

STATCAN COVID-19:
DATA TO INSIGHTS FOR A BETTER CANADA

Willingness of Canadians to use a contact tracing application

by Nicole Aitken, Martin Turcotte and Fei-Ju Yang

Release date: July 31, 2020

How to obtain more information

For information about this product or the wide range of services and data available from Statistics Canada, visit our website, www.statcan.gc.ca.

You can also contact us by

Email at STATCAN.infostats-infostats.STATCAN@canada.ca

Telephone, from Monday to Friday, 8:30 a.m. to 4:30 p.m., at the following numbers:

- | | |
|---|----------------|
| • Statistical Information Service | 1-800-263-1136 |
| • National telecommunications device for the hearing impaired | 1-800-363-7629 |
| • Fax line | 1-514-283-9350 |

Depository Services Program

- | | |
|------------------|----------------|
| • Inquiries line | 1-800-635-7943 |
| • Fax line | 1-800-565-7757 |

Standards of service to the public

Statistics Canada is committed to serving its clients in a prompt, reliable and courteous manner. To this end, Statistics Canada has developed standards of service that its employees observe. To obtain a copy of these service standards, please contact Statistics Canada toll-free at 1-800-263-1136. The service standards are also published on www.statcan.gc.ca under “Contact us” > “[Standards of service to the public](#)”.

Note of appreciation

Canada owes the success of its statistical system to a long-standing partnership between Statistics Canada, the citizens of Canada, its businesses, governments and other institutions. Accurate and timely statistical information could not be produced without their continued co-operation and goodwill.

Published by authority of the Minister responsible for Statistics Canada

© Her Majesty the Queen in Right of Canada as represented by the Minister of Industry, 2020

All rights reserved. Use of this publication is governed by the Statistics Canada [Open Licence Agreement](#).

An [HTML version](#) is also available.

Cette publication est aussi disponible en français.

Willingness of Canadians to use a contact tracing application

by **Nicole Aitken, Martin Turcotte** and **Fei-Ju Yang**

With the loosening of COVID-19 restriction measures, public health authorities and governments are reflecting on additional solutions to mitigate the spread of the virus. One way to achieve that goal in communities is to use contact tracing applications, as a complement to current manual contact tracing efforts by health authorities. Most of these applications use smartphone Bluetooth technology to check whether an individual was in close proximity to someone who tested positive for COVID-19 via randomly generated, anonymous codes.¹ These applications can notify users who have had potential contact with individuals who have the virus and can provide instructions on how to get tested and guidance on whether they should self-isolate.

Public health officials are advocating for the practice of contact tracing to help limit the spread of the virus. While the Canadian Medical Association and many experts² stress the merits of tracing contacts digitally with these applications, there are also debates about the potential privacy risks³ and concerns about malware exposure.⁴ Many governments around the world are working to implement these applications as a way to help slow the spread of COVID-19 as people resume their activities. Although contact tracing applications have not yet been widely used by health authorities in Canada,⁵ the federal government is promoting the voluntary use of a government-backed application to be released this summer.

Governments have struggled with uptake and use of these voluntary applications by their populations.⁶ Since the effectiveness of such applications depends on the proportion of the population that participates, this article explores the willingness of Canadians to use voluntary contact tracing applications, whether they would feel comfortable sharing data from the application with the government, and reasons why they would not use such an application. In addition, differences in willingness and in the reasons for using or not using a contact tracing application are explored by demographic characteristics, including region, sex and age. The data used in this article was collected June 15 to June 21, 2020 from the third wave of the Canadian Perspectives Survey Series (CPSS).

More than half of Canadians consider it “somewhat likely” or “very likely” that they would use a contact tracing application

To help assess Canadians’ interest in and openness to using contact tracing applications, the third iteration of the Canadian Perspectives Survey Series presented the following scenario: “Apps are available to report your COVID-19 symptoms and status, while tracing your movement. If these apps were recommended by public health authorities, how likely is it that you would use them?”

