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Tobacco Control Policy and Electronic Cigarettes

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During the past few years, the use of electronic nicotine delivery systems (ENDS), commonly known as electronic cigarettes (e-cigarettes), has risen rapidly in the United States, with some analysts suggesting that ENDS sales could surpass sales of traditional cigarettes in the not-too-distant future. This rapid rise has stimulated a vigorous debate in the tobacco control community over the potential public health impact of ENDS and about how best to regulate them. The article by Dutra and Glantz¹ highlights some of the concerns about the potential public health harms from ENDS, documenting the more than doubling of ever use among US teenagers between 2011 and 2012 and the associations of ENDS use with more established smoking and, among experimenters, reduced likelihood of abstinence from conventional cigarettes. At the same time, their article highlights the potential promise of ENDS, with their use associated with greater interest in quitting among current young smokers. The same phenomena are seen among adult smokers, with awareness and ever use of ENDS rising sharply from 2010 to 2011 and high rates of dual use among users of ENDS and conventional cigarettes, while many users report using ENDS in an effort to quit smoking.² To date, however, the empirical evidence on the effectiveness of ENDS use in promoting smoking cessation is mixed at best, with some studies finding either no association or a negative association between ENDS use and quitting and others suggesting effectiveness equivalent to that of nicotine patches.^{3,4}

As ENDS use has grown in the United States, federal, state, and local governments have struggled with how to treat ENDS under existing tobacco control policies and/or with developing and implementing new policies. In part, this struggle reflects the desire to maximize the use of ENDS as a smoking cessation tool, while at the same time preventing youths from starting with ENDS and moving on to conventional cigarettes. While not harmless, moving current smokers from cigarettes to ENDS would almost certainly lead to significant reductions in the health and economic consequences of smoking.⁵ However, the high rates of use of both ENDS and conventional cigarettes among current ENDS users suggest that many are using them as a way to satisfy their nicotine addiction in venues where smoking is not allowed rather than as a means to quit smoking entirely, raising concerns that the public health impact of ENDS could be minimal.

The inclusion of ENDS under some tobacco control policies seems clearly appropriate. The rising rates of ENDS use among youths and concerns that ENDS will become a gateway to

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conventional cigarettes provide a strong rationale for minimum purchase age laws, requirements that ENDS be placed behind the counter, and other policies aimed at preventing youths' access to them. As of mid-November 2013, youth access laws in 22 states included ENDS (Camille K. Gourdet, JD, MA, Jamie F. Chriqui, PhD, and F.J.C., unpublished data, November 2013), while local policies in many jurisdictions do the same. Similarly, given the growing evidence that the vapors produced by ENDS contain nicotine, benzene, cadmium, formaldehyde, isoprene, toluene, and other potentially harmful chemicals,⁶ including ENDS use under state and local policies prohibiting smoking in workplaces, restaurants, bars, and other public places would be an important step in protecting nonusers from exposure to secondhand vapors. In mid-November 2013, smoke-free air policies in 11 states explicitly addressed ENDS use (Camille K. Gourdet, JD, MA, Jamie F. Chriqui, PhD, and F.J.C., unpublished data, November 2013), while local policies in 108 communities did the same in early January 2014.⁷

Bringing ENDS under the jurisdiction of the US Food and Drug Administration (FDA) over tobacco products will be another key step. This would subject them to the FDA's existing regulations on cigarettes, including its efforts to reduce youth access and its ban on the sale of flavored products, which would help reduce the appeal of ENDS to youths. At the same time, it would open the possibility of future FDA regulations that would restrict ENDS marketing, regulate labeling, require disclosure of ingredients, establish product standards, and more. The FDA's past efforts to assert jurisdiction over ENDS have been unsuccessful, but the agency is soon expected to release a proposed deeming rule that would encompass the variety of other tobacco products currently not subject to FDA regulation, including ENDS. Constraining ENDS marketing and including them under comprehensive smoke-free policies would help ensure that the strong social norms against smoking that have developed in the 50 years since the release of the first US Surgeon General's report on the health consequences of smoking would not be eroded, as may be happening in the wake of extensive ENDS advertising on television, radio, and billboards and in newspapers and magazines as well as widespread ENDS use in venues where cigarette smoking is prohibited.

Less clear is whether ENDS should be taxed and, if they are, at what level to tax them. Extensive research shows that a significant increase in tobacco taxes that raises tobacco product prices is the single most effective policy for reducing tobacco use and shows that use among young people is particularly sensitive to price,⁸ while new research shows that ENDS sales are highly responsive to changes in their prices (Jidong Huang, PhD, John A. Tauras, PhD, and F.J.C., unpublished data, December 2013). Additionally, many ENDS users report that the low cost of ENDS relative to cigarettes is a key reason for use (Maansi Bansal-Travers, PhD, Andrew Hyland, PhD, Cheryl Rivard, MPH, F.J.C., Jidong Huang, PhD, and Dianne Barker, MHS, unpublished data, January 2014). This implies that taxing ENDS at rates comparable to cigarettes would be highly effective in deterring youths' initiation of ENDS use but at the same time would discourage many current smokers from switching to ENDS. At the other extreme, failing to levy a tax on ENDS would keep their prices relatively low, which could lead to youths' experimentation with ENDS and subsequent progression to conventional cigarette smoking. This suggests that governments that decide to levy taxes on ENDS should at the same time adopt significant increases in

their other tobacco taxes so that the prices of cigarettes and other combusted tobacco products rise relative to prices for ENDS. Such a policy would have the benefit of deterring initiation of all tobacco use, including ENDS use, among young people while increasing cessation among current tobacco users, at least in part by encouraging substitution to ENDS. To date, only Minnesota levies an excise tax on ENDS, with similar taxes under consideration in several other states (Camille K. Gourdet, JD, MA, Jamie F. Chriqui, PhD, and F.J.C., unpublished data, November 2013).

While much remains to be learned about the public health benefits and/or consequences of ENDS use, their exponential growth in recent years, including their rapid uptake among youths, makes it clear that policy makers need to act quickly. Adopting the right mix of policies will be critical to minimizing potential risks to public health while maximizing the potential benefits.

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