



Vapers Online Survey to Measure Attitudes and Behaviours Regarding Vaping Over Time (2019 to 2021)

Executive Summary

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Prepared for Health Canada by Environics Research

May 2021

This public opinion research report presents the results of quantitative and qualitative research conducted by Environics Research on behalf of Health Canada. The quantitative research involved a return-to-sample online survey conducted between March 8 and March 25, 2021, among a group of Canadians who identified as Regular Vapers in the original 2019 waves of the Health Canada Vapers Online Survey. The qualitative research, conducted between April 28 and 30, 2021, involved 46 individuals recruited from the quantitative exercise, who participated in a two-day online, moderated bulletin board exercise.

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Executive summary

Background and objectives

The *Tobacco and Vaping Products Act* (TVPA) came into force in May of 2018 and created a new legal framework for regulating vaping products to protect young persons from nicotine addiction and inducements to tobacco use, while allowing adults to legally access vaping products as a less harmful alternative to tobacco.

This 2021 Health Canada Vapers Online study represents the third wave of research conducted to examine the transition between smoking and vaping products occurring at the individual level. It represents a longitudinal study of the changes in vaping and smoking behaviour over time among a group of Canadians who identified as Regular Vapers in the original 2019 research, and then subsequently participated again in 2020.

The main objective of this research was to understand patterns of use over time at the individual level with respect to vaping products. The research also gathered attitudes and behaviours of Canadians who are still Regular Vapers with respect to vaping products. Specific research objectives include, but are not limited to, the following:

- To measure changes in patterns of use among Regular Vapers over time;
- To understand changes in patterns of Dual Users over time;
- To measure Canadian Regular Vapers' level of awareness and knowledge around vaping products;
- To gather information on Canadian Regular Vapers' behaviours with respect to vaping products, including product evolution; and,
- To gather information on the vaping devices and e-liquids currently being used by Canadian vapers.

Methodology

Quantitative. To address the research objectives, a quantitative Return to Sample (RTS) online survey was conducted with Canadians who originally participated in either the February or the June 2019 waves of the Health Canada Vapers Panel online survey. The original qualification criteria for the 2019 surveys were Regular Vapers aged 15 and older.

A total of 2,000 invitations were sent and 337 respondents completed the 2021 survey (a participation rate of 17%). The survey was conducted between March 8th and 25th, 2021, using the same panel sample sources as the 2019 and 2020 studies. This means that this survey was fielded while most parts of Canada were under public health restrictions due to the COVID-19 pandemic. Of the total 337 responding in 2021, 295 completed all three waves of research (2019, 2020 and 2021) and 42 completed only the 2019 and 2021 waves (i.e., not the 2020 wave). No quotas were used to allow every potential participant to respond. Weighting was used to match the final sample to the *2017 Canadian Tobacco Alcohol and Drugs Survey* (CTADS) in terms of region, gender and age to maintain demographic consistency.

Each respondent was classified as a **regular vaper** if they have vaped at least once a week for the past four weeks and as a **current smoker** if they have smoked daily or occasionally in the past month. Respondents who were both Regular Vapers and Current Smokers were classified as **Dual Users**.

The original sample (and, therefore, also the 2021 sample) was drawn from panels of individuals who have agreed to participate in online surveys. Because the sample is based on those who initially self-selected for

participation in the panel, no estimates of sampling error can be calculated, and the results cannot be described as statistically projectable to the target population.

Please note: this sample cannot be considered representative of Regular Vapers as a whole, since it excludes individuals who became Regular Vapers between 2019 and 2021 (i.e., no “new” vapers were invited to the survey).

Qualitative. The second phase of the project involved a qualitative online community exercise with a subsample of respondents from the 2021 online survey. The online community used the Recollective online bulletin board platform to guide participants through a two-day, moderated series of activities based on their past and current vaping and smoking behaviour, with a particular focus on transitions (i.e., quitting and relapsing). Separate English and French communities were run concurrently.

