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Factors associated with changes in vaping behaviour during 2020

Summary

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Canada

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Prepared for Health Canada by Environics Research

March 2022

This public opinion research report presents the results of a qualitative and quantitative research program conducted by Environics Research on behalf of Health Canada, comprising:

- A series of fifteen 90-minute online focus groups with Canadians in various age cohorts who vaped during the year 2020 and may or may not currently vape.
- An online survey with 3,653 Canadians aged 15 or older in 2020 and vaped regularly (vaped at least once a week for four consecutive weeks) at any time in 2020 and may or may not currently vape, conducted from February 3 – March 3, 2022.

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Executive summary

A. Background and objectives

The *Tobacco and Vaping Products Act* (TVPA) came into force on May 23, 2018, to regulate the manufacture, sale, labelling and promotion of tobacco products and vaping products sold in Canada. The TVPA created a legal framework for regulating vaping products to protect young persons from nicotine addiction and tobacco use, while allowing adults to legally access vaping products as a less harmful alternative to tobacco. This Act applies to a range of devices and substances, such as e-liquids, and covers vaping products with and without nicotine. The Act bans the sale and promotion of all vaping products to persons under 18, prohibits the promotion of flavours that appeal to youth, and creates regulatory authority to mandate the display of health-related labels on vaping devices and refill packages.

The Canadian Tobacco and Nicotine Survey (CTNS) provides nationally representative information on changes in prevalence that occurred in 2020 but does not explain the reasons individuals changed their vaping or smoking behaviours. Health Canada therefore commissioned public opinion research on the factors associated with these changes. This research will be used to inform ongoing regulatory and program activities.

The main objective of this research was to understand patterns of use at the individual level among Canadians aged 15 and older who vaped regularly (defined as at least once a week for a month) in 2020 and may or may not have been doing so at the time of data collection. The research also gathered attitudes, behaviours and the impacts of key restrictions in 2020 on their vape use patterns.

Specific research objectives include, but are not limited to, the following:

- To measure changes in use among those who vaped regularly in 2020;
- To understand factors influencing changes in use (e.g., provincial regulation changes, health concerns etc.);
- To understand changes in patterns of use among current co-users (those who smoke and vape) in 2020;
- To understand the impacts of the COVID-19 pandemic on vaping behaviour.

B. Methodology

This research study consisted of two separate, but complementary, phases (described below).

A note about age groups: The groups of interest were youth (15-19 years old), young adults (20-24 years old) and adults (25 years and older) that vaped regularly (defined as at least once a week for four weeks) in 2020. Thus, participants were in the 16-20 years, 21-25 years, and 26 years and older age groups, respectively, at the time of the research in 2021-2022.

1. Qualitative phase

EnviroNics Research conducted a series of fifteen 90-minute online focus groups with Canadians in various age cohorts who vaped regularly (defined as at least once a week for four weeks) at some point during the year 2020. Nine of the sessions were conducted with people who vaped in 2020 from provinces where restrictions on

the sale of vape flavours were introduced in 2020 (Nova Scotia, Ontario and British Columbia). Given that the restrictions primarily affected access to vaping products for youth, all three age groups (youth aged 15-19 years in 2020, young adults aged 20-24 years in 2020, and adults aged 25+ in 2020) were studied separately. Six focus groups were conducted with people who vaped in 2020 from the remaining provinces where no such restrictions were introduced in 2020; youth and young adults were combined in those sessions.

Participants were each offered a \$100 incentive to thank them for their time. Environics invited eight participants to each session. The sessions were hosted using the Zoom conferencing platform. The 15 focus groups were conducted between December 6 and 15, 2021. Thirteen sessions were conducted in English and two were conducted in French.

Group #	Date and time	Composition
1	Monday, December 6, 5:00-6:30pm EST	Adults (26+) who vape - Ontario
2	Monday, December 6, 4:00-5:30pm PST)	Adults (26+) who vape - B.C.
3	Tuesday, December 7, 5:00-6:30pm EST	Young adults (21-25) who vape - Ontario
4	Tuesday, December 7, 4:00-5:30pm PST	Young adults (21-25) who vape - B.C.
5	Wednesday, December 8, 5:00-6:30pm EST	Youth (16-20) who vape - Ontario
6	Wednesday, December 8, 4:00-5:30pm PST	Youth (16-20) who vape - B.C.
7	Thursday, December 9, 5:00-6:30pm AST	Adults (26+) who vape - NB/PEI/NL/QC (English)
8	Thursday, December 9, 6:00-7:30pm CST/ 5:00-6:30pm MST	Adults (26+) who vape - Prairies
9	Friday, December 10, 4:00-5:30pm AST	Adults (26+) who vape - Nova Scotia
10	Monday, December 13, 5:00-6:30pm AST	Young adults (21-25) who vape - Nova Scotia
11	Monday, December 13, 7:00-8:30pm AST	Youth (16-20) who vape - Nova Scotia
12	Tuesday, December 14, 6:00-7:30pm AST	Youth/Young adults (16-25) who vape - NB/PEI/NL/QC (English)
13	Tuesday, December 14, 6:00-7:30pm CST/ 5:00-6:30pm MST	Youth/Young adults (16-25) who vape - Prairies
14	Wednesday, December 15, 5:00-6:30pm EST	Youth/Young adults (16-25) who vape - Quebec (French)
15	Wednesday, December 15, 4:00-5:30pm PST	Adults (26+) who vape - Quebec (French)

