

**Testimony of Michael Tynan, Policy Officer
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Before the United States Senate Committee on Finance

July 29, 2014

Thank you Chairman Wyden, Ranking Member Hatch and members of the Committee. My name is Michael Tynan and I am the Policy Officer for the Public Health Division in the Oregon Health Authority. In that role I work on public health policy issues that aim to reduce the cause of death, disease and injury to Oregonians. Previous to that, I was at the Centers for Disease Control and Prevention (CDC) where I worked at CDC's Office on Smoking and Health. I have been invited here today to talk to you about studies I have published on changes that have happened since the Federal tobacco excise tax increased in 2009.

I am not here to speak for or against any piece of legislation. My full testimony, along with copies of the studies I reference, have also been submitted for the record.

Background

Tobacco use is the leading cause of death and disease in the United States. Each year, more than 480,000 people die from smoking and exposure to secondhand smoke. Smoking leads to cancer, heart disease and chronic lung disease and costs the United States at least \$293 billion in medical costs and lost productivity annually. According to CDC, an estimated 18.1% (42.1 million) of U.S. adults are current cigarette smokers. Overall smoking prevalence has declined from 20.9% in 2005 to 18.1% in 2012, and CDC reports that this is encouraging and likely reflects the success of tobacco control efforts across the country.

This January marked the 50th anniversary of Surgeon General Luther Terry's landmark report on Smoking and Health. Since that report's publication, the public health community and Americans have learned a lot about the impact smoking has on individual and population health.

In addition to learning about the impact of tobacco use on human health, we have also learned a lot about the tobacco industry. In a 2006 Federal racketeering case against the tobacco industry, a Federal judge ruled that the tobacco industry had engaged in a decades-long enterprise that conspired to hide the dangers of smoking and impact on human health.

The good news is we know how to end the tobacco use problem in this country. There are key evidence-based interventions that have been proven to lead tobacco-users to quit, prevent youth from starting to use tobacco and reduce consumption among tobacco users. These interventions include increasing tobacco taxes, implementing comprehensive

smoke-free laws, warning about the dangers of tobacco use with media campaigns, and increasing access to evidence-based cessation services.

Of this list of interventions, increasing the price of tobacco is one of the most effective tobacco prevention tools available for public health. And that is what I am here to talk to you about today.

Federal Cigarette Tax – 2009

Excise taxes are the most direct way for governments to increase the price of tobacco products. Every 10% increase in the price of cigarettes results in a 4% decline in consumption, and can have an even greater impact on youth and other price sensitive populations. Simply put, as cigarette and tobacco prices increase, people smoke less. Every state and the Federal government implements a tax on tobacco, with state cigarette taxes ranging from 17 cents per pack in Missouri to \$4.35 per pack in New York State. The national average state excise tax for cigarettes is \$1.54 per pack.

The Federal excise tax for tobacco products was increased on April 1, 2009. While the tax on most products (cigarettes, snuff and pipe tobacco) was increased by the same percentage, (see table) the tax on small cigars and roll-your-own tobacco increased by a greater amount to make those rates equivalent to the tax on cigarettes.

Federal Tobacco Tax Rates

Product	Tax prior to April 1, 2009	Tax as of April 1, 2009
Cigarettes	\$0.39 per pack of 20	\$1.01 per pack of 20
Small Cigars	\$0.04 per every 20	\$1.01 per every 20
Large Cigars	20.72% of sales price	52.75% of sales price
Snuff	\$0.59 per pound	\$1.51 per pound
Pipe Tobacco	\$1.01 per pound	\$2.83 per pound
Roll-Your-Own Tobacco	\$1.01 per pound	\$24.78 per pound

The issue we are discussing today is an unfortunate consequence of tax inequity between pipe tobacco and large cigars and other combustible products. As outlined in a Morbidity Mortality Weekly Report (MMWR) I authored with my CDC colleagues Gabbi Promoff, Tim McAfee and Terry Pechacek, the consumption of pipe tobacco and large cigars increased substantially after the federal tobacco excise tax was increased in 2009.

<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6130a1.htm>

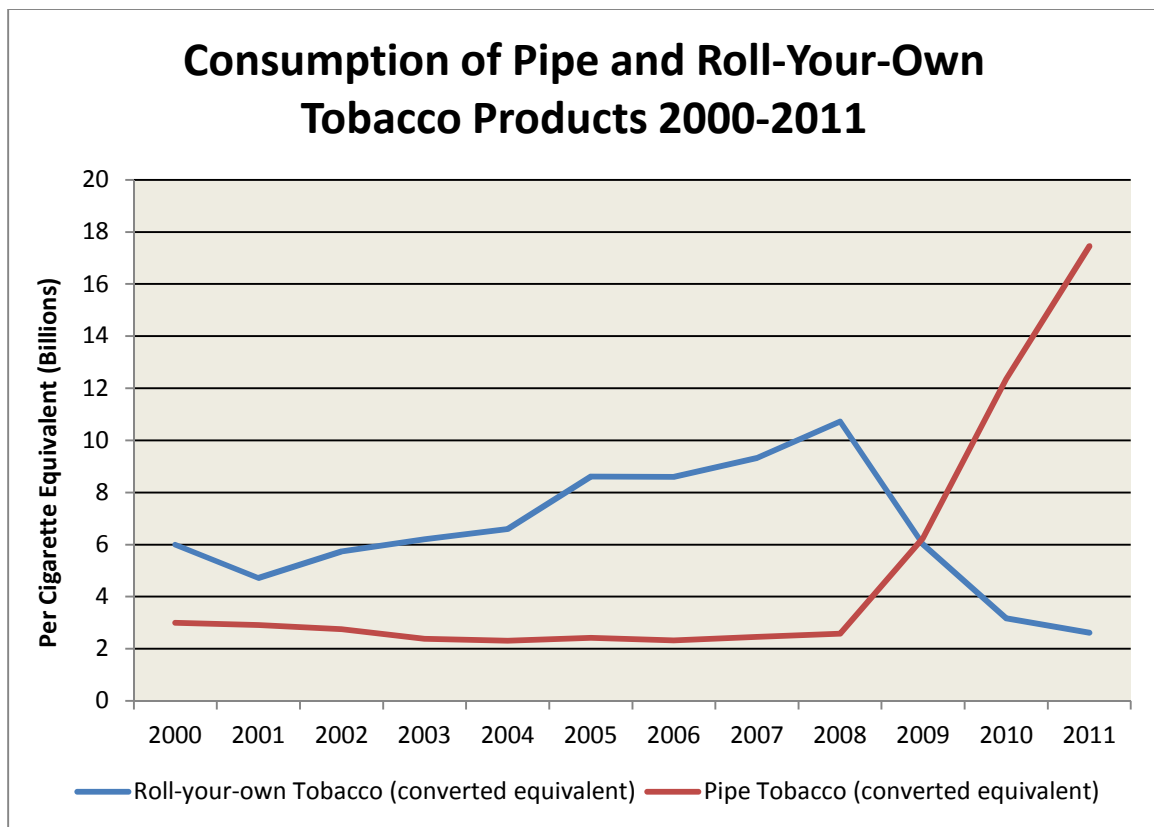
That MMWR attributed these changes to tax disparities created by the 2009 Federal tobacco tax increase that made 1) pipe tobacco less expensive than roll-your-own tobacco and manufactured cigarettes, and 2) large cigars less heavily taxed than small cigars and manufactured cigarettes.

Pipe and Roll-Your-Own Tobacco Consumption

Pipe tobacco and roll-your-own tobacco are typically classified for tax purposes based on the labeling, rather than physical characteristics (e.g. cut of loose tobacco, moisture profile).

Prior to the 2009 increase, the Federal tax on pipe and roll-your-own tobacco were the same. However, the 2009 tobacco tax changes resulted in the tax for roll-your-own tobacco being \$21.95 per pound more than the tax on pipe tobacco.

After the tax changes became effective, manufacturers began to re-label roll-your-own tobacco as pipe tobacco, making these products available to consumers at a lower price. Changes in consumption for pipe and roll-your-own tobacco were fully outlined in the MMWR, and are represented by the figure below, which calculates pipe and roll-your-own consumption based on Federal excise tax receipts.