A total of 46 participants (31 English and 15 French) completed the qualitative exercise between April 28 and April 30, 2021. Participants were recruited to reflect a mix of age groups, genders and smoking and vaping experiences. They were informed of the purpose of the exercise, the time commitment and incentive, and provided with guidance on how to protect their privacy. Each participant who completed the qualitative exercise was given an honorarium of \$150 as a thank you for their time.

This research was qualitative in nature, not quantitative. As such, the results provide an indication of participants’ views about the issues explored, but they cannot be generalized to the full population of members of the general public or members of the targeted audience segments.

Contract value

The contract value was \$147,564.71 (HST included).

Key findings

This research examines shifts in vaping and smoking behaviour among 337 Canadians who were originally identified as Regular Vapers in 2019, over a three-year period (2019, 2020 and 2021).

More than one in three (36%) experienced a transition of some kind between 2020 and 2021, either quitting vaping and/or smoking, relapsing vaping and/or smoking, or newly taking up smoking (no new vapers were invited to the survey). The remaining six in ten (64%) of participants fall into a “no transition” (status quo) category, meaning they continued to vape, smoke, both or neither in 2021 as they did in 2020. The large size of this status quo category, the decline in the proportion reporting any change in behaviour between 2020-21 (36%) compared to the previous year (54% between 2019-20), and high proportions interested in cessation points to the general tenacity of these behaviours, the difficulty of quitting for some, and a lack of interest in quitting for others.

There is also a degree of churn evident in quitting and relapsing behaviours. For example, while 15% of participants quit vaping since 2020, another 12% relapsed, resulting in a net decrease in vapers of only three percentage points. There was a net increase of smokers by two percentage points, with 6% of respondents quitting smoking, but another 6% relapsing and 2% taking up smoking for the first time. This churn, with different users effectively replacing each other over time, also points to the challenge inherent in reducing the *overall* proportion of people smoking and vaping over time.

Ultimately, respondents were categorized in broader categories for closer analysis of the following groups of interest:

- 1. Dual Users (38% (n=135*) of respondents):** A particular emphasis of this research is on “Dual Users” who both vape and smoke. In 2020, 38% of respondents were Dual Users, and this proportion remains consistent in 2021 (38%). However, this overall stability masks change between 2020 and 2021: during that time, 12% of the total sample moved out of the dual user category (either due to quitting smoking, quitting vaping or both), and another 12% became (new or relapsed) Dual Users in 2021.
- 2. Quit Smoking (6% (n=26*) of respondents):** This group consists of all respondents who were smokers in the previous study wave in 2020 (or 2019, for those who did not complete the survey in 2020) but are no longer regular smokers. The subsample size of this target group (n=26) is too small to analyze quantitatively.
- 3. Relapsed Smokers (6% (n=25*) of respondents) and New Smokers (2% (n=6) of respondents).** Relapsed Smokers are former smokers from 2019 who were not smoking in 2020, but since started smoking again. New smokers are those who never smoked in 2019 and 2020, but who now do. Due to small sample sizes (n=25 Relapsed Smokers and n=6 New Smokers), the two groups are combined to allow for analysis.
- 4. Quit Vaping (15% (n=56*) of respondents):** These respondents were vaping in 2020 (or 2019, for those who did not complete the 2020 study) but are no longer vaping regularly in 2021. This group includes the Current Smokers who had quit vaping, but continue to smoke (9% of respondents).

* Note: Percentages are based on weighted proportions; actual sample sizes are not weighted.

The following bullet points summarize the key findings for specific behaviours, including: vaping behaviours; smoking habits among Dual Use, New and Relapsed Smokers; the use of vaping to quit smoking; and, efforts toward vaping cessation. Overall, there are relatively few changes in these measures since 2020.