Statement of limitations: Qualitative research provides insight into the range of opinions held within a population, rather than the weights of the opinions held, as would be measured in a quantitative study. The results of this type of research should be viewed as indicative rather than projectable to the population.

2. Quantitative phase

Environics conducted a national online survey of 3,592 Canadians who were aged 15 or older in 2020 and who vaped at least once a week for four consecutive weeks at any time in 2020. The survey was conducted from February 3 – March 3, 2022. The sample was stratified by age group within region to allow for meaningful coverage of lower population areas, particularly for regions of interest where vaping flavour restrictions had

been implemented in 2020. As this online survey utilized an opt-in panel, it is a non-probability survey and no margin of sampling error should be calculated. The following completions were achieved:

Provinces	15-19	20-24	25+	Total
Provincial restrictions - 2020				
Ontario	240	488	473	1,201
British Columbia	85	199	205	489
Nova Scotia	32	73	134	239
Provincial restrictions - 2021				
PEI	6	13	13	32
New Brunswick	23	61	75	159
Saskatchewan	26	46	37	109
No provincial restrictions				
Newfoundland and Labrador	15	39	53	107
Quebec	157	337	241	735
Alberta, Manitoba, Territories	112	203	206	521
Total	696	1,459	1,437	3,592

C. Contract value

The contract value was \$249,397.36 (including HST)

Report

This report begins with an executive summary outlining key findings and conclusions, followed by a detailed analysis of the focus group findings and a detailed analysis of the survey data. Provided under a separate cover is a detailed set of “banner tables” presenting the results for all questions by population segments as defined by region and demographics. These tables are referenced by the survey question in the detailed analysis.

In this report, quantitative results are expressed as percentages unless otherwise noted. Results may not add to 100% due to rounding or multiple responses. Net results cited in the text may not exactly match individual results shown in the tables due to rounding.

Qualitative findings cannot be quantified numerically. References in the report to views expressed by “most” or to “a majority” of participants refer to well over half of participants. References to views expressed by “some” refer to about half of participants. References to views expressed by “a few” indicates a minority of participants.

People who smoke, had formerly smoked, and vape are referred to as smokers, former smokers, and vapers, respectively, in the interest of brevity.

At the time of the fieldwork, the provinces and territories can be categorized as follows according to vaping restrictions they have introduced (in addition to existing federal regulations):

- Restricted to tobacco flavour only: Nova Scotia (introduced 2020), New Brunswick and Prince Edward Island (2021)
- Access to flavours restricted to age 19 and older in vape stores only: Ontario and British Columbia (2020), Saskatchewan (2021); mint/menthol or tobacco flavours can be sold outside of specialty shops in Ontario and Saskatchewan while only tobacco flavour can be sold outside of specialty shops in B.C.

- No additional restrictions: Newfoundland & Labrador, Quebec, Manitoba, Alberta and the territories

Use of findings of the research. Data from this research will allow the Tobacco Control Directorate to understand and contextualize any recent changes in vaping prevalence.

D. Key findings – qualitative phase

Reasons and drivers for vaping

- The reasons why people started vaping varied by age. Youth and young adults who vaped in 2020 described starting vaping while in high school and being primarily motivated to start through peer pressure and by a perception that vaping was "modern," "clean" and "cool," especially compared to smoking.
- While a few youth participants also said they started to vape as a way of transitioning out of smoking cigarettes, this was a far more common phenomenon among young adults and (especially) adults who vaped in 2020.
- Many of the adults began vaping as a way to wean themselves from smoking. They found vaping was a more convenient way to satisfy their need for nicotine. Vaping, unlike smoking, was described as being almost odourless, something that could be done inside, and more discreet.
- Most could not identify what would typically drive or trigger them to vape, both in general and in the past 30 days. Some mentioned specific events, such as being stressed during exams in high school or university; having a breakup with a partner or a fight with a friend that caused stress; breaking an arm and using vaping to reduce pain; and having to work from home and being able to vape more than when in the workplace.
- When asked about what drives vaping in general, it was clear most participants did not maintain a constant vaping routine – it tended to be incidental and event-driven. Examples included being at a party, stressful situations, being alone, and being bored.