Large and Small Cigar Consumption

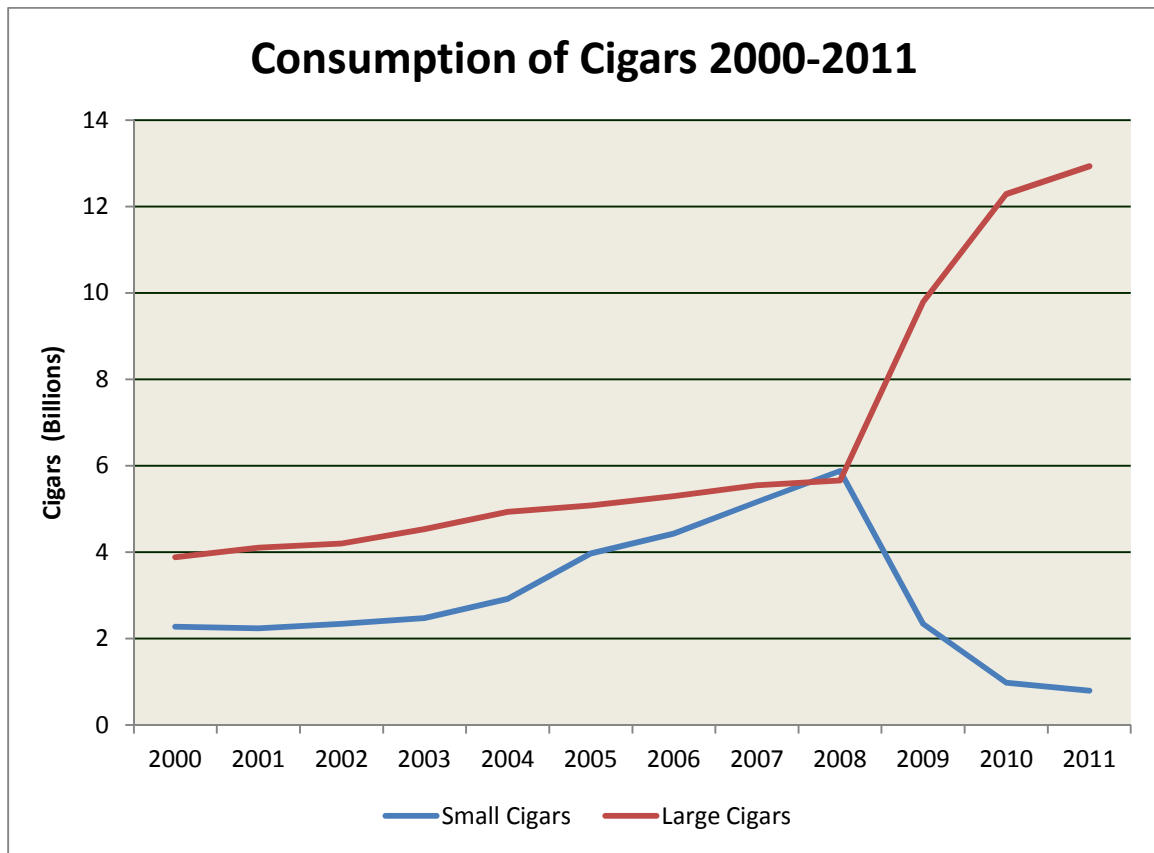
Cigars are primarily differentiated from cigarettes based on their wrapper, with cigarettes typically being wrapped in white paper and cigars being wrapped in brown tobacco leaf. Small cigars and large cigars are differentiated in the tax code based on their weight per thousand, with small cigars weighing 3 pounds or less per thousand.

For cigars, manufacturers were able to increase the per-unit weight of certain small cigars to take advantage of a lower tax when classified as large cigars. This is because large cigars are taxed based on product price, while small cigars are taxed per cigar. As a result of relatively minor increases in per-cigar weight, the new "large cigar" can appear almost identical to a "small cigar," which can resemble a typical cigarette.



Source: Government Accountability Office. Tobacco taxes: large disparities in rates for smoking products trigger significant market shifts to avoid higher taxes. Report 12-475.

Changes in consumption for cigars were fully outlined in the MMWR, and are represented by the figure below, which calculates cigar consumption based on Federal excise tax receipts.



Use of Automated Rolling Machines in Retail Stores

Tobacco retailers in some states began offering customers the use of automated cigarette rolling machines that could produce the equivalent of one carton of traditional cigarettes in approximately 8 minutes. By using tobacco labeled as pipe tobacco, cigarettes produced by these machines were much less expensive than factory-made cigarettes or cigarettes actually made from tobacco labeled as roll-your-own.

In a 2012 report published by the Government Accountability Office, researchers were able to use one of these machines to make 200 cigarettes using tobacco labeled as pipe tobacco for \$25. As a comparison, GAO reported that a carton of 200 discount cigarettes would cost \$51.50 and a carton of 200 brand-name cigarettes would cost \$69.50. (<http://www.gao.gov/assets/600/590192.pdf>).

Today, it is still possible to purchase a one pound bag of pipe tobacco online for about \$10 to use for roll-your-own purposes. Considering that 0.0325 oz (0.9 g) of tobacco is

needed to produce each cigarette, one pound of tobacco will produce 492 cigarettes (approximately two and half cartons). As a comparison, a single carton of 200 brand-name cigarettes costs approximately \$45 in Oregon.

First Study on the Impact on Federal Revenue

Using data from Federal tax receipts, I published a study with my colleague Dr. Daniel Morris that quantified the impact that these changes in consumption for pipe and roll-your-own tobacco had on revenue at the Federal and state level.

(<http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0036487>)

That study, which was published in 2012, found that from April 2009 through August 2011, Federal excise tax collections were lowered by \$985 million, and state excise tax and sales tax revenue declined by \$374 million. (Note: The reason state tobacco tax revenue declined is because most states levy taxes on pipe and RYO tobacco as a percentage of the product's overall price; therefore a lower Federal excise tax ultimately reduces states' excise and sales tax collections for tobacco products as well.)

After this study and the GAO report were published, a provision was included in the 2012 Federal Highway Bill that prohibited retailers from offering automated roll-your-own machines unless they registered as a tobacco manufacturer with the Federal government. Because of the fees and regulatory oversight associated with becoming a tobacco manufacturer, this provision was expected to remove these machines from retail space.

Continued Impact on Federal Revenue after the Highway Bill provision

To evaluate the impact of the tobacco tax provisions in the Federal Highway Bill, Dr. Daniel Morris, Tara Weston and I replicated the previously discussed study with data through June 2013.

(<http://tobaccocontrol.bmj.com/content/early/2014/04/10/tobaccocontrol-2013-051531>)

In this paper that was published in April 2014, we found that while the amount of roll-your-own tobacco taxed as pipe tobacco climbed steadily from April 2009 to June 2012, it leveled off following the July 2012 enactment of the Highway Bill.

Updating the lost revenue figure, our new study found that from April 2009 through June 2013, Federal excise tax collections were reduced by a total of \$2.36 billion.

This study found that while the Federal Highway Bill did, at least temporarily, level off the increase in pipe tobacco consumption, pipe tobacco rates did not return to pre-2009 levels or show any rate of decline. Therefore the Highway Bill was not effective at correcting the market shift that occurred in response to the tax disparity. Even without access to commercial rolling machines, smokers are continuing to take advantage of the tax disparity.

Impact on Health

Tax structures that provide tobacco users with an opportunity to switch to other low-cost tobacco products not only result in lower government revenue from these products, but also blunt the public health impact that excise tax increases would otherwise have on public health – specifically in preventing youth initiation, reducing tobacco consumption and prompting quit attempts. In this instance, roll-your-own and manufactured cigarette smokers who may otherwise quit instead have been able to maintain their addiction by switching to lower priced products.

Additionally, Food and Drug Administration tobacco regulations that apply to cigarettes and roll-your-own tobacco **do not fully** apply to pipe tobacco or cigars. This means that tobacco products that have a pipe label and cigarette-like cigars can be sold in candy flavors and with misleading descriptors such as light, mild and low. This is concerning to the public health community because the practice has been banned for cigarettes and roll-your-own and because, as the Surgeon General found, flavored tobacco products are appealing to youth.