One quarter (25%) of Canadians reported that they would be “very likely” to use contact tracing applications, and close to one third (31%) said that they would be “somewhat likely” to use them. This suggests that just over half of Canadians expressed some degree of support for such applications if they were recommended by public health

1. For details about the different technologies available for digital contact tracing applications, see the Canadian Medical Association article by Kleinman and Merkel (2020).
2. e.g., Whitelaw et al. (2020).
3. Kleinman and Merkel (2020); Austin et al. (2020).
4. Humphreys (2020).
5. The exception is ABTraceTogether, which has been used by Alberta Health Services since May 2020. On July 24, the Canadian Digital Service announced that a Canadian smartphone app meant to warn users if they’ve been in close contact with someone who tests positive for COVID-19 was entering going into beta testing phase.
6. Cellan-Jones and Kelion (2020).

STATCAN COVID-19: DATA TO INSIGHTS FOR A BETTER CANADA

authorities (56%). Of the remaining respondents, 13% were “somewhat unlikely,” 22% were “very unlikely” and 9% did not know whether they would use these applications (Table 1). There were no significant differences between men and women in their willingness to use these applications.

Table 1
Likelihood of using contact tracing apps if they were recommended by public health authorities, June 2020

	Likelihood of using contact tracing apps				
	Very likely	Somewhat likely	Somewhat unlikely	Very unlikely	Don't know
	percent				
Total	25	31	13	22	9
Men	24	31	14	22	9
Women	26	30	13	22	10
Age group					
15 to 24	16	47	19	11	8
25 to 64	24	28	13	25	9
65 and older	33	28	11	20	9
Region					
Atlantic	28	27	13	25	12
Quebec	21	29	17	25	8
Ontario	28	32	11	20	9
Prairies	17	33	15	25	10
British Columbia	30	28	11	22	9
Place of residence in Toronto, Montréal or Vancouver					
Yes	30	30	15	19	7
No	22	31	13	24	11
Immigrant status					
Born in Canada	21	33	13	24	9
Landed immigrant	36	24	14	17	9
Probability to be vaccinated when a vaccine becomes available					
Very likely	32	32	12	16	7
Somewhat likely	15	39	22	18	6
Somewhat unlikely	18	17	23	39	4
Very unlikely	15	16	10	52	7

Note: Totals may not add up to 100 because of rounding.

Source: Canadian Perspectives Survey Series, June 2020

Younger Canadians are more likely than seniors to be socially interacting in larger circles. Specifically, youth aged 15 to 24 were significantly more likely to say they were not keeping a 2 metre distance from others (32%) and not avoiding crowds and large gatherings (18%), compared with seniors aged 65 and older (14% and 9%, respectively).⁷

The proportion of people who said they would be “very likely” to use a contact tracing application was lower among younger people than among those in older age groups. Among people aged 15 to 24, 16% said they would be “very likely” to use such an application, compared with 24% of adults aged 25 to 64 and 33% of seniors aged 65 and older.⁸ One factor associated with the potential use of a contact tracing application may be age-related health concerns. For example, a recent Statistics Canada crowdsourcing initiative showed that senior participants were significantly more likely than younger participants to be concerned about the consequences of COVID-19 on their own health.⁹

While youth had the lowest proportion of those “very likely” to use a tracing app, the proportion of those who were “very unlikely” to use a such an app, however, was highest among working age adults aged 25 to 64 (25%, compared with 20% among those aged 65 and older and 11% among those aged 15 to 24).

7. Additional details can be found in a recent [Daily report](#) (Statistics Canada, 2020a) and [Infographic](#) (Statistics Canada, 2020b) based on CPSS data.

8. When the “very likely” are combined with the “somewhat likely”, support for a tracing app rises to 63% among the youth, compared with 52% among those aged 25 to 64 and 61% among those aged 65 and older. In this case, differences between age groups were not statistically significant.

9. Statistics Canada (2020c).

British Columbia, Ontario and the Atlantic region reported the highest support for using contact tracing applications (30%, 28% and 28% of residents in these regions reported that they were “very likely” to use a tracing app, respectively). In comparison with Ontario, the Prairie region (17%) had a significantly lower percentage of people indicating they would be “very likely” to use such applications. The proportion of people who were “very unlikely” or “somewhat unlikely” to use a tracing application was higher in Quebec (42%) than it was in Ontario (31%).