Vaping routines

- The pandemic had varied impacts on people's vaping routines. Those who primarily vaped in social situations reported they vaped less than they did a few years ago since they didn't socialize as much. On the other hand, many had increased their vaping because they were now either more idle or working more from home, which made it easier to vape whenever they wanted.
- Participants reported using a wide variety of vaping devices. Many youth used disposable vapes, such as Ghosts, or would share vaping devices with friends. Young adults and adults tended to have their own devices, and many spoke of having bought a Juul or having a "pen" with liquid cartridges or other types of "e-cigarettes."
- Many reported that, when they vaped, they did not think of it as a "vaping session." Instead, they would simply vape from time to time throughout the course of the day.

Flavours and nicotine content

- Flavoured vaping liquids were fairly popular, especially among youth and young adults. Many described how the fruit and dessert flavours of liquids had been something that attracted them to vaping in the first place, and were a topic of conversation with their friends.
- Many of the adults who reported they preferred the “golden tobacco” or plain nicotine flavours of vaping juice also previously smoked. They already liked the taste of tobacco and associated it with smoking – so when they switched to vaping, it felt like less of a transition.
- Many participants struggled to quantify their vaping habit in the way people could with smoking. The ways in which nicotine is measured vary, and it was hard to say what amount of vaping would be equivalent to smoking a pack of cigarettes.
- It was noted there were now restrictions on what concentrations of nicotine could be sold in Canada as well. Some participants reported trying to wean themselves to lower concentrations of nicotine.

Where vaping products are obtained

- Participants obtained their vaping devices and liquids in a variety of ways, and the responses varied somewhat by age and region. Most adults reported they usually obtained their products at specialty vape shops where there is a much wider selection of products. It was noted that, in some provinces such as Ontario and B.C., flavoured vaping liquids are only available at specialty stores; outside of these speciality stores (e.g., gas stations or convenience stores), tobacco flavour is available in B.C., and mint/menthol and tobacco flavours are available in Ontario.
- Some obtain their vaping products at convenience stores and gas stations, though these stores have limited availability and variety of products, and often cannot sell any flavours (depending on the provincial regulations) or higher nicotine concentrations. Some adults and young adults also reported they were increasingly ordering their vaping products online.
- Youth participants often reported they would get older friends to buy liquids for them; or that they would go to certain convenience stores or vape stores known to not ask for any ID or willing to sell to minors under the table.

Vaping and smoking

- There is a complex relationship between vaping and smoking. Many of the adults had turned to vaping after having smoked for many years. In some cases, they ceased smoking altogether and now only vaped; in other cases, they were still smoking as well as vaping.
- Vaping was seen as more convenient, “cleaner” and better smelling for indoor use. Cold weather also motivated some to vape rather than smoke cigarettes because they didn’t need to get dressed to go outside and can vape inside the home.
- Youth in particular felt smoking is now stigmatized and “looked down upon” in a way that vaping is not. Vaping did not involve all the “baggage” that comes with smoking, such as the smell and the ashes, etc.

- Most of the youth participants did not smoke at all and had started vaping without ever having smoked. It was notable that most of these younger participants reported smoking was now quite rare in their age group and was a very stigmatized practice.
- Vaping was also preferred because it was far less expensive than smoking. To the extent that people chose to smoke instead of vape, it was often in more social situations, such as outdoor parties, where people were also drinking.

Health impacts and quitting

- Participants had ambivalent attitudes toward the health risks and impacts of vaping. Many adults and some young adults had quit smoking, so their point of comparison was to the health impacts of vaping compared to smoking tobacco. Youth were more likely to never have smoked, so they were less likely to compare vaping with smoking, and instead looked at how vaping impacts their health compared to not inhaling anything at all.
- Most thought vaping was likely somewhat less harmful than smoking given the evidence about the harms of smoking. But there was always a subtext of suspicion that vaping was likely more harmful than people want to believe.
- It was noted the effects of smoking were well-known, while vaping is a relatively new phenomenon and, as a result, little is known about its long-term impacts. Several people mentioned hearing anecdotal stories about vaping causing “popcorn lung” or about someone young who had died and how it had possibly been due to vaping.
- To the extent that participants had an opinion on the health impacts of vaping and how it may or may not compare to the health risks of smoking, their opinions were almost entirely based on personal experience, as opposed to reading or hearing about any scientific studies.
- A few participants reported they had quit vaping in the past year or were trying to quit vaping. These participants were primarily motivated to quit for health reasons. Adults who had previously been smokers were less likely to report any plans to quit vaping. Many felt moving from smoking to vaping was a big enough step.
- Those who had quit or who were trying to quit vaping found it challenging because of the addictive nature of the nicotine, and because of being surrounded by friends who also tended to vape.

