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Cigar Use Symposium: Epidemiology, Toxicant Exposure, Health and Policy Implications

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Abstract

Objective—Domestic cigar use has increased over the past 2 decades perhaps partially in response to cigarette restrictions and partially because cigars are used as vehicles for the delivery of marijuana. Although there is ample epidemiologic data to verify use and use patterns, there are relatively few studies that have looked at other aspects of current cigar use, advertising, toxicant exposure, and health effects.

Methods—Gaps in knowledge prompted a research symposium entitled *Cigar Use: Epidemiology, Toxicant Exposure, Health and Policy Implications in 2016*. The symposium was hosted by Battelle Memorial Institute with support from an R03 grant from the United States Food and Drug Administration (FDA).

Results—Multiple research recommendations emerged from the symposium, such as improvements in cigar monitoring and assessing effects of product design on toxicant delivery that are essential to making regulatory decisions.

Conclusions—Now that FDA has indicated that it intends to regulate cigars, significant new research on cigar characteristics, use and marketing is needed to inform tobacco regulatory policy.

Keywords

cigars; little cigars; cigarillos; epidemiology; health policy; consumer health risks

The manuscripts that follow were presented at *Cigar Use: Epidemiology, Toxicant Exposure, Health and Policy Implications*, a research symposium coordinated and hosted by Battelle Memorial Institute with support from an R03 grant from the United States (US) Food and Drug Administration (FDA). The Symposium was held at the Grand Sheraton Hotel in Chicago, Illinois on March 1, 2016. The purpose of this meeting was to share the current state of knowledge on cigar use in the US through presentations by and discussions with expert panelists from academia and FDA. Specifically, the proposed symposium sought to: (1) update the existing knowledge base about cigar products, use, epidemiology, marketing,

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Conflict of Interest Statement

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and health effects; (2) identify knowledge gaps that impede further progress in understanding the use of cigar products; and (3) discuss and develop future research directions. In so doing, this conference addressed several current priorities identified by FDA as areas of scientific and regulatory importance including health consequences and epidemiology of cigar use (including little cigars and cigarillos), current market trends, advertising and promotions, toxicant exposure, and health communications.

Figure 1 provides a simplified overview of the relationships among tobacco products, their consumers, toxicant exposure, and subsequent health risk, to either the individual or collectively to society. However, the relation is not as simple as it may first appear. Whereas this conceptualization applies to all tobacco products, when applied specifically to cigar products important distinctions, especially when compared to cigarettes, emerge. In particular, cigar products are distinguished from cigarettes and their use in that the smoking patterns and market variety of cigarette sizes and styles is much more limited than those characteristics of cigars.

Notably, there is a wide variety and number of cigar products on the market that differ in size, filler, flavor, and design features. Consumers also differ in the way they smoke cigars, including whether they inhale, how many they smoke per day, whether they relight products that are only partially consumed, and in how vigorously they smoke the product. External influences such as price, advertising, social norms, family restrictions on home smoking, among many others, exert further influences that affect the associability and attractiveness of cigar products, their use patterns, and hence, toxicant exposure. From this brief consideration, it is apparent that the relationships among the smoker, the cigar product, toxicant exposure, and health risk are complex. In helping to elucidate and understand this complexity, a group of experts was convened (Table 1); throughout the Symposium, they addressed many of the component parts of the conceptualization described above.

METHODS

The meeting was moderated by Dr. Pickworth, who opened the meeting with a brief discussion of the conceptualization in Figure 1, and he closed the meeting with a discussion of identified gaps and next steps. One of the symposium objectives was the dissemination of the current state of research and policy as discussed at this Symposium by leaders in the field of cigar tobacco science. Multiple papers from the Symposium were prepared for publication on this special sub-theme in *Tobacco Regulatory Science*,^{1-3,5} other manuscripts were invited for inclusion in this special issue.⁴ Collectively, the presentations provided an overview of the cigar market, advertising, social media, and celebrity endorsements, epidemiology use patterns and trends, special use in minority populations, toxicant delivery, transition and exposure, health and exposure effects, and policy implications.

