

New vaping products with techy allure exploding in popularity among youth

■ Cite as: *CMAJ* 2019 February 11;191:E172-3. doi: 10.1503/cmaj.109-5710

Posted on cmajnews.com on Jan. 22, 2019.

A high-dose nicotine vaping device is taking off in Canada, and public health experts are concerned it will lead to a rise in nicotine addiction among youth. Juul has become the best-selling vaping product in the United States since its launch in 2015. In November, a survey of more than 14 000 American young people found that 6% of those aged 15–17 used Juul. This age group was 16 times more likely to use Juul than respondents aged 25–34.

In September, Juul hit the Canadian market, and other Juul-like products have also begun appearing. In Toronto, for example, colourful billboards advertise the “big hit” of the Vype ePod, owned by Imperial Tobacco. Ontario Premier Doug Ford halted legislation proposed by the previous

government to ban vaping wherever smoking is illegal and to limit marketing. Only Ontario, Alberta and Saskatchewan allow e-cigarette advertising in retail stores. A coalition of health organizations, including the Heart & Stroke Foundation and the Canadian Cancer Society, have called on Ford to introduce stronger legislation.

The Juul electronic nicotine delivery device became popular among youth because it’s small and easy to conceal. It has a techy allure, resembling a USB stick, and offers flavours like mango and vanilla. Juul’s early marketing campaigns appeared to appeal to youth, with attractive, young models and social media sponsorships.

David Hammond, a professor in the School of Public Health and Health Systems at the University of Waterloo, has

conducted a survey of vaping habits among youth. According to the data, to be published later this year, “vaping has gone up among Canadian youth to the same extent as it’s gone up among US youth,” said Hammond. Juul’s popularity hasn’t yet skyrocketed among youth in Canada as it has in the US, but Hammond expects it will. He said his survey showed “a big increase” in vaping use among Canadian teens in the four weeks after Juul entered the Canadian market.

Many teenagers see e-cigarettes as almost harmless, according to Michael Perley, director of the Ontario Campaign for Action on Tobacco. “You have young people who have no conception of nicotine addiction, who may well be thinking that cigarettes are disgusting, who think this



Billboards for vaping products are appearing in Toronto.

vaping device is cool and clean.” But Juul has nicotine levels comparable to traditional cigarettes and uses nicotine salts, which are more readily absorbed in the lungs than the freebase nicotine of first-generation e-cigarettes. A Juul “starter pack” contains the same amount of nicotine as four packs of cigarettes, noted Perley. “Once a young person has had the nicotine in four packs of cigarettes, their system will start to accommodate to nicotine.”

Although many experts agree that vaping is a healthier alternative to smoking, they’re still concerned about the risks of vaping, especially for young people. “Any time you repeatedly inhale any chemical into your lungs on a chronic basis, that’s going to cause some risks,” said Hammond.

According to Dr. Robert Jackler of Stanford University, who studies tobacco and vaping advertising, young people are “uniquely vulnerable” to nicotine addiction. About 80% of adult smokers are addicted before age 21, according to one survey. Youth also show dependency symptoms earlier and at lower levels of nicotine use than adults. The flavouring agents in vaping products may also be harmful. “Many are well tested in the gastrointestinal tract, but they haven’t been tested for inhalation into the lungs,” he said.

Bonnie Halpern-Felsher, a professor of pediatrics at Stanford University, is collecting data on how much nicotine youth are being exposed to through e-cigarettes.

Anecdotally, she said, some young people have told her they vape the equivalent nicotine of one-to-two packs of cigarettes a day. “That’s huge,” she said.

Before Juul, most young people who experimented with e-cigarettes didn’t use them routinely, according to Hammond. And because of their low nicotine content, first-generation e-cigarettes weren’t a popular alternative for many smokers. Hammond sees Juul and other nicotine salts products as a double-edged sword.

“If I were trying to quit, Juul would be one of the first products I’d try. If I’m a parent of a kid, it’s one of the last products I want them to try.”

Wendy Glauser, Toronto, Ont.