Vaping Behaviours

- In 2021, over half (56%) of the participants (who were all Regular Vapers in 2019) are still vaping, or vaping again. Of these current Regular Vapers, the large majority (78%) vape products that contain nicotine. The proportion who *only* use nicotine products has increased across the three waves of study, standing at 66% in 2021 (compared to 56% in 2020 and 48% in 2019). Daily use of nicotine products has also crept up since the original study, with six in ten (59%) current vapers using nicotine products daily (compared to 52% in 2020 and 49% in 2019). This shift toward greater nicotine use may reflect that this group no longer includes (successful) vaping quitters who were less likely to use nicotine products, or used nicotine products less frequently.
- Juul continues to be the device brand most widely used by Regular Vapers (24%). Average monthly spending is lower than in past waves, at \$40 a month for devices and \$46 a month for liquids (2019 mean spend was \$55 for devices and \$52 for liquids; 2020 mean spend was \$53 for devices, \$51 for liquids); this could be due to the economic impacts of COVID-19 on discretionary spending or pandemic-related shopping restrictions.
- Compared to previous waves of the study, preference for tobacco flavoured vaping liquids has increased, overtaking fruit flavours as the most common choice among Regular Vapers. Tobacco flavour preference is especially high among former smokers who still vape (46%), suggesting that many of these users have replaced smoking with vaping products to give an experience that more closely resembles smoking. It is also high in Atlantic Canada. This is likely attributed to Nova Scotia banning all flavours except tobacco since April 1, 2020.
- As before, vaping and smoking are rated equally important by their respective users (67% each say these activities are very or somewhat important to their day-to-day lives), and dual users do not value any one activity/substance more than another.
- While majorities of both vapers and smokers say they sometimes or often feel negatively judged for these behaviours, this stigma is felt more widely by smokers (74%) than Regular Vapers (58%), a pattern that holds true for Dual Users (74% for smoking and 60% for vaping).
- There continues to be a clear hierarchy in terms of perceptions of harm, with just half (50%) of participants seeing vaping products without nicotine as harmful, rising to three-quarters (74%) for vaping products with nicotine, and almost nine in ten (86%) for cigarette smoking; these results are broadly consistent with previous study waves.
- Nearly half of Regular Vapers (47%) have tried to quit vaping or are trying to quit right now, and an even higher proportion (59%) have tried or are trying to reduce their vaping frequency. While these proportions are similar to 2020, fewer report that their attempt is serious (75% serious in 2021, down from 90% in 2020). This may not reflect a change in attitude among individual vapers, but rather points to the attrition of successful quitters leaving behind a group who are less serious about quitting. Nicotine gum or lozenges remain the most common type of quitting aid used by those actively trying to quit vaping.

Smoking Among Dual Users, New and Relapsed Smokers

- As was the case in 2020, dual use continues to be associated with less frequent smoking (44% every day, compared to 66% among those who only smoke) and a lower daily number of cigarettes smoked compared to those who smoke but no longer vape (mean of 8 per day, compared to 10). Dual Users remain most likely to see themselves as both a vaper and smoker (48%) rather than mainly a vaper (30%) or mainly a smoker (17%).
- By comparison to Dual Users, New and Relapsed Smokers tend to be occasional smokers (75% smoke occasionally and just 25% smoke daily) and report a relatively lower number of cigarettes per day (mean of 7 per day). Stress is the top reason these smokers say they have returned to smoking.
- Status quo Dual Users are those who were Dual Users in the previous wave of the study, and are still Dual Users in 2021. When asked why they continue to vape in addition to smoking, these users most often say it's due to habit (37%) or because they like the feeling of smoking that vaping can't offer (32%). This second reason has risen in prominence compared to 2020; as with many other shifts noted in the study, this may be a matter of attrition of quitters, rather than individual changes, that is to say that those who are still Dual Users after two waves of the study are more likely to experience something with smoking that vaping simply can't replicate.
- Vaping in situations where smoking isn't possible remains common among Dual Users: nearly half (46%) report doing this at least twice a day. However, the reported frequency of this behaviour has declined since 2020 (56% in 2020). One hypothesis is that smokers are home more due to the pandemic, and thus encounter fewer situations where replacing a cigarette with vaping is necessary.

