

Prevalence of vaping and smoking among adolescents in Canada, England, and the United States: repeat national cross-sectional surveys

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Abstract

Objective: To examine differences in vaping and smoking prevalence among adolescents in Canada, England, and the United States.

Design: Repeat cross sectional surveys.

Setting: Online surveys in Canada, England, and the US.

Participants: National samples of 16 to 19 year olds in 2017 and 2018, recruited from commercial panels in Canada (n=7891), England (n=7897), and the US (n=8140).

Main outcome measures: Prevalence of vaping and smoking was assessed for use ever, in the past 30 days, in the past week, and on 15 days or more in the past month. Use of JUUL (a nicotine salt based electronic cigarette with high nicotine concentration) and usual vaping brands were also assessed. Logistic regression models examined differences in vaping and smoking between countries and over time.

Results: The prevalence of vaping in the past 30 days, in the past week, and on 15 days or more in the past month increased in Canada and the US between 2017 and 2018 ($P < 0.001$ for all), including among non-smokers and experimental smokers, with no changes in England. Smoking prevalence increased in Canada ($P < 0.001$ for all measures), with modest increases in England, and no changes in the US. The percentage of ever vapers who reported more frequent vaping increased in Canada and the US ($P < 0.01$ for all), but not in England. The use of JUUL increased in all countries, particularly the US and Canada—for example, the proportion of current vapers in the US citing JUUL as their usual brand increased threefold between 2017 and 2018.

Conclusions: Between 2017 and 2018, among 16 to 19 year olds the prevalence of vaping increased in Canada and the US, as did smoking in Canada, with little change in England. The rapidly evolving vaping market and emergence of nicotine salt based products warrant close monitoring.

Recommended Citation

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