Another of the Symposium's goals was to foster collaborations among interested investigators across all disciplines of tobacco regulatory and health science. By convening these investigators and other interested researchers, the meeting specifically sought to identify knowledge gaps about cigars to inform consumer and public health messaging, areas of science needed to improve understanding of cigar use behaviors and their

consequences, and information necessary for a scientific basis for regulation. Moreover, both panelists and audience members identified several major impediments that hinder the study of cigar use.

RESULTS

Generally, as the papers presented at the Symposium that are available in the issue of *Tobacco Regulatory Science* indicate, the understanding of cigar use is challenged by the number of available products in varying sizes, flavors, and design features. Furthermore, how products are packaged and promoted as well as the nature and place of sales (retail, Internet) is beginning to distinguish the cigar market from other tobacco product marketing. Simply understanding the nomenclature of the cigar market, and how users and marketers refer to these products, have proven to be a challenge.

The imposition of cigarette regulations through the Fair and Equitable Tobacco Reform Act⁶ has led to the development of new products that vary only slightly and are in compliance with the Act, but products with small changes in weight (for example) can be sold at a decreased price and are more profitable overall. As a result, surveys to capture cigar use are constrained by definitions that no longer reflect the actual market. This change also has led to forced categorizations (for example, the inclusion of both little cigars and cigarillos in a singularly defined group) in descriptions of products and use, even though it is now recognized that little cigars and cigarillos, for example, are quite different products that are consumed in different ways, and have differing market appeal. Furthermore, results from qualitative research indicate that people who alter cigar products by removing the inner lining paper (hyping) or by emptying out the tobacco and refilling, partially or fully, with marijuana (blunts or splifs) often do not even acknowledge that they are also smoking tobacco. These special use patterns highlight the need for targeted health messaging that accounts for use patterns beyond those typically associated with tobacco use.

Promotion of sales and marketing approaches for cigars differ in some respects from the marketing and sale of cigarettes. In the Symposium, we were reminded of the diverse market for cigar products, the wide variety of available flavors and their promotion, particularly of little cigars and cigarillos that are offered for sale in smaller sizes and packages and advertised for use during a “smoke break.” There is also an extensive use of celebrity endorsement of little cigars and cigarillos; moreover, the association of cigars with the urban music scene (hip-hop, rap) is especially unique to cigar products. The use of packaging and advertising that promotes use of cigars as delivery devices for marijuana also was noted. Finally, there is a notable increase in the number of references to cigar product use in social media sampling.

Quantification of toxicant exposure from cigar smoke is another research area that is challenging given that cigar smoking, unlike cigarette smoking, is not a standardized behavior. Some people inhale cigar smoke, but others do not; some people smoke only a portion of the cigar and subsequently re-light the product, whereas others chew on their cigars. These and other behaviors of consumption, quite different from what is seen with conventional cigarette smokers, have unique consequences of toxicant exposure.

Quantification of this type of toxicant exposure is complicated further by concomitant cigarette use. Up to 50% of cigarillo and little cigar users, for example, are also dual cigarette smokers.^{7,8} To determine whether exposure to cigar smoke is more toxic than cigarette smoke, one also must consider differences in the size of the article, puff volume, and puff and inhalation behavior.

DISCUSSION

From the presentations and subsequent discussions, a number of key research recommendations emerged, including studies and data that address the following areas:

Product characterization – market research to reflect sales in areas coded by socio-economic status and racial demographics.

Effect of design on toxicant delivery – studies of article size, wrapping, and filter ventilation and flavors of cigars and the impact on exposure and appeal.

Filler characteristics – distinguishing cigar blends and their importance on toxicant exposure.

Standardized naming – a consensus about how a product is named and specified (eg, distinctions among products branded as little cigar, filtered cigar, and a little cigar or cigarillo).

Better timed surveys – conduct surveys more frequently to capture the effects of new market introductions and new trends in use patterns and surveys that accurately account for changes in marketing and use patterns.

