Data on the purchasing and use patterns of premium cigars has, up until now, been very limited. The dearth of information is in part a result of the fact that premium cigars are not defined as a class by the federal government, and are not routinely included in survey data or more general consumption data. Moreover, premium cigars are not sold in traditional mass-market channels. This stands in contrast to other types of cigars and cigarettes, where data is available from usage surveys and from scanner data as these products are sold in retail channels that are easily traceable. In order to examine purchasing patterns, therefore, it is necessary to conduct surveys of premium cigar consumers or to collect data from individual premium cigar retailers. To date, this has not been done using a verifiable analytical methodology. This analysis has taken data from five of the largest internet/mail-order retailers of premium cigars in order to analyze purchasing patterns of premium cigar consumers, and provides a new,

much more comprehensive window on the purchasing, and by implication, use patterns of premium cigars.

### **3.0 Executive Summary**

Using a definition of “premium” cigar developed by a researcher at FDA’s Center for Tobacco Products (CTP), this report analyzes sales data for approximately 125 million premium cigars in 2017. The data provided by the companies allows for analysis of premium cigar purchasing patterns that has never before been undertaken.

The data from these companies provide important demographic information about premium cigar purchasers. For example, it shows the average premium cigar purchaser is 55 years old, with a median age of 57, and that 89% of these consumers are over age 35. Further, premium cigar purchasers reside in communities with higher levels of education and higher incomes than the rest of the US population, and reside predominantly in urban environments. In addition, the data show no youth purchases, because all of these companies use third party age-verification to ensure that all consumers are of at least legal minimum age of purchase.

The data also shed light on the distinct purchasing patterns of premium cigar consumers. For the most part, these consumers purchase infrequently, and approximately 44% of the purchasers in this dataset made only a single purchase, and only 17% of premium cigar consumers average more than 2 purchases per year. In addition, premium cigar consumers do not display great brand loyalty, preferring instead to purchase a variety of brands. This differs from what is typically assumed of consumers of tobacco products. Additionally, and unlike purchases of other tobacco products, premium cigar purchases are not spread evenly throughout the year; rather they peak before the December holidays, around Father’s Day, and in the summer.

Regarding how premium cigars are sold, the data shows that in 2017, these retailers on average had approximately 10,000 individual Stock Keeping Units (“SKUs”), reflecting the great diversity of products in the premium cigar market. Reflecting the desire for variety among premium cigar consumers, nearly a quarter of orders for premium cigars contain “sample packs,” meaning different combinations of cigars, generally created by the retailers themselves. These sample packs are sold so that premium cigar consumers can (as the name implies) sample a variety of different cigars. Further, premium cigars are most often sold in package quantities of five, 10, 20 and 25.

Overall, the purchasing and sale patterns of premium cigars show that consumers (i) are older; (ii) seek variety in their products; and (iii) purchase only occasionally, in limited quantities, and in seasonal patterns.

### **4.0 Data Sources and Methodology**

#### **Approach**

The main purpose of this report is to analyze the purchasing patterns of premium cigar consumers and demographic information relating to the communities where premium cigar consumers live. This type of

analysis requires a data set that is broad and deep enough to generate reliable results. We have combined data from multiple online retailers to create a consistent, merged master data set. The data are linked to Census data to bring in information on demographics and the geographic pattern of purchasers.

## **Cigar Retailers**

We collected transaction level data from five major online retailers: Best Cigar Prices, Cigars International, Famous Smoke Shop, JR Cigar, and Thompson Cigar. Four of the retailers provided data for 2014-2016, inclusive, and all five provided data for 2017. In addition, two retailers provided partial year data for 2018.

## **SKUs**

Each retailer provided detailed information on sales. They reported each transaction, broken down by SKU. A record consists of a SKU, the quantity ordered, the customer number, the order number, the date of the order, date of birth, and geographic information about the customer. An order that consists of three SKUs would have three rows, each with the same order number and customer number. A customer who ordered twice in one year would have two order numbers, but one customer number. Each retailer also provided information on the SKU, including brand, brand family, and other identifying information on the product.

Some retailers identified SKUs as premium brands. Some identified which cigars were “hand rolled,” which were also identified as “premium” brands.

Each retailer uses a different system for identifying SKUs, so it is not possible to match a specific SKU from one retailer to a SKU from another retailer. Said another way, a specific package of cigars from one retailer that is exactly the same as a package from another retailer will not have the same SKU and cannot be matched from one retailer to another. Brands, on the other hand, are consistent from one retailer to another, except for house or retailer-specific brands.

We note that using manufacturer’s Universal Product Codes (UPC), or barcodes, to match cigars across retailers is not feasible because of two retailer practices. First, it is common for retailers to create new package combinations, for example by packaging smaller quantities, such as one to five cigars that are otherwise identical, or the creation of “sampler” packs that combine different types of cigars, either all from the same brand or from different brands, into a new package. None of these configurations has a manufacturer’s UPC code. Second, retailers have “house” brands of cigars that only they sell. These house brands also generally do not have UPC codes.

## **Customers**

Each retailer has a unique customer identification system, which allows us to analyze multiple transactions by a single customer. The identifiers are not common across retailers. It is therefore not possible to perfectly identify customers across retailers, so a customer who purchases from two retailers would be counted as two separate customers in this dataset.

To estimate the potential overlap in customers, we used a combination of location and age. The retailers provided zip codes, in most cases nine-digit zip codes, and date of birth (DOB) for most customers.<sup>1</sup> Using customers' nine-digit zip code and date of birth, we measured how many customers with identical dates of birth shared a nine-digit zip code. Because there are relatively few people in a given nine-digit zip code compared to the number of potential birthdays, this combination is likely to be unique, or close to unique, within a nine-digit zip code. Therefore, any overlap in a nine-digit zip code/DOB combination between retailers is likely to indicate the same customer. In our analysis, approximately 4% of nine-digit zip code/DOB combinations appear in more than one retailer's sales information. This percentage indicates that there is relatively little overlap between customers in the data.

## Basic Data Facts

The retailers sell premium and non-premium cigars. In total, the data contain information on more than 12 million orders from more than 2.3 million customers. Importantly, the data illustrate the breadth and depth of the cigar industry, containing over 74,000 SKUs, and an average of approximately 15,000 unique SKUs per retailer. In 2017, over 4 million orders were made by 1.2 million unique customers.

**Table 1 - Dataset Summary Statistics, All Years and 2017**

Item	Quantity (all years)	Quantity 2017
Total Orders	12,753,862	4,062,002
Total Unique Customers	2,312,552	1,223,926
Total number of SKUs	74,339	54,554
Average Unique SKUs per retailer	14,868	10,911

## 5.0 Premium Cigars

### 5.1 Definition of "Premium" Cigar

There are many types of cigars on the market, including both premium and non-premium. Our analysis focuses on premium cigars, which means we need to identify which cigars in the data are premium. As noted above, while there is no federal definition of "premium" cigars, CTP researcher Catherine Corey, in her analysis of data relating to cigar use as reported in Wave 1 of the Population Assessment and Tobacco and Health ("PATH") study, provided guidance on classifying premium cigars that can be adopted and

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<sup>1</sup> Because nine-digit zip codes are not required by the postal service, some addresses did not include full zip codes. We used the address verification service from SmartyStreets to standardize addresses to USPS specifications, including full nine-digit zip codes.

adapted to the analysis here.<sup>2</sup> Corey developed criteria for determining what constitutes a “premium” cigar and then applied it to brands included in her analysis. The criteria used is as follows:

“In general, premium cigars, also referred to as “stogies”, consist of more expensive tobacco varieties and components, such as whole tobacco leaf wrapper and binder, and may be assembled by hand.”<sup>3</sup>

and

“...information about the brand’s tobacco blends, components (e.g., long filler, whole leaf wrapper), and manufacturing process (e.g., handmade), obtained through online searches (conducted fall/winter 2015), was used to distinguish premium cigar brands from non-premium brands.”<sup>4</sup>

In our analysis, brands that Corey identified as premium were treated as premium, and brands she considered non-premium were treated as non-premium.<sup>5</sup> Corey’s designation of premium versus non-premium cigars nearly perfectly matches industry designations in the data from the retailers who provided such information.

For brands sold by the retailers that Corey did not identify, we followed her approach, as described in the quotes above. For example, we designated hand-rolled cigars as premium. We also conducted internet research on brand descriptions to help determine which were premium.

In total, the brands analyzed by Corey accounted for 30,667 of the SKUs sold by the retailers, leaving 43,672 SKUs to be categorized as premium or non-premium. Of the 30,667 SKUs accounted for in Corey’s research, 28,883 SKUs were from brands categorized as premium by Corey, which translates to 149 million cigars. We deemed an additional 41,022 SKUs, out of the 43,672 not addressed by Corey, as premium using the Corey definition and, where necessary, additional research. The brands Corey categorized as non-premium encompassed 1,784 SKUs in our dataset, and we identified an additional

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<sup>2</sup> “The Population Assessment of Tobacco and Health (PATH) Study is a national longitudinal study of tobacco use and how it affects the health of people in the United States. People from all over the country take part in this study.” <https://pathstudyinfo.nih.gov/UI/HomeMobile.aspx>. The PATH study has over 40,000 participants in the youth and adult cohorts.

<sup>3</sup> Corey C, et al., *U.S. adult cigar smoking patterns, purchasing behaviors, and reasons for use according to cigar type: findings from the Population Assessment of Tobacco and health (PATH) Study, 2013-2014*; Nicotine and Tob. Res. ntx209 (2017).

<sup>4</sup> Corey C, et al., *U.S. adult cigar smoking patterns, purchasing behaviors, and reasons for use according to cigar type: findings from the Population Assessment of Tobacco and health (PATH) Study, 2013-2014*; Nicotine and Tob. Res. ntx209 (2017) Supplemental Table A.

<sup>5</sup> Two brands, Marsh Wheeling and Optimo, were treated as non-premium even though Corey designated them as premium because their characteristics, including being machine-made, are more similar to non-premium cigars.



2,650 SKUs as non-premium which Corey did not comment on. While the vast majority of SKUs sold by the retailers are premium, nearly half of the cigars sold are non-premium.<sup>6</sup>

**Table 2 – Share of Cigar Market Defined by Corey, All Years**

	Number of SKUs	Number of Cigars
<b>Premium</b>		
Identified by Corey	28,883	149,195,309
Not identified by Corey	41,022	239,780,128
Total Premium	69,905	388,975,437
<b>Non-Premium</b>		
Identified by Corey	1,784	172,909,021
Not identified by Corey	2,650	178,954,944
Total Non-Premium	4,434	351,863,965
<b>Total</b>		
Identified by Corey	30,667	322,104,330
Not identified by Corey	43,672	418,735,072
<b>Total</b>	<b>74,339</b>	<b>740,839,402</b>

Once the non-premium SKUs were identified, we excluded non-premium cigar purchases from the analysis. If a transaction contained premium and non-premium SKUs, the non-premium SKUs were dropped, leaving only the premium portion of the order. As such, customers who purchased non-premium cigars exclusively are not analyzed. After accounting for non-premium cigars, our dataset has 11.2 million premium cigar orders, including 3.6 million in 2017. The dataset includes 2.1 million customers, over half of whom made a purchase in 2017. In total, 389 million cigar purchases are represented and almost 70,000 SKUs. Premium cigar purchases for all data received from 2014-2018 totaled \$1.1 billion, including \$376.6 million in 2017.

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<sup>6</sup> Corey et al. classified the brands available in the PATH study, which is a survey, and by definition the brands included would represent only a subsection of premium cigars. The brand data from the five companies includes all brands sold, which is the entire market of brands sold, but with no reference to consumer use of these brands.

**Table 3 – Summary Statistics of Premium Cigar Transactions, All Years and 2017**

<b>Premium Cigars</b>	<b>All Years</b>	<b>2017</b>
Total Premium Cigar Orders	11,196,240	3,619,014
Total Unique Premium Cigar Customers <sup>7</sup>	2,129,018	1,123,994
Total Premium Cigars Sold	388,975,437	125,314,590
Total Number of Premium Cigar SKUs	69,905	51,123
Average Premium SKUs per Retailer	13,981	10,225
Total Premium Cigar Revenue	\$1,142,980,082	\$376,556,960

## **5.2 Share of the Premium Market**

As noted, there is no regulatory or other federal government definition of a “premium” cigar and, therefore, no precise way to determine the true size of the premium cigar market. There is, however, a way to approximate the size, by volume, of the premium cigar category. Premium cigars are nearly all imported. Premium cigars are taxed according to weight, and the harmonized tariff codes are assigned to cigars by price. Therefore, analyzing tax and tariff data can approximate the volume of premium cigars sold in the United States. According to this data, as compiled by the Alcohol Tobacco Tax and Trade Bureau, in 2017, there were 351,011,000 cigars imported into the United States that fall into the two highest Harmonized Tariff Categories (HTS) for large cigars.<sup>8</sup> This number is approximate both due to the imprecise nature of using the HTS classifications for premium cigars, and because this number represents premium cigars imported into the US in 2017, not necessarily premium cigars sold in 2017. The data provided by the five online retailers indicated that they sold 125,314,590 premium cigars in 2017.

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<sup>7</sup> This number includes customers who purchases both premium cigars and non-premium cigars in the same order, and only excludes those customers who **only** purchased non-premium cigars.

<sup>8</sup> Department of the Treasury, Alcohol and Tobacco Tax and Trade Bureau, Statistical Report Tobacco, TTB-S-5210-12-2017, Mar. 5, 2018. This number is most likely artificially inflated as a reference point for premium cigars, however, as the HTS classification is based on price at import and does not discriminate based on cigar characteristics. The 351,011,000 number includes cigars included in the highest two tariff classes, but would likely not be considered premium cigars. It follows that this number can be considered only an approximation of the premium cigar market, and the actual volume of the market is lower than this number.

## 6.0 Customer Age

Retailers record the birthdate of purchasers, allowing us to calculate the purchaser's age at the date of sale.<sup>9</sup> The data indicate that premium cigar customers of the online retailers are older than the general population. The average age of a cigar customer is 55.3 years and the median age is 57 years. A full 88% were over 35 years old, with almost 55% being over 55 years at the time of purchase, and over 34% being between 35 and 54 years old; approximately 11% were under 34. This distribution skews considerably older than the country as a whole.

**Table 4 – Age of Online Premium Cigar Purchasers, 2017<sup>10</sup>**

Age Cohort	Customers	Percent	US Population	Percent
18-20	3,928	0.4%	12,774,579	5%
21-24	16,120	1.8%	17,841,890	7%
25-34	84,127	9.4%	45,342,672	18%
35-54	305,443	34.3%	83,250,322	33%
>55	480,814	54.0%	92,854,337	37%
<b>Total</b>	<b>890,432</b>	<b>100.0%</b>	<b>252,063,800</b>	<b>100%</b>
Average Age	55.3			
Median Age	57.0		38.0	

A subset of the premium cigar market includes flavored premium cigars. We analyzed the average purchaser age of flavored premium cigars and found that the average age was 52 years old and the median is 53.<sup>11</sup>

## 7.0 Purchasing Patterns

The dataset of premium cigar transactions allowed for a rich analysis of purchasing patterns. These trends include overall market trends, such as seasonal purchasing patterns and the geographic dispersion of customers, as well as how often customers order and what they order when they purchase premium cigars.

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<sup>9</sup> Retailer data provided date of birth for 83% of the orders, and the age analysis performed here is based on these numbers. We understand that the retailers all now use independent third-party age verification software, ensuring there are no underage sales even if a date of birth is not currently recorded for the customer.

<sup>10</sup> While there were 883,779 premium cigar purchasers in 2017 with age information, there were slightly more, 890,432, ages recorded. This is because a single customer could make multiple purchases in a calendar year before and after their birthdate, resulting in two age entries for that individual.

<sup>11</sup> We undertook a limited study of flavored premium cigars in order to compare the average age of flavored premium cigar purchasers to the whole universe of premium cigar purchasers. In order to identify the flavored premium cigars we started with the brands analyzed in the PATH study and did additional keyword searches in the product name for flavors including “Java”, “Vanilla”, and “Rum.”

## 7.1 Basic Results

Our dataset captured 11.2 million orders by 2.1 million unique customers, who purchased 389 million cigars. The average price per premium cigar was \$2.94, and the average number of premium cigars sold per order was 34.7.

**Table 5 – Basic Premium Cigar Purchasing Results**

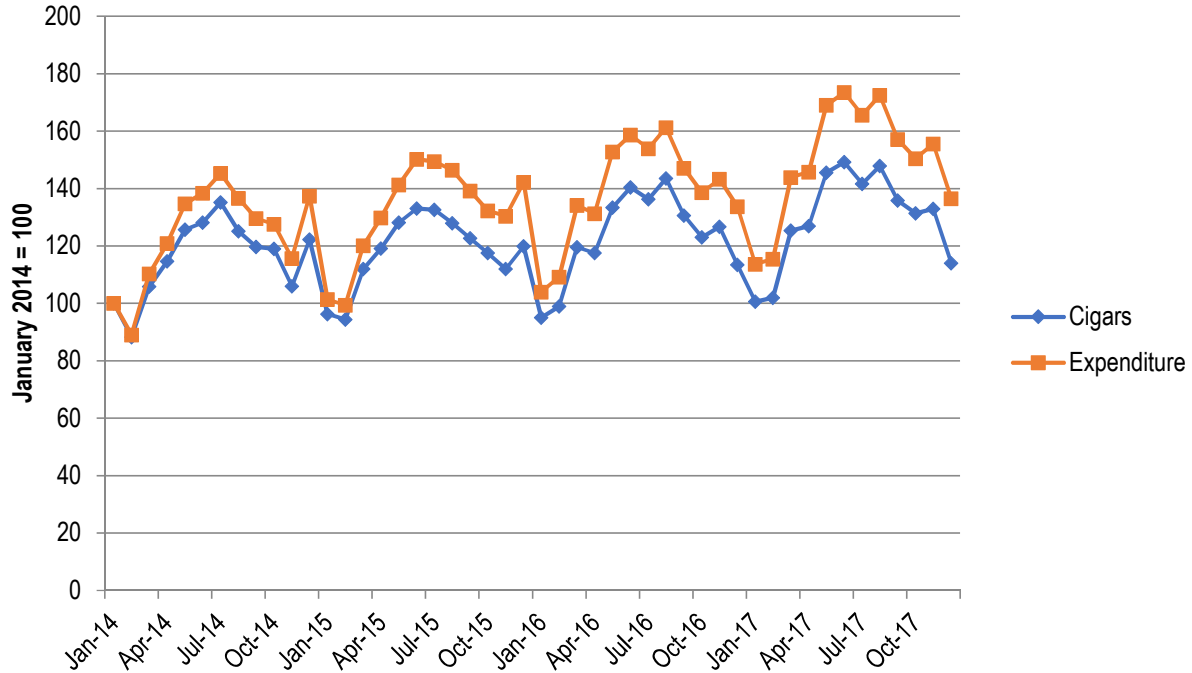
<b>Premium Cigars</b>	<b>All Years</b>	<b>2017</b>
Unique Customers	2,129,018	1,123,994
Orders	11,196,240	3,619,014
Total valid rows (Order-SKU)	18,172,016	6,146,470
Unique SKUs Sold	69,905	51,123
Number of Cigars Sold	388,975,437	125,314,590
Average Number of Cigars per Order	34.7	34.6
	18,172,016	
Avg Price per Cigar	\$2.94	\$3.00
Avg Amount Spend per Order-SKU Purchase	\$62.90	\$61.26

## 7.2 Market Purchasing Patterns

### Seasonality

Cigar purchases exhibit significant seasonality. Cigar purchases are lowest in January and February, increase through the spring as Father's Day approaches, and peak in the summer before declining throughout the fall. The only exception to this pattern is a sales surge in November/December in advance of the holiday season. In the peak month, the number of cigars purchased is between 41% and 53% greater than in the month of lowest purchases.

**Figure 1 - Cigar Units and Expenditures by Month, 2014-2017**



**Table 6 – Seasonality of the Number of Cigars Purchased**

Year	Peak month	Lowest Month	Ratio
2014	135.15	88.25	1.53
2015	132.99	94.42	1.41
2016	143.47	95.02	1.51
2017	149.17	100.60	1.48

### 7.3 Frequency

The data cover four full years (2014-2017) of sales for four of the retailers. We examined repeat purchasing patterns over these four years by summing how many times each customer placed an order in that period. A customer who ordered eight times would have eight order numbers in the data assigned to a single customer number. We also measured the number of cigars that each customer purchased. For this analysis we considered only customers who placed orders 240 or fewer times over the four year

period, or approximately once per week.<sup>12</sup> More frequent purchasers were viewed as more likely to be retail stores or other reseller restocking as opposed to end purchasers buying cigars.

For the four retailers over the four years, there were 1,469,334 unique customers and 304,119,528 cigars purchased. Approximately 44% (648,824 out of 1,469,334) customers purchased only once, and accounted for 5% of the cigars ordered. A significant majority of customers, 86 %, ordered 10 or fewer times, but account for only 29% of cigars. In contrast, the 14 % of customers who ordered at least 11 times account for 71% of cigars purchased.

**Table 7 – Frequency of Premium Cigar Purchases, All Years**

Number of Orders (2014-2017)	Number of Customers	% of Total Customers	Total Cigars Purchased	% of Total Cigars Purchased
1	648,824	44%	14,774,926	5%
2	216,525	15%	11,321,694	4%
3	119,620	8%	9,931,874	3%
4	79,295	5%	9,180,555	3%
5	56,932	4%	8,456,268	3%
6	43,265	3%	7,908,170	3%
7	34,254	2%	7,480,944	2%
8	27,676	2%	6,979,435	2%
9	22,844	2%	6,662,368	2%
10	19,304	1%	6,466,243	2%
Sub-Total – 10 or fewer orders	1,268,539	86%	89,162,477	29%
Tri-Monthly (11-20)	101,427	7%	52,468,590	17%
Bi-Monthly (21-36)	56,717	4%	61,263,292	20%
Monthly (37-60)	28,253	2%	54,970,487	18%
Bi-Weekly (61-120)	13,128	1%	39,736,035	13%
Weekly (121-240)	1,270	0%	6,518,647	2%
Sub-Total – 11-240 orders	200,795	14%	214,957,051	71%
<b>Total 1-240 orders</b>	<b>1,469,334</b>	<b>100%</b>	<b>304,119,528</b>	<b>100%</b>

We also analyzed the average order size based on frequency. In general, the more frequently a customer orders cigars, the more cigars, *per order*, the customer purchases. For example, customers who ordered only once in the data purchased 23 cigars on average. Customers who ordered ten times in the data ordered 33 cigars per order on average. The maximum average order size is for customers who purchase

<sup>12</sup> Customers who ordered more than 240 times over the period represent less than 1% of the customers and purchased 1.14% of the total cigars sold.

monthly, and customers who ordered bi-weekly or more frequently ordered fewer cigars, per order, than the monthly purchasers.