Smoke from pipe tobacco, roll-your-own tobacco and cigars contain the same toxic chemicals as cigarette smoke. The evidence that the increase in cigar and pipe tobacco use is the result of cigarette smokers having access to low-priced alternative products is a public health concern, because the morbidity and mortality effects of other forms of combustible tobacco are similar to those of cigarettes.

Potential Policy Tools

At least two policy approaches can address these tax and policy loopholes:

- Establish objective standards to classify tobacco products
- Achieve tax parity among all tobacco products

One approach is for Federal regulatory agencies to distinguish objective standards for roll-your-own and pipe tobacco, rather than allowing companies to self-classify if a product is pipe or roll-your-own based on the label. Standards are needed based on measurable, objective characteristics.

The other approach—which is more direct—involves tax parity. The 2009 tax increase created tax parity for cigarettes and roll-your-own to discourage switching between these products. The issue we are discussing today is an unfortunate consequence of tax inequity between pipe tobacco and large cigars and other combustible products. Tax parity for combustible tobacco products would expand the public health benefit of the 2009 Federal tobacco tax increase.

Without a solution, states and the Federal government will continue to lose revenue, and there will be a low-cost alternative product available that is attractive to smokers who may have otherwise quit.

Fiscal and Policy Implications of Selling Pipe Tobacco for Roll-Your-Own Cigarettes in the United States

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Abstract

Background: The Federal excise tax was increased for tobacco products on April 1, 2009. While excise tax rates prior to the increase were the same for roll-your-own (RYO) and pipe tobacco, the tax on pipe tobacco was \$21.95 per pound less than the tax on RYO tobacco after the increase. Subsequently, tobacco manufacturers began labeling loose tobacco as pipe tobacco and marketing these products to RYO consumers at a lower price. Retailers refer to these products as “dual purpose” or “dual use” pipe tobacco.

Methods: Data on tobacco tax collections comes from the Alcohol and Tobacco Tax and Trade Bureau. Joinpoint software was used to identify changes in sales trends. Estimates were generated for the amount of pipe tobacco sold for RYO use and for Federal and state tax revenue lost through August 2011.

Results: Approximately 45 million pounds of pipe tobacco has been sold for RYO use from April 2009 to August 2011, lowering state and Federal revenue by over \$1.3 billion.

Conclusions: Marketing pipe tobacco as “dual purpose” and selling it for RYO use provides an opportunity to avoid paying higher cigarette prices. This blunts the public health impact excise tax increases would otherwise have on reducing tobacco use through higher prices. Selling pipe tobacco for RYO use decreases state and Federal revenue and also avoids regulations on flavored tobacco, banned descriptors, prohibitions on shipping, and reporting requirements.

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Competing Interests: The authors have read the journal's policy and have the following conflict: DM works for the Oregon Tobacco Prevention and Education Program and is paid in part with Measure 44 tobacco tax revenues. If the federal tobacco tax disparity between pipe and RYO tobacco were closed, tobacco-tax funded state programs like TPEP would see an increase in funding. This does not alter the authors' adherence to all the PLoS ONE policies on sharing data and materials.

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Introduction

Increasing the price of tobacco products is an evidence-based intervention that prevents initiation of tobacco use among adolescents and young adults, reduces consumption of tobacco, and increases quit attempts [1–4]. Excise taxes are the most direct way for governments to increase the price of tobacco products [2,4]. However, tobacco users may seek sources of lower priced tobacco products in response to a price increase instead of quitting tobacco use or reducing consumption, undermining the public health impact of the tax increase [5]. Strategies employed to avoid paying higher prices include, but are not limited to, crossing state borders to purchase products in states with a lower excise tax; purchasing no-to-low taxed products over the internet or at Native American reservations; purchasing no-to-low taxed products on the black market; switching to discount brands; or making roll-your-own (RYO) cigarettes [5–9]. Tobacco manufacturers have also reformulated or re-labeled products to capitalize on disparities between tax rates on different types of tobacco products and minimize the impact taxes have on product prices [10].

The Federal excise tax for tobacco products was increased on April 1, 2009 (Table 1) [11]. While the tax on cigarettes, snuff and pipe tobacco was increased by 158%, the tax on small cigars and RYO tobacco increased by a greater amount to make those rates equivalent to the tax levied on cigarettes [11]. Previously, the excise tax rates for RYO and pipe tobacco were the same, but after the increase, the tax on pipe tobacco was \$21.95 per pound less than the tax on RYO tobacco [11].

After this tax disparity developed, RYO manufacturers began to label loose tobacco as pipe tobacco, making these products available to RYO consumers at a lower price [10,12]. As Morris showed, as soon as the tax rates changed, the amount of loose tobacco taxed as RYO declined dramatically, while the amount of loose tobacco taxed as pipe tobacco increased [10]. This practice was possible because, even though pipe tobacco and RYO tobacco traditionally have different physical characteristics (i.e. pipe tobacco is coarser and moister than RYO tobacco), for practical purposes the products are taxed and regulated according to the label on the packaging [12–14]. A lower price was realized

Table 1. Change in federal excise tax for all tobacco products, April 1, 2009.

Product	Tax Prior to April 1, 2009	Tax as of April 1, 2009
Cigarettes	\$19.50 per 1,000	\$50.33 per 1,000
Small Cigars	\$1.83 per 1,000	\$50.33 per 1,000
Large Cigars	20.72% of sales price, \$0.05 maximum per cigar	52.75% of sales price, \$0.4026 maximum per cigar
Snuff	\$0.59 per pound	\$1.51 per pound
Pipe Tobacco	\$1.01 per pound	\$2.83 per pound
Roll Your Own	\$1.01 per pound	\$24.78 per pound

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because the Federal excise tax is paid by manufacturers who pass the cost to consumers through the final retail price. Additionally, because most states levy ad valorem taxes on pipe and RYO tobacco (i.e. taxes as a percentage of the product's overall price) [15], a lower Federal tax ultimately reduces states' excise and sales tax collections for tobacco products as well.

Loose tobacco labeled as pipe tobacco is being offered to consumers for making cigarettes. For example, starter kits are being sold that include a table-top injector machine, a box of cigarette tubes, and a bag of loose tobacco labeled "pipe tobacco" [16]. In addition, tobacco retailers in some states are offering customers the use of commercial cigarette rolling machines that can produce the equivalent of one carton of traditional cigarettes (i.e. 200 cigarettes) in approximately 8 minutes [17]. By using loose tobacco labeled as pipe tobacco, cigarettes produced by these machines are less expensive than factory-made cigarettes or cigarettes made from tobacco labeled as RYO [18–21].

Sellers of make-your-own cigarettes supplies use a range of terms to describe their products, including "dual purpose tobacco", "dual use tobacco" or "multi-use tobacco." This terminology helps prevent taxation of loose tobacco at the RYO rates. One online retailer posted "*This dual purpose tobacco is a highly recommended low-cost alternative to the standard cigarette tobacco. 'Dual Purpose Tobacco' is also called 'Alternative Tobacco' and 'Pipe Cut Tobacco.' 'Pipe-cut' pipe tobacco is the same as cigarette tobacco, with exception to the leaf being cut a little wider. Dual purpose pipe-cut tobacco is a dry tobacco works well with all of our cigarette machines and cigarette tubes.*" [22]

This study quantifies the effect the Federal tax increase had on loose tobacco sales, and describes the policy and revenue implications of marketing pipe tobacco as "dual purpose" and selling it for RYO use, including estimating the total Federal and state revenue lost.

Methods

Data on quantities of tobacco taxed in the United States between January 2007 and August 2011 come from monthly reports published by the Department of Treasury's Alcohol and Tobacco Tax and Trade Bureau (TTB) [23]. TTB collects Federal excise taxes on tobacco products that are intended for sale in the United States. State-specific pipe and RYO tobacco excise tax rates, sales tax rates on tobacco products, and cigarette sales volumes are from the Tax Burden on Tobacco [15].