Vaping for Smoking Cessation

- The use of vaping to cut down or quit smoking remains a common theme among Regular Vapers. As before, most Dual Users say their main reason for vaping is to reduce or eliminate cigarettes altogether (69% in 2021, consistent with 66% in 2020 and 69% in 2019). Despite their use of vaping for this purpose, Status Quo Dual Users say they continue to smoke out of habit and because vaping does not offer the same feeling.
- Moreover, Regular Vapers who have successfully quit smoking (and thus are also Former Smokers) say they still vape as an alternative to smoking (71%) and because it helps them avoid a relapse (51%). Indeed, fewer of this group than before cite reasons related to enjoyment and entertainment.
- Half of Dual Users (51%) indicate an intention to quit smoking, most often looking at a six-month time frame (26%). This is a shift in timing compared to 2020 and 2019, with more looking to quit within six months, and may represent a backlog of hopeful quitters who intend to stop smoking when pandemic concerns subside.
- Dual Users who intend to quit remain most likely to say vaping products with nicotine are the aid they will use to help for this purpose (70% in 2021 and in 2020). Fewer than before say they will use vaping products without nicotine (61% in 2021, down from 69% in 2020) or nicotine patches (44%, down from 59%), and a greater proportion say they will use medication like Zyban or Champix (50%, up from 38%).
- As before, relatively few of these Dual Users who plan to quit smoking have supports in place to increase their chances. Fewer than four in ten (36%) have sought advice on using vaping to quit smoking, most commonly from the medical professional group as a whole (25% will seek advice from a doctor, pharmacist, nurse, or dentist), although friends are the single most-common source of advice (16%). This suggests that while medical advice is valued, some Dual Users might prefer to hear from someone close to them with lived quitting experience. Moreover, only a third (32%) of these Dual Users who want to quit smoking have a specific plan for when to vape and when to smoke.

Successful Vaping Cessation

- Of all study participants in 2021, 15% have quit vaping since 2020 (or 2019, for those who did not participate in 2020). These new non-vapers include smokers and non-smokers. New vaping quitters continue to cite the health effects of vaping as the main reason they quit (25%), while considerably fewer than in 2020 link their decision to negative media coverage of vaping (1%, compared to 20% in 2020). Three in ten (30%) got information to help them quit, most often from a medical professional, which is similar to those who quit between 2019-2020.
- In terms of strategies used to quit vaping, fewer than before say they reduced their frequency of vaping (44% of former vapers in 2021, down from 59% who quit between 2019-2020). Although tobacco is noted as the most popular flavour among Regular Vapers, it ranks lower among former vapers as a flavour used to quit (22%). Fruit (27%), coffee or tea (27%), and mint or menthol (24%) are mentioned more often as vaping flavours that specifically helped with quitting vaping.
- Asked to name specific aids that helped them to quit vaping, about half of new vaping quitters (48%) say they didn't use anything at all. Compared to 2020, higher proportions of vaping quitters turned to nicotine gum or lozenge (17%, compared to 12% in 2020) and counselling (17%, compared to 10% in 2020). This may point to a higher level of effort among those who quit more recently. Indeed, a higher proportion of 2021 vaping quitters required three or more attempts to quit (26%), compared to 2020 (14%). Nonetheless, most who stopped vaping since 2020 say it was easy (64%).

For those who have quit vaping, an end to cravings or no longer thinking about vaping is the most common sign of success (38%).

Qualitative findings

Transitions: The goal of the qualitative research was to explore more deeply four possible transitions in vaping and smoking use that participants had experienced in the past year.

The two main transitions with which participants had experience were efforts to **quit smoking** (n=23) and efforts to **stop vaping** (n=19).