**Table 8 – Average Number of Premium Cigars Ordered and Order Amount by Order Frequency, All Years**

<b>Number of Orders (2014-2017)</b>	<b>Average Cigars per Order</b>	<b>Average Spending per Order</b>
1	23	\$75.42
2	26	\$85.27
3	28	\$89.47
4	29	\$92.62
5	30	\$94.16
6	30	\$96.22
7	31	\$97.44
8	32	\$99.15
9	32	\$100.00
10	33	\$101.17
Tri-Monthly (11-20)	35	\$105.08
Bi-Monthly (21-36)	40	\$111.43
Monthly (37-60)	42	\$116.39
Bi-Weekly (61-120)	39	\$108.95
Weekly (121-240)	34	\$98.63

### **Most Frequent Purchasers**

Approximately 1.1% of cigars were purchased by customers who placed more than 240 orders over four years. Forty-one customers placed a total of 12,144 orders in the period, or an average of 74 orders per customer per year.<sup>13</sup> The average number of cigars per order is 31.9 and the average amount spent per order is \$94.85. The average age of these purchasers is 60.9, and the median age is 60.0.

---

<sup>13</sup> Five customer IDs were dropped from this analysis. Two IDs, “NA” and “00000” appear to include incomplete data entries and do not reflect actual customers. The remaining three IDs place orders with dramatically higher frequency and are removed as outliers. These IDs placed over 3,000 orders over the four years. These five IDs account for 1.02% of the total cigar purchases captured in this dataset.

## 7.4 Product Quantity

We have analyzed the product quantity of the cigars purchased. There are three main methods by which these retailers sell premium cigars: as single cigars, as sample packs, and as boxes.<sup>14</sup>

### Samplers

A sampler is a single SKU that contains more than one type of cigar, and in their product descriptions the retailers identified those SKUs that are samplers. Approximately 25% of orders include at least one sampler SKU. Samplers are a smaller portion of the overall sales, as approximately 13% of premium cigars sold are in samplers, and the other 87% are non-sampler cigars.

**Table 9 – Sampler and All Other Orders, All Years and 2017**

Type	All Years		2017	
	Number	Percent	Number	Percent
Orders Including Samplers	2,775,109	25%	816,016	23%
Orders Not Including Samplers	8,421,131	75%	2,802,998	77%
<b>Total</b>	<b>11,196,240</b>	<b>100%</b>	<b>3,619,014</b>	<b>100%</b>

**Table 10 – Premium Cigars Sold in Samplers, All Years and 2017**

Type	All Years		2017	
	Number	Percent	Number	Percent
Cigars Sold In Samplers	50,424,486	13%	16,043,731	13%
Cigars Not Sold In Samplers	338,550,951	87%	109,270,859	87%
<b>Total</b>	<b>388,975,437</b>	<b>100%</b>	<b>125,314,590</b>	<b>100%</b>

### Single Cigars or Boxes

We analyzed the sales with respect to product quantity. Cigars are often thought of as coming in “boxes” of 20 or 25, though box sizes vary widely. For our purposes, a single cigar is a SKU with a single cigar, and multi-pack is a SKU with a quantity of 2 - 4 cigars, and a box is a SKU of 5 or more cigars.

Most orders are focused on boxes as opposed to individual cigars or multi-packs. More than 90% of orders consist only of boxes, as we have defined them. Relatively few orders contain single cigars or multi-packs.<sup>15</sup>

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<sup>14</sup> In this report “box” will refer to any product quantity above 5 cigars. A “multipack” refers to packages of 2-4 cigars.



**Table 11 – Orders by Mix of Individual Cigars and Boxes, All Years**

	# Orders	% Orders of Total	# Cigars	% Cigars of Total
Single Cigar Only	130,275	1.2%	766,671	0.2%
Multit-Packs and Single Cigar Only	82,545	0.7%	519,107	0.1%
One Box Only, No Single or Multi	7,416,110	66.2%	211,836,839	54.5%
Multiple Boxes, No Single or Multi	3,193,946	28.5%	157,932,618	40.6%
Mix of 1+ Boxes and 1+ Single or Multi	373,364	3.3%	17,920,202	4.6%
<b>Total</b>	<b>11,196,240</b>	<b>100%</b>	<b>388,975,437</b>	<b>100%</b>

**Table 12 – Order Characteristics by Box Size, All Years**

Box Size	Number of Boxes Ordered	Total Number of Cigars	Number of Sampler Cigars	Sampler Cigars as % of Box Size	Total Spent	Avg Price per Box	Avg Price per Cigar
5	6,372,667	31,863,335	5,286,950	16.6%	\$141,537,070	\$22.21	\$4.44
6-9	783,321	5,673,414	2,904,611	51.2%	\$23,700,473	\$30.26	\$4.18
10	2,482,261	24,822,610	6,651,520	26.8%	\$108,548,916	\$43.73	\$4.37
11-19	1,491,336	21,339,045	8,395,120	39.3%	\$75,593,806	\$50.69	\$3.54
20	5,950,477	119,009,540	8,975,660	7.5%	\$321,021,901	\$53.95	\$2.70
21-24	601,098	14,135,911	1,529,362	10.8%	\$75,255,014	\$125.20	\$5.32
25	2,301,634	57,540,850	668,725	1.2%	\$201,609,329	\$87.59	\$3.50

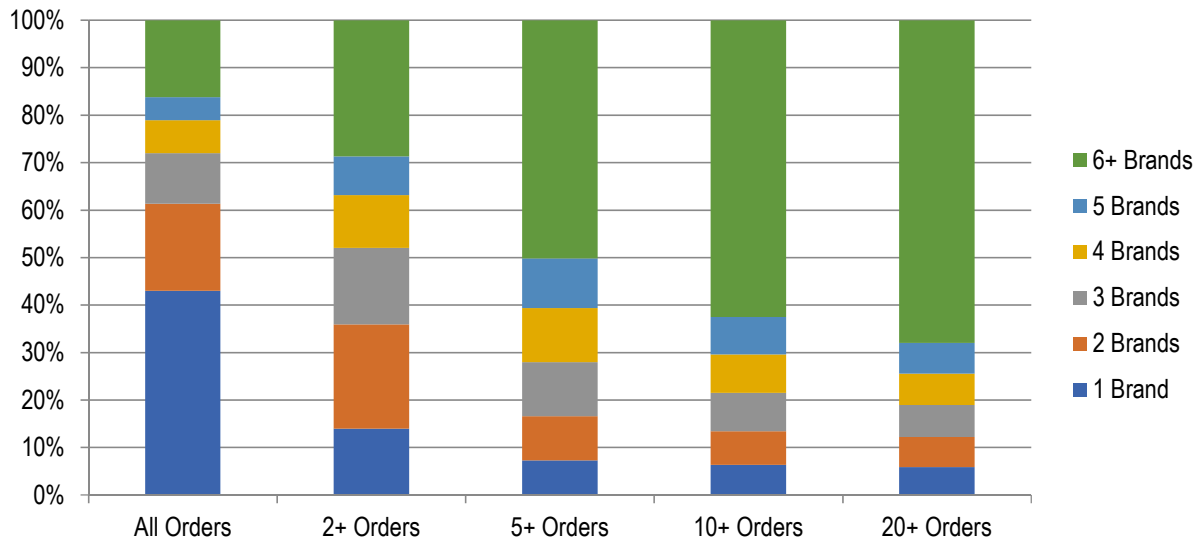
## 7.5 Brand Variety

We investigated the variety of brands purchased by customers by summing the total number of brands an individual customer purchased. For all customers, more than 60% purchase one or two brands. However, this statistic disguises the behavior of more frequent cigar purchasers. For customers who order at least twice, approximately 36% order one or two brands. For customers who order at least 10 times, only 13% order one or two brands. As indicated in Figure 2, the more frequently a customer purchases, the more brands the customer purchases in total. Put another way, frequent customers purchase a variety of cigars, more so than less frequent customers.

<sup>15</sup> The most popular product quantity configurations, based on number boxes ordered, are (i) a five cigar “box,” (ii) a twenty cigar box, (iii) a 10 cigar “box,” and (iv) a twenty-five cigar “box.” We understand that many of the five and ten cigar configurations contained in the data are actually “packs” of five or ten that generally have been created by the retailers from the original boxes of 20 or 25. For ease of analysis we have included these “packs” in the “box” category.

The majority of the time, sampler packs are created by the retailer and listed in our dataset under a single SKU. As such, they are considered one “brand” in this chart, even though the SKU contains multiple brands of premium cigars.

**Figure 2 – Number of Brands Ordered by Order Frequency**



## 8.0 Geocoding and Geographic Information

### 8.1 Geographic Data from Retailers

The retailers provided geographic information on the shipping address for each order. The type of information provided varied by retailer. Some retailers provided a mailing address, while others disclosed the nine-digit zip code associated with the order.

Where address data was available, the addresses were geocoded to give the precise longitude and latitude (XY coordinates) of the location. In order to geocode the data, we tested a sample set of addresses using two geocoding services, and observed the accuracy scores of each.

There are many providers that offer geocoding services. To find the best service for our analysis, we selected two providers, Geocodio and Texas A&M GeoServices (an affiliate of Texas A&M University Department of Geography), to geocode sample datasets. When the sample data set was analyzed, Geocodio located 93% of the addresses with an accuracy score above 90%, whereas Texas A&M GeoServices matched 86% of addresses with an accuracy score above 90%. On the basis of this analysis, we used Geocodio to geocode all the addresses in our dataset, of which 90% were geolocated with an accuracy score above 90%.

In instances where nine-digit zip code data was provided, we matched zip codes to geographic coordinates using a database purchased from GreatData.com.<sup>16</sup> With this database, we were able to assign coordinates to the provided nine-digit zip codes.

The full data set of all premium cigar purchases includes 2,234,584 customer addresses and nine-digit zip codes, which includes instances where multiple addresses and/or nine-digit zip codes are associated with a single customer ID. Of these, 85% are valid addresses or nine-digit zip codes, and 95% of the valid addresses or nine-digit zip codes were successfully geocoded to a Census Tract.

**Table 13 –Premium Cigar Customers Successfully Matched to Census Tracts**

Total Addresses or 9-Digit Zip Codes Associated with Premium Purchases	2,234,584
Valid Addresses or 9-Digit Zip Codes	1,899,527
Valid Addresses or 9-Digit Zip Codes as Percent of Total	85%
Addresses or 9-Digit Zip Codes Geocoded to a Census Tract	1,796,341
Percent of Valid Addresses or 9-Digit Zip Codes Geocoded	95%

## Linking to Community Data

We used the geographic data provided by the retailers to understand the geographic distribution of cigar purchasers and to identify the community characteristics of the Census Tract of the purchaser. This geographic information provides insight into the distribution of cigar purchasers throughout the country, including the weighting of purchasers by state and in rural or urban areas. Further, by geocoding the addresses, we were able to identify the Census Tract of the purchaser. With the Census Tract, we were able to link a purchaser to community data, such as median household income and education.

With the geographic coordinates of consumers, we were able to identify the Census Tract of the location, providing demographic information from the US Census about the socioeconomic status of their community.

## 8.2 Geography

Cigar purchases are correlated with geography as well. More urbanized states have more cigar purchasers, relative to population, than more rural states. Figure 3 plots penetration of cigar purchasers against the urban population. Each dot is a state. States in which most of the population lives in urban

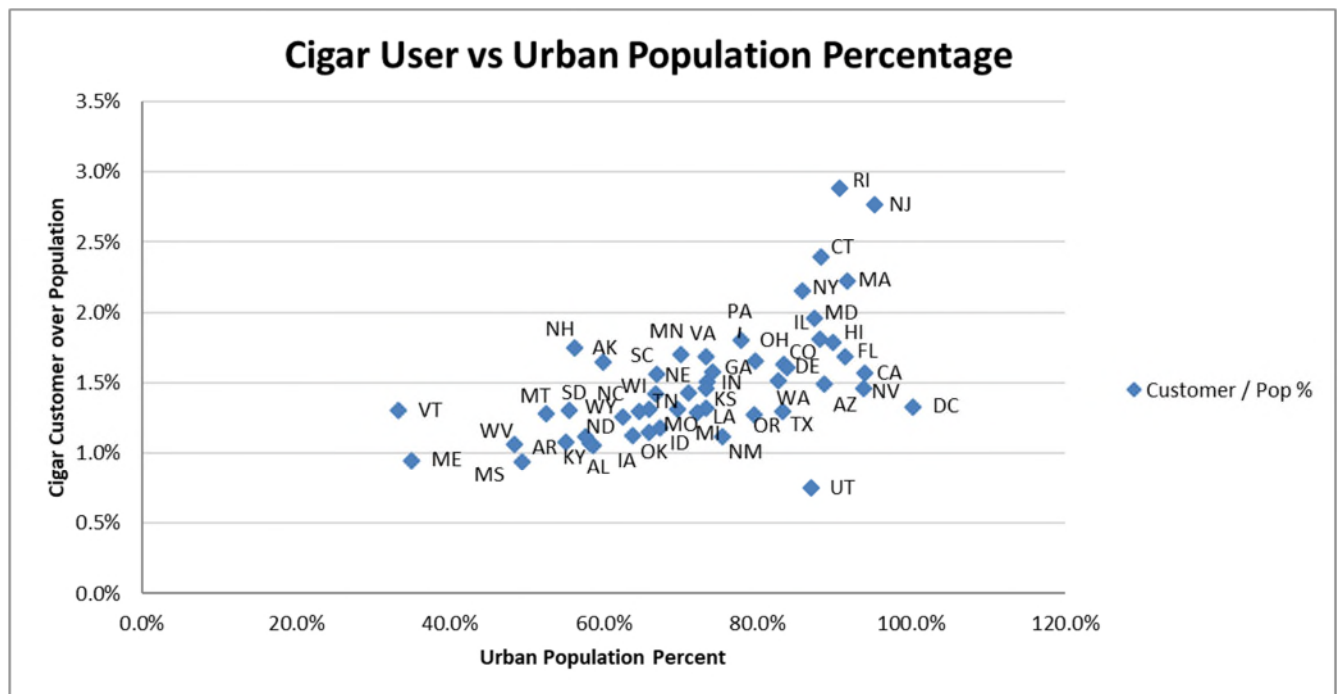
<sup>16</sup> GreatData.com uses the latest United States Postal Service database to match nine-digit zip codes to their latitude and longitude coordinates. A nine-digit zip code usually refers to a segment of one side of a street and can contain multiple addresses, but it can also be assigned to a single building or cluster of buildings. As such, they cannot be used to find an exact location, but they do provide a good approximation of an address's location.

<https://greatdata.com/product/51/zip4-geo>

areas, as defined by the Census, are on the right side of the figure, and more rural states are on the left side of the figure. States with many cigar purchasers relative to population are on the top of the figure, and states with few purchasers relative to population are lower on the figure. For example, Washington DC is 100% urban, so it is on the far right side of the figure.<sup>17</sup>

The dots in the figure generally slope up, which means that the more urban states, in general, have higher percentages of cigar purchasers than states that are less urban. The one obvious outlier is Utah, which is nearly 90% urban but has relatively few cigar purchasers. The skew towards urban sales is somewhat unexpected, given the fact that urban customers have access to competing bricks and mortar cigar retailers. However, as is seen in the next section, premium cigar purchasers tend to live in higher income communities, which also skew urban.

**Figure 3 – Percent of Population Purchasing Premium Cigars by State’s Urban Population**



<sup>17</sup> The customer list includes all customers. There may be some overlap, as an individual who orders from multiple retailers will be included in the calculation twice. Because this overlap can occur in any state, and is relatively minor to begin with, the overall pattern will be the same had it been possible to de-duplicate the customer list. As discussed above in Section 4, there is only an approximate 4% overlap of customers between the retailers.

### 8.3 Demographics

Retailers do not collect personal data about customers, preventing us from commenting directly on characteristics of purchasers beyond age and geographic location. By identifying the Census Tract in which a consumer resides, however, we can analyze the community they live in. By design, Census Tracts contain a small number of people, with an optimum population of 4,000.<sup>18</sup> As such, Census Tracts serve as a useful measure of the characteristics of premium cigar purchasers. In this section we look at the median income and education attainment in the Census Tracts of premium cigar purchasers.

### 8.4 Income

Overall, the Census Tracts of premium cigar purchasers have higher incomes than the general population. The median household income in the Census Tracts of premium cigar purchasers is \$65,573. By comparison, nationally, median household income is \$57,617. Over 15% of customers live in tracts with median household income above \$100,000, whereas 10% of households nationally are in that bracket.

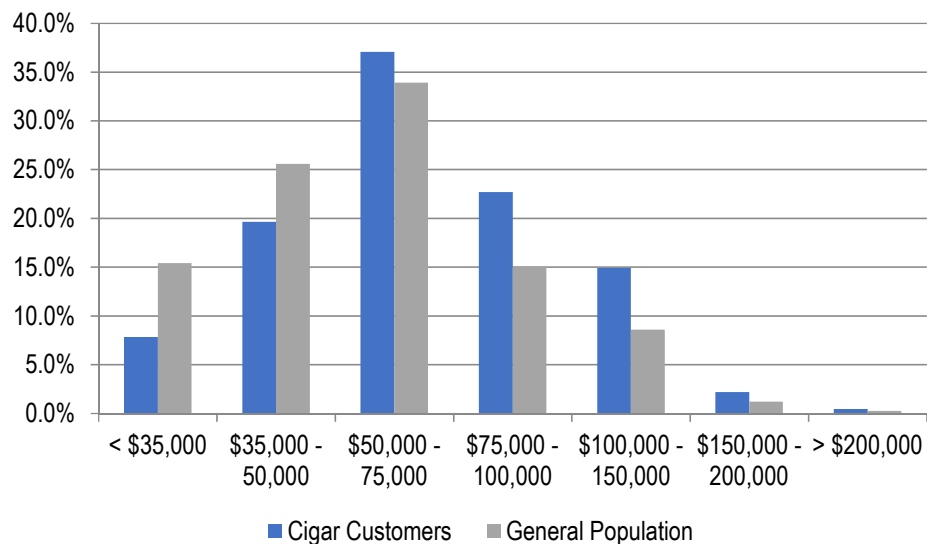
**Table 14 – Median Household Income of the Census Tract of Premium Cigar Purchasers**

Income Category	# Customers	Percentage	Total Population in these CT	% of US Pop Census Tracts
< 35,000	140,443	7.8%	38,154,387	15.4%
35,000 - 50,000	352,466	19.6%	63,370,525	25.6%
50,000 - 75,000	665,660	37.1%	83,951,957	33.9%
75,000 - 100,000	407,767	22.7%	37,317,707	15.1%
100,000 - 150,000	267,903	14.9%	21,300,987	8.6%
150,000 - 200,000	39,382	2.2%	2,993,843	1.2%
> 200,000	7,832	0.4%	618,297	0.2%
Median HH Income	\$65,573			
Mean HH Income	\$71,633			
US Median HH Income	\$57,617			

*Source: US Census Bureau, American Community Survey 2016 5-year Estimates*

<sup>18</sup> US Census Bureau, 2010 Geographic Terms and Concepts, [https://www.census.gov/geo/reference/gtc/gtc\\_ct.html](https://www.census.gov/geo/reference/gtc/gtc_ct.html)

**Figure 4 –Distribution of Median Income of the Census Tracts of Premium Cigar Purchasers and the US Population**

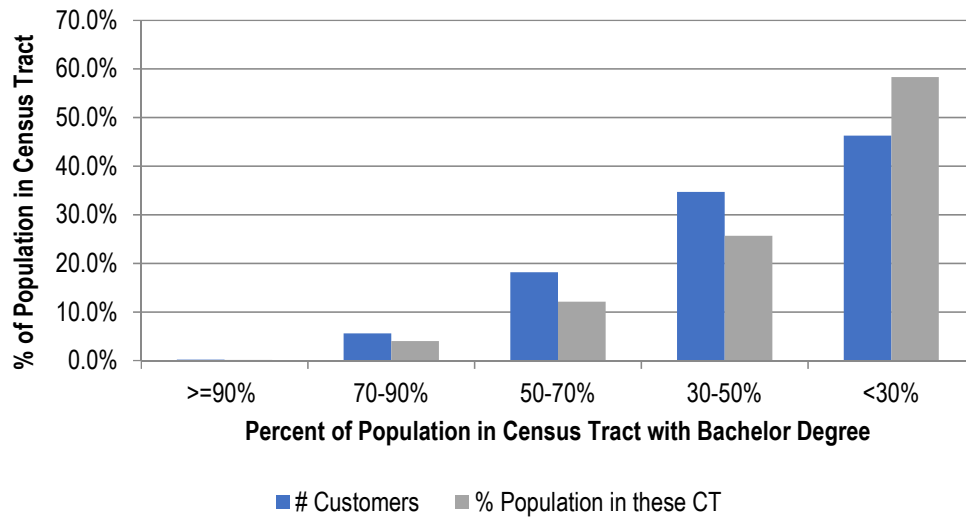


*Source: US Census Bureau, American Community Survey 2016 5-year Estimates*

## 8.5 Education

Premium cigar purchasers live in more educated Census Tracts than the general population. Nearly 60% of the general population lives in Census Tracts where less than 30% of the population has a bachelor degree. In contrast, approximately 45% of premium cigar purchasers live in similar tracts. Over 20% of premium cigar purchasers live in tracts where over 50% of the population has a bachelor degree, compared to approximately 15% of the general population.