Microsoft Excel 2010 and Adobe Illustrator CS3 were used to graph data. We used Joinpoint software to describe changes in loose tobacco sales trends (pipe tobacco plus RYO). The National Cancer Institute publishes Joinpoint software as a tool for assessing public health trends [24]. Joinpoint fits a segmented regression model to trend data, identifying the points where the segments meet and the trend changes (the "joinpoints") [25]. We specified a

linear model assuming constant variance in the dependent variable.

To calculate revenue losses, TTB data were used to estimate the amount of loose tobacco marketed as pipe tobacco and sold for RYO use since the April 2009 federal tax change. In the 12 months prior to the tax increase, an average 432,000 pounds of pipe tobacco were taxed per month; this number is the baseline for comparison. For each month from April 2009 through August 2011, the difference between the amount of pipe tobacco taxed and the baseline amount was assumed to indicate the quantity of pipe tobacco sold for RYO use. The sum of the monthly differences is the cumulative amount (Equation 1).

National estimate for lbs.of pipe

tobacco sold for RYO use =

$$\sum_{\text{April 2009}}^{\text{August 2011}} (\text{Taxed pipe tobacco} - \text{baseline taxed pipe tobacco}) \quad (1)$$

State-specific cigarette sales data are readily available, but few states report pipe tobacco sales data. To generate state-specific sales estimates for pipe tobacco sold for RYO use, we assumed that tobacco sales for RYO use were proportional to state cigarette sales [15]. We therefore used state cigarette sales data to establish the proportion of national cigarette sales that occurred in each state. These proportions were multiplied by the total estimated amount of pipe tobacco sold for RYO use nationally to get state-level estimates for each month. (Equation 2)

State estimate for lbs.of pipe tobacco sold for RYO use

= (National estimate for lbs. of pipe

tobacco sold for RYO use)

$$\times \left(\frac{\text{State cigarette sales 2008 through 2010}}{\text{National cigarette sales 2008 through 2010}} \right) \quad (2)$$

Most states levy the same excise tax rate on pipe and RYO tobacco, and base the tax on the wholesale or manufacturer's price for the product [15]. The manufacturer's price includes the federal tax, and after April 2009 the federal tax on pipe tobacco was \$21.95/lb. lower than the tax on RYO tobacco [26]. Because loose tobacco sold for RYO use is less expensive at retail when it is taxed as pipe tobacco, it results in lower state excise and sales taxes being levied on the now less expensive product. Equation 3 shows

the calculation for state excise tax losses used for most states. A similar calculation was used to estimate lost sales tax revenue.

Two states (ND and VT) tax RYO tobacco by the pound but tax pipe tobacco based on its price. For those states, we first calculated the amount of pipe tobacco sold for RYO use (Equation 2). We then calculated the total value of state excise tax for that amount of tobacco if it were taxed as RYO, then if it were taxed as pipe tobacco. The difference between the two totals represents the lost state excise tax revenue. Two states (AL and AZ) tax both pipe and RYO by the pound; for those states the difference in federal excise tax rates does not affect state excise tax collections, but does affect sales tax collections because sales taxes are based on price.

State estimate for excise tax revenue loss

$$= \sum_{\text{April}2009}^{\text{August}2011} ((\text{State estimate for lbs. of pipe tobacco sold for RYO use}) \times (\text{Difference in federal tax rates between RYO and pipe}) \times (\text{State excise tax rate on pipe tobacco})) \quad (3)$$

Results

Joinpoint analysis identified two inflection points in the loose tobacco sales data: January 2009, when Congress passed the Federal tax increase ($p < .001$); and April 2009, when the tax changes took effect ($p < .001$) (Figure 1). The fit line on the figure shows loose tobacco production was increasing by 15% annually prior to January 2009, mainly due to increases in RYO sales. This is consistent with studies showing gradual increases in RYO use in the United States [9]. Loose tobacco production dipped after the Federal tax increase was enacted, but only until the new tax rates went into effect. Since April 2009, loose tobacco production has increased by 31% annually, twice as fast as before the tax was changed.

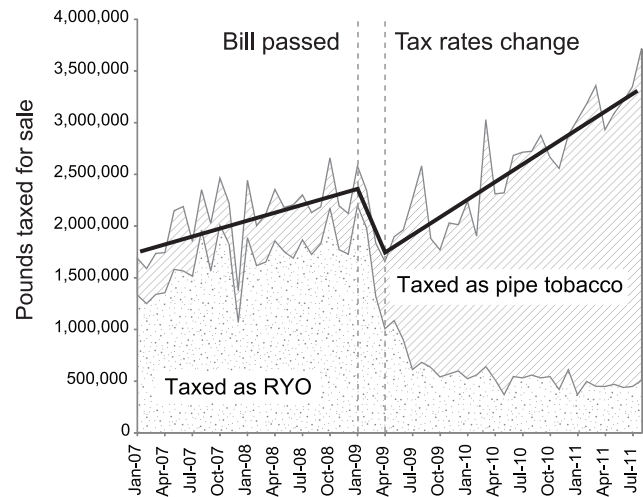
From April 2009 through August 2011, nearly 45 million pounds of pipe tobacco was sold for RYO use, lowering Federal excise tax collections by \$985 million and lowering state sales and excise tax collections by more than \$374 million (Table 2). When combined, over \$1.36 billion has been lost in total state and Federal revenue as the result of this practice.

State revenue losses range from \$63 million in Florida to \$117,000 in Vermont. Eleven states have each lost over \$10 million (CA, FL, IN, MI, MN, OH, NY, OK, TX, WA, WI), with lost revenue in those states accounting for 62 percent of all state revenue from RYO tobacco taxes lost.

Discussion

The tax discrepancy between RYO and pipe tobacco offered an opportunity for tobacco manufacturers to lower the price consumers pay for loose tobacco used for making RYO cigarettes. Our analysis indicates that this approach led to a substantial increase in the sale of loose tobacco sold for RYO purposes, and in overall loose tobacco sales.

While rates of make-your-own cigarette use in the United States were increasing slowly before the tax change [9], the dramatic shift in sales after April 2009 can be partially explained by manufacturers labeling loose tobacco as pipe tobacco, allowing retailers to



Data source: Alcohol and Tobacco Tax and Trade Bureau

Figure 1. Roll-your-own (RYO) and pipe tobacco sales in the United States, January 2007–August 2011. This stacked area graph shows the total amount of loose tobacco (RYO and pipe tobacco) sales in the United States. The jointpoint fit line shows loose tobacco production was increasing by 15% annually prior to January 2009, mainly due to increases in RYO sales. Loose tobacco production dipped after the Federal tax increase was enacted, but only until the new tax rates went into effect in April 2009. Since April 2009, loose tobacco production has increased by 31% annually, twice as fast as before the tax was changed.

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offer these products to RYO consumers at a lower price [12]. One factor that may have contributed to the sudden increase in RYO sales was the emergence of automated cigarette-rolling machines in retail stores.

Federal government and state government agencies have taken actions to attempt to curtail these tax revenue losses. For example, TTB, in its authority as the agency responsible for collecting Federal excise taxes, issued a ruling in September 2010 that found that retailers offering cigarette rolling machines are manufacturers of tobacco products, and are thus required to pay the Federal tax on all cigarettes that are produced [17]. Retailers sued TTB and a preliminary injunction was issued by the United States District Court for the Northern District of Ohio on December 14, 2010, preventing TTB from enforcing its ruling while the case remains pending [27]. As of March 2012 this court case was still pending. At the state level, New Hampshire's State Supreme Court ruled that by offering cigarette rolling machines, retailers would be classified as cigarette manufacturers and as a result would be subject to the Master Settlement Agreement, and be required to submit payments to the state for each cigarette that is produced [28]. Additionally, in March 2011, Arkansas enacted a law to prohibit licensed tobacco retailers from possessing or otherwise utilizing a cigarette rolling machine [29]. Also, the Wisconsin Department of Revenue issued a notice in September 2011 that ruled that retailers that offer cigarette rolling machines are classified as manufactures, and considers the final product to be a manufactured cigarette subject to cigarette excise taxes [30].