A larger proportion of residents in the census metropolitan areas of Toronto, Montréal and Vancouver were “very likely” to use a contact tracing application (30%) than those living in areas of smaller sizes, including rural areas (22%). Immigrants, who are more likely to live in larger cities and to be concerned about their personal health,¹⁰ were also significantly more likely (36%) than those born in Canada (21%) to report that they would be “very likely” to use a contact tracing application. This is consistent with another recent report that found that immigrants are more likely than Canadian-born individuals to continue taking precautions—such as wearing masks, avoiding crowds and large gatherings, and keeping a 2 metre distance from others—as COVID-19 safety measures are relaxed.¹¹

Willingness to be vaccinated was also associated with willingness to use contact tracing applications. About 57% of Canadians said they would be “very likely” to get vaccinated when a vaccine becomes available.¹² Of these, 32% considered it “very likely” that they would use a contact tracing application. In comparison, among those who considered it “very unlikely” that they would be vaccinated, 15% reported that they would be “very likely” to use a contact tracing application.

Potential users are generally comfortable with data from the application being shared with government officials

Potential contact tracing application users may still have some reservations about how their personal data are used. To evaluate these potential concerns, the survey asked those who reported that they were “somewhat likely” or “very likely” to use a contact tracing application whether they were comfortable with data from the application being shared with government officials. A majority were comfortable with this (66%), while 21% did not know and 13% were uncomfortable sharing their data. Men were significantly more likely (18%) than women (9%) to be uncomfortable sharing these data with the government.

Concerns about privacy and government access to location data are the leading reasons why people would not use a contact tracing application

There are several reasons why Canadians may not consider using contact tracing applications. For those who indicated that they would be “somewhat unlikely” or “very unlikely” to use such an application, the most frequently cited reason for not installing it was that they felt it was an invasion of privacy (64%) (Chart 1).

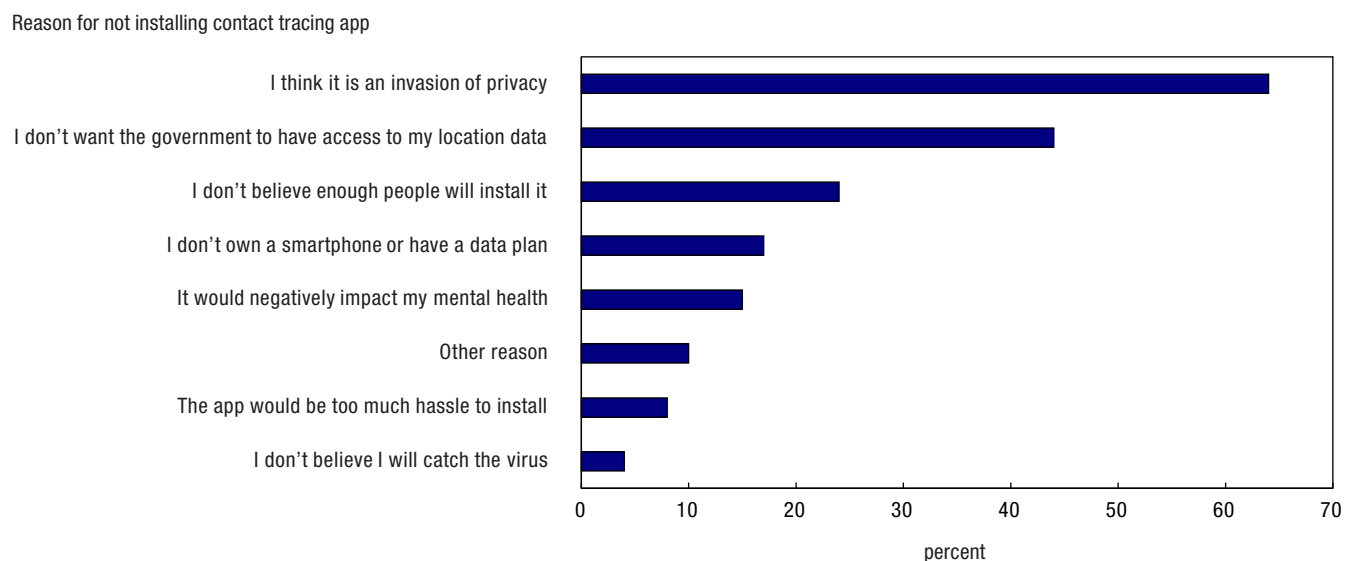
10. Statistics Canada (2020d).