**Figure 5 - Percent of Population 25 and Above with a Bachelor Degree, Census Tracts of Premium Cigar Purchasers and the US Population**



*Source: US Census Bureau, American Community Survey 2016 5-year Estimates*

## 9.0 Conclusion

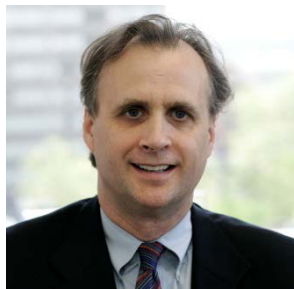
The data from these five retailers show consistent trends and data about both premium cigar purchasers themselves, and their purchasing patterns.

- First, premium cigar purchasers are an older population, with an average age of 55 and a median age of 57.
- Second, premium cigar purchasers reside in areas with higher levels of education and higher incomes than the rest of the US population.
- Third, premium cigar purchasers are, for the most part, infrequent purchasers of premium cigars. Only 17% of purchasers place more than, on average, two orders per year.
- Fourth, premium cigar purchasers reliably purchase orders containing sample packs or five packs of cigars.
- Fifth, repeat purchasers of premium cigars show little brand loyalty.
- Sixth, premium cigars purchases spike at certain times of the year, rather than being spread evenly over the year.
- Finally, the premium cigar market has incredible diversity, with a current average of approximately 10,000 SKUs per retailer.

Overall, premium cigar purchasers are older, live in communities that are wealthier and better educated than the average population, and are not purchasing premium cigars on a regular and consistent basis.

## Appendix A





## Richard P. Voith, Ph.D.

### President and Principal

Dr. Voith is a well-known expert in real estate economics, transportation, and applied microeconomics. As president and founding principal of Econsult Solutions, Dr. Richard Voith oversees a wide variety of projects in the realm of housing, labor markets, transportation, and economic development. Just as importantly, Dr. Voith is involved in setting the strategic direction of organizations both large and small. Also, he regularly provides analysis and testimony in support of litigation in real estate and transportation matters.

## Areas of Expertise

Real Estate Economics

Transportation

Applied  
Microeconomics

Funding for Transit  
Systems

Energy

Metropolitan  
Development

## Experience

Prior to joining Econsult Solutions, Dr. Voith held the position of Economic Advisor at the Federal Reserve Bank of Philadelphia.

Dr. Voith has worked frequently in the public policy arena. In 2013, he was a principal author of *Understanding SEPTA's Statewide Economic Value* which demonstrated the importance of transportation investment for the state. In 2006, Dr. Voith was appointed by Governor Rendell to the newly created Transportation Funding and Reform Commission charged with recommending appropriate levels of funding for transit systems, roads and bridges. Dr. Voith is also a member of the SEPTA Board of Directors, serving as Vice Chairman of SEPTA from 1996 to 1998.

## Professional, Corporate, Civic Leadership

Dr. Voith is a founding board member of Pentrans, an organization dedicated to balanced, multimodal transportation and mobility alternatives in Pennsylvania. Dr. Voith is active in Philadelphia area organizations, including Philadelphia Youth Basketball, an organization which is focused on the holistic development of Philadelphia youth.

## Additional Experience

Dr. Voith has taught *Cost Benefit Analysis* at the Wharton School's Business and Public Policy Department, and *Urban Real Estate Economics* through the Wharton's Real Estate Department. Dr. Voith continues as a Faculty Fellow at the University of Pennsylvania's Institute for Urban Research.

Over the last 15 years, Dr. Voith has served on several National Academy of Science Foundation Advisory Panels addressing topics such as the interrelationships between highway and transit investment and land use, valuing the costs and benefits of transit investments, and the relationships between land use and public health. He has been a guest speaker at numerous forums, including those sponsored by the Lincoln Land Institute, the Brookings Institution, Urban Land Institute, and the Department of Housing and Urban Development. Until 2007, Dr. Voith served on the editorial board of Real Estate Economics.

## Education

PhD in Economics  
University of  
Pennsylvania

MS in Energy  
Management and  
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University of  
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BS in Economics  
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## Contact

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## Appendix B

**Peter A. Angelides, Ph.D., AICP****Principal**

Dr. Peter Angelides is principal of Econsult Solutions, Inc. (ESI) and a member of the teaching faculty at the University of Pennsylvania. Dr. Angelides has high-level expertise in both economics and city planning, applying critical economic thinking to projects in real estate, economic development, transportation, tax policy, valuation and litigation. He assists clients in many industries, including real estate development, transportation, local and regional government, affordable housing, gaming, utilities, health care, and insurance.

**Areas of Expertise**

Real Estate

Transportation

Economic  
Development

Tax Policy

Gaming

Litigation

**Experience**

When he joined ESI, Dr. Angelides brought a wealth of experience in both economics and planning. Prior to joining ESI, he practiced economics in the private sector having worked for large and small firms including:

- Econsult Corporation, Vice President and Director;
- PricewaterhouseCoopers, Philadelphia PA, Director;
- Charles River Associates, Washington, DC, Economist;
- Putnam Hayes & Bartlett, Washington, DC, Economist.

In these roles he evaluated market competitiveness in merger and rate-setting proceedings before several federal regulatory agencies, estimated the economic impacts from private investment, set prices for intellectual property, evaluated the impact of technology licensing agreements and calculated damages in numerous commercial disputes.

Dr. Angelides practiced planning in the public and private sectors having worked for:

- Wallace Roberts and Todd;
- The Central Philadelphia Development Corporation;
- Philadelphia City Planning Commission.

**Professional, Corporate, Civic Leadership**

Dr. Angelides serves as a board member or in other contributing roles for several civic and professional organizations, including:

- Design Advocacy Group;
- Philadelphia Historic Preservation Task Force;
- PenTrans;
- Urban Land Institute;
- The Transportation Research Board;
- American Institute of Certified Planners (AICP);
- Racquet Club of Philadelphia.

**Additional Experience**

Dr. Angelides teaches courses in the areas of urban economics, public finance, and infrastructure investment at the University of Pennsylvania in both the Department of City and Regional Planning, and at the Fels Institute of Government.

**Education**BA in Urban Studies  
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University of  
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## **Exhibit 11**

Peter Angelides  
Econsult Solutions, Inc.  
1435 Walnut Street  
4<sup>th</sup> Floor  
Philadelphia, PA 19102

April 30, 2019

Beth G. Oliva, Esq.  
Fox Rothschild LLP  
101 Park Avenue  
17<sup>th</sup> Floor  
New York, NY 10178

Dear Ms. Oliva,

On July 25, 2018, Richard P. Voith and I submitted an expert report entitled “Purchasing Patterns and Demographics of Online Premium Cigar Customers.” Table 4 to that report, “Age of Online Premium Cigar Purchasers, 2017,” analyzed the age of premium cigar purchasers. We found that the average age of purchasers was 55.3 years and the median age was 57.0 years. In this supplemental letter report, we reproduce Table 4 from the July 25, 2018 report and add two additional tables, one for all purchases of flavored premium cigars (Table 4a) and one for all purchases of non-flavored premium cigars (Table 4b). These new tables are based on the same data as the July 25, 2018 report.

Table 4 from the July 2018 report includes 890,432 customers.<sup>1</sup> Table 4a includes 86,061 customers who purchased flavored premium cigars, and Table 4b includes 867,285 customers who purchased non-flavored premium cigars. Some customers purchased both flavored and non-flavored cigars, so the sum of these latter two numbers is greater than the total from Table 4.

The average age of purchasers of flavored cigars was 52.0 years and the median age was 53.0 years. The average age of purchasers of non-flavored cigars was 55.4 years and the median age was 57.0 years.

---

<sup>1</sup> While there were 883,779 premium cigar purchasers in 2017 with age information, there were slightly more, 890,432, ages recorded. This is because a single customer could make multiple purchases in a calendar year before and after their birthdate, resulting in two age entries for that individual.

**Table 4 – Age of Online Premium Cigar Purchasers, 2017**

<b>Age Cohort</b>	<b>Customers</b>	<b>Percent</b>	<b>US Population</b>	<b>Percent</b>
18-20	3,928	0.4%	12,774,579	5%
21-24	16,120	1.8%	7,841,890	7%
25-34	84,127	9.4%	45,342,672	18%
35-54	305,443	34.3%	83,250,322	33%
>55	480,814	54.0%	2,854,337	37%
<b>Total</b>	<b>890,432</b>	<b>100.0%</b>	<b>252,063,800</b>	<b>100%</b>
Average Age	55.3			
Median Age	57.0		38.0	

**Table 4a – Age of Online Premium Cigar Purchasers, 2017 – Flavored**

<b>Age Cohort</b>	<b>Customers</b>	<b>Percent</b>	<b>US Population</b>	<b>Percent</b>
18-20	371	0.4%	12,774,579	5%
21-24	1,817	2.1%	7,841,890	7%
25-34	9,587	11.1%	45,342,672	18%
35-54	35,370	41.1%	83,250,322	33%
>55	38,916	45.2%	2,854,337	37%
<b>Total</b>	<b>86,061</b>	<b>100.0%</b>	<b>252,063,800</b>	<b>100%</b>
Average Age	52.0			
Median Age	53.0		38.0	

**Table 4b – Age of Online Premium Cigar Purchasers, 2017 – Non-Flavored**

<b>Age Cohort</b>	<b>Customers</b>	<b>Percent</b>	<b>US Population</b>	<b>Percent</b>
18-20	3,768	0.4%	12,774,579	5%
21-24	15,380	1.8%	7,841,890	7%
25-34	80,777	9.3%	45,342,672	18%
35-54	295,879	34.1%	83,250,322	33%
>55	471,481	54.4%	2,854,337	37%
<b>Total</b>	<b>867,285</b>	<b>100.0%</b>	<b>252,063,800</b>	<b>100%</b>
Average Age	55.4			
Median Age	57.0		38.0	

Regards,

A handwritten signature in black ink, reading "Peter A. Angelides". The signature is fluid and cursive, with a long horizontal stroke at the end.

Peter A. Angelides, PhD, AICP

## **Exhibit 12**



**RE: DOCKET NO. FDA-2017-N-6107 REGARDING THE REGULATION  
OF PREMIUM CIGARS**

**REPORT REGARDING CONSUMPTION PATTERNS OF PREMIUM  
CIGARS**

**FATEN SABRY, PH.D.  
IGNACIO FRANCESCHELLI, PH.D.  
DREW CLAXTON**

**July 25, 2018**

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## **I. INTRODUCTION**

### **A. Assignment**

1. The Food and Drug Administration (“Agency” or “FDA”) published a proposed rule in the Federal Register of April 25, 2014, seeking to deem additional products meeting the statutory definition of “tobacco product” to be subject to chapter IX of the Federal Food, Drug, and Cosmetic Act (“FD&C Act”). After considering the public comments on the rule, the Agency concluded that there was no appropriate public health justification to exclude premium traditional cigars (“premium cigars”) from regulation. The Agency stated that “comments against regulation provided little data to support the opinions expressed and, where studies were submitted, provided little information about the studies cited.” Consequently, premium cigars were included in the scope of the final deeming rule published on May 10, 2016.

2. On July 28, 2017, the FDA announced a “new comprehensive plan for tobacco and nicotine regulation,” and stated that it would seek additional comments and scientific data that were not submitted in response to the 2014 proposed deeming rule that could further inform the Agency’s thinking about the regulatory status of premium cigars.<sup>1</sup> The Agency is now seeking comments, data, research results, and other information related to the definition of premium cigars, the use patterns of premium cigars and the public health considerations associated with premium cigars. The Agency has requested comments on the use patterns of premium cigars, both generally and among youth and young adults, and as compared to and contrasted against that of non-premium traditional cigars, filtered cigars and cigarillos (together “non-premium cigars”).

3. I have been asked by Cigar Rights of America, the Cigar Association of America, and the International Premium Cigar and Pipe Retailers Association to provide a statistical analysis of four aspects of consumption behavior that is related to premium cigar usage: i) the prevalence of use and the demographic characteristics of premium cigar users as compared to users of non-premium cigars and cigarettes; ii) the frequency and intensity of premium cigar use as compared to that of non-premium cigars and cigarettes; iii) the initiation of premium cigar use and the progression from premium cigar use to cigarette use as compared to that of non-premium

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<sup>1</sup> Federal Register, Vol. 83, No. 58, p.12902. Monday, March 26, 2018 Proposed Rules.

cigar; and iv) the dual usage of premium cigars and cigarettes, as compared to that of non-premium cigars.

## **B. Population Assessment of Tobacco and Health Study**

4. The Population Assessment of Tobacco and Health Study (“PATH” or “Study”) is a large, nationally representative, longitudinal cohort study of adults and youth selected between September 2013 and December 2014. The Study’s design allows for the longitudinal assessment of tobacco use behavior, attitudes and beliefs, and tobacco-related health outcomes for individuals nine years old or older in the U.S.<sup>2</sup> The sampling rates were designed to achieve sufficiently large sample sizes for young adults, Black or African American adults and adult tobacco users of all ages. According to the Inter-University Consortium for Political and Social Research (ICPSR), the PATH data provide “an empirical evidence base for developing, implementing, and evaluating regulations governing tobacco products by measuring the behavioral and health effects associated with changes in such regulations.”<sup>3</sup> These data were not available during the public comment period for the proposed rule published on April 25, 2014.

5. The PATH data follows 45,971 respondents (32,320 adults, and 13,651 youth) over time and consists of repeated observations on the same cross section of individuals, so for example, one can determine whether an 18-year-old e-cigarette user at time 1 is still using the product at time 2. The first wave of data collection began in September 2013, was completed in December 2014 (“Wave 1”) and included an adult questionnaire with 2,011 variables and 32,320 cases in the database and a youth (and parent) questionnaire with 1,431 variables and 13,651 cases in the database. The second wave of data collection began in October 2014, was completed in October 2015 (“Wave 2”) and included a follow-up on individuals that had already completed the first wave questionnaire. Similarly, the third wave of data collection took place from October 2015 through October 2016 (“Wave 3”) and was released on May 1, 2018.

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<sup>2</sup> United States Department of Health and Human Services. National Institutes of Health. National Institute on Drug Abuse, and United States Department of Health and Human Services. Food and Drug Administration. Center for Tobacco Products. Population Assessment of Tobacco and Health (PATH) Study [United States] Restricted-Use Files. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2018-05-01. <https://doi.org/10.3886/ICPSR36231>, v14.

<sup>3</sup> PATH Restricted-Use Data User Guide, p. 2.

6. The target population for Wave 1 is the civilian household population 9 years of age or older in the United States.<sup>4</sup> The PATH data include information for adults, ages 18 and older, youth ages 12 to 17, and “shadow youth” ages 9 to 11. Shadow youth will “age-up” to the youth category and be interviewed as youth upon reaching 12 years of age.<sup>5</sup> Similarly, those classified as youth in Wave 1, will “age-up” to be classified and interviewed as adults if they become 18 years of age in subsequent waves.<sup>6</sup>

### **C. Summary of Opinions**

7. Based on my statistical analysis of the PATH data, my opinions are summarized as follows:

- i. The prevalence of premium cigar usage and the demographic characteristics of premium cigar consumers differ from that of non-premium cigar products and cigarette users. For example, in Waves 1, 2 and 3, among youth, the prevalence of non-premium cigar use is 16.5 to 25 times that of premium cigars. Similarly, among adults, the prevalence of non-premium cigar use is more than 3.7 to 4.5 times that of premium cigars. Prevalence is the estimated weighted percentage of respondents who are identified as current cigar or cigarette users.
  - a. Among the 11,814 respondents aged 12 to 17 in the recently released Wave 3, there is only one current premium cigar user, or a 0.02% prevalence. In Wave 3, the premium cigar prevalence for respondents aged 12 to 17 remains lower than that of any single non-premium cigar—in the 0.05% to 0.35% range—and cigarettes with a 1.77% rate. No respondents aged 12-14 reported using premium cigars. Similar results are obtained for the first and second waves of data collection. The prevalence of premium

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<sup>4</sup> PATH Restricted-Use Data User Guide, pp. 17 and 21. Wave 1 respondents continued to be eligible for interview in Wave 2 and Wave 3 as long as they continued to live in the U.S. and were not incarcerated.

<sup>5</sup> PATH Restricted-Use Data User Guide, p. 8.

<sup>6</sup> PATH Restricted-Use Data User Guide, p. 18.

cigar uses among youth respondents decreased from 0.08% in Wave 1 and 0.04% in Wave 2 to 0.02% in Wave 3. See Table 1.

- b. Among adults, the prevalence of premium cigar use is statistically significantly less than that of non-premium cigars and cigarettes across all three waves of PATH data. Overall, in Wave 1, the prevalence of premium cigar use is 0.56% as compared to 2.51% for non-premium cigars. In Wave 2, the prevalence of premium cigar use increased slightly to 0.58%, but remains statistically significantly less than the 2.16% for non-premium cigars. In Wave 3, the prevalence of premium cigar use drops to 0.53%, and again, is statistically significantly less than the 1.94% for non-premium cigars. As compared to the detailed non-premium cigar types, the prevalence of premium cigars is statistically significantly less than cigarillos and filtered cigars in all three Waves, and statistically significantly less than non-premium traditional cigars in Wave 1. See Table 2.
- c. Premium cigar users are typically white males, 35 years or older, who have higher levels of education and higher incomes than consumers of non-premium cigar or cigarettes. In Wave 3, 81% of adult premium cigar users were white, 98% were male, and 67% were 35 years or older. In addition, 83% of premium cigar users aged 25 and up have higher-level education, and 53% completed college. In comparison, 17% of non-premium cigar users, 11% of cigarillo smokers, 5% of filtered cigar smokers, and 12% of cigarette smokers age 25 and older completed college. Finally, 44% of premium cigar users have a household income of \$100,000 or more, as compared to 13% of non-premium traditional cigars, 10% of cigarillo, 4% of filtered cigar, and 8% of cigarette smokers. Similar results are obtained for the first and second waves of data collection. See Table 3a, Table 3b, and Table 3c.



- ii. Among adult current users, premium cigar consumers were less likely to use them daily, used them on fewer days and consumed fewer cigars per day than users of non-premium cigar or cigarette users. In Wave 3, the most current PATH data, about 3.9% of premium cigar consumers smoked them daily. Premium cigar users typically used them 1.3 days out of 30, as reported by the median and smoked 0.1 cigars per day in past 30 days. In comparison, 20.7% to 40.9% of non-premium cigar consumers smoked them every day, used them on 4.4 to 14.5 days out of 30 and smoked 0.2 to 0.9 non-premium cigars per day in past 30 days. For cigarette smokers, 77.0% smoked cigarettes every day. The median cigarette smoker smoked on 29.4 of the past 30 days, and smoked 9.9 cigarettes per day in past 30 days. Similar results are obtained for the first and second waves of data collection. See Table 4a, Table 4b, and Table 4c.
- iii. Most cigarette smokers experiment and progress to becoming established smokers between the ages of 12 and 24.<sup>7</sup> Using the most recent PATH data, we find that the median age at first regular use is 30.0 years for premium cigar users, older than that of cigarillo and cigarette users. We also find that premium cigar users are as likely to become cigarette users as those who do not use any tobacco product and are less likely than users of non-premium cigar.
  - a. In Wave 1, the median age at first regular use reported by premium cigar users is 24.8 years. In comparison, the median age at first regular use is 19.4 years for non-premium traditional cigars, 18.0 years for cigarillo users and 16.6 years for cigarette users. Filtered cigar users, like premium cigar users, were generally older at initiation, with a median age at first regular use of 26.8 years. In Wave 3, the median age at first regular use increased to 30.0 years for premium cigar users. The median age at first regular use for non-premium cigar ranged from 24.2 years for cigarillos to

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<sup>7</sup> Trinidad, D. R., Pierce, J. P., Sargent, J. D., et al. (2017), “Susceptibility to Tobacco Product Use Among Youth in Wave 1 of the Population Assessment of Tobacco and Health (PATH) Study”, *Preventive Medicine*, 101, 8-14.

34.2 years for filtered cigars. The median age at first regular use remained unchanged at 16.7 years for cigarette smokers. See Table 5a, Table 5b, and Table 5c.

- b. The percentage of premium cigar users that progress from never smoking cigarettes or smoking cigarettes some days in Wave 1 to everyday cigarette smoking in Wave 3 is 2.2%. In comparison, 9.1% of non-premium traditional cigar users, 11.5% of cigarillo users, 26.4% of filtered cigar users and 1.1% of not tobacco users transition to smoking cigarettes everyday by Wave 3. The difference between the 2.2% transition rate for premium cigar users and the 1.1% for respondents that did not use tobacco products is not statistically significant. Similar results are obtained for transition into some day cigarette smoking. See Table 6 and Table 7.
  - c. Of adults who are current established premium cigar users and are also current established cigarette users, 78.8% smoked cigarettes first before they started smoking traditional cigars—premium or not-premium, 10.1% started smoking traditional cigars before they started to smoke cigarettes and 11.0% started smoking traditional cigars and cigarettes at the same age. See Table 8.
- iv. The prevalence and intensity of dual usage of cigars and cigarettes is less for premium cigar users than for non-premium cigar users.
- a. In Wave 3, for current premium cigar users, the median number of cigarette smoking days and the number of cigarettes smoked per day in past 30 days are zero (0). In comparison, the non-premium traditional cigar user typically smoked cigarettes on 1.6 days in past 30 days and smoked 0.1 cigarettes per day in past 30 days. The cigarillo smoker typically smoked cigarettes on 8.0 days in past 30 days and smoked 1.0 cigarettes per day in past 30 days. The filtered cigar smoker typically smoked cigarettes on 28.3 days in past 30 days and smoked 5.9 cigarettes per day in past 30 days. See Table 9c.