- Health concerns figured prominently in both cases. This was rarely due to a recent health scare for themselves or their loved ones, but more of a growing realization about the negative health impacts they were experiencing and a desire for a better (healthier) quality of life. Comparatively speaking, those trying to quit smoking referred more often to specific negative physical effects (e.g., trouble breathing during physical activity), while those trying to stop vaping relied more so on the knowledge that vaping is not good for their health. Similarly, the benefits of quitting appeared to be more noticeable to those trying to quit smoking versus vaping.
- Notably, the process of quitting, particularly to quit smoking, appeared highly variable, with individuals trying multiple methods to find the one to help them succeed. For those trying to quit smoking, vaping was just one of the potential tools; for some it made all the difference, while others worried they had simply replaced one bad habit with another. A common first step for those trying to quit or reduce vaping was to reduce their nicotine levels; otherwise, the reported techniques were similar to those trying to quit smoking, including quitting "cold turkey", substituting other activities or avoiding temptation (e.g., social activities).
- Personal willpower was a commonly raised theme, seen as central to their success or ability to quit, and a lack of willpower was often noted as the main reason if they relapsed, both for smoking and vaping. Quitting appeared to be a fairly solitary activity, with few who described the support of others (family, friends, health professionals) as a part of their quitting process. Yet, a key recommendation participants made to others who want to quit was to access outside supports, rather than try to do it on their own.

A small number had **started or resumed smoking** (n=7). These individuals described various circumstances or triggers that led to this, including temptation from peers in social settings, having easy access to family members' cigarettes, and stress or anxiety.

For those who had **resumed vaping** (n=3), two did so to reduce their cigarette consumption and one did so on the recommendation of a medical professional to treat an unspecified medical condition.

Comparisons of Smoking and Vaping: Participants who were current or past smokers were also asked to compare their vaping and smoking experiences.

Among those who currently smoke or have smoked in the past, **smoking** was a source of conflicting feelings. On the one hand, cigarettes provided substantial stress-relief and comfort, with some describing a more intense and longer physical reaction to the nicotine by comparison to vaping. At the same time, they often felt guilt due to a keen awareness of the negative health consequences as well as personal experiences with side effects such as coughing, shortness of breath and feeling distressed.

Vaping was generally described as an adequate, but imperfect, substitute for smoking. While vaping could provide feelings of relaxation and satisfy a nicotine craving, it was perceived to be less physically and emotionally satisfying than cigarettes. It was clearly perceived to be a healthier alternative to smoking, and also more socially acceptable, meaning it was often preferred during the daytime, indoors and in any other settings where smoking would not be appropriate. For these reasons, vaping could be described as the 'rational choice' by comparison to the more 'emotional' choice or guilty pleasure of smoking.

Despite this generally positive positioning of vaping as the healthier and more guilt-free option, there were nonetheless concerns about the long-term effects of vaping, due to the nicotine content, and the fear that one bad habit (smoking) had been replaced by another (vaping).

Vaping flavours. There was no consensus on the role played by vaping flavours. Nearly all participants have used flavoured vape liquids, with fruit flavours being the most popular, followed by mint and vanilla. For some, it was the flavours that made them more willing to accept the trade-off in emotional and physical fulfillment compared to smoking. There was recognition that while flavours made vaping enjoyable as an aid when quitting smoking, they equally could make it difficult to quit vaping later. However, few believed that availability or unavailability of certain flavours would influence their own personal decisions whether or not to vape. The exception was those who exclusively used tobacco flavoured vape liquids, who were more likely to foresee resuming smoking if that flavour became unavailable.

Impact of the pandemic. The COVID-19 pandemic had varying impacts on participants' vaping and smoking habits. For some, it made it easier to quit or reduce smoking or vaping, often because the routines associated with smoking or vaping had changed or participants no longer found themselves in the social situations that encouraged cigarette or vape use. For others, it had the opposite effect of increasing their smoking or vaping habits, either because of stress related to the pandemic, or because they had greater opportunities to smoke or vape at home.

Political neutrality statement and contact information

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