Selling pipe tobacco for RYO use avoids other laws and regulations as well. For example, the Prevent All Cigarette Trafficking (PACT) Act of 2009 prohibits the U.S. Postal Service from shipping cigarettes, RYO, and smokeless tobacco, but does not prohibit shipping pipe tobacco [31]. This allows internet sites to continue to sell and ship pipe tobacco marketed for RYO use.

Table 2. \$374 million in state revenue losses from RYO sold as pipe tobacco, April 2009–August 2011.

State	Revenue lost	State	Revenue lost
Florida	\$63,090,040	Mississippi	\$3,621,319
Texas	\$31,230,931	Nevada	\$3,593,092
California	\$27,729,785	Connecticut	\$3,155,720
New York	\$16,949,733	Maryland	\$2,948,031
Wisconsin	\$16,648,628	Pennsylvania	\$2,774,241
Oklahoma	\$16,051,628	South Carolina	\$2,738,305
Washington	\$13,239,829	Rhode Island	\$2,659,804
Minnesota	\$13,049,342	Idaho	\$2,453,330
Michigan	\$12,718,593	Hawaii	\$2,418,164
Ohio	\$10,417,761	Utah	\$2,029,489
Indiana	\$10,083,434	Nebraska	\$1,777,368
Arkansas	\$9,679,677	West Virginia	\$1,681,977
Illinois	\$9,372,385	Montana	\$1,524,148
Louisiana	\$8,662,924	Alaska	\$1,495,507
North Carolina	\$7,737,982	Kansas	\$1,353,789
Kentucky	\$7,621,484	New Mexico	\$1,267,201
Oregon	\$7,505,630	Maine	\$1,160,792
New Jersey	\$6,937,258	Delaware	\$1,005,273
Colorado	\$6,044,448	South Dakota	\$990,878
Iowa	\$6,016,351	Alabama	\$874,862
Massachusetts	\$5,834,113	Wyoming	\$632,761
Virginia	\$5,430,809	Arizona	\$627,551
Missouri	\$5,257,990	North Dakota	\$457,065
Georgia	\$5,132,795	District of Columbia	\$222,772
New Hampshire	\$4,429,013	Vermont	\$116,874
Tennessee	\$3,954,684		

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Further, the PACT Act requires sellers to report on quantities of cigarettes, RYO, and smokeless tobacco shipped to each state and tax administrators use this information to ensure all state taxes have been paid. There is no such reporting requirement on sales of pipe tobacco.

Additionally, the Family Smoking Prevention and Tobacco Control Act (Tobacco Control Act) prohibits candy-flavored cigarettes and RYO, but does not prohibit flavorings in pipe tobacco [32]. Brands of pipe tobacco sold for RYO use come in blackberry, black cherry, and vanilla flavors [22]. The Tobacco Control Act also prohibits the use of the descriptors “light,”

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“mild,” or “low,” or similar descriptors in tobacco product labeling or advertising [32]. However, some pipe tobacco brands sold for RYO use still carry these descriptors [33].

This study has at least five limitations. First, we assumed that all pipe tobacco sales that exceeded the April 2009 baseline represented sales of pipe tobacco marketed for RYO use. This appears to be a reasonable assumption, given trends in pipe tobacco sales prior to the April 2009 tax increase. Second, for this study, the proportion of national cigarette sales that occur in each state is used as a proxy for the proportion of RYO tobacco sales in each state, causing actual RYO and pipe tobacco sales to vary from the estimates presented. This calculation also does not take into account different excise tax rates on non-cigarette tobacco products, which could further explain state-to-state variation in RYO tobacco use. Third, estimates do not factor in distributor or retailer markups. State excise and sales taxes are levied on products after these markups. Fourth, revenue lost estimates do not account for background trends in pipe tobacco sales prior to April 2009, although pipe tobacco sales were relatively flat during this period [23]. Finally, this study did not attempt to quantify changes in the number of taxed packs of cigarettes sold due to smokers switching from manufactured cigarettes to make-your-own cigarettes. Overall, these limitations mean our revenue loss estimates are likely conservative.

Conclusion

Increasing excise taxes is one of the most effective evidence-based strategies for reducing tobacco use [1–4]. However, tax structures that provide tobacco users with an opportunity to switch to other low-cost tobacco products not only result in lower Federal and state revenue from these products, but also blunt the public health impact that excise tax increases would otherwise have on preventing youth initiation, reducing cigarette consumption and prompting quit attempts. In this instance, RYO and traditional cigarette smokers who may otherwise quit can instead maintain their addiction with lower priced products.

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Author Contributions

Conceived and designed the experiments: DSM MAT. Performed the experiments: DSM. Analyzed the data: DSM. Wrote the paper: DSM MAT.

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Continued implications of taxing roll-your-own tobacco as pipe tobacco in the USA

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ABSTRACT

Background In 2009, a US\$21.95 per pound disparity was created in the Federal excise tax between roll-your-own cigarette tobacco (RYO) and pipe tobacco in the USA. After this disparity was created, pipe tobacco sales increased and RYO sales declined as some manufacturers repackaged roll-your-own tobacco as pipe tobacco and retailers began to offer cigarette rolling machines for consumers to use. A Federal law was passed in 2012 limiting the availability of these machines, however, it was unclear what impact this law had on the sales of roll-your-own tobacco labelled as pipe tobacco.

Methods The quantity of RYO sold as pipe tobacco each month was estimated using objective data on Federal excise taxes.

Results From April 2009 through June 2013, 107 million pounds of RYO were sold as pipe tobacco, reducing Federal excise tax collections by US\$2.36 billion. The amount of RYO taxed as pipe tobacco climbed steadily and then levelled off following the July 2012 Federal law.

Conclusions The Federal law did not correct the market shift that occurred in pipe and RYO sales beginning in 2009. Even without access to commercial rolling machines, smokers are continuing to take advantage of the tax disparity. Without a solution, states will continue to lose revenue, and smokers who would otherwise quit will continue to have a low-cost alternative product available for purchase. Potential solutions include: (1) US Treasury Department distinguishing between RYO and pipe tobacco based on physical characteristics and (2) changing the Federal excise tax so that RYO and pipe tobacco are taxed at the same rate.

INTRODUCTION

Increasing the price of tobacco products is among the most effective methods to reduce tobacco use, prompt cessation and prevent youth initiation.^{1 2} Increasing taxes is the most direct way for governments to increase cigarette prices.² Federal taxes on all tobacco products increased in the USA on 1 April 2009, but not by the same amount.³ A US \$21.95 per pound tax disparity was created between roll-your-own cigarette tobacco (RYO) and pipe tobacco, when previously the taxes on these products had been the same.⁴ After the tax change, pipe tobacco sales increased and RYO sales declined in a manner that was described by the US Government Accountability Office as a 'significant market shift to avoid higher taxes'.⁴ A previous analysis found that from April 2009 through August 2011, smokers avoided paying over \$1 billion in state and Federal tobacco taxes by making cigarettes with RYO labelled as pipe tobacco.⁵

According to Federal law, RYO is defined as 'any tobacco which, because of its appearance, type, packaging, or labelling, is suitable for use and likely to be offered to, or purchased by, consumers as tobacco for making cigarettes or cigars, or for use as wrappers thereof'.^{6 7} Even though pipe tobacco and RYO have different physical characteristics (ie, pipe tobacco is coarser and moister than RYO), in practice, the products are taxed and regulated according to how manufacturers label them. After the Federal tobacco tax changed in 2009, manufacturers repackaged RYO as pipe tobacco,^{8 9} causing the market shift in sales to occur. Some manufacturers have acknowledged that they knew the tobacco would be used for making cigarettes, even though it was labelled as pipe tobacco.⁴

According to findings from the International Tobacco Control (ITC) Four Country Survey, RYO cigarette users are more likely to be male, younger, have a lower income, and typically cite cost as a reason for use.^{10 11}