- b. Also in Wave 3, non-premium traditional cigar users were more than twice as likely to smoke cigarettes when compared to premium cigar users. These differences increase when compared to cigarillos and filtered cigars. For example, in Wave 3, 23.8% of premium cigar users also smoked cigarettes as compared to 51.3% of non-premium traditional cigar users, 56.3% of cigarillo users and 69.8% of filtered cigar users. Similar results are obtained for the first and second waves of data collection. See Table 9a, Table 9b, and Table 9c.
- c. Among current premium cigar users in Wave 3, those who are also current cigarette users do not use more premium cigars. They use premium cigars 0.7 days per month as compared to 1.5 days per month for those who are not current cigarette smokers. Premium cigars smoked, per day in past 30 days, among these two groups, is less than 0.1 cigars per day for current cigarette smokers and also for those who are not current cigarette smokers. Similar results are obtained for the first and second waves of data collection. See Table 10a, Table 10b, and Table 10c.

#### **D. Qualifications**

8. I am an economist and a Managing Director in the Securities Practice and the Product Liability and Mass Torts Practice of NERA Economic Consulting. I provide economic consulting services and testimony in cases involving product liability, mass torts, complex damages disputes and securities. This work includes both advisory consulting engagements and litigation support in cases that have culminated in trials, bankruptcy hearings, or regulatory proceedings. My case work includes: estimating the future personal injury claims likely to be brought against defendants involved in asbestos, silica, medical products, and construction products litigation; analyzing liabilities related to environmental contamination for the Met-Coil bankruptcy Trust and the future silica and asbestos liabilities for the Tyler Pipe/Swan Transportation bankruptcy Trust; assessing recall costs of automobile and construction products; analyzing insurance allocation; applying statistical and content analyses to examine product

identification; and analyzing class certification and allegations of diminution of value in consumer class actions, including actions related to automobile recalls.

9. I have testified at trial in state and federal courts and am the author of various articles on the econometric analysis of claiming behavior, impact of tort reforms and regulatory changes, and determinants of anti-dumping protection. I have testified before the U.S. Department of Labor on an economic and statistical analysis of the methodology used to quantify the expected benefits of the proposed rule regarding silica.<sup>8</sup> I have also recently submitted comments regarding the CFPB's request for changing the Bureau's public reporting practices of consumer complaint information. I have worked for opponents of tobacco companies on consulting and litigation projects, estimating tobacco-related liabilities and, consulted on the tobacco Master Settlement Agreement with a NERA team that worked with the Special Master. In addition, I have conducted a study for a municipality on the economic impact of smoking bans.<sup>9</sup> My research has been published in the *Journal of Investment Compliance*, *Journal of Alternative Investments*, *Business Economics*, *International Trade Journal* and others. I was a Post-Doctoral Fellow at the International Food Policy Research Institute and an assistant professor of economics at the American University in Cairo. I received my Ph.D. from Stanford University.

## **II. PATH DATA AND IDENTIFICATION OF PREMIUM CIGARS**

10. To identify relevant academic studies on patterns of premium cigar usage, we followed the procedures set out in Chang et al. (2015), and conducted a systematic literature review of tobacco studies published after the FDA's 2014 request for comments. We then excluded any study cited in the FDA's 2016 rule on the regulation of tobacco products.

11. To identify relevant academic studies, we specified search terms to search through three databases—PubMed, Embase, and ISI Web of Science—that record academic studies. We

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<sup>8</sup> See, "Re: Docket No. OSHA-2010-0034 Occupational Exposure to Respirable Crystalline Silica – Comments of Dr. Faten Sabry, Ph.D. of NERA Economic Consulting for the US Chamber of Commerce," January 27, 2014, available at: <https://www.regulations.gov/document?D=OSHA-2010-0034-2263>.

<sup>9</sup> See, "Re: Docket Number CFPB-2018-0006 Regarding the Consumer Financial Protection Bureau's ("CFPB") Reporting Practices of Consumer Complaint Information," April 19, 2018, available at: <https://www.regulations.gov/document?D=CFPB-2018-0006-0017>. See also, Faten Sabry and Robert Patton, "Village of Tinley Park - Study of Impact of Smoking Bans Final," *NERA Economic Consulting*, March 12, 2007.

used the terms “Cigar” or “Cigars” in combination with the terms “PATH” or “NATS” or “NYTS” to identify potentially relevant articles.<sup>10</sup> Appendix A provides a summary of the process used to identify and select relevant academic studies of tobacco usage. We identified only one study - “U.S. Adult Cigar Smoking Patterns, Purchasing Behaviors and Reasons for Use According to Cigar Type: Findings from the Population Assessment of Tobacco and Health (PATH) Study, 2013-2014” by Corey et al.– that analyzed tobacco use in the U.S. by cigar type and distinguished between premium and non-premium traditional cigars.<sup>11</sup>

#### **A. Corey et al. (2017) Distinguishes between Premium and Non-Premium Traditional Cigars**

12. In 2017, Corey et al. published the results of their analysis of “U.S. Adult Cigar Smoking Patterns, Purchasing Behaviors and Reasons for Use According to Cigar Type: Findings from the Population Assessment of Tobacco and Health (PATH) Study, 2013-2014” (the “Corey Study”) and noted that “despite the diversity in the cigar market place,” most tobacco studies treated cigars as a single product type. In their study, they distinguished between traditional cigars, cigarillos and filtered cigars, and further divided traditional cigars into premium and non-premium. They found that user characteristics, cigar smoking patterns and dual smoking with cigarettes varied by cigar type, and that sufficient descriptions of cigar types, as well as distinguishing between premium and non-premium traditional cigars, is important to “enhance tobacco regulatory science.”

13. In particular, Corey et al. found that, among adults ages 18 years and older, the prevalence of premium cigar smoking was 0.7% as compared to 0.8% for non-premium traditional cigars, 1.7% for cigarillos, 0.9% for filtered cigars and 18.1% for cigarettes.

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<sup>10</sup> NYTS is the acronym for the National Youth Tobacco Survey conducted by the U.S. Centers for Disease Control and Prevention (DCP). NATS is the acronym for the National Adult Tobacco Survey conducted by the U.S. Centers for Disease Control and Prevention (DCP).

<sup>11</sup> Corey, C. G., Holder-Hayes, E., Nguyen, A. B., et al. (2017), “US Adult Cigar Smoking Patterns, Purchasing Behaviors, and Reasons for Use According to Cigar Type: Findings from the Population Assessment of Tobacco and Health (PATH) Study, 2013-2014”, *Nicotine & Tobacco Research*.

Prevalence is the estimated weighted percentage of adult respondents who are identified as adults who are current cigar or cigarette smokers.<sup>12</sup>

14. They also found that the percentage of daily cigar smoking and the number of cigars smoked per day in past month were higher for filtered cigars than all non-premium cigars, daily smoking of cigars per day were similar for non-premium traditional cigars and cigarillos, and cigarette smoking was twice as common among users of non-premium traditional cigars, cigarillos and filtered cigars than among users of premium cigars.

15. In addition, they found that demographic characteristics of users varied by cigar type and cigarettes. Young adults (aged 18 to 34 years) accounted for 64.5% of cigarillo users, as compared to 34% to 47% of users of non-premium cigars. More than half of users of non-premium traditional cigars, cigarillos, filtered cigars and cigarettes had a high school diploma/GED or less, whereas 26% of premium cigar users had a high school diploma/GED or less. In addition, Corey et al. found that “those smoking premium cigars tended to differ from those smoking non-premium cigars, cigarillos, and [filtered cigars] including having users with higher socioeconomic status.” For example, they found that 41% to 47% of non-premium traditional cigar, cigarillo and filtered cigar users, as compared to 14% of premium cigar users, lived below the federal poverty level.

16. In the Advanced Notice of Proposed Rulemaking (“ANPRM”) published in the Federal Register in March 2018, the FDA cited the Corey Study as an example of the type of information that would be responsive to its request, noting that it “assessed use patterns and related behaviors of users of ‘premium’ and other cigar types.”<sup>13</sup> The Agency also notes that in its conclusion, the Corey Study “highlighted the importance of adequately describing the cigar type studied and, where appropriate, differentiating results by cigar type.”<sup>14</sup>

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<sup>12</sup> “Current smokers” are “current established smokers” defined in PATH. According to PATH, current established cigar smokers are defined as those who have ever smoked the cigar type, ever smoked the cigar type “fairly regularly,” and now smoke the cigar type every day or some days; current established cigarette smokers are defined as those who have smoked at least 100 cigarettes in their lifetime and now smoke cigarettes every day or some days.

<sup>13</sup> Federal Register, Vol. 83, No. 58, March 26, 2018. Proposed Rules, p. 12902.

<sup>14</sup> Federal Register, Vol. 83, No. 58, March 26, 2018. Proposed Rules, p. 12903.

## **B. Identification of Premium Cigars**

17. The PATH Study is a large, nationally representative, longitudinal cohort study of tobacco use behavior, attitudes and beliefs, and tobacco-related health outcomes for individuals 12 years old or older in the U.S.<sup>15</sup> The data collected also include detailed information on cigar characteristics such as cigar type (traditional cigars, cigarillos, or filtered cigars), brand and product name. With this level of detail, one can further distinguish traditional cigars as premium and non-premium. These data were not available during the public comment period for the proposed rule published on April 25, 2014.

18. To identify premium cigars, we used the definition of “premium cigar” adopted in the Corey Study, and made certain limited adjustments where necessary to correct the designation of a premium cigar type. Corey et al. acknowledged that “regulatory definitions of premium cigars do not exist.” Using information obtained through research about the brand’s tobacco blends, components (e.g., long filler, whole leaf wrapper), and manufacturing process (e.g., handmade), they used the brand and product information collected by the PATH study to distinguish premium from non-premium traditional cigars. The Corey Study used the Restricted Use files for Wave 1 of the PATH Study in which respondents identified the usual brand of “traditional cigar” that they smoked. Using this list of brands, Corey et al. determined, through research, whether a brand qualified as “premium” based on three criteria: (1) tobacco blends, (2) components (e.g., long filler, whole leaf wrapper), and (3) manufacturing process (e.g., handmade).<sup>16</sup> For brands that could not be classified as premium or non-premium traditional cigars based on the above criteria, the study’s authors considered the usual price paid per cigar and set a cut-off of \$2 per cigar for premium brands. Corey et al. acknowledged that “[a]lthough the results illustrate clear distinctions between premium and nonpremium smoker characteristics,

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<sup>15</sup> United States Department of Health and Human Services. National Institutes of Health. National Institute on Drug Abuse, and United States Department of Health and Human Services. Food and Drug Administration. Center for Tobacco Products. Population Assessment of Tobacco and Health (PATH) Study [United States] Restricted-Use Files. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2018-05-01. <https://doi.org/10.3886/ICPSR36231> v14. Sampling rates were designed to achieve sufficiently large sample sizes for young adults, Black or African American adults and adult tobacco users of all ages.

<sup>16</sup> The PATH survey asked respondents to provide information on each of the tobacco products that they used, including cigarettes, cigarillos, filtered cigars and traditional cigars. If a respondent answered that they used traditional cigars, they were provided a list of traditional cigar brands/products so that they could specify which brand/product they used. If the respondents did not find the brand/product of traditional cigar on the PATH list, they could select “Other” and write in the specific brand/product of traditional cigar that they used.

use patterns and purchasing behaviors, some traditional cigar smokers may have been misclassified using this approach.”<sup>17</sup> The full methodology used by Corey et al. to produce a list of premium and non-premium traditional cigars (the “Corey List”) is laid out in Supplemental Table A to the study.

19. We compiled traditional cigar brands and products specified by respondents and reported in the PATH Restricted Use data files for Waves 1. We then cross-referenced those brands/products with the Corey List of premium cigars. Having replicated the Corey List using the PATH data, we then replicated Corey et al.’s statistical results, as published. We replicated their results on the prevalence of smoking, demographic characteristics of smokers, age at first regular use, dual use of cigars and cigarettes, and the frequency and intensity of use by cigar types and cigarettes.

20. Next, we made certain limited adjustments where necessary to the Corey List. We reclassified certain brands using Corey et al.’s own study criteria (without any reference to usual retail price) and criteria provided by the Cigar Rights of America, the Cigar Association of America, and the International Premium Cigar and Pipe Retailers Association. Based on these criteria, we reclassified nine brands reported in Wave 1 that were identified as premium cigars in the Corey Study: (1) Optimo, which is a brand of cigarillos; (2) Ben-Bay, which makes only cigar accessories and little cigars; (3) Chubb, which makes “wooden stogie cigar pipes”; (4) Cuban, which is not a cigar brand; (5) Durango, which is a brand of cigars made with pipe tobacco; (6) El Pita, which is not a cigar brand; (7) El Verso, which is a brand of machine-made cigars and fails the handmade requirement; (8) Indio, which is not a cigar brand; and (9) Marsh Wheeling, which is a brand of machine-made cigars and fails the handmade requirement. Similarly, we reclassified two brands reported in the Wave 1 data and that were not identified as premium cigars in the Corey Study: (1) Thompson and (2) JR. Thus, where Corey et al. analyze 377 premium cigar users in Wave 1, we analyzed 315. We follow the same approach to identify premium cigars in Wave 2 and 3. For example, we added premium brands from the PATH

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<sup>17</sup> Corey et al. (2017), p. 8.



Restricted Use data set that were identified by respondents in Wave 2 and 3, but were not in Wave 1.<sup>18</sup>

21. A number of brands identified in the PATH Restricted Use data set produce cigars that meet the Corey Study’s criteria but contain non-tobacco flavoring. As one of the FDA’s questions addresses the use of flavors in premium cigars, we further divided the brands in the PATH Restricted Use data set into unflavored premium cigars and flavored premium cigars and conducted separate analyses for each category and for the overall premium cigar category.<sup>19</sup> In the narrative discussion in this report, we refer to the results for overall premium cigars, but we separately list the results for unflavored premium cigars in each of the tables. We do not report results for flavored premium cigar users as there were too few observations to produce reliable estimates.

22. Finally, we find no indication that the refinements made to the Corey List substantially change the findings of the Corey Study. As discussed in Section II-A above, Corey et al. found that, among adults, the prevalence of premium cigar use was 0.7% as compared to 0.8% for non-premium traditional cigars. Using the adjusted list of premium cigar brands, we find that, among adults, the prevalence of premium cigar use was 0.6% as compared to 0.8% for non-premium traditional cigars.

### **III. PREVALENCE AND USE PATTERNS OF CIGAR USAGE**

23. Using the PATH data (Wave 1, Wave 2 and Wave 3), we estimate the prevalence and patterns of cigar use by cigar type—premium cigars, non-premium traditional cigars, cigarillos and filtered cigars.

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<sup>18</sup> The added brands include Aldino, Asylum, Avo, Bohemia, Camacho, Carrillo, Cromagnon, DAS, Diesel, Don Diego, Don Lucas, Don Simon, Field of Gold, Gispert, Graycliff, Habanos, Illusione, Kauai Cigar, Liga Privada, Mr. B, Nostalgia, Omar Ortez, Pinar Del Rio (PDR), Penamil, Playboy, Por Larranaga, Quorum, Rancho Real, San Cristobal, Santiago, Sosa, Topstone.

<sup>19</sup> Based on information provided by the Cigar Rights of America, the Cigar Association of America, and the International Premium Cigar and Pipe Retailers Association, we identified unflavored premium cigar brands/products, as premium cigars brands that are not “Acid”, “Makers Mark”, “Java”, “Tabak” and Trader Jack”; and not CAO brand where the product is specified as “Bella Vanilla”, “Caramelo Joe”, “Cherry Bomb”, “Earth Nectar”, “Eileen’s Dream”, “Gold Honey” and “Moontrance”; and not “Cohiba” brand where the product is “Vanilla”, and not Don Tomas where the product is “Acid” or “Ambrosia”.

## **A. Prevalence of Cigar Usage**

24. Using the PATH data, we estimated the prevalence of cigar usage for youth and adults. Youth are persons ages 12 to 17. Adults include persons 18 years and older.

### **1. Prevalence of Youth Cigar Usage<sup>20</sup>**

25. As shown in Table 1, among youth aged 12-17, the prevalence of premium cigar use is close to zero and, overall, is statistically significantly lower than that of non-premium cigars, as well as that of cigarettes. The prevalence of youth premium cigar use is less than 0.1% and decreased over time—from 0.08% in Wave 1 to 0.04% in Wave 2, and to 0.02% in Wave 3. No respondents aged 12-14 reported using premium cigars. In Waves 1, 2 and 3, the prevalence of non-premium cigars use is 16.5 to 25 times that of premium cigars. Prevalence for cigarettes is 40.6 to 88.5 times that of premium cigars.

26. Among the 11,814 respondents aged 12-17 in the recently released Wave 3 there is only one current premium cigar user, or a 0.02% prevalence. The premium cigar prevalence in Wave 3 for respondents aged 12-17 remains lower than that of non-premium traditional cigars (0.05%), cigarillos (0.35%), filtered cigars (0.18%) and cigarettes (1.77%).

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<sup>20</sup> “Youth current smokers” of cigars or cigarettes are Past 30 Day “Not-Light” Cigar or Cigarette Smokers defined by PATH Study Youth/Parent Questionnaires. Past 30 Day “Not-Light” Cigar or Cigarette Smokers are youth respondents who have smoked more than 10 of the respective cigar or cigarette categories (traditional cigars, cigarillos, filtered cigars, or cigarettes) in their lifetime and smoked a product of the respective cigar or cigarette categories within the past 30 days. For example, Past 30 Day “Not-Light” cigarillo smokers are youth respondents who have smoked more than 10 cigarillos in their lifetimes and smoked a cigarillo within the past 30 days. “Not-Light” smokers are identified for this analysis because in PATH Study Restricted-Use Files for youth, only “Not-Light” smokers of traditional cigars are asked about the brand and product of traditional cigars they smoked. Brand and product variables are used to identify premium and non-premium traditional cigar smokers. Unlike the database for adults, there are no variables that identify “Current Established Smokers” of cigars or cigarettes in the youth database.

Table 1. *Prevalence of Cigar Usage Among Youth Aged 12-17, Wave 1 to Wave 3*

	Premium Cigars		Non-Premium Cigars				Cigarettes
	Overall	Unflavored	Overall <sup>1</sup>	Traditional Cigars	Cigarillos	Filtered Cigars	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Wave 1 (13,651 youth respondents)</b>							
Overall youth prevalence <sup>2</sup>							
Percentage	0.08%	0.08%	1.38%	0.22%	1.17%	0.22%	3.25%
Confidence interval	(0.02-0.14%)	(0.02-0.14%)	(1.17-1.58%)	(0.12-0.32%)	(0.98-1.36%)	(0.12-0.33%)	(2.91-3.59%)
Number of users	8	8	195	29	165	30	450
<b>Wave 2 (12,172 youth respondents)</b>							
Overall youth prevalence <sup>2</sup>							
Percentage	0.04%	0.04%	0.66%	0.14%	0.44%	0.22%	2.73%
Confidence interval	(0.00-0.08%)	(0.00-0.08%)	(0.51-0.82%)	(0.08-0.20%)	(0.32-0.56%)	(0.12-0.33%)	(2.39-3.08%)
Number of users	4	4	82	18	54	26	333
<b>Wave 3 (11,814 youth respondents)</b>							
Overall youth prevalence <sup>2</sup>							
Percentage	0.02%	0.02%	0.50%	0.05%	0.35%	0.18%	1.77%
Confidence interval	(0.00-0.05%)	(0.00-0.05%)	(0.39-0.61%)	(0.01-0.10%)	(0.26-0.45%)	(0.10-0.26%)	(1.50-2.05%)
Number of users	1	1	61	7	42	20	198

**Notes and Sources:**

- Data are from Population Assessment of Tobacco and Health (PATH) Study Restricted-Use Files for youth.

<sup>1</sup> Respondents can be current smokers of multiple non-premium cigar types, including non-premium traditional cigars, cigarillos, and filtered cigars. The prevalence for each non-premium cigar type may not add up to the prevalence for overall non-premium cigars.

<sup>2</sup> Prevalence is the estimated weighted percentage of youth respondents who are identified as current users of cigars or cigarettes.

27. The youth population varies between waves. Youth in Wave 1 who become 18 in Wave 2 or Wave 3 age up and their responses are then captured in the adult PATH data. Similarly, “shadow youth”, who were ages 9-11 in Wave 1, also age up as they become 12 years of age in Wave 2 or Wave 3. The shadow youth who age up and are interviewed and their responses are newly included in the youth PATH data.<sup>21</sup>

## 2. Prevalence of Adult Cigar Usage<sup>22</sup>

28. As shown in Table 2, among adults ages 18 years and older, the prevalence of premium cigar use is statistically significantly less than that of non-premium cigar and cigarette

<sup>21</sup> PATH Restricted-Use Data User Guide, pp. 17 and 21. Youth who have relocated outside of the U.S. or have become incarcerated by Wave 2 or Wave 3 will not be interviewed and are not replaced in the sample data.

