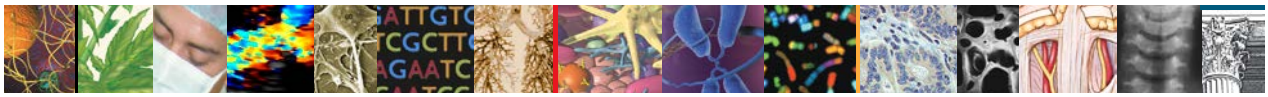

The NEW ENGLAND JOURNAL of MEDICINE

Perspective

JANUARY 23, 2014

The Renormalization of Smoking? E-Cigarettes and the Tobacco "Endgame"

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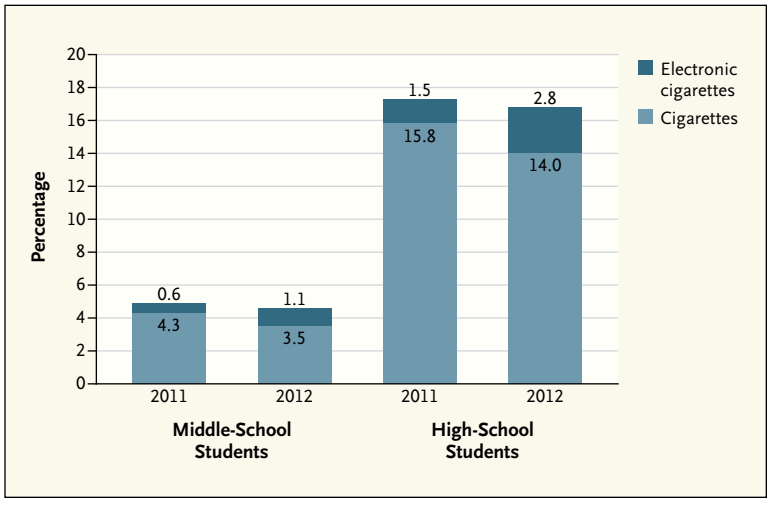
Electronic cigarettes, or e-cigarettes — battery-operated nicotine-delivery devices that mimic the look and feel of smoking by vaporizing a liquid solution such as propylene glycol — appeared in European and American markets less than a decade ago. Sales have reached $650 million a year in Europe and are projected to reach $1.7 billion in the United States in 2013. Though these figures are a small fraction of sales figures for traditional cigarettes, e-cigarettes represent a substantial market achievement; indeed, some people predict that they may eventually eclipse tobacco cigarettes.

But e-cigarettes are the subject of a public health dispute that has become more furious as their popularity has increased. Whereas some experts welcome the e-cigarette as a pathway to the reduction or cessation of tobacco use, opponents characterize it as a dangerous product that could undermine efforts to denormalize smoking. Already, Boston has applied workplace smoking bans to e-cigarettes. New York City and Los Angeles are poised to go a step further, prohibiting their use in public (including in parks and on beaches), though a similar proposal recently stalled in Chicago. This debate occurs as tobacco-control advocates have begun examining policy options for a tobacco "endgame" — the implementation of radical strategies for eliminating tobacco use globally.

Marketing campaigns for e-cigarettes threaten to reverse the successful, decades-long public health campaign to denormalize smoking. The chief advertising officer of one e-cigarette company has spoken explicitly about the "renormalization" of smoking in the form of "vaping" — the popular name for e-cigarette use. Even Big Tobacco dared not utter such words as the image of smoking was transformed over the decades. As information about the hazards of sidestream smoke was publicized in the 1980s and 1990s, the imperative to protect "innocent bystanders" moved to the center of tobacco-control efforts, and public smoking bans pushed smokers into the shadows. The once-widespread habit didn't simply become denormalized or marginalized; it became highly stigmatized. The pervasive became perverse.

E-cigarette advertisements, even as they denigrate traditional tobacco cigarettes, are challenging a barrier to television promotion erected more than 40 years ago. "Smelling like an ashtray is not the ideal aphrodisiac," scolds talk-show host Jenny McCarthy, as she enjoys her Blu eCig. Actor Stephen



Use of Cigarettes and Electronic Cigarettes by U.S. Students in 2011 and 2012.
Data are from the Centers for Disease Control and Prevention.

Dorff, another Blu spokesperson and former smoker, similarly acknowledges that smoking is seen as dirty but adds, "I'm tired of feeling guilty every time I want to light up." He implies that public health messages are paternalistic: "We're all adults here. It's time to take our freedom back. Come on guys, rise from the ashes." On Super Bowl Sunday 2013, an NJOY e-cigarette ad seen by 10 million viewers declared, "Finally, smokers have a real alternative. Cigarettes, you've met your match."