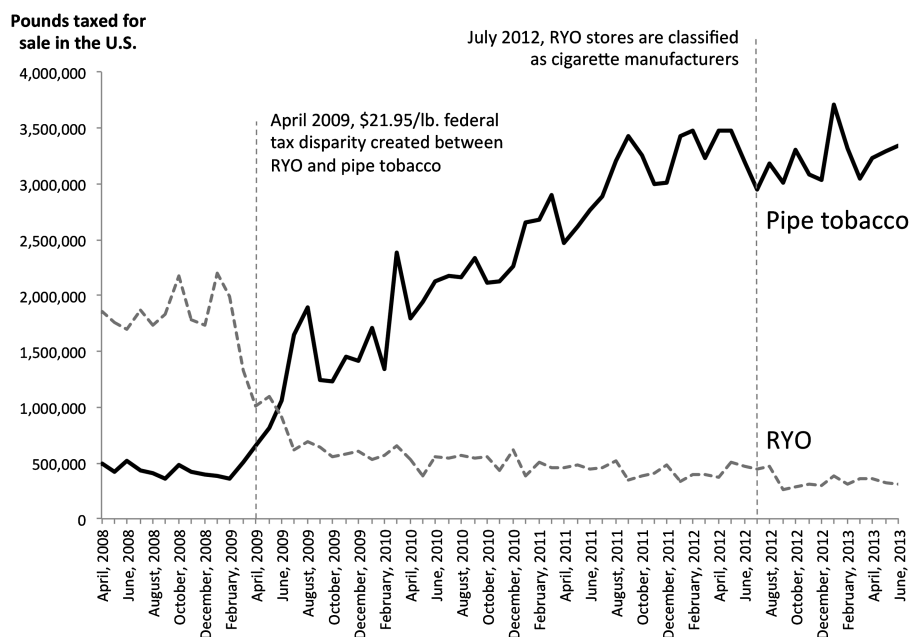
While rolling cigarettes by hand is time-consuming, cigarette rolling machines can stuff loose tobacco into preformed cigarette tubes more quickly. Hand-cranked and motorised rolling machines are available for home use. Additionally, larger self-service, commercial rolling machines exist that can produce 200 cigarettes in 8 min.^{4 12} Retailers across the country began offering these RYO machines, allowing customers to make cigarettes that were less expensive than factory-made cigarettes, or cigarettes made with tobacco labelled as RYO.^{4 13-16} This resulted in RYO cigarettes made with pipe tobacco being sold for one-third the price of commercial cigarettes.⁴ The introduction of these commercial rolling machines coincided with the tax disparity,⁴ offering smokers who may have otherwise quit an opportunity to switch to a less expensive alternative product.⁵

To stop the loss of tobacco tax revenues, the US Department of Treasury issued a notice in 2010 deeming stores with RYO machines as cigarette manufacturers.¹² Retailers sued and won an injunction preventing enforcement.¹⁷ However, before the case was resolved, a provision which settled the issue was included in the Federal law which reauthorised highway programmes through 2014 (Highway Bill).¹⁸ The provision required retailers who maintain commercial cigarette-making machines to register as cigarette manufacturers as of July 2012.¹⁸ The Highway Bill is otherwise unrelated to tobacco prevention, but was used by lawmakers as a legislative vehicle to enact this provision. Due to increased fees and regulations, this law was expected to eliminate RYO machines in retail stores.¹⁹ This study was conducted to assess

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Brief report

Figure 1 Market shift in sales of roll-your-own (RYO) and pipe tobacco sales in the USA, April 2008–June 2013.



whether the law had an impact on the sale of RYO labelled as pipe tobacco.

METHODS

Data on quantities of tobacco taxed in the USA are from monthly reports published by the Department of Treasury's Alcohol and Tobacco Tax and Trade Bureau (TTB).²⁰ Methods from the authors' previous study were replicated to estimate the quantity of RYO sold as pipe tobacco each month.⁵

In the 12 months prior to the April 2009 tax increase, an average of 432 000 pounds of pipe tobacco were taxed per month; this number is the baseline for comparison. The monthly quantity of RYO sold as pipe tobacco is estimated as the amount of pipe tobacco taxed over the baseline. To determine the effect of the Highway Bill, trends in the months before and after July 2012 were compared.

RESULTS

From April 2009 through June 2013, 107 million pounds of RYO were sold as pipe tobacco, reducing Federal excise tax collections by \$2.36 billion. The amount of RYO taxed as pipe tobacco climbed steadily from April 2009 to June 2012, then levelled off following the July 2012 enactment of the Highway Bill (figure 1).

DISCUSSION

The Federal Highway Bill did halt, at least temporarily, the steady increase in loose tobacco sales (pipe and RYO tobacco combined). However, sales of RYO labelled as pipe tobacco do not appear to be declining, so the Highway Bill was not effective at correcting the market shift that occurred in response to the tax disparity. Even without access to commercial rolling machines, smokers are continuing to take advantage of the tax disparity.

It is not clear from these data how many smokers still make cigarettes using commercial-grade machines sold in stores, or how many of these machines still exist, though the US Treasury Department has pursued legal action against some businesses that have failed to comply with the law. For example, some retailers claimed not to be subject to regulation because they

self-identified as a club or non-profit, while others indicated that consumers were 'renting' use of the machine.²¹ However, the US Treasury Department and some states insisted that these retailers would still be classified as manufacturers.^{19 21 22} An assessment of the incidence of RYO machines still in stores would clarify this issue; and machines still operating would signal the need for enhanced enforcement.

One limitation of this study is that revenue loss estimates do not account for background trends in pipe tobacco sales prior to April 2009. However, because pipe tobacco sales were slowly declining during this period, the estimates of revenue losses are likely conservative. Another limitation is that this study did not estimate losses sustained by states. However, as established in the authors' previous paper,⁵ most state taxes on pipe and RYO tobacco are ad valorem (ie, taxed as a percentage of overall product price), consequently, if a lower Federal tax results in lower product prices, that will also result in reduced state excise tax and sales tax collections.

CONCLUSION

Because the provision included in the Federal Highway Bill only addressed access to commercial rolling machines and did not address the tax disparity between pipe tobacco and RYO tobacco, consumers continue to have access to RYO tobacco labelled as pipe tobacco, a low-cost alternative product. Two approaches exist that will potentially address this issue.

The US Treasury Department could begin distinguishing RYO and pipe tobacco based on physical characteristics, rather than allowing companies to self classify if a product is pipe or roll-your-own based on the label. The absence of clear standards allows manufacturers to label RYO as pipe tobacco to avoid taxes and other regulations. Classifying products using measurable standards would give the agency responsible for collecting RYO taxes the power to determine what products are to be considered RYO. The US Treasury conducted a study of 40 products labelled as pipe tobacco and RYO before the 2009 tax change took effect, that compared physical characteristics of these products.²² Furthermore, in 2010, Treasury proposed and accepted public comment on a regulation that would establish standards to distinguish between pipe tobacco and roll-your-own tobacco

based on physical characteristics, however, this regulation has not been finalised.²³ In addition to addressing the price disparity, this approach could also address other regulatory issues, specifically the availability of flavoured tobacco. As established previously, there are pipe tobacco products that are sold for RYO purposes that are available in various flavours.⁵ Even though the Food and Drug Administration (FDA) prohibits the sale of flavoured cigarettes and flavoured RYO, FDA tobacco regulations do not currently apply to pipe tobacco.²⁴

Because tax parity for tobacco products eliminates opportunities for tax avoidance, a direct approach would be to tax RYO and pipe tobacco at the same rate.⁴ This approach would also expand the public health benefit of the 2009 Federal tobacco tax increase, such as preventing smoking initiation and promoting cessation through increased tobacco product prices. Without a solution, the Federal government and states will continue to lose revenue, and smokers who would otherwise quit will continue to have a low-cost alternative product available for purchase.

What this paper adds?

- ▶ This study found that while a 2012 national law did halt the steady increase in pipe tobacco sales in the USA, the law did not correct the market shift that has occurred since 2009 when a price US\$21.95 tax disparity was created between pipe and roll-your-own tobacco.
- ▶ This study illustrates that because the new national law only addressed availability of commercial rolling machines in retail stores—and did not address the tax disparity between pipe tobacco and roll-your-own tobacco—sales of pipe tobacco will likely continue at increased levels.
- ▶ If the tax disparity remains, the Federal government and states will continue to lose revenue, and smokers who would have otherwise quit will continue to have a low-cost alternative product available for purchase.