<sup>22</sup> Prevalence is the estimated weighted percentage of adult respondents who are identified as adults who are current cigar or cigarette smokers.

use across all three Waves of PATH data. Overall, in Wave 1, the prevalence of premium cigar use is 0.56% as compared to 2.51% for non-premium cigars. In Wave 2, the prevalence of premium cigar use increased slightly to 0.58%, but remains significantly less than the 2.16% for non-premium cigars. In Wave 3, the prevalence of premium cigar use drops to 0.53%, and again, is significantly less than the 1.94% for non-premium cigars. As compared to detailed non-premium cigar types, the prevalence of premium cigars is significantly less than cigarillos and filtered cigars in all three Waves, and significantly less than non-premium traditional cigars in Wave 1. Finally, as shown in Table 2, the prevalence of cigar use decreased from Wave 1 to Wave 3 for all cigar types. The prevalence of cigarette use increased, from 18.08% in Wave 1 to 18.27% in Wave 3.<sup>23</sup>

Table 2. *Prevalence of Cigar Usage among Adults, Aged 18 Years and Older, Wave 1 to Wave 3*

	Premium Cigars		Non-Premium Cigars				
	Overall	Unflavored	Overall <sup>1</sup>	Traditional Cigars	Cigarillos	Filtered Cigars	Cigarettes
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Wave 1 (32,320 adult respondents)</b>							
Overall adult prevalence <sup>2</sup>							
Percentage	0.56%	0.51%	2.51%	0.78%	1.59%	0.85%	18.08%
Confidence interval	(0.49-0.63%)	(0.45-0.58%)	(2.35-2.67%)	(0.70-0.85%)	(1.46-1.72%)	(0.77-0.94%)	(17.55-18.61%)
Number of users	315	289	1,760	506	1,186	551	11,402
<b>Wave 2 (28,362 adult respondents)</b>							
Overall adult prevalence <sup>2</sup>							
Percentage	0.58%	0.53%	2.16%	0.44%	1.32%	0.86%	18.60%
Confidence interval	(0.49-0.67%)	(0.45-0.61%)	(1.99-2.32%)	(0.38-0.51%)	(1.21-1.43%)	(0.74-0.98%)	(18.08-19.12%)
Number of users	270	248	1,237	243	790	473	9,694
<b>Wave 3 (28,148 adult respondents)</b>							
Overall adult prevalence <sup>2</sup>							
Percentage	0.53%	0.48%	1.94%	0.36%	1.20%	0.79%	18.27%
Confidence interval	(0.44-0.62%)	(0.39-0.56%)	(1.78-2.11%)	(0.30-0.42%)	(1.09-1.31%)	(0.67-0.91%)	(17.68-18.87%)
Number of users	215	193	1,055	179	682	424	9,013

**Notes and Sources:**

- Data are from Population Assessment of Tobacco and Health (PATH) Study Restricted-Use Files for adults.

<sup>1</sup> Respondents can be current users of multiple non-premium cigar types, including non-premium traditional cigars, cigarillos, and filtered cigars. The prevalence for each non-premium cigar type may not add up to the prevalence for overall non-premium cigars.

<sup>2</sup> Prevalence is the estimated weighted percentage of adult respondents who are identified as current users of cigars or cigarettes.

<sup>23</sup> As discussed above, Corey's list of premium cigars included 135 traditional cigar brands/products. After adjusting Corey's list of premium cigars, based on advice from counsel, we include 124 traditional cigar brands/products as premium cigars.

### **3. Demographic Characteristics of Cigar and Cigarette Users, Wave 1 – Wave 3**

29. Premium cigar users are typically white males, who are 35 years or older, and are relatively more educated and have higher incomes than non-premium traditional cigar, cigarillo, filtered cigar and cigarette smokers.

30. In Wave 1, of current premium cigar users 76% are white, 96% are male, and 57% are 35 years or older. In contrast, consumers of non-premium cigar products are 42-66% are white and 69-84% are male. Cigarillo users are generally younger, with only 36% being 35 years or older. See Table 3a.

31. Premium cigar users are also more educated than non-premium cigar or cigarette users. Similar to Corey et al., we report educational attainment data for respondents aged 18 and up, but we also compute statistics for those age 25 and older which allows for a better comparison to census data. We found that, in Wave 1, 78.1% of premium cigar users aged 25 and up had some higher-level education, and 44.9% had completed college. In contrast, among the same age group approximately 44.7% of non-premium traditional cigar users, 46.4% of cigarillo users, 40.0% of filtered cigar users and 45.0% of cigarette smokers respectively had at least some college experience. Of non-premium traditional cigar users age 25 and older, 9.4% had completed college, with a similar percentage observed for cigarillo users (10.6%), filtered cigar users (9.2%) and cigarette smokers (12.0%).

32. Finally, premium cigar users have higher incomes than non-premium cigar users or cigarette smokers. Of current users, 35.5% of premium cigar users had a household income of \$100,000 or more, as compared to 8.8% of non-premium traditional cigar, 5.8% of cigarillo, 4.8% of filtered cigar, and 7.5% of cigarette smokers.

Table 3a. *Demographic Characteristics of Adults, Aged 18 Years and Older, Current Smokers, Wave 1*

	Premium Cigars		Non-Premium Cigars			Cigarettes (6)
	Overall	Unflavored	Traditional Cigars	Cigarillos	Filtered Cigars	
	(1)	(2)	(3)	(4)	(5)	
Age group (%) <sup>1</sup>						
18-24	16.2%	16.0%	22.5%	35.9%	18.0%	14.1%
25-34	26.6	26.1	24.3	28.6	16.0	24.3
35-54	34.8	35.3	32.8	27.1	39.8	39.0
55+	22.4	22.6	20.5	8.5	26.3	22.7
Sex (%)						
Male	96.0%	96.5%	84.0%	72.7%	68.6%	55.3%
Female	4.0	3.5	16.0	27.3	31.4	44.7
Race/ethnicity (%)						
White, non-Hispanic	76.4%	75.1%	59.2%	41.7%	66.2%	69.8%
Black/AA, non-Hispanic	5.6	5.8	23.0	35.7	15.7	12.9
Other or multi-race, non-Hispanic	6.9	7.3	6.0	6.6	6.6	6.0
Hispanic	11.1	11.9	11.7	16.0	11.5	11.2
Education for adults aged 18+ (%)						
Less than high school diploma	4.7%	5.0%	14.4%	16.0%	17.7%	15.9%
GED	3.9	3.3	12.2	11.7	11.7	10.8
High school diploma	15.7	13.4	28.1	26.3	29.8	28.1
Some college/associate degree	36.2	37.4	37.7	38.2	33.0	33.8
Completed college or more	39.5	41.0	7.6	7.8	7.8	11.3
Education for adults aged 25+ (%)						
Less than high school diploma	3.7%	4.0%	13.4%	15.9%	18.3%	16.1%
GED	4.3	3.7	12.8	12.4	11.9	10.9
High school diploma	13.9	11.8	29.0	25.3	29.9	28.0
Some college/associate degree	33.2	34.1	35.3	35.8	30.8	33.0
Completed college or more	44.9	46.4	9.4	10.6	9.2	12.0
Household poverty (%) <sup>2</sup>						
<100% FPL	13.6%	12.7%	40.6%	47.1%	44.9%	34.2%
100-<200% FPL	14.7	13.7	22.5	23.6	27.4	25.1
>200% FPL	64.8	66.2	29.7	22.6	18.4	32.3
Missing FPL	6.9	7.4	7.2	6.8	9.2	8.5
Household income (%)						
Less than \$10,000	7.4%	7.4%	27.2%	30.4%	29.1%	21.0%
\$10,000-\$24,999	14.1	12.6	26.2	30.1	35.3	27.6
\$25,000-\$49,999	14.1	13.1	23.6	21.5	21.8	25.6
\$50,000-\$99,999	28.9	30	14.2	12.2	9.1	18.3
\$100,000-\$199,999	24.5	25.2	6.9	4.6	4.1	6.4
\$200,000 or more	11.0	11.7	1.9	1.2	0.7	1.1
Number of users	315	289	506	1,186	551	11,402

**Notes and Sources:**

- Data are from Population Assessment of Tobacco and Health (PATH) Study Restricted-Use Files for adults.

<sup>1</sup> When respondent age was missing, imputed values for age were used as described in the PATH Study Restricted Use Files User Guide (United States Department of Health and Human Services, 2017).

<sup>2</sup> Household poverty is from field "3 level poverty status based on annual household income and HHS poverty guidelines." TI field is only available in Wave 1, not Wave 2 or Wave 3.

33. In Wave 2, of current premium cigar users 85% are white, 98% are male, and 62% are 35 years or older. In contrast, consumers of non-premium cigar products are 47-62% white and 64-85% male. See Table 3b.

34. Again, premium cigar users are more educated than non-premium cigar or cigarette users. In Wave 2, 80.5% of premium cigar users aged 25 and up had some higher-level education. This percentage for premium cigar users is larger than the ones for non-traditional cigar users (48.3%), cigarillo users (49.5%), filtered cigar users (40.0%) and cigarette users (44.9%). The fraction of college completion of premium cigar users among those age 25 and older also compares favorably to non-premium cigar or cigarette users with percentages of 13.9% for non-premium traditional cigar users, 11.7% for cigarillo users, 8.8% for filtered cigar users and 12.3% for cigarette users.

35. Finally, in Wave 2, 35.6% of premium cigar users had a household income of \$100,000 or more, as compared to 10.8% of non-premium traditional cigar, 8.6% of cigarillo, 3.8% of filtered cigar, and 7.5% of cigarette smokers.

Table 3b. *Demographic Characteristics of Adults, Aged 18 Years and Older, Current Smokers, Wave 2.*

	Premium Cigars		Non-Premium Cigars			Cigarettes
	Overall	Unflavored	Traditional	Cigarillos	Filtered	
			Cigars		Cigars	
	(1)	(2)	(3)	(4)	(5)	(6)
Age group (%)						
18-24	12.4%	11.4%	15.5%	27.5%	15.5%	12.5%
25-34	25.7	25.1	23.5	28.1	20.1	23.6
35-54	35.1	35.4	36.1	31.1	35.9	39.1
55+	26.8	28.1	25.0	13.3	28.4	24.7
Sex (%)						
Male	97.5%	97.7%	85.1%	75.0%	64.2%	54.8%
Female	2.5	2.3	14.9	25.0	35.8	45.2
Race/ethnicity (%)						
White, non-Hispanic	84.5%	84.1%	58.8%	47.4%	61.8%	68.4%
Black/AA, non-Hispanic	4.5	4.3	24.4	32.5	19.4	13.7
Other or multi-race, non-Hispanic	3.9	4.0	3.8	5.8	4.6	5.9
Hispanic	7.2	7.7	13.0	14.3	14.2	12.0
Education for adults aged 18+ (%)						
Less than high school diploma	3.5%	3.8%	15.7%	17.1%	21.3%	16.5%
GED	4.1	4.4	15.0	10.6	9.1	11.3
High school diploma	14.2	11.3	22.8	24.4	27.9	27.5
Some college/associate degree	33.0	33.5	34.4	38.0	33.7	33.2
Completed college or more	45.2	46.9	12.1	9.9	8.1	11.5
Education for adults aged 25+ (%)						
Less than high school diploma	3.1%	3.4%	15.1%	17.2%	22.2%	16.6%
GED	4.1	4.4	14.6	10.9	9.6	11.3
High school diploma	12.2	9.1	22.1	22.5	28.3	27.1
Some college/associate degree	31.4	32.3	34.4	37.8	31.2	32.6
Completed college or more	49.1	50.8	13.9	11.7	8.8	12.3
Household income (%)						
Less than \$10,000	4.4%	4.5%	27.5%	29.6%	39.6%	21.5%
\$10,000-\$24,999	9.3	7.6	25.5	27.0	28.3	27.4
\$25,000-\$49,999	18.8	18.1	22.0	17.5	17.4	24.2
\$50,000-\$99,999	32.0	32.1	14.2	17.2	10.8	19.4
\$100,000-\$199,999	25.4	27.0	9.8	7.1	2.8	6.3
\$200,000 or more	10.2	10.8	1.0	1.5	1.0	1.2
Number of users	270	248	243	790	473	9,694

**Notes and Sources:**

- Data are from Population Assessment of Tobacco and Health (PATH) Study Restricted-Use Files for adults.

36. In Wave 3, among adults, 81% of premium cigar users are white, as compared to 57% of non-premium traditional cigar smokers, 49% of cigarillo smokers and 57% of filtered cigar smokers. In addition, 98% of premium cigar users are male, as compared to 65%-83% for other cigar smokers and 54% of cigarette smokers. Premium cigar users are also older. Almost



no youth, aged 12-17, smoke premium cigars and, among adults, 67% of premium cigar users in Wave 3 were 35 years or older. See Table 3c.

37. Premium cigar smokers are also more educated and have higher incomes than those using non-premium cigar products or cigarette smokers. In Wave 3, 83.3% of premium cigar users aged 25 and up had some higher-level education, and 52.7% had completed college. In contrast, among the same age group approximately 43.6% of non-premium traditional cigar users, 51.5% of cigarillo users, 38.6% of filtered cigar users and 44.8% of cigarette smokers respectively had at least some college experience. Of non-premium traditional cigar users age 25 and older, 16.5% had completed college, with lower percentages observed for cigarillo users (11.1%), filtered cigar users (4.9%) and cigarette smokers (11.9%).

38. Finally, 44% of premium cigar users had a household income of \$100,000 or more, as compared to 13% of non-premium traditional cigar, 10% of cigarillo, 4% of filtered cigar, and 8% of cigarette smokers.

Table 3c. *Demographic Characteristics of Adults, Aged 18 Years and Older, Current Smokers, Wave 3.*

	Premium Cigars		Non-Premium Cigars			Cigarettes
	Overall	Unflavored	Traditional Cigars	Cigarillos	Filtered Cigars	
	(1)	(2)	(3)	(4)	(5)	(6)
Age group (%)						
18-24	9.4%	9.1%	10.8%	23.9%	14.9%	11.2%
25-34	23.6	25.2	17.6	30.8	21.3	23.2
35-54	31.1	28.0	32.8	29.1	34.5	39.0
55+	35.9	37.8	38.9	16.2	29.3	26.6
Sex (%)						
Male	97.5%	98.5%	82.9%	73.2%	65.2%	53.7%
Female	2.5	1.5	17.1	26.8	34.8	46.3
Race/ethnicity (%)						
White, non-Hispanic	80.7%	80.5%	56.6%	49.4%	56.9%	68.5%
Black/AA, non-Hispanic	7.4	6.8	27.1	33.4	22.0	13.8
Other or multi-race, non-Hispanic	6.5	7.3	5.4	5.4	6.1	5.7
Hispanic	5.3	5.3	10.9	11.8	15.0	12.0
Education for adults aged 18+ (%)						
Less than high school diploma	3.2%	3.2%	13.7%	13.8%	23.0%	17.2%
GED	2.2	1.5	11.3	10.2	7.9	11.0
High school diploma	12.4	8.3	32.9	26.9	31.1	27.4
Some college/associate degree	32.1	33.8	26.9	39.7	32.9	33.1
Completed college or more	50.1	53.2	15.2	9.4	5.0	11.3
Education for adults aged 25+ (%)						
Less than high school diploma	3.4%	3.3%	13.2%	13.0%	24.0%	17.3%
GED	1.9	1.3	12.0	10.8	8.1	11.1
High school diploma	11.5	7.6	31.1	24.7	29.3	26.8
Some college/associate degree	30.6	31.8	27.1	40.4	33.7	32.9
Completed college or more	52.7	56.0	16.5	11.1	4.9	11.9
Household income (%)						
Less than \$10,000	6.0%	5.2%	29.4%	28.6%	39.1%	21.0%
\$10,000-\$24,999	9.2	8.9	22.3	24.6	30.6	27.1
\$25,000-\$49,999	12.0	10.4	22.4	20.5	15.7	24.6
\$50,000-\$99,999	28.9	30.2	12.5	16.7	10.3	19.7
\$100,000-\$199,999	28.9	29.5	11.5	8.6	3.1	6.7
\$200,000 or more	15.0	15.9	1.9	0.9	1.2	1.0
Number of users	215	193	179	682	424	9,013

**Notes and Sources:**

- Data are from Population Assessment of Tobacco and Health (PATH) Study Restricted-Use Files for adults.

## **B. Frequency and Intensity of Premium Cigar Use**

39. Using the PATH data, we analyzed the frequency and intensity of tobacco use by cigar type and cigarettes. We found that of current users, premium cigar users are far less likely to smoke every day, smoke on substantially fewer days, and smoke fewer numbers of cigars per day than non-premium cigar or cigarette users. Again, as the prevalence of premium cigar smoking among youth was 0.08% or less, we focused our analysis on persons aged 18 and older. See Table 4a-Table 4c.

40. Premium cigar users are less likely to smoke every day. Of current users in Wave 1, 6.5% of premium cigar consumers used them daily. In comparison, 24.0% of non-premium traditional cigar smokers, 22.0% of cigarillo smokers, 37.3% of filtered cigar smokers, and 79.5% of cigarette smokers smoke every day. See Table 4a.

41. Premium cigar users smoke on fewer days than non-premium cigar or cigarette users. The median number of days smoked in past 30 days ranged from 1.7 days for premium cigar users, to 8.1 for non-premium traditional cigar users, 7.5 for cigarillo users, 14.0 days for filtered cigar users, and 29.4 days for cigarette users, in Wave 1.

42. Premium cigar users also use fewer cigars on each day in past 30 days than those using non-premium cigars or cigarettes. The median number of cigars per day in past 30 days ranged from 0.1 cigars for premium cigar users to 0.3 for non-premium cigar users, 0.3 for cigarillo users and 1.6 for filtered cigar users.<sup>24</sup> Cigarette smokers smoked a median of 10.1 cigarettes per day in past 30 days, in Wave 1.

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<sup>24</sup> Using Corey et al.'s methodology, if a PATH respondent replied that they smoked less than one cigar per day, we coded them as having smoked 0.50 cigars per day.

Table 4a. *Frequency and Intensity of Tobacco Use by Cigar Type and Cigarettes, Wave 1*

	Premium Cigars		Non-Premium Cigars			Cigarettes
	Overall	Unflavored	Traditional Cigars	Cigarillos	Filtered Cigars	
	(1)	(2)	(3)	(4)	(5)	(6)
Now smoke product every day						
Percentage	6.5%	6.9%	24.0%	22.0%	37.3%	79.5%
Confidence interval	(3.9-9.2%)	(4.1-9.6%)	(20.1-27.8%)	(19.7-24.2%)	(31.9-42.7%)	(78.5-80.6%)
Days smoked in past 30 days <sup>1</sup>						
Median	1.7	1.7	8.1	7.5	14.0	29.4
Interquartile range	(0.0-4.8)	(0.0-4.8)	(1.4-28.4)	(1.3-29.1)	(0.8-28.8)	(29.1-29.7)
Number of cigars or cigarettes per day on days smoked <sup>2</sup>						
Median	0.6	0.6	1.0	1.0	3.4	11.0
Interquartile range	(0.0-0.9)	(0.0-0.9)	(0.5-2.5)	(0.3-2.4)	(0.3-10.2)	(5.4-19.4)
Number of cigars or cigarettes per day in past 30 days <sup>2</sup>						
Median	0.1	0.1	0.3	0.3	1.6	10.1
Interquartile range	(0.0-0.2)	(0.0-0.2)	(0.1-1.9)	(0.1-2.0)	(0.1-9.5)	(5.0-19.6)
Number of users	315	289	506	1,186	551	11,402

**Notes and Sources:**

- Data are from Population Assessment of Tobacco and Health (PATH) Study Restricted-Use Files for adults.
- The median is the weighted middle value in a sequence of observations. The interquartile range represents the weighted 25<sup>th</sup> and 75<sup>th</sup> percentiles.

<sup>1</sup> Number of days smoked in the past 30 days is available for someday users. Everyday users are assumed to smoke on all 30 days.

<sup>2</sup> Respondents reporting smoking less than one cigar per day were assigned as smoking 0.5 cigars per day.

43. In Wave 2, 7.5% of current premium cigar users smoke every day. In comparison, 14.4% of non-premium traditional cigar, 15.6% of cigarillo, 37.4% of filtered cigar, and 76.0% of cigarette users smoke every day. The median number of days smoked in the past 30 days was 1.4 days for premium cigar users and 2.6 days for non-premium traditional cigar users, 4.1 days for cigarillo users, 12.8 for filtered cigar users and 29.4 days for cigarette users. The median number of cigars per day smoked in past 30 days is 0.1 cigars for premium cigar users and 0.1 for non-premium traditional cigar users, 0.2 for cigarillo users and 0.9 for filtered cigar users.<sup>25</sup> Cigarette smokers smoked a median of 9.8 cigarettes per day in past 30 days, in Wave 2. See Table 4b.

<sup>25</sup> Using Corey et al.'s methodology, if a PATH respondent replied that they smoked less than one cigar per day on days smoked, we coded them as having smoked 0.50 cigars per day.

Table 4b. *Frequency and Intensity of Tobacco Use by Cigar Type and Cigarettes, Wave 2*

	Premium Cigars		Non-Premium Cigars			Cigarettes
	Overall	Unflavored	Traditional Cigars	Cigarillos	Filtered Cigars	
	(1)	(2)	(3)	(4)	(5)	(6)
Now smoke product every day						
Percentage	7.5%	7.3%	14.4%	15.6%	37.4%	76.0%
Confidence interval	(3.5-11.4%)	(3.1-11.6%)	(9.5-19.3%)	(12.9-18.2%)	(32.8-42.0%)	(74.7-77.3%)
Days smoked in past 30 days <sup>1</sup>						
Median	1.4	1.4	2.6	4.1	12.8	29.4
Interquartile range	(0.0-4.0)	(0.0-4.1)	(0.3-11.4)	(0.8-16.5)	(1.5-29.4)	(29.0-29.7)
Number of cigars or cigarettes per day on days smoked <sup>2</sup>						
Median	0.6	0.6	0.6	0.8	2.6	9.7
Interquartile range	(0.0-0.8)	(0.0-0.8)	(0.1-1.4)	(0.2-1.7)	(0.5-9.1)	(4.6-19.3)
Number of cigars or cigarettes per day in past 30 days <sup>2</sup>						
Median	0.1	0.1	0.1	0.2	0.9	9.8
Interquartile range	(0.0-0.1)	(0.0-0.2)	(0.0-0.5)	(0.0-1.0)	(0.0-7.1)	(4.9-19.2)
Number of users	270	248	243	790	473	9,694

**Notes and Sources:**

- Data are from Population Assessment of Tobacco and Health (PATH) Study Restricted-Use Files for adults.
- The median is the weighted middle value in a sequence of observations. The interquartile range represents the weighted 25<sup>th</sup> and 75<sup>th</sup> percentiles.

<sup>1</sup> Number of days smoked in the past 30 days is available for someday users. Everyday users are assumed to smoke on all 30 days.

<sup>2</sup> Respondents reporting smoking less than one cigar per day were assigned as smoking 0.5 cigars per day.

