



Results of the COVID-19 CARTaGENE survey

The CARTaGENE's COVID-19 online survey was sent to more than 33,000 participants of the Quebec population-based cohort CARTaGENE in early June 2020. The invitation was valid for 4 weeks and the questionnaire was closed in early July.

The requested information concerned: (i) the existence of manifestations suggesting of a COVID-19 infection, the tests performed and the results, the evolution, (ii) the medical history, (iii) the socio-demographic factors and potential risk factors, (iv) the consequences of the pandemic on everyday life.

Similar results to those observed in Quebec

As of July 6th, 2020, 8,129 participants completed the questionnaire. Among them, 8% were tested for COVID-19 (649 participants) of which 6.3% (41) were positive. These results are similar to those observed in Quebec (7.3% of the population tested and 7.4% of positive cases among the tested). The average time to receive a test result was 3 days. Three people were hospitalized for a COVID-19 infection, but none of them were hospitalized in the intensive care unit.

Medical workers and people who had a contact with a COVID-positive individual are the most tested and the most positive.

The participants living in Montreal (epicenter of the COVID-19 infection), living in an apartment/condominium, with a chronic respiratory disease and exposed to potential risks of infection (healthcare worker, contact with a COVID-19 case) were more frequently tested.

Among the tested (more than 600 participants), medical workers and people who had contact with a COVID-positive individual were the two largest groups (32% and 42%, respectively). They were also the two groups with the highest rate of positivity (17% and 13%, respectively). The other participants were tested after the occurrence of one of the four symptoms compatible with COVID-19 identified by the Ministère de la santé et des services sociaux (MSSS): fever ($>38^{\circ}\text{C}$); cough (recent or chronic with exacerbation); respiratory difficulty; sudden anosmia (loss of smell) without nasal obstruction, with or without ageusia (loss of taste).

A significant proportion of the participants with COVID-related symptoms were not tested.

It is worth noting that 7.6% of the participants reported having one of the 4 symptoms compatible with COVID-19 and were not tested.

A particular symptomatology

The factors strongly associated with being positive were anosmia, fever and headache. Symptoms such as sinusitis, otitis, sore throat, runny nose, or wet cough, which could be reported during the test, were not associated with test positivity.

A more difficult access to healthcare but more widespread use of virtual consultations.

One-third of the participants experienced a decrease in access to health services. However, it is interesting to note that virtual medical consultations were widely used.

A greater socio-economic and psychological impact for women and younger participants.

While the impact of the first two months of the pandemic remains overall limited, there was an increase in food consumption, a decrease in physical activity and a slight increase in anxiety among women. There was a slight income decrease among younger participants.

A change of habits.

The majority of the participants changed their lifestyle habits, in particular by limiting their use of public transportation.

In conclusion, the main findings from the first months of the pandemic are: (i) The pre-existing structure of the CARTaGENE population-based cohort has demonstrated its role as a Public Health surveillance system during this pandemic by collecting and analyzing public health relevant results in a very short period; (ii) There appeared to be a lack of test accessibility for people with symptoms compatible with COVID-19 during the first wave; (iii) The 4 main symptoms selected by the Ministère de la santé et des services sociaux (MSSS) seem to be quite appropriate for the indication to carry out a screening test; (iv) Access to healthcare was severely disrupted during lockdown, but remote consultations compensated for this effect, and a specific effort should be considered by the health system in anticipation of a possible second wave; (v) Socio-economic and psychological impacts appear to be moderate for the moment but should be monitored in the coming months.

Study reference:

Epidemiological and socio-economic characteristics of the COVID-19 spring outbreak in Quebec, Canada: A population-based study (<https://www.medrxiv.org/content/10.1101/2020.08.26.20182675v1>)