Correction notice This article has been corrected since it was published Online First. A repeat in the 'Correspondence to' section has been deleted.

Contributors MAT and DM designed the study. DM conducted the analysis. MAT, DM, TW reviewed and analysed the results. MAT drafted and revised the paper. DM and TW revised the paper.

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TC

Continued implications of taxing roll-your-own tobacco as pipe tobacco in the USA

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Consumption of Cigarettes and Combustible Tobacco — United States, 2000–2011

Smoking cigarettes and other combustible tobacco products causes adverse health outcomes, particularly cancer and cardiovascular and pulmonary diseases (1). A priority of the U.S. Department of Health and Human Services is to develop innovative, rapid-response surveillance systems for assessing changes in tobacco use and related health outcomes (2). The two standard approaches for measuring smoking rates and behaviors are 1) surveying a representative sample of the public and asking questions about personal smoking behaviors and 2) estimating consumption based on tobacco excise tax data (3). Whereas CDC regularly publishes findings on national and state-specific smoking rates from public surveys (4), CDC has not reported consumption estimates. The U.S. Department of Agriculture (USDA), which previously provided such estimates, stopped reporting on consumption in 2007 (5). To estimate consumption for the period 2000–2011, CDC examined excise tax data from the U.S. Department of Treasury's Alcohol and Tobacco Tax and Trade Bureau (TTB); consumption estimates were calculated for cigarettes, roll-your-own tobacco, pipe tobacco, and small and large cigars. From 2000 to 2011, total consumption of all combustible tobacco decreased from 450.7 billion cigarette equivalents to 326.6, a 27.5% decrease; per capita consumption of all combustible tobacco products declined from 2,148 to 1,374, a 36.0% decrease. However, while consumption of cigarettes decreased 32.8% from 2000 to 2011, consumption of loose tobacco and cigars increased 123.1% over the same period. As a result, the percentage of total combustible tobacco consumption composed of loose tobacco and cigars increased from 3.4% in 2000 to 10.4% in 2011. The data suggest that certain smokers have switched from cigarettes to other combustible tobacco products, most notably since a 2009 increase in the federal tobacco excise tax that created tax disparities between product types.

USDA's previous consumption estimates were based on 1) information from TTB, including data on products that are produced domestically or imported and taxed for legal

sale in the United States; 2) tobacco industry reports; and 3) information from industry advisors. CDC developed a method to estimate consumption exclusively by using publicly available federal excise tax data available from TTB on products taxed domestically and imported into the United States (6). Using monthly tax data, CDC calculated the per unit (e.g., per cigarette or per cigar) consumption for each product. To enable comparisons with pipe tobacco and roll-your-own tobacco, CDC converted the tax data from pounds of tobacco to a per cigarette equivalent, based on the conversion formula contained in the Master Settlement Agreement (0.0325 oz [0.9 g] = one cigarette).^{*} Adult per capita cigarette consumption was estimated by dividing total consumption by the number of persons aged ≥18 years in the United States each year using data from the U.S. Census Bureau. When compared with USDA's previous calculations for adult per capita cigarette consumption during 2000–2006, CDC's estimates differed each year by a median of only 0.15% and a mean of 0.76%.

From 2000 to 2011, total cigarette consumption declined from 435.6 billion to 292.8 billion, a 32.8% decrease (Table 1). Per capita cigarette consumption declined from 2,076 in 2000 to 1,232 in 2011, a 40.7% decrease. Conversely, total consumption of noncigarette combustible products increased

^{*} Available at <http://www.naag.org/backpages/naag/tobacco/msa/msa-pdf>.

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from 15.2 billion cigarette equivalents in 2000 to 33.8 billion in 2011, a 123.1% increase, and per capita consumption increased from 72 in 2000 to 142 in 2011, a 96.9% increase. Total consumption of all combustible tobacco decreased from 450.7 billion cigarette equivalents to 326.6, a 27.5% decrease from 2000 to 2011, and per capita consumption of all combustible tobacco products declined from 2,148 to 1,374, a 36.0% decrease.

Consumption of loose tobacco (i.e., roll-your-own cigarette tobacco and pipe tobacco) changed substantially from 2000 to 2011. Roll-your-own cigarette equivalent consumption decreased by 56.3%, whereas pipe tobacco consumption increased by 482.1% (Table 2). The largest changes occurred from 2008 to 2011, when roll-your-own consumption decreased from 10.7 billion to 2.6 billion (a 75.7% decrease), whereas pipe tobacco consumption increased from 2.6 billion to 17.5 billion (a 573.1% increase).

Substantial changes also were observed in consumption of small cigars[†] and large cigars (Figure 1). From 2000 to 2011, consumption of small cigars decreased 65.0%, whereas large cigar consumption increased 233.1% (Table 2). The largest changes occurred from 2008 to 2011, when small cigar consumption decreased from 5.9 billion to 0.8 billion (an 86.4% decrease), whereas large cigar consumption increased from 5.7 billion to 12.9 billion (a 126.3% increase).

[†] In 26 USC 5701, small cigars are defined as cigars that weigh ≥ 3 pounds (< 1.36 kg) per 1,000 cigars, and large cigars are defined as cigars that weigh > 3 pounds per 1,000.

Annual cigarette consumption declined each year during 2000–2011, including a 2.6% decrease from 2010 to 2011, but total consumption of combustible tobacco decreased only 0.8% from 2010 to 2011, in part because of the effect of continued increases in the consumption of noncigarette combustible tobacco products (Figure 2). From 2000 to 2011, the percentage of total combustible tobacco consumption composed of loose tobacco and cigars increased from 3.4% (15.2 billion cigarette equivalents out of 450.7 billion) to 10.4% (33.8 billion of 326.6 billion).

Reported by

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Editorial Note

Despite continued decreases in cigarette smoking in the United States, consumption of pipe tobacco and large cigars has increased substantially since the federal tobacco excise tax was increased in 2009, creating tax disparities that made 1) pipe tobacco less expensive than roll-your-own tobacco and manufactured cigarettes, and 2) large cigars less heavily taxed than small cigars and manufactured cigarettes (7,8). Because loose tobacco products are classified based on how they are labeled, the loose tobacco tax disparity of \$21.95 per pound

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TABLE 1. Total consumption and adult per capita consumption* of cigarettes, all combustible tobacco,[†] and noncigarette combustible tobacco products[§] — United States, 2000–2011

Year	Cigarettes				All combustible tobacco				Noncigarette combustible tobacco			
	Total consumption (in millions)	% change	Adult per capita consumption	% change	Total consumption (in millions)	% change	Adult per capita consumption	% change	Total consumption (in millions)	% change	Adult per capita consumption	% change
2000	435,570	—	2,076	—	450,725	—	2,148	—	15,155	—	72	—
2001	426,720	-2.0	2,010	-3.2	440,693	-2.2	2,075	-3.4	13,973	-7.8	66	-8.9
2002	415,724	-2.6	1,936	-3.7	430,763	-2.3	2,006	-3.4	15,040	7.6	70	6.4
2003	400,327	-3.7	1,844	-4.7	415,930	-3.4	1,916	-4.5	15,603	3.8	72	2.6
2004	397,655	-0.7	1,811	-1.8	414,421	-0.4	1,888	-1.5	16,766	7.5	76	6.2
2005	381,098	-4.2	1,717	-5.2	401,187	-3.2	1,807	-4.3	20,089	19.8	90	18.5
2006	380,594	-0.1	1,695	-1.3	401,241	>-0.1	1,787	-1.1	20,648	2.8	92	1.6
2007	361,590	-5.0	1,591	-6.1	384,087	-4.3	1,690	-5.4	22,497	9.0	99	7.7
2008	346,419	-4.2	1,507	-5.3	371,264	-3.3	16,15	-4.5	24,845	10.4	108	9.1
2009	317,736	-8.3	1,367	-9.3	342,124	-7.9	1,472	-8.9	24,388	-1.8	105	-2.9
2010	300,451	-5.4	1,278	-6.5	329,239	-3.8	1,400	-4.9	28,788	18.0	122	16.7
2011	292,769	-2.6	1,232	-3.6	326,577	-0.8	1,374	-1.9	33,808	17.4	142	16.2
% change, from 2000 to 2011	-32.8	—	-40.7	—	-27.5	—	-36.0	—	123.1	—	96.9	—

* Adults aged ≥18 years as reported annually by the U.S. Census Bureau.