The tobacco-control community has responded to these messages with alarm. In 2009, the World Health Organization warned that e-cigarettes threatened bans on public smoking, which have been key to tobacco control. Similar concerns were raised by antitobacco activist Stanton Glantz and his colleagues: "Given the substantial research demonstrating the effect of viewing smoking in the movies on adolescent smoking initiation, the addictive nature of nicotine and the lack of regulatory assurance of their quality or safety, it is important to keep ENDS [electronic nicotine-delivery systems], and other similar products, from being sensationalized through the use of celebrity promotion or product placement in movies or other entertainment media."[1]

These fears are compounded by data from the Centers for Disease Control and Prevention showing that twice as many young people experimented with e-cigarettes in 2012 as in 2011, although use of tobacco cigarettes declined in the same period (see graph). If e-cigarettes prove to be a "gateway" or "bridge" product, leading to an increase in underage smoking, that would represent a serious setback in the fight against tobacco-related illness. Invoking images of terrorism, two tobacco-control advocates claim that "smoking bans and clean air advocacy are being hijacked."[2] Australian tobacco-control advocates Simon Chapman and Melanie Wakefield warn that something sinister is at work. The goal of e-cigarette makers is not cessation of tobacco use but "dual use": e-cigarettes simply "capitalize on harm-reduction sentiment" to sustain what has become a private habit by reopening public spaces. They argue, "This could be a harm-increasing outcome when assessed against the status quo of ever-declining smoking prevalence."[3]

In September 2013, 40 U.S. attorneys general called on the Food and Drug Administration (FDA) to act swiftly to regulate e-cigarettes as tobacco products. Dr. Howard Koh, assistant secretary for health, has urged leaders of U.S. schools of public health to join an effort to make U.S. colleges and universities smoke-free, which would include banning e-cigarettes.

The most vocal supporters of e-cigarettes, other than those with commercial interests in them, have been public health professionals who've embraced the strategy of harm reduction — an approach to risky behavior that prioritizes minimizing damage rather than eliminating the behavior. Harm reduction was the guiding principle behind needle exchange, the provision of sterile syringes to injection-drug users to reduce bloodborne transmission of the human immunodeficiency virus, hepatitis, and other illnesses. Some harm-reduction advocates frame an abstinence-only stance as "moralistic," arguing that "it is nonsensical to dismiss an alternative" by demanding absolute safety. Furthermore, some such advocates believe that not only e-cigarettes but also smokeless tobacco products hold "the potential to lead to one of the greatest public health breakthroughs in human history by fundamentally changing the forecast of a billion cigarette-caused deaths this century."[4]

Although the evidence is limited and contested, some studies suggest that the majority of e-cigarette users treat them as cessation aides and report that they've been key to quitting smoking. For example, in one study, e-cigarettes

compare favorably to nicotine-replacement therapies in terms of the likelihood of having returned to smoking 6 months after a cessation attempt.[5]

Given the near unanimity of the public health community in pressing for harm reduction for injection-drug users in the face of relentless political opposition, some harm-reduction advocates find it stunning that their allies in that struggle have embraced an abstinence-only position on smoking. These advocates claim that a strategy of reducing, though not eliminating, risk is a moral imperative, given the certainty of harm associated with continued tobacco smoking.

The debate's stakes are heightened by the current discussion of the tobacco endgame, which aims to eliminate smoking or reduce it to very low levels. Most endgame strategists have advanced prohibitionist policies, from complete bans on traditional cigarettes, to regulatory strategies that would reduce and eventually eliminate nicotine, to efforts to manipulate pH levels in tobacco to make inhaling unpleasant.

This debate compels us to address the fundamental issue posed by Kenneth Warner in a recent issue of *Tobacco Control* devoted to endgame strategies: "What would constitute a final victory in tobacco control?" Warner's question raises several others: Must victory entail complete abstinence from e-cigarettes as well as tobacco? To what levels must we reduce the prevalence of smoking? What lessons should be drawn from the histories of alcohol and narcotic-drug prohibition?

From the glowing tip to the smokelike vapor, e-cigarettes seek to mimic the personal experience and public performance of smoking. But ironically, the attraction of the device is predicated on the continued stigmatization of tobacco cigarettes. Although abstinence-only and strict denormalization strategies may be incompatible with e-cigarette use, the goal of eliminating smoking-related risks is not. We may not be able to rid the public sphere of "vaping," but given the magnitude of tobacco-related deaths — some 6 million globally every year and 400,000 in the United States, disproportionately among people at the lower end of the socioeconomic spectrum — an unwillingness to consider e-cigarette use until all risks or uncertainties are eliminated strays dangerously close to dogmatism. We believe that states should ban the sale of e-cigarettes to minors and the FDA should move swiftly to regulate them so that their potential harms are better understood — and so that they can contribute to the goal of harm reduction.

Disclosure forms provided by the authors are available with the full text of this article at NEJM.org.

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This article was published on December 18, 2013, at NEJM.org.

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DOI: 10.1056/NEJMp1313940

Tobacco 21 — An Idea Whose Time Has Come

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On November 19, 2013, New York City Mayor Michael Bloomberg signed into law the "Tobacco 21" bill, imposing the strictest age restriction on tobacco sales of any major U.S. city.[1] Beginning in May 2014, it will be illegal to sell tobacco products and electronic cigarettes to persons younger than 21 years of age. The law stops short of making possession of tobacco products by persons under 21 a crime, placing the responsibility on retailers under penalty of civil fines.

Regulations issued by the Food and Drug Administration (FDA) set the national minimum tobacco-sales age at 18 but allow states and localities to enact laws setting a higher minimum age. In 2013, seven Massachusetts towns and one Hawaiian county adopted Tobacco 21 laws. Similar legislation has been introduced in a growing number of communities and at least three states: New Jersey, New York, and Utah. Further dissemination of Tobacco 21 laws represents a critical opportunity for public health law to reduce one of the most important health risks facing the U.S. population.

A generation ago, a similar strategy proved successful in curbing alcohol use by young