44. The frequency and intensity of smoking decreased between Wave 1 and Wave 3 for all cigar types except for filtered cigars. The daily use of premium cigars decreased from 6.5% in Wave 1 to 3.9% in Wave 3, and was lower than that of all non-premium cigars in Wave 3 —21.9% for non-premium traditional cigars, 20.7% for cigarillos, and 40.9% for filtered cigars. In Wave 3, the median number of days smoked in the past 30 days was a low of 1.3 days for premium cigars and 4.7 days for non-premium traditional cigars, 4.4 for cigarillos, 14.5 for filtered cigars and 29.4 days for cigarette smokers. The median number of cigars per day smoked in past 30 days is 0.1 cigars for premium cigar users and 0.2 for non-premium traditional cigar users, 0.2 for cigarillo users and 0.9 for filtered cigar users.<sup>26</sup> Cigarette smokers smoked a median of 9.9 cigarettes per day in past 30 days, in Wave 3. See Table 4c.

<sup>26</sup> Using Corey et al.'s methodology, if a PATH respondent replied that they smoked less than one cigar per day, we coded them as having smoked 0.50 cigars per day.

Table 4c. *Frequency and Intensity of Tobacco Use by Cigar Type and Cigarettes, Wave 3*

	Premium Cigars		Non-Premium Cigars			Cigarettes
	Overall	Unflavored	Traditional Cigars	Cigarillos	Filtered Cigars	
	(1)	(2)	(3)	(4)	(5)	(6)
Now smoke product every day						
Percentage	3.9%	3.5%	21.9%	20.7%	40.9%	77.0%
Confidence interval	(1.4-6.3%)	(1.0-6.1%)	(13.8-29.9%)	(16.9-24.4%)	(33.8-47.9%)	(75.9-78.2%)
Days smoked in past 30 days <sup>1</sup>						
Median	1.3	1.3	4.7	4.4	14.5	29.4
Interquartile range	(0.0-4.2)	(0.0-4.3)	(0.8-24.3)	(0.7-22.6)	(1.6-29.4)	(29.0-29.7)
Number of cigars or cigarettes per day on days smoked <sup>2</sup>						
Median	0.6	0.6	0.8	0.8	2.7	9.7
Interquartile range	(0.0-0.8)	(0.0-0.8)	(0.2-1.8)	(0.2-1.8)	(0.5-9.3)	(4.5-19.3)
Number of cigars or cigarettes per day in past 30 days <sup>2</sup>						
Median	0.1	0.1	0.2	0.2	0.9	9.9
Interquartile range	(0.0-0.1)	(0.0-0.1)	(0.0-1.2)	(0.0-1.0)	(0.1-8.4)	(4.1-19.5)
Number of users	215	193	179	682	424	9,013

**Notes and Sources:**

- Data are from Population Assessment of Tobacco and Health (PATH) Study Restricted-Use Files for adults.
- The median is the weighted middle value in a sequence of observations. The interquartile range represents the weighted 25<sup>th</sup> and 75<sup>th</sup> percentiles.

<sup>1</sup> Number of days smoked in the past 30 days is available for someday users. Everyday users are assumed to smoke on all 30 days.

<sup>2</sup> Respondents reporting smoking less than one cigar per day were assigned as smoking 0.5 cigars per day.

### C. Premium Cigars, Tobacco Initiation and Progression to Use of Other Tobacco Products.

45. Using the PATH data, we analyzed tobacco initiation and the progression from non-regular to regular cigarette use. We analyzed the age at first regular use, the transition of cigar users to cigarette smoking between Wave 1 and Wave 3, and the percent of dual users of premium cigar and cigarette who started smoking traditional cigars before they started smoking cigarettes.

## 1. Age at Initiation

46. Most cigarette smokers experiment and progress to becoming established users during an “initiation window” between the ages of 12 and 24.<sup>27</sup> Using the PATH data, we analyzed the age at first regular use by cigar type and cigarettes, for current smokers in Wave 1, Wave 2 and Wave 3. See Table 5a, Table 5b, and Table 5c.

47. In Wave 1, premium cigar users were typically older at first regular use as compared to non-premium traditional cigar users, cigarillo users and cigarette users. For premium cigars, the median age at first regular use was 24.8 years, as compared to 19.4 years for non-premium traditional cigar users, 18.0 years for cigarillo users and 16.6 years for cigarette users. Filtered cigar smokers were generally older at initiation, with a median age at first regular use of 26.8 years. See Table 5a.

Table 5a. *Initiation, Median Age at First Regular use by Cigar Type and Cigarettes, Wave 1*

	Premium Cigars		Non-Premium Cigars			Cigarettes
	Overall	Unflavored	Traditional Cigars	Cigarillos	Filtered Cigars	
	(1)	(2)	(3)	(4)	(5)	(6)
Age at first regular use <sup>1</sup>						
Median	24.8	24.8	19.4	18.0	26.8	16.6
Interquartile range	(19.2-33.1)	(19.4-33.1)	(16.5-29.5)	(15.9-23.3)	(17.8-44.3)	(14.7-18.7)
Current age <sup>2</sup>						
Median	37.7	38.1	35.5	28.1	42.5	40.1
Interquartile range	(28.0-53.4)	(28.1-53.5)	(24.8-51.5)	(22.0-40.2)	(27.6-54.5)	(28.3-52.9)
Number of users	315	289	506	1,186	551	11,402

### Notes and Sources:

- Data are from Population Assessment of Tobacco and Health (PATH) Study Restricted-Use Files for adults.
- The median is the weighted middle value in a sequence of observations.

<sup>1</sup> Respondents reporting age at first regular use <6 years old were assigned a value of 6 years old.

<sup>2</sup> When respondent age was missing, imputed values for age were used as described in the PATH Study Restricted Use Files User Guide (United States Department of Health and Human Services, 2017).

<sup>27</sup> Trinidad, D. R., Pierce, J. P., Sargent, J. D., et al. (2017), “Susceptibility to Tobacco Product Use Among Youth in Wave 1 of the Population Assessment of Tobacco and Health (PATH) Study”, *Preventive Medicine*, 101, 8-14.

48. In Wave 2, the median age at first regular use was more similar for premium and non-premium traditional cigars, 27.6 years and 27.3 years respectively. For cigarillos, the median age at first regular use is 21.7 and for cigarettes, is 16.6. Filtered cigar users were 35.1 years old at first regular use, as measured by the median. See Table 5b.

Table 5b. *Initiation, Median Age at First Regular use by Cigar Type and Cigarettes, Wave 2*

	Premium Cigars		Non-Premium Cigars			Cigarettes
	Overall	Unflavored	Traditional Cigars	Cigarillos	Filtered Cigars	
	(1)	(2)	(3)	(4)	(5)	(6)
Age at first regular use <sup>1</sup>						
Median	27.6	27.8	27.3	21.7	35.1	16.6
Interquartile range	(20.6-39.1)	(21.4-39.4)	(17.9-43.6)	(17.5-34.0)	(20.6-49.7)	(14.7-18.9)
Current age						
Median	39.6	41.0	42.6	31.3	45.1	41.2
Interquartile range	(29.6-54.7)	(30.0-55.6)	(27.2-54.0)	(23.4-46.2)	(26.6-55.1)	(29.1-53.9)
Number of users	270	248	243	790	473	9,694

**Notes and Sources:**

- Data are from Population Assessment of Tobacco and Health (PATH) Study Restricted-Use Files for adults.
- The median is the weighted middle value in a sequence of observations.

<sup>1</sup> Respondents reporting age at first regular use <6 years old were assigned a value of 6 years old.

49. The median age at first regular use increased between Wave 1 and Wave 3 for each cigar type. In Wave 3, the median age at first regular use was 30.0 for premium cigars, 29.8 for non-premium traditional cigars, 24.2 for cigarillos, and 34.2 for filtered cigars. The median age at first regular use for cigarettes remained essentially unchanged at 16.7. See Table 5c.



Table 5c. *Initiation, Median Age at First Regular Use by Cigar Type and Cigarettes, Wave 3*

	<b>Premium Cigars</b>		<b>Non-Premium Cigars</b>			<b>Cigarettes</b>
	<b>Overall</b>	<b>Unflavored</b>	<b>Traditional Cigars</b>	<b>Cigarillos</b>	<b>Filtered Cigars</b>	
	(1)	(2)	(3)	(4)	(5)	(6)
Age at first regular use <sup>1</sup>						
Median	30.0	29.8	29.8	24.2	34.2	16.7
Interquartile range	(24.0-48.6)	(24.0-49.5)	(19.4-48.6)	(17.9-38.2)	(22.0-50.6)	(14.7-19.1)
Current age						
Median	44.5	46.0	49.0	31.9	43.3	42
Interquartile range	(30.7-58.2)	(30.5-58.6)	(31.8-62.1)	(24.2-47.1)	(27.4-56.3)	(29.6-54.8)
Number of users	215	193	179	682	424	9,013

**Notes and Sources:**

- Data are from Population Assessment of Tobacco and Health (PATH) Study Restricted-Use Files for adults.
- The median is the weighted middle value in a sequence of observations.

<sup>1</sup> Respondents reporting age at first regular use <6 years old were assigned a value of 6 years old.

## 2. Progression to Everyday Cigarette Smoking

50. Using the PATH data, we analyzed the cigar users' progression from non-regular cigarette smoking to regular cigarette smoking in two ways. In the first case, we analyzed the number of adult current smokers, by cigar type, that did not smoke cigarettes regularly in Wave 1, but became regular cigarette smokers by Wave 3. In the second case, we took all respondents that were current cigar smokers and current cigarette smokers, and determined what percentage of this group reported an age of first use for cigars that was lower than that of cigarettes.

### a. Current Cigar Smokers Transition to Regular Cigarette Smoking

51. In Table 6, we report the number of survey respondents that are current cigar smokers and that are also not everyday cigarette smokers, in Wave 1. For example, in Wave 1, 173 survey respondents were current premium cigar users and did not smoke cigarettes every day. Next, we report the number of these respondents who become everyday cigarette smokers as of Wave 3. For example, 5 of the 173 premium cigar and not-everyday cigarette smokers in Wave 1 became everyday cigarette smokers by Wave 3. In the bottom panel of the table, we convert these counts to percentages. Our results show that 2% of premium cigar and not-

everyday-cigarette smokers in Wave 1 became everyday cigarette smokers between Wave 1 and Wave 3. The percentage for premium cigar users is lower than the 9% for non-premium traditional cigar users, the 12% for cigarillo users, and the 26% for filtered cigar users that became everyday cigarette smokers between Wave 1 and Wave 3. Not only was the everyday cigarette smoking progression for current users of premium cigars statistically significantly lower than those of non-premium cigars, it was also statistically indistinguishable from the transition into everyday smoking for respondents who were not current users of any tobacco product as of Wave 1.

Table 6. *Progression from Current Cigar Smoker to Everyday Cigarette Smoker, 2013-2016*

	Current Users of					Not Current Tobacco Users
	Premium Cigars		Non-Premium Cigars			
	Overall	Unflavored	Traditional Cigars	Cigarillos	Filtered Cigars	
	(1)	(2)	(3)	(4)	(5)	
Number of Respondents						
Not Everyday Cigarette Users as of Wave 1	173	161	170	469	148	12,584
Progress to Everyday Cigarette Users in Wave 3	5	5	20	56	38	302
Remain as Not Everyday Cigarette Users in Wave 3	168	156	150	413	110	12,282
Weighted Percentage						
Not Everyday Cigarette Users as of Wave 1	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Progress to Everyday Cigarette Users in Wave 3						
Percentage	2.2%	2.3%	9.1%	11.5%	26.4%	1.1%
Confidence Interval	(0.1-4.3%)	(0.1-4.6%)	(5.6-12.6%)	(8.3-14.8%)	(19.0-33.7%)	(1.0-1.3%)
Remain as Not Everyday Cigarette Users in Wave 3						
Percentage	97.8%	97.7%	90.9%	88.5%	73.6%	98.9%
Confidence Interval	(95.7-99.9%)	(95.4-99.9%)	(87.4-94.4%)	(85.2-91.7%)	(66.3-81.0%)	(98.7-99.0%)

**Notes and Sources:**

- Data are from Population Assessment of Tobacco and Health (PATH) Study Restricted-Use Files for adults.
- Respondents who are defined as “Not Current Tobacco Users” are adult respondents who are not defined by PATH data as any of the following in Wave 1: Current Established Cigarette User, Current Established Dissolvable User, Current Established E-Cigarette user, Current Established Filtered Cigar User, Current Established Cigarillo User, Current Established Traditional Cigar User, Current Established Hookah User, Current Established Pipe User, Current Established Smokeless Tobacco User, or Current Established Snus User.
- Not Everyday Cigarette Users are respondents who chose “No” when asked “Have you ever smoked a cigarette, even one or two puffs?” or chose “Not at all” or “Some day” when asked “Do you now smoke cigarettes . . .” The respondents must be in both Wave 1 and Wave 3.
- Everyday Cigarette Users are respondents who chose “Every day” when asked “Do you now smoke cigarettes . . .” The respondents must be in both Wave 1 and Wave 3.

52. Similar results are obtained for transition into some day cigarette smoking. Our results show that 5.9% of premium cigar users who did not smoke cigarettes in Wave 1 became some day or everyday cigarette smokers in Wave 3. The percentage for premium cigar users is lower than the 13.2% for non-premium traditional cigar users, the 17.3% for cigarillo users, and the 29.5% for filtered cigar users that became cigarette smokers between Wave 1 and Wave 3.

Not only was the someday cigarette smoking progression for current users of premium cigars statistically significantly lower than those of non-premium cigars, it was also statistically indistinguishable from the transition into someday smoking for respondents who were not current users of any tobacco product as of Wave 1.

Table 7. *Progression from Current Cigar Smoker to Someday Cigarette Smoker, 2013-2016*

	Current Users of					Not Current Tobacco Users
	Premium Cigars		Non-Premium Cigars			
	Overall	Unflavored	Traditional Cigars	Cigarillos	Filtered Cigars	
	(1)	(2)	(3)	(4)	(5)	
Number of Respondents						
Not Someday Cigarette Users as of Wave 1	149	138	101	252	77	11,993
Progress to Someday Cigarette Users in Wave 3	9	9	15	48	20	596
Remain as Not Someday Cigarette Users in Wave 3	140	129	86	204	57	11,397
Weighted Percentage						
Not Someday Cigarette Users as of Wave 1	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Progress to Someday Cigarette Users in Wave 3						
Percentage	5.9%	6.4%	13.2%	17.3%	29.5%	2.5%
Confidence Interval	(1.7-10.0%)	(1.8-10.9%)	(5.8-20.6%)	(13.1-21.4%)	(19.3-39.7%)	(2.2-2.8%)
Remain as Not Someday Cigarette Users in Wave 3						
Percentage	94.1%	93.6%	86.8%	82.7%	70.5%	97.5%
Confidence Interval	(90.0-98.3%)	(89.1-98.2%)	(79.4-94.2%)	(78.6-86.9%)	(60.3-80.7%)	(97.2-97.8%)

**Notes and Sources:**

- Data are from Population Assessment of Tobacco and Health (PATH) Study Restricted-Use Files for adults.
- Respondents who are defined as “Not Current Tobacco Users” are adult respondents who are not defined by PATH data as any of the following in Wave 1: Current Established Cigarette User, Current Established Dissolvable User, Current Established E-Cigarette user, Current Established Filtered Cigar User, Current Established Cigarillo User, Current Established Traditional Cigar User, Current Established Hookah User, Current Established Pipe User, Current Established Smokeless Tobacco User, or Current Established Snus User.
- Not Someday Cigarette Users are respondents who chose “No” when asked “Have you ever smoked a cigarette, even one or two puffs?” or chose “Not at all” when asked “Do you now smoke cigarettes . . .” The respondent must be in both Wave 1 and Wave 3.
- Someday Cigarette Users are respondents who chose “Some day” or “Every day” when asked “Do you now smoke cigarettes . . .” The respondent must be in both Wave 1 and Wave 3.

**b. Which Tobacco Product Was Used First: Premium Cigars or Cigarettes?**

53. To determine whether premium cigar use progressed to cigarette use, we identified those respondents who currently used both premium cigars and cigarettes and determined the percentage of those who started smoking traditional cigars first. I relied on the following PATH study questions to conduct this analysis:

- How old were you the first time you smoked part or all of a traditional cigar, even one or two puffs?
- How old were you the first time you smoked part or all of a cigarette?

54. Note that the first question does not specify whether the traditional cigar was premium or not. In addition, no brand or product information was collected as a follow-up to this question. Hence we are not able to identify whether it was a premium or non-premium traditional cigar.

55. Table 8 shows that of adults who are current established premium cigar users and also current established cigarette smokers, 78.8% smoked cigarettes first before they started smoking traditional cigars—premium or non-premium, 10.1% started smoking traditional cigars before they started to smoke cigarettes and 11.0% started smoking traditional cigars and cigarettes at the same age.

Table 8. *First Traditional Cigar or Cigarette Use Among Current Premium Cigar and Cigarette Smokers*

	<b>Started Smoking</b> <hr/> <b>(1)</b>
<b>Cigarette first</b>	
Percentage	78.8%
Confidence Interval	(71.1% - 86.5%)
<b>Traditional cigars first</b>	
Percentage	10.1%
Confidence Interval	(3.6% - 16.7%)
<b>Both at the same age</b>	
Percentage	11.0%
Confidence Interval	(4.7% - 17.3%)
Number of users	101

**Notes and Source:**

- Data are from Population Assessment of Tobacco and Health (PATH) Study Restricted-Use Files for adult.
- Age when started smoking is identified by the following questions: "How old were you the first time you smoked part or all of a traditional cigar, even one or two puffs?" "How old were you the first time you smoked part or all of a cigarette?" These questions are only available in Wave 1, not Wave 2 or Wave 3.

#### **D. Dual Use of Premium Cigars and Other Tobacco Products**

56. As the prevalence of premium cigar use among youth is close to zero, we focused our analysis of the dual use of cigars and cigarettes on PATH respondents age 18 years and older. We found that, in Wave 1, the dual use of cigarettes and premium cigars was substantially lower than that of non-premium cigar products. We also found that the current premium cigar smoker typically did not smoke any cigarettes on any day in the past 30 days. See Table 9a-Table 9c.

57. Of current smokers in Wave 1, non-premium cigar users were more than twice as likely to be dual users than premium cigar users. Of current users, 29.0% of premium cigar users were also current cigarette users, as compared to 58.3% of non-premium traditional cigar users, 58.0% of cigarillo users and 66.0% of filtered cigar users. The median premium cigar user had not smoked any cigarettes on any day in the past 30 days – the median number of cigarette smoking days and the number of cigarettes smoked per day in past 30 days are both zero (0). In contrast, the median non-premium traditional cigar user smoked cigarettes on 29.0 days of the past 30-day period, and typically smoked 4.7 cigarettes per day in the past 30 days. The median cigarillo smoker smoked cigarettes on 19.9 days of the past 30-day period and smoked 3.0 cigarettes per day in the past 30 days. The median filtered cigar smoker smoked cigarettes on 29.2 days of the past 30-day period and smoked 7.8 cigarettes per day in the past 30 days.

Table 9a. *Dual Use of Cigars and Cigarettes, Wave 1*

	Premium Cigars		Non-Premium Cigars		
	Overall	Unflavored	Traditional Cigars	Cigarillos	Filtered Cigars
	(1)	(2)	(3)	(4)	(5)
Cigarette smoking status <sup>1</sup>					
Current smoker					
Percentage	29.0%	27.5%	58.3%	58.0%	66.0%
Confidence interval	(24.2-33.7%)	(22.5-32.6%)	(53.6-63.0%)	(54.4-61.6%)	(61.3-70.7%)
Former smoker					
Percentage	30.2%	32.0%	15.4%	10.6%	10.6%
Confidence interval	(24.3-36.1%)	(25.9-38.2%)	(11.8-19.0%)	(8.4-12.8%)	(7.5-13.8%)
Never smoker					
Percentage	40.9%	40.4%	26.3%	31.4%	23.4%
Confidence interval	(35.4-46.4%)	(34.5-46.3%)	(22.4-30.2%)	(28.2-34.6%)	(18.9-27.8%)
Now smoke cigarettes every day					
Percentage	24.8	23.5	54.5	50.3	65.2
Confidence interval	(20.3-29.3%)	(18.6-28.4%)	(49.1-59.9%)	(47.2-53.4%)	(60.6-69.9%)
Number of cigarette smoking days in past 30 days <sup>2</sup>					
Median	0.0	0.0	29.0	19.9	29.2
Interquartile range	(0.0-24.3)	(0.0-14.5)	(0.0-29.5)	(0.0-29.5)	(1.4-29.6)
Number of cigarettes per day on days smoked					
Median	0.0	0.0	5.1	4.2	9.2
Interquartile range	(0.0-3.2)	(0.0-2.6)	(0.0-18.6)	(0.0-14.7)	(0.0-18.9)
Number of cigarettes per day in past 30 days					
Median	0.0	0.0	4.7	3.0	7.8
Interquartile range	(0.0-1.4)	(0.0-1.2)	(0.0-18.5)	(0.0-14.8)	(0.0-18.8)
Number of users	315	289	506	1,186	551

**Notes and Sources:**

- Data are from Population Assessment of Tobacco and Health (PATH) Study Restricted-Use Files for adults.
- The median is the weighted middle value in a sequence of observations.

<sup>1</sup> Former cigarette smokers are those who have smoked at least 100 cigarettes in their lifetime and do not smoke cigarettes now. Never cigarette smokers are those who have smoked less than 100 cigarettes in their lifetime.

<sup>2</sup> Everyday smokers are assumed to smoke on all 30 days. Respondents who have never smoked are assumed to not have smoked on any days.

58. Of current users in Wave 2, 31.6% of premium cigar users were also current cigarette users, as compared to 55.9% of non-premium traditional cigar users, 61.4% of cigarillo users and 73.2% of filtered cigar users. The median number of cigarette smoking days and the number of cigarettes smoked per day remain at zero (0). In contrast, the median non-premium traditional cigar user smoked cigarettes on 14.0 days of the past 30-day period, and typically smoked 1.0 cigarettes per day in past 30 days. The median cigarillo smoker smoked cigarettes on 14.7 days of the past 30-day period and smoked 1.4 cigarettes per day in the past 30 days. The

median filtered cigar smoker smoked cigarettes on 28.3 days of the past 30-day period and smoked 4.8 cigarettes per day in past 30 days. See Table 9b.