[†] Includes cigarettes, small cigars and large cigars, and per-cigarette equivalents for pipe tobacco and roll-your-own tobacco based on the conversion rate in the Master Settlement Agreement: 0.0325 oz (0.9 g) of tobacco = one cigarette.[§] Includes all combustible products other than cigarettes.**TABLE 2. Total consumption of noncigarette combustible tobacco product, by product category and type — United States, 2000–2011**

Year	Loose tobacco				Cigars			
	Roll-your-own* (in millions)	% change	Pipe* (in millions)	% change	Small cigars (in millions)	% change	Large cigars (in millions)	% change
2000	5,995	—	2,999	—	2,279	—	3,882	—
2001	4,714	-21.4	2,915	-2.8	2,239	-1.8	4,105	5.7
2002	5,737	21.7	2,757	-5.4	2,343	4.6	4,203	2.4
2003	6,207	8.2	2,389	-13.3	2,474	5.6	4,533	7.9
2004	6,600	6.4	2,314	-3.2	2,917	17.9	4,935	8.9
2005	8,614	30.5	2,423	4.7	3,968	36.0	5,084	3.0
2006	8,594	-0.2	2,322	-4.2	4,434	11.7	5,299	4.2
2007	9,326	8.5	2,463	6.1	5,161	16.4	5,548	4.7
2008	10,721	15.0	2,586	5.0	5,881	14.0	5,657	2.0
2009	6,006	-44.0	6,256	142.0	2,343	-60.2	9,784	73.0
2010	3,168	-47.2	12,351	97.4	983	-58.1	12,287	25.6
2011	2,622	-17.2	17,459	41.4	798	-18.8	12,929	5.2
% change, from 2000 to 2011	-56.3	—	482.1	—	-65.0	—	233.1	—

* These data are the per-cigarette equivalent based on the conversion rate in the Master Settlement Agreement: 0.0325 oz (0.9 g) of tobacco = one cigarette.

led manufacturers to relabel roll-your-own tobacco as pipe tobacco and then market this relabeled pipe tobacco for roll-your-own use (7–9). In addition, manufacturers were able to increase the per-unit weight of certain small cigars to take advantage of a tax benefit when classified as large cigars, which are taxed based on the product price rather than per cigar (7). As a result of relatively minor increases in per-unit weight, the new “large cigar” can appear almost identical to a “small cigar,” which resembles a typical cigarette and can cost as little as 7 cents per cigar (Figure 1) (7).

This analysis shows that cigarette consumption continues to decline in the United States, a trend that has persisted since the 1960s. However, recent changes in consumption patterns, particularly increases in large cigar and pipe tobacco use, have

resulted in a slowing of the decline in consumption of all combustible tobacco, and indicate that certain cigarette smokers have switched to using lower-taxed noncigarette combustible products. Moreover, a 2012 Surgeon General’s report found that youths and young adults had even higher rates of cigar use and simultaneous use of multiple tobacco products (10).

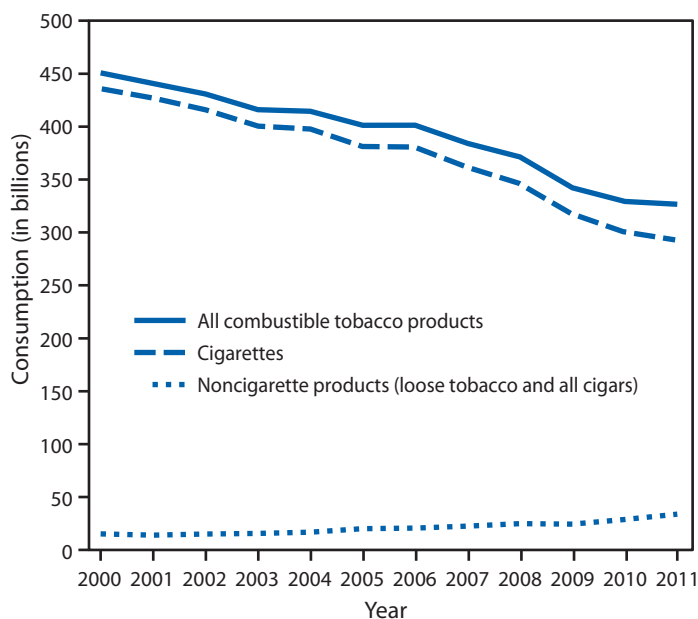
Recent analysis of excise tax data for pipe tobacco, roll-your-own cigarette tobacco, small cigars, and large cigars reveals that the tobacco industry is adapting the marketing and production of cigars and roll-your-own tobacco products to minimize federal excise tax and thus reduce these tobacco products’ prices compared with cigarettes (7–9). Reducing the effective federal and state excise tax rates on tobacco lessens the impact of cost on reducing smoking and preventing smoking

FIGURE 1. Physical differences between combustible tobacco products — Government Accountability Office, United States



Source: Government Accountability Office. Tobacco taxes: large disparities in rates for smoking products trigger significant market shifts to avoid higher taxes. Available at <http://www.gao.gov/products/gao-12-475>.

FIGURE 2. Consumption of cigarettes and other combustible tobacco products — United States, 2001–2011



initiation. The Government Accountability Office (GAO) recommends modifying federal tobacco taxes to eliminate large tax differentials between roll-your-own and pipe tobacco and small and large cigars (7). In addition, because Food and Drug Administration (FDA) regulations currently do not apply to cigars and pipe tobacco, these products can be produced with flavoring, can be labeled with misleading descriptors such as “light” or “low tar,” and can be marketed and sold with fewer restrictions than apply to cigarettes.

What is already known on this topic?

Cigarette use continues to decline in the United States, a trend that has persisted since the 1960s.

What is added by this report?

From 2000 to 2011, consumption of all combustible tobacco products decreased from 450.7 billion cigarette equivalents to 326.6 (a 27.5% decrease), and per capita consumption of all combustible tobacco products declined from 2,148 to 1,374 (a 36.0% decrease). However, whereas consumption of cigarettes decreased 32.8%, consumption of noncigarette combustible tobacco increased 123.1%. As a result, the percentage of combustible tobacco consumption composed of loose tobacco and cigars increased from 3.4% in 2000 to 10.4% in 2011.

What are the implications for public health practice?

The increase in cigar and pipe tobacco use is a public health concern because all combustible tobacco use causes cancer, heart disease, and other smoking-related diseases. A switch from cigarettes to other, lower-taxed, combustible tobacco products blunts the effect of increasing prices, one of the most effective ways to reduce smoking and prevent youth smoking initiation.

The findings in this report are subject to at least one limitation. CDC’s measure for cigarette and combustible tobacco consumption only accounts for products taxed for legal sale in the United States and does not account for illicit cigarette sales, such as those smuggled into or out of the country, or for untaxed cigarettes that are produced or sold on American Indian sovereign lands. Currently, no method exists for measuring or estimating illicit or untaxed tobacco trade in the United States.

Smoke from pipes and cigars contains the same toxic chemicals as cigarette smoke (1). The evidence that the increase in cigar and pipe tobacco use is the result of offering cigarette smokers a low-priced alternative product is a particular public health concern, because the morbidity and mortality effects of other forms of combustible tobacco are similar to those of cigarettes. Increasing prices has been one of the most effective ways to reduce tobacco use and prevent youth smoking initiation (10). In addition, combustible tobacco products that are similar in design but not legally considered to be cigarettes are not subject to FDA regulations related to manufacturing, flavoring, labeling, and marketing. The availability of low-priced and less regulated alternative products appears to have led certain cigarette smokers to switch to other combustible tobacco products. This group also might include persons who otherwise might have quit smoking as a result of the 2009 federal tobacco excise tax increase and FDA cigarette regulations. Diminishing the public health impact of excise tax increases and regulation can hamper efforts to prevent youth smoking initiation, reduce consumption, and prompt quitting.

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