



Better education and surveillance to approach the e-cigarette surge as a pandemic

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“We are in the business of selling nicotine, a drug that causes addiction and effectively releases the stress mechanisms.”

Alberto Addison Yeman, from the cigarette industry Brown & Williamson. Document 1802, from the secret file that was unveiled in 1963 – USA.⁽¹⁾

Professor José Rosemberg, one of the best examples of human dignity, ethics, and solidarity, while fighting disease for many years and pursuing the right of the Brazilian population to live healthy lives, wrote the book “*Pandemia do Tabagismo: enfoques históricos e atuais*” in 2002.⁽¹⁾ We quote him, “No social habit or drug has expanded at the speed of tobacco. It was a real fever that took hold of everyone.”⁽¹⁾ Nowadays, with the surge of e-cigarettes, we are seeing a remake of this dark era.

E-cigarettes have been the most used tobacco product among adolescents in the United States since 2014. In 2022, over 2.5 million youth, including 14.1% of American high schoolers, were current e-cigarette users.⁽²⁾ Findings from the Global Youth Tobacco Survey in 17 European sites evaluating students aged 11-17 years showed that the prevalence of vape use doubled in some countries between 2014-2018, with rates between 7.6% and 18.5%.⁽³⁾ A study in 73 countries showed that the prevalence of use (at least one day in the last 30 days) of water pipe among adolescents aged 12-16 years was 6.9%, and rates higher than 10% were found in Europe and Eastern Mediterranean.⁽⁴⁾

To achieve one of the most important declines in smoking worldwide, Brazilian institutions took strong actions, and the prevalence of smoking dropped from 34.8% in 1989 to 9.1% in 2021.⁽⁵⁾ According to the 2019 Brazilian National Adolescent School-based Health Survey,⁽⁶⁾ the total proportion of smokers among students aged 13 to 17 years was 6.8%, being higher among boys (7.1%) in comparison with girls (6.5%). When comparing the findings with data from the same survey in 2015,⁽⁷⁾ a slight increase in the total proportion of smokers in the 13-17 year-old age group (from 6.6% in 2015 to 6.8% in 2019) can be observed due to the increase in the proportion of smokers among girls (from 6.0% in 2015 to 6.5% in 2019), although the prevalence of smokers among boys remained stable during the same period (7.1% in 2015 and 2019).^(6,7)

Regarding electronic smoking devices, the resolution of the Brazilian National Health Surveillance Agency⁽⁸⁾ prohibits selling, importing, and advertising of any devices for smoking, known as electronic cigarettes. Nevertheless, data from the Brazilian National Health Survey identified a prevalence of 0.64% of e-cigarette users, 70% of whom

were between 15-24 years of age, and almost 90% of whom were not cigarette smokers.⁽⁹⁾ The prevalence of water pipe use was estimated at 0.47%, an increase of 300% between 2013 and 2019, and approximately 80% of the users were in the 15-24 year-old age group.⁽⁹⁾

The real problem is not just the experimentation with e-cigarettes, but their continuous use, which can lead to an addiction that is difficult to overcome. In addition, the characteristics of e-cigarette and water pipe users and the tobacco industry propaganda reveal that the main objective is not smoking cessation, but rather to get the users hooked on nicotine and become dependent.

In this issue of the Brazilian Journal of Pulmonology, two important articles analyze the experimentation with and use of e-cigarettes and water pipes among people older than 18 years of age and medical students. Menezes et al.,⁽¹⁰⁾ as part of a countrywide cross-sectional telephone-based study conducted in 2022, included 1,800 individuals from each of the five Brazilian geographic regions. It was found identical prevalence of lifetime use of e-cigarettes and hookah (7.3%; 95% CI: 6.0-8.9), which were higher among men, in those in the 18-24 year-old age group, and in those with a higher level of education. Martins et al.⁽¹¹⁾ evaluated 711 medical students in an online cross-sectional multicentric study in the five Brazilian geographic regions. Experimentation with and current use of water pipes were 42.6% and 11.5%, respectively, whereas those of e-cigarettes were 13.2% and 2.3%, respectively. A higher risk of experimentation was found among those with higher incomes and those who had smokers in their social group. Water pipe and e-cigarette experimentation was associated with an elevated risk of smoking cigarettes. The use of e-cigarettes to quit smoking was more commonly associated with dual use than with smoking cessation. Surprisingly, even among medical students, the knowledge about the health consequences of consumption of nicotine delivery products did not stop experimentation.

These studies reveal and reinforce some important findings. First, even with the prohibition of selling, importing, and advertising of these devices, the prevalence of use is increasing, mainly between well-educated and higher-income groups. In addition, nonsmokers represent most of the users, and tobacco industry advertisements

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have targeted this public. These findings add to the challenge of developing strategies to prevent this group of consumers from being hooked by the appeal of such devices and the industry strategies.

Although long-term health effects of inhaling liquid flavoring chemicals and nicotine need further investigations, there is clear evidence that the use of any nicotine product by young people is unsafe. Therefore, aggressive steps are needed in order to protect our children and youth from these products, which have great appeal, partly due to their innovative design, attractive taste and scent, and great ability to release nicotine, inducing nicotine dependence and being a gateway to smoking initiation.

The current Brazilian regulation prohibits commercialization of e-cigarettes and includes the adoption of additional measures to curb the illegal trade of these devices, such as increasing inspection actions and carrying out educational campaigns. However, maintaining surveillance on sales ban is a difficult task, even more so because of e-commerce, and people may obtain their e-cigarettes during international trips as well as from friends or family members.

To achieve success, we must work together, aligning and coordinating efforts across governmental agencies

at national, state, and local levels, as well as across medical entities, educational institutions, and society.⁽¹²⁾ Parents, teachers, health professionals, and communities must take actions such as: learn about the different shapes and types of e-cigarettes and the risks of all forms of e-cigarette use; develop, implement, and enforce tobacco-free policies; engage people in discussions about the dangers of e-cigarette use; and ask about e-cigarettes. In addition, when screening patients for the use of any tobacco products, health professionals must educate patients, especially if they are young, about the risks of all forms of tobacco product use, including e-cigarettes, and encourage patients to quit.

I finalize this editorial with the following quote:

“I, Surgeon General of the United States Public Health Service, VADM Jerome Adams, am emphasizing the importance of protecting our children from a lifetime of nicotine addiction and associated health risks by immediately addressing the epidemic of youth e-cigarette use. The recent surge in e-cigarette use among youth, which has been fueled by new types of e-cigarettes that have recently entered the market, is a cause for great concern. We must take action now to protect the health of our nation’s young people. **KNOW THE RISKS. TAKE ACTION. PROTECT OUR KIDS.**”⁽¹²⁾

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