Improved monitoring and surveying of advertising and promotional procedures – the marketing of cigar products appears to be directed in many cases to urban youth through celebrity endorsements, current music, and alternative sports and entertainment.

Concomitant marijuana and cigar use – better understanding of this use pattern, which was a recurring topic of discussion during the symposium. Several panelists and audience members indicated how difficult it is to even talk about cigar use, especially among urban youth, without a discussion of the use of cigars with marijuana. There are few studies to date that have examined the concomitant smoking of marijuana and use of tobacco-based products, or the influence of nicotine dependence on marijuana smoking.

In all, the Symposium achieved the goal of updating the current status of cigar smoking and the research challenges associated with the topic. Of particular importance, the Symposium confirmed that the current picture of cigar use is incomplete and more research is warranted. In spite of considerable interest in and research about these products, to date, significant knowledge gaps remain. The papers that follow summarize past, on-going, and recently completed studies in this new and rapidly changing chapter in tobacco regulation.

IMPLICATIONS FOR TOBACCO REGULATION

In May, 2016, shortly after the Symposium, the FDA's Center for Tobacco Products released a "deeming" document that extended their authority to regulate a wide range of tobacco products including cigar products.⁹ Given the FDA's decision to regulate cigars, the research recommendations that resulted from the Cigar Symposium provide relevant and timely guidance to both the scientific community and the FDA, and have direct relevance to the process of developing and implementing tobacco regulatory policies. In particular, Dr Husten's manuscript includes portions of her presentation at the Symposium and comments on the subsequent deeming regulation that were not reported at the Symposium.⁵

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Figure 1.
Schematic Diagram Illustrating the Complex Relationship among a Tobacco Product, its Consumer, and Individual Health Risk*

Note.

External influences such as laws, advertising, social norms, accessibility, taxes, and price, influence the nature of the product and how it is consumed. Characteristics of the product (such as design, tobacco content, filler, and filter) influence toxicant delivery as does consumption behavior (smoking topography, number of articles per day, lifetime duration of smoking). The health risk to the individual is related to the overall public health risk by the number of consumers, use patterns and the toxicity of environmental smoke to non-smokers.

Table 1

Symposium Speakers and Presentation Titles

Speaker	Presentation Title
Dr. Cristine Delnevo, Rutgers, The State University of New Jersey, delnevo@sph.rutgers.edu	Changes in the United States Mass-Merchandise Cigar Market since the Tobacco Control Act
Dr. Benjamin Apelberg, Office of Science, U.S. Food and Drug Administration, Benjamin.Apelberg@fda.hhs.gov	Prevalence and Determinants of Cigar Smoking in the U.S.
Dr. Caroline Cobb, Virginia Commonwealth University, cobbco@vcu.edu	Cigarillo Product Modification: User Characteristics, Behavior Patterns, and Toxicant Exposure
Dr. Kymberle Sterling, Georgia State University, ksterling@gsu.edu	Patterns and Perceptions of Risk of Flavored Little Cigars and Cigarillos among a National Sample of Young Adult Smokers
Dr. Sherry Emery, University of Illinois at Chicago, slemery@uic.edu	"Sweeter Than a Swisher:" A Pilot Study of the Amount and Themes of Little Cigar and Cigarillo Content on Twitter
Dr. Andrew Strasser, University of Pennsylvania, strasse3@mail.med.upenn.edu	Examining Smoking Behaviors and Smoke Exposure when Cigarette Smokers Switch to Little Filtered Cigars
Dr. Bartosz Koszowski, Battelle Memorial Institute, Koszowskib@Battelle.org	Chemical Characterization of Smoke from Little Cigars and Effects of Filter Ventilation on Toxicant Levels
Dr. Neal Benowitz, University of California, San Francisco, Neal.Benowitz@ucsf.edu	Volatile Organic Chemical Exposure with Use of Little Cigars Compared to Cigarettes
Dr. Corinne Husten, Center for Tobacco Products, U.S. Food and Drug Administration, Corinne.Husten@fda.hhs.gov	Tobacco Regulation, Regulatory Science, and Cigars