Indicators of dependence and efforts to quit vaping and smoking among youth in Canada, England, and the United States

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Abstract
Objective: The current study examined indicators of dependence among youth cigarette smokers and e-cigarette users in Canada, England and the USA, including changes between 2017 and 2019.

Methods: Data are from repeated cross-sectional online surveys conducted in 2017, 2018 and 2019 with national samples of youth aged 16-19 years, in Canada (n=12 018), England (n=11 362) and the USA (n=12 110). Measures included perceived addiction to cigarettes/e-cigarettes, frequency of experiencing strong urges to smoke/use an e-cigarette, plans to quit smoking/using e-cigarettes and past attempts to quit. Logistic regression models were fitted to examine differences between countries and changes over time.

Results: The proportion of ever-users who vaped frequently was significantly higher in 2019 compared with 2017 for all outcomes in each country. Between 2017 and 2019, the proportion of past 30-day vapers reporting strong urges to vape on most days or more often increased in each country (Canada: 35.3%, adjusted OR (AOR) 1.69, 95% CI 1.20 to 2.38; England: 32.8%, AOR 1.55, 1.08 to 2.23; USA: 46.1%, AOR 1.88, 1.41 to 2.50), along with perceptions of being 'a little' or 'very addicted' to e-cigarettes (Canada: 48.3%, AOR 1.99, 1.44 to 2.75; England: 40.1%, AOR 1.44, 1.03 to 2.01; USA: 53.1%, AOR 1.99, 1.50 to 2.63). Indicators of dependence among smokers were consistently greater than e-cigarette users, although differences had narrowed by 2019, particularly in Canada and the USA.

Conclusions: Prevalence of dependence symptoms among young e-cigarette users increased between 2017 and 2019, more so in Canada and the USA compared with England. Dependence symptom prevalence was lower for e-cigarettes than smoking; however, the gap has narrowed over time.

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