11. Statistics Canada (2020a).

12. Another 19% said that they were “somewhat likely” to be vaccinated, 14% said that they were “somewhat” or “very” unlikely and 9% did not know.

Chart 1

Reasons why people who were unlikely to use a contact tracing app would not install it, June 2020



Source: Canadian Perspectives Survey Series, June 2020.

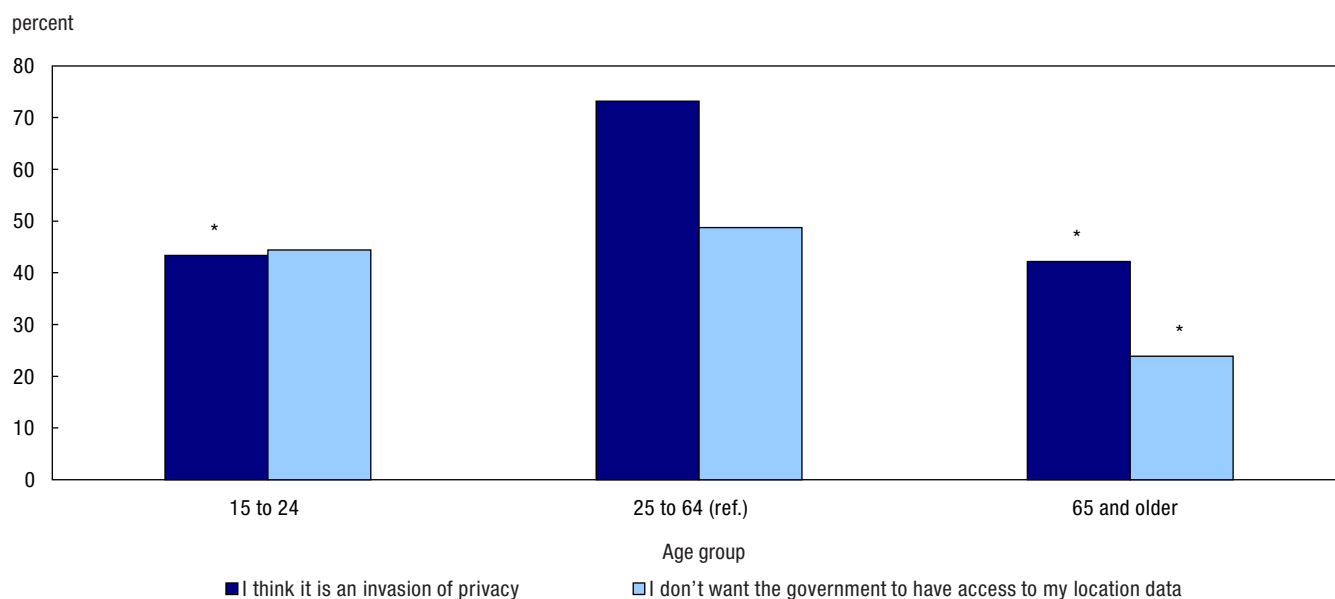
This reason was followed by not wanting the government to have access to their location data (44%), believing that not enough people would install it (24%), and not owning a smartphone or having a data plan (17%). Fewer people said they would not install a contact tracing application because it would be too much hassle to install (8%) or because they did not believe they would catch the virus (4%).

Adults aged 25 to 64 who are reluctant to use a contact tracing application are more concerned about the invasion of privacy

There were no differences between men and women or between different regions in terms of the top reasons for not wanting to install a contact tracing application. However, there were some significant differences between age groups. Among those who said they would be unlikely to use a contact tracing application, adults aged 25 to 64 expressed the greatest concern about the invasion of privacy (73%). They were about twice as likely as their counterparts aged 15 to 24 (43%) and those aged 65 and older (42%) to say they would not install such an application because they considered it an invasion of privacy (Chart 2). Such results could explain why people in this age group were the most likely to report that they were unlikely to use a tracing app, relative to other age groups.