Impact of flavour restrictions

- Awareness of the new restrictions on flavours varied. Participants of all ages from Nova Scotia were aware of the restrictions on flavours in that province, because it was an across-the-board ban on all flavours (except tobacco flavour) that also applied to vaping specialty stores. Awareness of the restrictions was much lower in Ontario and B.C., where the restrictions only applied to flavours sold at gas stations or convenience stores.
- Many participants also confused restrictions on vaping flavours with other restrictions on the allowable nicotine content in vaping liquids.

- The impact of the flavour restrictions also varied by province and by age group. Youth and, to a lesser extent young adults, in Nova Scotia were most likely to report having been affected by the ban on flavours. Most of them found other ways to get flavours, such as homemade flavours being sold at school, or buying flavours from people at school who ordered them online. Some also reported they would buy flavours from stores that still sold them under the table.
- Adults in Nova Scotia were less affected by the restrictions, since many had previously smoked and preferred tobacco vaping flavour and others procured flavoured products online or by driving to a neighbouring province.
- In Ontario and B.C., where flavours were still widely available in vaping specialty stores, most reported the restrictions had little impact on them. Most indicated they tended to buy their vaping liquids at specialty stores or online, as opposed to convenience stores, so they still had easy access to flavours. The lack of available flavours seemed more noticed by youth than by adults (although they did not necessarily connect it to provincial regulations), but otherwise did not appear to have impacted them.
- Those living in major urban centres (such as Toronto or Vancouver) tended to not be affected much by the restrictions on flavours, as vape specialty stores selling flavours are abundant in those cities. Some participants in rural areas were more affected, because they were more likely to buy nicotine products from gas stations that typically have minimal or fewer vape flavour options.
- Very few participants reported restrictions on flavours making them want to quit vaping altogether, but some younger participants noted they might never have begun to vape if the flavours had not been available to them.

Behavioural changes in 2020

- Since early 2020, reported changes in vaping patterns were often linked to the impact of the COVID-19 pandemic. Many reported their vaping had increased in the early months of the pandemic, mostly because they were now working or studying from home, had been laid off and had nothing else to do or were in lockdown, which also led to idleness.
- For those who tended to only or mostly vape in social situations, the seclusion and idleness brought on by pandemic restrictions led to a reduction in vaping because they were no longer in social situations.
- Pandemic-related lockdowns made it more difficult for some participants to obtain their vaping products. Youth were often not able to easily switch to other ways of getting products, such as online purchases or going to specialty vape stores which were sometimes stricter about ID checks.
- Most felt any vaping habits they had picked up during the pandemic would fade away over time. Some who had developed a routine of vaping almost constantly while working or studying at home indicated this was something they might not be able to roll back in the future.
- Other types of personal events leading to an increase in vaping included loss of employment, relationship issues, a death in the family, moving back in with parents and not being able to smoke (but can hide their vaping from their family), online schooling, and working from home.

- Some mentioned events in their lives that had caused them to vape less or quit, such as pregnancy, death or respiratory illness in the family, or wanting to save money to make a major purchase.
- It was difficult for participants to quantify the relative impact of different factors on their vaping in 2020 – and those factors were often interrelated. The pandemic triggered lifestyle changes which in turn led to relationship challenges and financial issues.
- Among participants in provinces where flavours were restricted in 2020, the major direct and indirect impacts of the pandemic were greater factors on their reported vaping behaviour than flavour restrictions.

E. Key findings – quantitative phase

The purpose of the quantitative survey was to measure, in a structured way, change in vaping behaviours over the course of the COVID-19 pandemic, and better understand the factors influencing that behaviour change – including change in access to vaping products due to the pandemic or to the introduction of provincial flavour restrictions, health concerns, or other factors.