Table 9b. *Dual Use of Cigars and Cigarettes, Wave 2*

	Premium Cigars		Non-Premium Cigars		
	Overall	Unflavored	Traditional Cigars	Cigarillos	Filtered Cigars
	(1)	(2)	(3)	(4)	(5)
Cigarette smoking status <sup>1</sup>					
Current smoker					
Percentage	31.6%	30.1%	55.9%	61.4%	73.2%
Confidence interval	(25.2-38.0%)	(23.5-36.7%)	(48.6-63.3%)	(57.4-65.3%)	(68.9-77.5%)
Former smoker					
Percentage	30.5%	33.0%	18.1%	15.9%	9.4%
Confidence interval	(23.6-37.3%)	(25.6-40.4%)	(13.1-23.1%)	(13.1-18.7%)	(6.2-12.5%)
Never smoker					
Percentage	37.9%	36.9%	26.0%	22.8%	17.4%
Confidence interval	(31.5-44.3%)	(30.1-43.6%)	(19.2-32.7%)	(19.6-26.0%)	(13.5-21.3%)
Now smoke cigarettes every day					
Percentage	18.3	16.2	45.9	45.2	59.4
Confidence interval	(12.7-23.9%)	(10.8-21.7%)	(38.6-53.3%)	(41.0-49.3%)	(55.0-63.8%)
Number of cigarette smoking days in past 30 days <sup>2</sup>					
Median	0.0	0.0	14.0	14.7	28.3
Interquartile range	(0.0-6.8)	(0.0-3.6)	(0.0-28.9)	(0.0-28.9)	(2.7-29.1)
Number of cigarettes per day on days smoked					
Median	0.0	0.0	2.3	3.0	6.6
Interquartile range	(0.0-2.0)	(0.0-1.7)	(0.0-14.0)	(0.0-11.3)	(0.6-18.3)
Number of cigarettes per day in past 30 days					
Median	0.0	0.0	1.0	1.4	4.8
Interquartile range	(0.0-0.8)	(0.0-0.2)	(0.0-13.1)	(0.0-9.8)	(0.1-14.9)
Number of users	270	248	243	790	473

**Notes and Sources:**

- Data are from Population Assessment of Tobacco and Health (PATH) Study Restricted-Use Files for adults.
- The median is the weighted middle value in a sequence of observations.

<sup>1</sup> Former cigarette smokers are those who have smoked at least 100 cigarettes in their lifetime and do not smoke cigarettes now. Never cigarette smokers are those who have smoked less than 100 cigarettes in their lifetime.

<sup>2</sup> Everyday smokers are assumed to smoke on all 30 days. Respondents who have never smoked are assumed to not have smoked on any days.

59. By Wave 3, the percentage of dual usage dropped to 23.8% for premium cigar users, still far below the 51.3% for non-premium traditional cigar users, 56.3% for cigarillos users, and 69.8% for filtered cigars. See Table 9c.

Table 9c. *Dual Use of Cigars and Cigarettes, Wave 3*

	Premium Cigars		Non-Premium Cigars		
	Overall	Unflavored	Traditional Cigars	Cigarillos	Filtered Cigars
	(1)	(2)	(3)	(4)	(5)
Cigarette smoking status <sup>1</sup>					
Current smoker					
Percentage	23.8%	24.0%	51.3%	56.3%	69.8%
Confidence interval	(17.1-30.5%)	(17.0-31.1%)	(41.5-61.1%)	(51.8-60.7%)	(64.4-75.3%)
Former smoker					
Percentage	40.1%	41.2%	28.6%	19.1%	11.0%
Confidence interval	(31.5-48.8%)	(31.7-50.8%)	(18.1-39.1%)	(15.7-22.5%)	(8.0-14.1%)
Never smoker					
Percentage	36.1%	34.7%	20.1%	24.6%	19.1%
Confidence interval	(27.4-44.8%)	(24.8-44.6%)	(11.4-28.8%)	(20.7-28.4%)	(13.2-25.0%)
Now smoke cigarettes every day					
Percentage	15.0	14.6	38.0	40.6	59.6
Confidence interval	(9.4-20.7%)	(8.7-20.4%)	(29.2-46.7%)	(36.1-45.0%)	(53.8-65.4%)
Number of cigarette smoking days in past 30 days <sup>2</sup>					
Median	0.0	0.0	1.6	8.0	28.3
Interquartile range	(0.0-0.5)	(0.0-0.6)	(0.0-28.6)	(0.0-27.5)	(2.2-29.2)
Number of cigarettes per day on days smoked					
Median	0.0	0.0	0.6	2.5	6.8
Interquartile range	(0.0-0.5)	(0.0-0.6)	(0.0-13.0)	(0.0-9.9)	(0.4-16.2)
Number of cigarettes per day in past 30 days					
Median	0.0	0.0	0.1	1.0	5.9
Interquartile range	(0.0-0.0)	(0.0-0.0)	(0.0-11.3)	(0.0-10.0)	(0.1-15.9)
Number of users	215	193	179	682	424

**Notes and Sources:**

- Data are from Population Assessment of Tobacco and Health (PATH) Study Restricted-Use Files for adults.
- The median is the weighted middle value in a sequence of observations.

<sup>1</sup> Former cigarette smokers are those who have smoked at least 100 cigarettes in their lifetime and do not smoke cigarettes now. Never cigarette smokers are those who have smoked less than 100 cigarettes in their lifetime.

<sup>2</sup> Everyday smokers are assumed to smoke on all 30 days. Respondents who have never smoked are assumed to not have smoked on any days.

60. Among current premium cigar users in Wave 1, those who are also current cigarette smokers do not smoke more premium cigars. They smoke premium cigars 1.1 days per month as compared to 1.9 days per month for those who are not current cigarette smokers. The median number of premium cigars used a day in the past 30 days was 0 for current cigarette smokers and 0.1 for non-cigarette smokers.



Table 10a. *Premium Cigar Smoking by Cigarette Smoking Status, Wave 1.*

	<b>Current Cigarette Smokers?</b>	
	<b>Yes</b>	<b>No</b>
	<b>(1)</b>	<b>(2)</b>
Now smoke premium cigars every day		
Percentage	4.5%	7.3%
Confidence interval	(0.2-8.7%)	(3.8-10.9%)
Days smoked premium cigars in past 30 days <sup>1</sup>		
Median	1.1	1.9
Interquartile range	(0.0-4.4)	(0.2-4.9)
Number of premium cigars per day on days smoked <sup>2</sup>		
Median	0.6	0.6
Interquartile range	(0.0-0.9)	(0.1-0.9)
Number of premium cigars per day in past 30 days <sup>2</sup>		
Median	0.0	0.1
Interquartile range	(0.0-0.2)	(0.0-0.2)
Number of users	101	214

**Notes and Sources:**

- Data are from Population Assessment of Tobacco and Health (PATH) Study Restricted-Use Files for adults.

- The median is the weighted middle value in a sequence of observations. The interquartile range represents the weighted 25<sup>th</sup> and 75<sup>th</sup> percentiles.

<sup>1</sup> Number of days smoked in the past 30 days is available for someday users. Everyday users are assumed to smoke on all 30 days.

<sup>2</sup> Respondents reporting smoking less than one cigar per day were assigned as smoking 0.5 cigars per day.

61. In Wave 2, as in Wave 1, there is no statistically significant difference in premium cigar usage between those who currently smoke cigarettes and those who do not. See Table 10b.

Table 10b. *Premium Cigar Smoking by Cigarette Smoking Status, Wave 2.*

	<b>Current Cigarette Smokers?</b>	
	<b>Yes</b>	<b>No</b>
	<b>(1)</b>	<b>(2)</b>
Now smoke premium cigars every day		
Percentage	5.8%	8.2%
Confidence interval	(1.5-10.1%)	(3.4-13.0%)
Days smoked premium cigars in past 30 days <sup>1</sup>		
Median	0.9	1.7
Interquartile range	(0.0-2.7)	(0.0-4.4)
Number of premium cigars per day on days smoked <sup>2</sup>		
Median	0.6	0.6
Interquartile range	(0.0-0.8)	(0.0-0.8)
Number of premium cigars per day in past 30 days <sup>2</sup>		
Median	0.0	0.1
Interquartile range	(0.0-0.1)	(0.0-0.2)
Number of users	84	186

**Notes and Sources:**

- Data are from Population Assessment of Tobacco and Health (PATH) Study Restricted-Use Files for adults.

- The median is the weighted middle value in a sequence of observations. The interquartile range represents the weighted 25<sup>th</sup> and 75<sup>th</sup> percentiles.

<sup>1</sup> Number of days smoked in the past 30 days is available for someday users. Everyday users are assumed to smoke on all 30 days.

<sup>2</sup> Respondents reporting smoking less than one cigar per day were assigned as smoking 0.5 cigars per day.

62. As in Waves 1 and 2, in Wave 3, there is no statistically significant difference in smoking premium cigar every day between those who currently smoke cigarettes and those who do not. See Table 10c.

Table 10c. *Premium Cigar Smoking by Cigarette Smoking Status, Wave 3.*

	<b>Current Cigarette Smokers?</b>	
	<b>Yes</b>	<b>No</b>
	<b>(1)</b>	<b>(2)</b>
Now smoke premium cigars every day		
Percentage	5.8%	3.3%
Confidence interval	(0.0-12.3%)	(0.7-5.9%)
Days smoked premium cigars in past 30 days <sup>1</sup>		
Median	0.7	1.5
Interquartile range	(0.0-2.7)	(0.2-5.4)
Number of premium cigars per day on days smoked <sup>2</sup>		
Median	0.5	0.7
Interquartile range	(0.0-0.8)	(0.1-0.9)
Number of premium cigars per day in past 30 days <sup>2</sup>		
Median	0.0	0.0
Interquartile range	(0.0-0.1)	(0.0-0.2)
Number of users	56	159

**Notes and Sources:**

- Data are from Population Assessment of Tobacco and Health (PATH) Study Restricted-Use Files for adults.

- The median is the weighted middle value in a sequence of observations. The interquartile range represents the weighted 25<sup>th</sup> and 75<sup>th</sup> percentiles.

<sup>1</sup> Number of days smoked in the past 30 days is available for someday users. Everyday users are assumed to smoke on all 30 days.

<sup>2</sup> Respondents reporting smoking less than one cigar per day were assigned as smoking 0.5 cigars per day.

#### IV. MISCELLANEOUS

63. My work is ongoing and my opinions are subject to revision based on additional economic and statistical analyses.

July 25, 2018

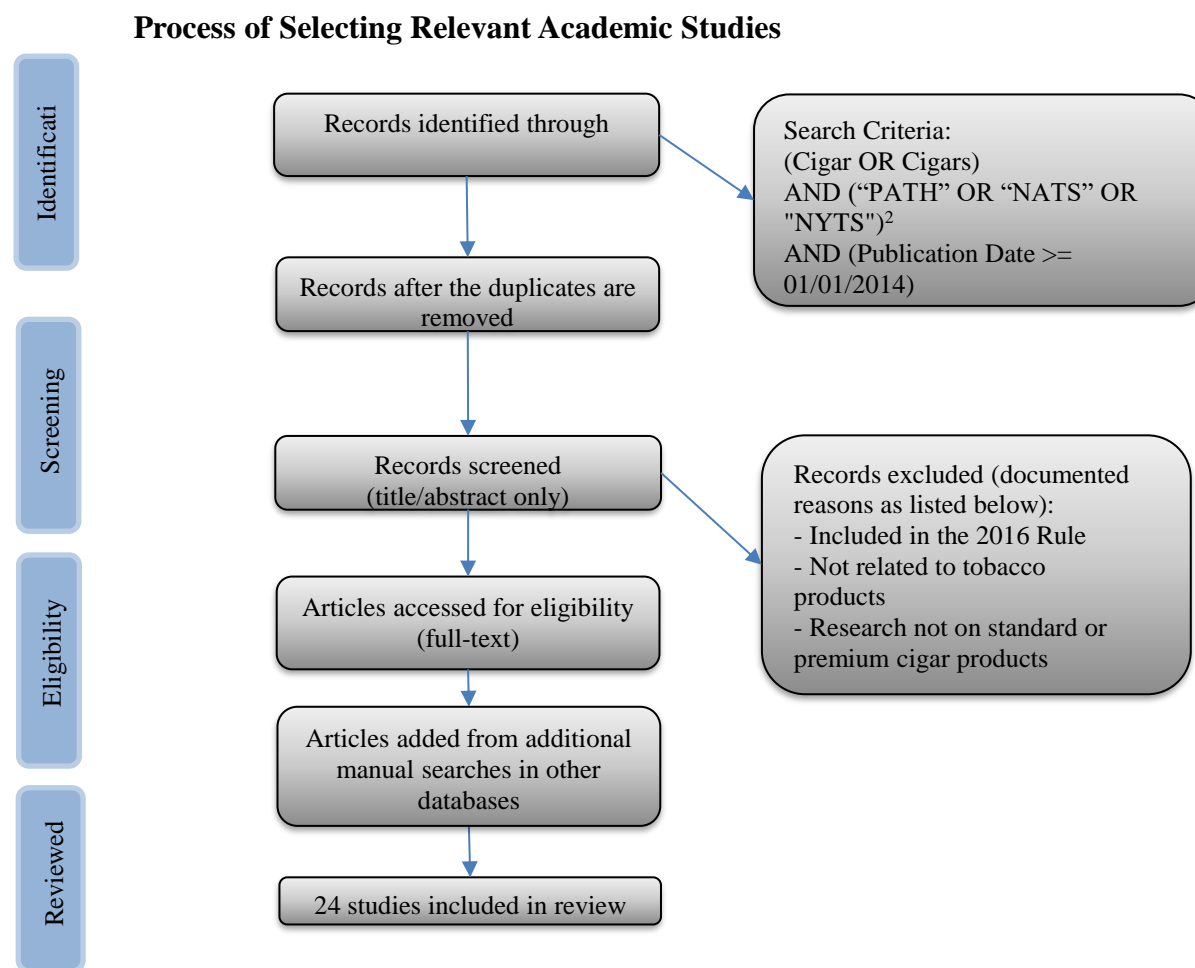



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## APPENDIX A

Table 11. *Literature Review*



### Notes and Sources:

<sup>1</sup> The databases searched are: PubMed, ISI Web of Science, and Embase.

<sup>2</sup> PATH: Population Assessment of Tobacco and Health; NATS: National Adult Tobacco Survey; NYTS: National Youth Tobacco Survey.

### Summary of Recent Studies on Traditional Cigar Smoking Patterns

No. (1)	Study Authors (2)	Title (3)	Types of Tobacco Products Analyzed (4)	Data Source (5)	Population (6)	Use Patterns of Tobacco Products Analyzed <sup>1</sup> (7)	Conclusion (8)
1.	Corey, et al. (2017)	US Adult Cigar Smoking Patterns, Purchasing Behaviors, and Reasons for Use According to Cigar Type: Findings from the Population Assessment of Tobacco and Health (PATH) Study, 2013-2014	Premium cigars, non-premium cigars, cigarillos, filtered cigars, and cigarettes. Premium cigars are defined by a brand's tobacco blends, components (e.g. long filler, whole leaf wrapper), and manufacturing process. Where brand information was unavailable, usual price paid per stick of ≥\$2 was applied to identify premium brands	PATH	Adult smokers and non-smokers (n = 32,320 participants aged 18 years and older; weighted response rate = 74.0%)	Initiation/Progression; Dual Use; Frequency of Use; Impact of Labelling/Advertising	Those smoking premium cigars tended to differ from those smoking non-premium cigars, cigarillos, and FCs (filtered cigars) including having users with higher socioeconomic status, lower smoking frequency, different purchasing behaviors (e.g., where and for how much cigars were bought) and reasons for use. Age at first regular use was higher for FCs (median: 26.8 years) and premium cigars (24.5 years) compared with non-premium cigars, cigarillos, and cigarettes (16.6–19.5 years; all p < .05). Currently smoking one or more of the other cigar products ranged from 64.0% for non-premium cigars to 16.8% for premium cigars. Prevalence of daily smoking was higher for FCs (37.3%), compared with all other cigar types (6.7%–25.3%; all p < .01); daily smoking was similar for non-premium cigars and cigarillos (p = 0.11). Endorsing advertising as a reason for smoking ranged from 9.7% for premium cigars to 15.1% for non-premium cigars. "That public figures smoke them" as a reason for smoking ranged from 12.1% for premium cigars to 21.0% for non-premium cigars. In terms of metrics - flavor, affordability, alternative to quitting tobacco altogether, similarity to the feeling of smoking a regular cigarette, tool to help quit/cut down cigarettes as reasons of smoking, premium cigars have the lowest percentage among all tobacco products listed in the analysis.
2.	Ambrose, et al. (2015)	Flavored Tobacco Product Use among US Youth Aged 12-17 Years, 2013-2014	Cigars (including traditional cigars, cigarillos, and filtered cigars), cigarettes, e-cigarettes, pipe tobacco, hookah, snus pouches, and other smokeless tobacco	PATH	13,651 youths aged 12-17 years old	Initiation/Progression	The majority of youth ever-users reported that the first tobacco product they used was flavored, including 88.7% of hookah users, 81% of e-cigarette users, 65.4% of ever-users of any cigar type, and 50.1% of ever cigarette smokers. For past 30-day youth tobacco users, 71.7% of cigars used were flavored. In addition, youth consistently reported product flavoring as a reason for use across all product types, including e-cigarettes (81.5%), hookahs (78.9%), cigars (73.8%), smokeless tobacco (69.3%), and snus patches (67.2%).
3.	California Medical Association (CMA) White Paper (2016)	Flavored and Mentholated Tobacco Products: Enticing a New Generation of Users	Cigars (including traditional cigars, little cigars, and cigarillos), smokeless tobacco, hookah tobacco, liquid nicotine solution, and menthol cigarettes	N/A	N/A	Initiation/Progression; Dependence; Labelling/Advertising	Tobacco use remains the chief risk factor for the leading causes of death in the state, and evidence shows that the tobacco industry continues to engage in efforts to entice a new generation of users by adding specific flavors to mask the harsh taste of tobacco, which does not reduce the negative health impacts of tobacco use. Flavors and menthol tobacco products skew user preferences to the younger users. These products are usually the "starter" products that lead to dependence and addiction to tobacco products and even increase use of multiple tobacco products concurrently.

4.	Conway, et al. (2018)	Co-occurrence of Tobacco Product Use, Substance Use, and Mental Health Problems among Youth: Findings from Wave 1 (2013-2014) of the Population Assessment of Tobacco and Health (PATH) Study	Cigarettes, e-cigarettes, traditional cigars, cigarillos, filtered cigars, pipe tobacco, hookah, smokeless tobacco (i.e. loose snus, moist snuff, dip, spit, or chewing tobacco), snus pouches, kreteks, bidis, and dissolvable tobacco	PATH	13,617 youth, aged 12-17 years old, participants of PATH Wave 1	Association between tobacco use and substance use and mental health problems	In multivariable regression analyses, use of each tobacco product was associated with substance use, particularly cigarillos and marijuana. Cigarette and cigarillo use were strongly associated with substance use problems and tobacco users were more likely to report internalizing and externalizing problems. Female tobacco users were more likely to have internalizing problems than male tobacco users. Poly-tobacco users were more likely than exclusive users to use substances and have mental health and substance use problems. In terms of cigars, users of any cigar had relatively higher severity of substance use problems and a relatively high ever-substance use compared to other tobacco products analyzed.
5.	Conway, et al. (2017)	Co-occurrence of tobacco product use, substance use, and mental health problems among adults: Findings from Wave 1 (2013-2014) of the Population Assessment of Tobacco and Health (PATH) Study	Cigarettes, e-cigarettes, traditional cigars, cigarillos, filtered cigars, pipe tobacco, hookah, smokeless tobacco (i.e. loose snus, moist snuff, dip, spit, or chewing tobacco), snus pouches, kreteks, bidis, and dissolvable tobacco	PATH	32,202 Adult (18+ years) participants of PATH Wave 1	Association between tobacco use and substance use and mental health problems	In multivariable regression analyses, tobacco users were more likely to use substances and experience mental health problems. This result was more pronounced among female subjects. Cigarette users were found to be more likely to have problematic alcohol and other drug use, while cigarillo users had the highest likelihood of a combination of marijuana and alcohol use. Hookah use was strongly associated with the use of alcohol, marijuana, and Ritalin.
6.	Dickinson, et al. (2016)	The Language of Cigar Use: Focus Group Findings on Cigar Product Terminology	Traditional cigars, cigarillos, and little cigars	Self conducted research on 16 focus groups	123 participants who were current cigar users in the U.S.	Labelling/Advertising	Participants used a variety of terms for each product subtype. Brand names were often used, as well as slang terms, including terms describing cigars modified for marijuana use. Some subtypes were less likely than others to be considered “cigars.” Participants had mixed opinions about whether users of cigar products are “smokers.” In terms of cigars, participants saw little cigars and cigarillos as being more common, daily-use, products than large/traditional cigars, which were viewed as something to smoke during leisure time or special occasions. Participants were less likely to view users of large/ traditional cigars as “smokers.”
7.	Hinds, et al. (2018)	Flavored Cigars Appeal to Younger, Female, and Racial/Ethnic Minority College Students	Cigars (including traditional cigars, filtered cigars, and cigarillos)	Marketing and Promotions across Colleges in Texas project (M-PACT)	523 18-29 year old college students who reported current (past 30-day) cigar use	Prevalence and correlates of flavored and non-flavored cigar use	68.3% of those smoking flavored cigars smoked cigarillos, as compared to 20.4% who smoked traditional cigars. 64.5% of those who smoked non-flavored cigars smoked traditional cigars as compared to 25.5% that were cigarillo smokers. Younger participants (18-24) had 2.17 greater odds of choosing flavored cigars as compared to older participants (25-29). The number of days of cigar use in the past 30 days was not associated with flavored cigar use.