Chart 2

Top two reasons for not installing a contact tracing app among those who would not install it, by age group, June 2020



* significantly different from reference category ($p < 0.05$)
Source: Canadian Perspectives Survey Series, June 2020.

One challenge in using contact tracing applications successfully is that seniors, who have the highest risk of complications or death from COVID-19, are the age group that uses smartphones the least. According to Statistics Canada’s Canadian Internet Use Survey,¹³ the vast majority of Canadians aged 15 to 24 have a smartphone (98%), while 60% of seniors aged 65 and older have one. Seniors who reported they would be unlikely to use a contact tracing application were more likely to say it was because they did not own a smartphone or have a data plan (43%), compared with people aged 15 to 24 (13%) or 25 to 64 (10%).

Lastly, immigrants were relatively similar to Canadian-born individuals in reporting the invasion of privacy as their top reason for not installing a contact tracing application (55% and 66%, respectively). However, immigrants were less likely than those born in Canada to cite the government having access to their location data as a reason for not installing a contact tracing application (31%, compared with 47% of Canadian-born individuals). This echoes the findings of a recent report based on crowdsourcing data, which indicated that immigrants were more likely than the Canadian-born to express high levels of trust in governments.¹⁴

Data source

Data in this release are from the third iteration (June 15 to 21, 2020) of Statistics Canada’s new Canadian Perspectives Survey Series (CPSS), for which a panel of Canadians has agreed to complete a number of short online surveys. The CPSS is a probabilistic panel based on the Labour Force Survey and is therefore representative of the general population in the 10 provinces.

13. Table 22-10-0115-01, “Smartphone use and smartphone habits by gender and age group” (<https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=2210011501>).
14. Statistics Canada (2020e).

References

Austin, Lisa M., Vincent Chiao, Beth Coleman, David Lie, Martha Shaffer, Andrea Slane and François Tanguay-Renaud. 2020. "[Test, trace, and isolate: COVID-19 and the Canadian Constitution.](#)" SSRN. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3608823.

Canadian Medical Association. 2020. "[CMA reacts to new national app designed to support contact tracing measures during pandemic.](#)" June 18. Available at: <https://www.cma.ca/news-releases-and-statements/cma-reacts-new-national-app-designed-support-contact-tracing-0>.

Cellan-Jones, Rory, and Leo Kelion. 2020. "Coronavirus: The great contact-tracing apps mystery." *BBC News*. July 22.

Humphreys, Adrian. 2020. "Hackers target Canadians with fake COVID-19 contact-tracing app disguised as official government software." *The National Post*. June 24.

Kleinman, Robert A., and Colin Merkel. 2020. "[Digital contact tracing for COVID-19.](#)" *CMAJ* 192(24): E653-E656. DOI: <https://doi.org/10.1503/cmaj.200922>.

Statistics Canada. 2020a. "Canadian Perspectives Series Survey 3: Resuming economic and social activities during COVID-19." *The Daily*. July 8.

Statistics Canada. 2020b. "Precautions that Canadians will take or continue to take as COVID-19 safety measures are relaxed." *Statistics Canada – Infographics*. Statistics Canada Catalogue no. 11-627.

Statistics Canada, 2020c. "Impacts of COVID-19 on Canadians: First results from crowdsourcing." *The Daily*. April 23.

Statistics Canada. 2020d. "The social and economic concerns of immigrants during the COVID-19 pandemic." *StatCan COVID-19: Data to Insights for a Better Canada*. May 1.

Statistics Canada, 2020e. "Crowdsourcing participants' trust in governments, public health authorities, businesses and others during the COVID-19 pandemic". *The Daily*. June 26, 2020.

Whitelaw, Sera, Mamas A. Mamas, Eric Topol and Harriette G.C. Van Spall. 2020. "[Applications of digital technology in COVID-19 pandemic planning and response.](#)" *The Lancet Digital Health*. June 29. Available at: [https://www.thelancet.com/journals/landig/article/PIIS2589-7500\(20\)30142-4/fulltext](https://www.thelancet.com/journals/landig/article/PIIS2589-7500(20)30142-4/fulltext).