This survey was conducted in early 2022, and thus relied on respondent recall of their behaviours going back two years to February 2020. Research-on-research has demonstrated that people do not recall past events or behaviours with great accuracy, even for “habitual” behaviours such as vaping or smoking. Moreover, other longitudinal research conducted for Health Canada has revealed considerable change over time in vaping and smoking behaviours among individuals, which, compounded by the unique situation of the pandemic, speaks to the complexity of accurately retrieving memories going back two years. Therefore, these survey results are best interpreted as the target audience’s *perceptions* of whether or not they changed their vaping behaviours, and the reasons why.

The survey covered the following three time periods, chosen to anchor survey respondents’ recall and also reflect meaningful intervals in time:

- February 2020 (the month before the COVID-19 pandemic was confirmed in Canada)
- The rest of 2020 (from March to December 2020 after the pandemic was confirmed)
- Early 2022 (during the survey data collection period, almost two years into the pandemic)

A. *Perceived behavioural change and influencing factors over time*

- Almost all (95%) participants identify themselves as current vapers back in February 2020; the remainder would have been a regular vaper at some point in 2020, but not necessarily in February. A majority (56%) were current co-users, meaning they also smoked cigarettes in February 2020, although this skewed higher among young adult and adult vapers versus youth.
- This target audience reported a substantial amount of change in their vaping and smoking use between February and the rest of 2020. This included half (52%) who changed their nicotine vaping use, and close to four in ten who changed their non-nicotine vaping (40%) and smoking (45%) behaviours. Roughly similar proportions also reported changes to these behaviours between January 2021 and 2022. The direction of change tended to reflect increasing or fluctuating use, rather than declining use or cessation.

- The data suggests that provincial flavour restrictions may have played a role in reported behavioural shifts. Restricting vaping flavours to tobacco may have contributed to reported declines (or at least, to reduced propensity for increases) in nicotine vaping use. Similarly, reported use of fruit flavours was lower in provinces restricted to tobacco flavour. However, there was no substantial shift in where vapers sourced their liquids or devices that can be conclusively linked to provincial flavour restrictions; the only finding of note is that purchasing of vaping liquids at convenience stores was more common in provinces with no flavour restrictions whatsoever.
- Those who changed their vaping behaviour over the past two years linked it primarily to change in routine due to the pandemic and to increased stress, followed by fewer social gatherings and greater mental health concerns – moreover, these factors were more widely mentioned by those reporting increases in nicotine vaping. In turn, those who report decreases in their vaping or cessation suggested that physical health concerns (both COVID and non-COVID related), as well as a decrease in their stress levels, were contributing factors to this behaviour change. Notably, individuals living in provinces with flavour restrictions were no more likely than those without flavour restrictions to say that finding it harder to get vaping products contributed to behaviour change.
- In terms of age groups, there was considerable reported behaviour change for all three age groups. For youth, the most prominent reported change was an increase or fluctuation in nicotine vaping (by comparison, fewer used non-nicotine vaping or smoked cigarettes in the past two years). Young adults reported similar changes to their nicotine vaping use, as well as an increased propensity to quit smoking or not smoke at all between 2021 and 2022. Adults are as likely as youth and young adults to report behaviour change, but also relatively more likely to say no change occurred (with relatively fewer who say they do not use these substances).
- There is no clear evidence from the research about change in reported use of vaping flavours (such as fruit and candy) over time among youth and young adult vapers. The sources of vaping liquids and devices have changed for youth, with declining reliance on family/friends and increased self-purchases at either a vape shop or convenience store. For young adult and adult vapers, there appeared to be a bump up in online purchasing of devices and liquids over the past two years.

B. Vaping flavour and device shortages and habit changes

- Just under half of vapers have experienced times since February 2020 when they have been unable to obtain either a vape flavour or device they wanted. Those experiencing shortages adjusted mainly by shopping online, switching to an available flavour, finding another store in their province where the products they wanted were available or purchasing from a friend or family member. Notably fewer mention other adaptations, including reducing or quitting vaping, finding an out-of-province store, or replacing vaping with cigarette or other substance use.

C. Attitudes about vaping and smoking

- Of a series of statements about the experience of vaping, vapers are most likely to agree vaping calms them down when stressed or upset or that they enjoy vaping too much to give it up, and least likely to agree they have the kind of genetic makeup that allows them to vape without it causing health problems, or that the

medical evidence that vaping is harmful is exaggerated. Vapers who currently smoke respond similarly to identical statements about smoking.

F. Political neutrality statement and contact information

I hereby certify as senior officer of Environics that the deliverables fully comply with the Government of Canada political neutrality requirements outlined in the Communications Policy of the Government of Canada, and Procedures for Planning and Contracting Public Opinion Research. Specifically, the deliverables do not include information on electoral voting intentions, political party preferences, standings with the electorate, or ratings of the performance of a political party or its leaders.

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