8.	Kasza, et al. (2017)	Tobacco-Product Use by Adults and Youths in the United States in 2013 and 2014	Traditional cigars, cigarillos, filtered cigars, pipe tobacco, hookah, snus pouches, other smokeless tobacco, dissolvable tobacco, bidis, kreteks, cigarettes, and e-cigarettes	PATH	32,320 adults (18+) and 13,651 youths (12-17)	Dual Use; Frequency of Use; Prevalence	The prevalence of tobacco use (%) for youth aged 12-17 who had "ever used" a tobacco product was 21.8 for any tobacco product as compared to 2.3 for traditional cigars. For youth who had used a tobacco product in the past 30 days, prevalence was 8.9 for any tobacco product as compared to 0.7 for traditional cigars. The prevalence for youth using a tobacco product daily was 1.6 for any tobacco product, and was unable to be reliably estimated for traditional cigars. The prevalence of tobacco use for adults age 18 or older who had used a tobacco product in the past 30 days was 29.7 for any tobacco product as compared to 3.6 for traditional cigars. The prevalence for adults using a tobacco product daily was 19.7 for any tobacco product as compared to 0.3 for traditional cigars. (Approximately 40% of tobacco users, adults and youths used multiple tobacco products, in which cigarettes+e-cigarettes was the most common combination.)
9.	Kong, et al. (2017)	Adolescent and Young Adult Perceptions on Cigar Packaging: A Qualitative Study	Traditional cigars and cigarillos	Focus groups conducted in Connecticut in 2016	Study participants were Connecticut Adolescent (up to 17 years old) and Adults (18-25 years old) in New Haven County who had ever used a cigar (N=47)	Labelling/Advertising	Findings showed that adolescents and young adults identified many features of cigar packaging as attractive, such as flavors, price promotions, branding, and marketing claims. Participants were shown packaging for cigars (mostly cigarillos, with a few traditional cigars) and asked to identify characteristics that they found appealing. The appealing components identified were flavors (46.8%), price promotions (28.8%), branding (21.2%), marketing claims (e.g., "natural", 17.2%), product features (e.g., the word "cigarillos", 15.2%), number of cigars (8.0%), color (4.4%), re-sealable features (2.8%), and other (6.0%).
10.	Kurti, et al. (2017)	Tobacco and Nicotine Delivery Product Use in a National Sample of Pregnant Women	Cigars (including traditional cigars, cigarillos, and filtered cigars), cigarettes, e-cigarettes, pipe tobacco, hookah, snus pouches, other smokeless tobacco, and dissolvable tobacco	PATH	388 pregnant women 18 years or older	Prevalence and correlates of using tobacco products; Frequency of Use	13.8% maternal smoking prevalence among women whose average gestational age was 20.9 weeks (5-6 months) is consistent with an earlier study using 2002-2009 NSDUH data. Overall prevalence was highest for cigarettes (13.8%), followed by e-cigarettes (4.9%), hookah (2.5%) and cigars (2.3%), and below 1% for all other products. Prevalence of using other tobacco products is much higher among current smokers than the general population, with e-cigarettes (28.5%) most prevalent followed by cigars (14.0%), hookah (12.4%), smokeless (4.7%), snus (4.6%), and pipes (2.1%).

11.	Lopez, et al. (2018)	Tobacco and Nicotine Delivery Product Use in a U.S. National Sample of Women of Reproductive Age	Tobacco cigarettes, e-cigarettes, any cigar (traditional cigars, filtered cigars, and/or cigarillo), hookah, smokeless tobacco and snus, pipe tobacco, and dissolvable tobacco	PATH	12,848 women aged 15–44 who were not currently pregnant in the first wave of the PATH data, 2013–2014	Prevalence and correlates of using tobacco products; Dual Use	Cigarette smoking prevalence remains relatively high among women of reproductive age and strongly correlated with use of other tobacco products. Current cigarette smoking was the strongest correlate of current e-cigarette use (OR=65.7, 95% CI=44.8–96.5), cigar smoking (OR=19.2, 95% CI=14.1–26.1), and hookah use (OR=6.6, 95% CI=5.1–8.5). Use of other tobacco and nicotine delivery product was low among those who never smoked tobacco cigarettes. In terms of cigars, cigarette smoking was the strongest predictor of cigar smoking. Current and former cigarette smokers had 19.2 and 3.8 times greater odds of smoking cigars relative to never smokers, respectively. Those who were younger, non-White, had less than high school or some college education, or had used alcohol or illicit drugs in the past year were more likely to report any current cigar use.
12.	Miller, et al. (2015)	“You’re made to feel like a dirty filthy smoker when you’re not, cigar smoking is another thing all together.” Responses of Australian Cigar and Cigarillo Smokers to Plain Packaging	Premium cigars, premium cigarillos, non-premium cigarillos, and other cigars	Self conducted interviews and surveys in Australia	Interviewed premium cigar smokers (n=10); occasional premium cigar smokers and/or premium cigarillo smokers (n=14); non-premium cigarillo smokers (n=28); 268 respondents to the online survey of current cigar and cigarillo smokers in March 2014	Dual Use; Labelling/Advertising; Impact of Regulation	Premium cigar smokers had limited exposure to Plain Packaging (PP), with many purchasing fully branded cigars in boxes duty free or online, and singles in non-compliant packaging. Those who were exposed were concerned by the warnings, and felt more like "dirty smokers." Premium cigar smokers perceived minimal changes in taste, harm, and value. Occasional premium cigar and premium cigarillo smokers with higher PP exposure perceived cigar/package appeal and value had declined and noticed the Graphic Health Warnings (GHW). Online survey participants reported increased noticeability of GHWs (33%), decreased appeal of packaging (53%), and reduced consumption of cigars (42%) and cigarillos (44%) since PP implementation.
13.	Neff, et al. (2015)	Frequency of Tobacco Use Among Middle and High School Students - United States, 2014	Cigars (including traditional cigars, filtered cigars, and cigarillos), cigarettes, e-cigarettes, and smokeless tobacco	NYTS	22,007 U.S. students from public and private schools, grade 6-12. A nationally representative sample (response rate = 73.3%)	Dual Use; Frequency of Use; Dependence	An estimated 480,000 middle school and high school students smoked cigarettes, 390,000 used smokeless tobacco, 340,000 used e-cigarettes, and 170,000 smoked cigars on 20 or more days of the preceding 30 days. Among high school students who were current users, cigar smokers were least likely to have smoked 20 or more days in the past 30 days -- 42.0% of smokeless tobacco users, 31.6% of cigarette smokers, 15.5% of e-cigarettes users, and 13.1% of cigar smokers were frequent users. In turn, of current users, cigar smokers were most likely to have only smoked 1-2 days in the past 30 days (52.0 % for cigar smokers as compared to 26.6% for smokeless tobacco users). Similarly, for middle school students, cigar smokers were less likely to be frequent smokers (20 or more days in the past 30 days), and more likely to be occasional smokers, smoking 1-2 days in the preceding 30 days.
14.	Pierce, et al. (2017)	Receptivity to Tobacco Advertising and Susceptibility to Tobacco Products	Cigars (including traditional cigars, cigarillos, and filtered cigars), cigarettes, e-cigarettes, and smokeless tobacco	PATH	10,751 adolescents (12-17 years old) who had never used a tobacco product	Initiation/Progression; Labelling/Advertising	For youth aged 12-13 years old, 7.9% were receptive to ads for cigars as compared to 27.8% for e-cigarettes, 21.5% for cigarettes, and 14.8% for smokeless tobacco. For youth aged 16-17 years old, 12.6% were receptive to cigar ads as compared to 32.7% for e-cigarettes, 25% for cigarettes, and 20.5% for smokeless tobacco. 14-15 year olds had similar numbers as 16-17 year olds. In a multivariate logistic regression controlling for potential covariates, moderate to high receptivity to cigarettes, e-cigarettes, and smokeless tobacco was significantly associated with concurrent susceptibility to smoke cigarettes, which was not the case for moderate to high receptivity to cigar advertising.



15.	Pierce, et al. (2018)	Association Between Receptivity to Tobacco Advertising and Progression to Tobacco Use in Youth and Young Adults in the PATH Study	Cigars (including traditional cigars, cigarillos, and filtered cigars), electronic cigarettes, cigarettes, and smokeless tobacco products	PATH	10,989 respondents aged 12-24 who had no tobacco product use in Wave 1	Initiation/Progression; Labelling/Advertising	Receptivity to tobacco product advertising is substantial among US youth who are below the minimum required age to purchase tobacco products. Among young committed never users, receptivity is significantly associated with progression toward use within a 1-year period. In general, receptivity to cigar ads is lowest for all age groups, whereas receptivity to e-cigarette ads is highest.
16.	Protano, et al. (2017)	Second-hand Smoke Generated by Combustion and Electronic Smoking Devices Used in Real Scenarios: Ultrafine Particle Pollution and Age-Related Dose Assessment	Combustion (conventional and hand-rolled cigarettes, a cigar and tobacco pipe) and non-combustion (e-cigarette and IQOS®) devices	N/A	4 volunteer smokers (three male and one female of 60, 58, 53, and 37 years old), all of whom were employees of the Sapienza University of Rome	Characterization of smoke dispersal and second-hand smoke transmission	Aerosol measurements were carried out in a model room where both combustion and non-combustion devices were smoked. Regardless of the smoking device, the highest doses were received by infants, which reached $9.88 \times 10^8$ particles/kg bw during a cigar smoking session. Moreover, 60% to 80% of the particles deposited in the head region of a 3-month-old infant were smaller than 100nm and could be translocated to the brain via the olfactory bulb. The doses due to second-hand smoke from electronic devices were significantly lower, below $1.60 \times 10^8$ particles/kg bw, than those due to combustion devices. Dosimetry estimates were 50% to 110% higher for IQOS® than for e-cigarettes.
17.	Roberts, et al. (2017)	Rural versus Urban Use of Traditional and Emerging Tobacco Products in the United States, 2013-2014	Cigars, cigarillos, pipes, smokeless tobacco, e-cigarettes, cigarettes, and hookah	PATH	32,320 adults (18+)	Dual Use; Difference between Urban and Rural populations	No non-rural difference in the use of cigars, although the daily use of cigarettes and smokeless tobacco were higher in Rural populations, and the use of Cigarillos and Hookah were higher in Urban than Rural populations, at the $P < .001$ level.
18.	Rostron, et al. (2016)	Dependence Symptoms and Cessation Intentions among US Adult Daily Cigarette, Cigar, and E-cigarette Users, 2012-2013	Cigarettes, cigars (including large cigars, cigarillos, and little filtered cigars), and e-cigarettes	NATS	5,617 daily tobacco users that used a combination of cigars, cigarettes, and e-cigarettes (who either reported using a single product type every day or being a multi-product user and using at least one tobacco product every day)	Dual Use; Frequency of Use; Dependence	1) Among daily tobacco users, dual cigarette and cigar users show evidence of greater dependence symptoms -- they smoked more cigarettes per day (17.3 vs. 15.8), had shorter times to first tobacco use after waking (21.4 min vs. 25.9 min), and were more likely to report dependence symptoms (withdrawal and craving) than exclusive cigarette smokers. 2) Dual cigarette and e-cigarette users were more likely than exclusive cigarette smokers to report withdrawal and craving symptoms and cessation intentions. 3) Exclusive cigar and e-cigarette users were less likely to report dependence symptoms than users of other products, but more than a third of exclusive cigar users reported strong cravings for tobacco in the past 30 days.

19.	Singh, et al. (2016)	Tobacco Use Among Middle and High School Students--United States, 2011-2015	Cigarettes, cigars, smokeless tobacco, electronic cigarettes, hookahs, pipe tobacco, and bidis	NYTS	U.S. students in grades 6-12. Sample sizes and overall response rates were 2011: 18,866 (72.7%); 2012: 24,658 (73.6%); 2013: 18,406 (67.8%); 2014: 22,007 (73.3%); and 2015: 17,711 (63.4%)	Prevalence, Frequency of Use	In 2015, e-cigarettes were the most commonly used tobacco product among middle (5.3%) and high (16.0%) school students. During 2011-2015, current use of e-cigarettes and hookahs significantly increased for both middle school and high school students, whereas current use of conventional tobacco products, such as cigarettes and cigars decreased. During 2014-2015, current use of e-cigarettes increased among middle school students, whereas current use of hookahs decreased among high school students; in contrast, no change was observed in use of hookahs among middle school students, use of e-cigarettes among high school students, or use of cigarettes, cigars, smokeless tobacco, pipe tobacco, or bidis among middle and high school students. In 2015, an estimated 4.7 million middle and high school students were current tobacco product users.
20.	Soneji, et al. (2017)	Engagement with Online Tobacco Marketing and Associations with Tobacco Product Use among U.S. Youth	Cigars (including traditional cigars, cigarillos, and filtered cigars), cigarettes, e-cigarettes, pipe tobacco, hookah, snus pouches, dissolvable tobacco, bidis, kreteks, and smokeless tobacco	PATH	13,651 youths aged 12-17 years old	Initiation/Progression; Labelling/Advertising	12% of youth engaged in one or more forms of online tobacco marketing. Compared to no engagement, the odds of susceptibility to the use of any tobacco product among never-tobacco users was independently associated with the level of online engagement. Similarly, higher levels of receptivity to tobacco marketing in traditional media venues were also associated with these tobacco-related outcomes, independent of on-line engagement. The prevalence of susceptibility was lower for cigars than for cigarettes, and e-cigarettes despite the level of online engagement for both ever smokers and smokers that have used tobacco for the past 30 days. For example, for those who have ever smoked tobacco, the prevalence of susceptibility for cigars ranged from 6.7 (no tobacco product online engagement) to 26.0 (two or more types of tobacco product online engagement) as compared to 12.5 to 39.2 for cigarettes.
21.	Strong, et al. (2017)	Indicators of Dependence for Different Types of Tobacco Product Users: Descriptive Findings from Wave 1 (2013-2014) of the Population Assessment of Tobacco and Health (PATH) Study	Cigars (including traditional cigars, filtered cigars, and cigarillos), cigarettes, e-cigarettes, hookah, and smokeless tobacco products	PATH	14,287 current established users of tobacco products	Nicotine Dependence	The PATH study questionnaire included 24 tobacco dependence ("TD") symptoms derived from four primary instruments used to represent multiple domains of TD. With levels of TD anchored at 0 (SD=1.0) for cigarette only users, the mean TD were more than a full standard deviation lower for cigar only users (mean= -1.92, SD=2.11). The lowest levels of TD relative to cigarette smokers were seen in e-cigarette users only, cigar only users (lowest, TD=-1.92), and hookah only users.
22.	Strong, et al. (2018)	Marijuana Use among US Tobacco Users: Findings from Wave 1 of the Population Assessment of Tobacco Health (PATH) Study	Cigars (including traditional cigars, cigarillos, and filtered cigars), cigarettes, e-cigarettes, pipe tobacco, hookah, and smokeless tobacco	PATH	32,212 respondents from Wave 1 of the PATH Study	Correlation between tobacco use and marijuana use	1) When compared to non-current tobacco users, each tobacco user group except smokeless only users had higher odds of reporting current marijuana use. 2) Among current tobacco users, higher levels of tobacco dependence did not explain the relationship between tobacco use and marijuana use. 3) Concurrent marijuana use was associated with lower odds of attempts to quit tobacco (OR=0.86, 95% CI=0.79, 0.94, $p < 0.001$ ) and a higher probability (OR=1.35, 95% CI=1.21, 1.51, $p < 0.001$ ) of reporting a history of respiratory disease. 4) Marijuana use may represent an additive risk for respiratory harm among concurrent users of tobacco and marijuana. In terms of cigars, current cigar-only users had significantly higher odds of reporting current marijuana use than all other types of tobacco analyzed, but lower than the multiple product users.

23.	Trinidad, et al. (2017)	Susceptibility to Tobacco Product Use among Youth in Wave 1 of the Population Assessment of Tobacco and Health (PATH) Study	Cigars (including traditional cigars, cigarillos, and filtered cigars), cigarettes, e-cigarettes, pipe tobacco, hookah, smokeless tobacco, snus, dissolvable tobacco, bidis, and kreteks	PATH	13,651 adolescents, 13,589 parents, and 9,112 18-24 year old young adults	Initiation/Progression; Dual Use; Frequency of Use	The purpose of the study was to investigate susceptibility and ever use of tobacco products among adolescents and young adults in the U.S. Susceptibility is reflected by the number of "susceptible never users", which is defined by the authors who created a questionnaire and conducted a tobacco product uptake continuum from it. They found that susceptibility levels were lower for cigars (15.2%) as compared to cigarettes (28.6%). The reported ever use of cigars among adolescents ages 12-17 was approximately half that of cigarettes (7.4% for cigars as compared to 13.4% for cigarettes). The authors considered susceptible never users, non-current ever users and current users to be at risk for future established tobacco use in adulthood, and the proportion at risk for cigars is relatively low (22.9%) as compared to cigarettes (42.0%).
24.	Villanti, et al. (2017)	Flavored Tobacco Product Use in Youth and Adults: Findings from the First Wave of the PATH Study (2013-2014)	Traditional cigars, cigarillos, filtered cigars, pipe tobacco, hookah, snus pouches, other smokeless tobacco, dissolvable tobacco, cigarettes, e-cigarettes, kreteks, and bidis	PATH	32,320 adults (18+) and 13,651 youths (12-17)	Initiation/Progression	The prevalence of any current flavored cigar use among current tobacco users was higher in youth (20.6%) and young adults (18.4%) than adults (6.9%). Flavor was found to be a primary reason for using a given tobacco product, especially among youth.

**Notes and Sources:**

<sup>1</sup> Aspects of user patterns analyzed include initiation/progression, dual use, frequency of use, dependence, impact of labelling/advertising, impact of regulation, and other specific smoking patterns.

## APPENDIX B

Table 12a. *Unflavored Premium Cigar Smoking by Cigarette Smoking Status, Wave 1*

	<b>Current Cigarette Users?</b>	
	<b>Yes</b>	<b>No</b>
	<b>(1)</b>	<b>(2)</b>
Now smoke unflavored premium cigars every day		
Percentage	5.1%	7.5%
Confidence interval	(0.2-10.0%)	(3.9-11.2%)
Days smoked unflavored premium cigars in past 30 days <sup>1</sup>		
Median	1.0	1.9
Interquartile range	(0.0-4.2)	(0.2-4.9)
Number of unflavored premium cigars per day on days smoked <sup>2</sup>		
Median	0.6	0.6
Interquartile range	(0.0-0.9)	(0.1-0.9)
Number of unflavored premium cigars per day in past 30 days <sup>2</sup>		
Median	0.0	0.1
Interquartile range	(0.0-0.2)	(0.0-0.2)
Number of users	90	199

### Notes and Sources:

- Data are from Population Assessment of Tobacco and Health (PATH) Study Restricted-Use Files for adults.

- The median is the weighted middle value in a sequence of observations. The interquartile range represents the weighted 25<sup>th</sup> and 75<sup>th</sup> percentiles.

<sup>1</sup> Number of days smoked in the past 30 days is available for someday users. Everyday users are assumed to smoke on all 30 days.

<sup>2</sup> Respondents reporting smoking less than one cigar per day on days smoked were assigned as smoking 0.5 cigars per day.

Table 12b. *Unflavored Premium Cigar Smoking by Cigarette Smoking Status, Wave 2*

	<b>Current Cigarette Users?</b>	
	<b>Yes</b>	<b>No</b>
	<b>(1)</b>	<b>(2)</b>
Now smoke unflavored premium cigars every day		
Percentage	4.4%	8.5%
Confidence interval	(0.0-9.3%)	(3.4-13.7%)
Days smoked unflavored premium cigars in past 30 days <sup>1</sup>		
Median	1.0	1.8
Interquartile range	(0.0-2.6)	(0.0-4.5)
Number of unflavored premium cigars per day on days smoked <sup>2</sup>		
Median	0.6	0.6
Interquartile range	(0.0-0.9)	(0.0-0.8)
Number of unflavored premium cigars per day in past 30 days <sup>2</sup>		
Median	0.0	0.1
Interquartile range	(0.0-0.1)	(0.0-0.2)
Number of users	74	174

**Notes and Sources:**

- Data are from Population Assessment of Tobacco and Health (PATH) Study Restricted-Use Files for adults.

- The median is the weighted middle value in a sequence of observations. The interquartile range represents the weighted 25<sup>th</sup> and 75<sup>th</sup> percentiles.

<sup>1</sup> Number of days smoked in the past 30 days is available for someday users.

Everyday users are assumed to smoke on all 30 days.

<sup>2</sup> Respondents reporting smoking less than one cigar per day on days smoked were assigned as smoking 0.5 cigars per day.

Table 12c. *Unflavored Premium Cigar Smoking by Cigarette Smoking Status, Wave 3*

	<b>Current Cigarette Users?</b>	
	<b>Yes</b>	<b>No</b>
	<b>(1)</b>	<b>(2)</b>
Now smoke unflavored premium cigars every day		
Percentage	5.3%	3.0%
Confidence interval	(0.0-12.3%)	(0.4-5.5%)
Days smoked unflavored premium cigars in past 30 days <sup>1</sup>		
Median	0.5	1.5
Interquartile range	(0.0-2.4)	(0.1-5.8)
Number of unflavored premium cigars per day on days smoked <sup>2</sup>		
Median	0.5	0.6
Interquartile range	(0.0-0.8)	(0.1-0.8)
Number of unflavored premium cigars per day in past 30 days <sup>2</sup>		
Median	0.0	0.0
Interquartile range	(0.0-0.1)	(0.0-0.2)
Number of users	50	143

**Notes and Sources:**

- Data are from Population Assessment of Tobacco and Health (PATH) Study Restricted-Use Files for adults.

- The median is the weighted middle value in a sequence of observations. The interquartile range represents the weighted 25<sup>th</sup> and 75<sup>th</sup> percentiles.

<sup>1</sup> Number of days smoked in the past 30 days is available for someday users. Everyday users are assumed to smoke on all 30 days.

<sup>2</sup> Respondents reporting smoking less than one cigar per day on days smoked were assigned as smoking 0.5 cigars per day.