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# Quebec's public health approach in response to the global COVID-19 pandemic

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## Background

In Quebec, the first case of COVID-19 was reported on January 28, 2020. Regional public health teams were already on alert, and the province's two major public health institutions – the Institut national de santé publique du Québec and Institut national d'excellence en santé et services sociaux – mobilized their researchers to provide science-based advice to support the health crisis management decisions of the *Direction nationale de Santé publique du Québec*. The Minister of Health and Social Services created working groups of health care system workers to advise her on the ethical, technical and tactical aspects of the situation.

On March 8, as spring break ended, vacationing families returned to Quebec from around the world. On March 12, the Premier provided voluntary self-isolation instructions to Quebecois coming back from their travels (mandatory self-isolation for health care workers). On March 13, Quebec's preschool, school and university institutions were closed. The following day, the Premier cited the *Public Health Act* [1] and declared a public health emergency in Quebec [2]<sup>1</sup>. In such a situation, the Act grants the Minister of Health and Social Services further reaching powers to organize resources, close health institutions and regions, call upon other government departments and agencies for assistance, build public works and move forward with any spending and new contracts deemed necessary. On March 23, the Premier announced the closure of all non-essential businesses. At the epicentre of the crisis, the city of Montreal was given heightened powers, including the authority granted to law enforcement to intervene to disperse crowds. In March

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<sup>1</sup> A timeline of all the measures implemented is available here (in French) [2].

28, the Deputy Premier announced that interregional travel would be limited to prevent transmission in outlying areas, which had been somewhat spared until then. Measures to close Canada's international borders and require mandatory quarantine for travellers returning to Canada were gradually implemented by the federal government.

In January, the *Ministère de la Santé et des Services sociaux du Québec*, in conjunction with health professional colleges and associations, prepared teams for the impending prevention and infected patient care protocols. This unprecedented mobilization was supported by intensive electronic communications. A national medical staff reallocation hub appointed experts in every centre and sector to redirect the workforce toward priority tasks. Videoconferencing platforms made it possible to coordinate professional teams, and teleconsultations and telehealth-care were encouraged to minimize travel to elective medical visits by citizens.

On April 1, 2020, there were 5518 confirmed cases of COVID-19 in Quebec. A total of 365 patients were hospitalized, including 96 in intensive care. There were 36 deaths. Hospital capacity was 6000 beds for a population of 8.5 million Quebecers.

### Public health strategy in response to the pandemic

With no vaccine or preventive treatment, public health authorities sought to "flatten the curve" (i.e. spread the occurrence of new cases of COVID-19 over time to allow the health care network to adapt by freeing up beds, ceasing a number of non-emergency activities, dedicating hospitals and units to COVID-19 cases and reassigning staff accordingly).

The strategy aimed to hit hard and very early and reassess measures every day based on the epidemiological situation. Community screening clinics were quickly opened for symptomatic travellers returning to the province and health care workers. People were tested and sent home with strict self-isolation instructions as they awaited their results. Regional public health authorities followed up with patients and those they had been in contact with. The directive to practice social distancing and self-isolation (except for essential workers and those needing to purchase food or medication) was hammered home.

In the week of March 23, 2020, faced with situations varying significantly from one region to the next, the *Direction nationale de Santé publique* invited regional health directors to develop approaches adapted to their territories in terms of screening criteria and social distancing measures. The city of Montreal had police ensure compliance with health instructions, and outlying areas closed their perimeters.

### Mobilization of the research community

Members of the scientific community in the public and private sectors quickly came together to help stem the pandemic through research and innovation. In mid-March, in light of the interest expressed by several experts in all areas, the Office of the Chief Scientist and *Fonds de recherche du Québec* proposed to create a government-led coordinating committee including experts from the

*Ministère de la Santé et des Services sociaux* (department of health and social services) and the *Ministère de l'Économie et de l'Innovation* (department of economy and innovation). To date, the committee has received hundreds of proposals in fields ranging from virology to social science and humanities, clinical research and public health. Members met with the Minister of Economy and Innovation on a weekly basis to recommend projects for funding. These initiatives include the creation of a multidisciplinary COVID-19 research network, additional support for the Observatory on the Societal Impacts of Artificial Intelligence to explore the social acceptance and impacts of digital tools including facial recognition, the development of a COVID-19 biobank for the genotyping of the virus and its hosts and approaches combining serology, clinical responses and epidemiology, and jointly funded random clinical trials. In terms of a vaccine, major investments by the governments of Canada and Quebec were confirmed to give impetus to projects led by researchers in the academic and private sectors. To help citizens through this period of isolation and social distancing, the Office of the Chief Scientist is also supporting participatory and citizen science initiatives such as a bird watching project in collaboration with *Oiseaux Québec*, a program to encourage art as a means for pregnant women to relax and a teleworking activity with science communicators (*Québec Science, Le Soleil and Centre Déclit*) to respond to the many questions of fellow citizens.

### Very preliminary lesson learned from the Quebec experience

The approach to strike fast and hard seems to be paying off, as reflected in the province's low mortality rate to date.

A number of challenges have arisen, including shortages of screening swabs and reagents and citizen information lines that were quickly overwhelmed. Wait times for test results increased over several days but eventually shortened. In Montreal especially, community events were held despite the assembly ban, and the number of cases exploded in some neighbourhoods. Regional public health agencies, which faced up to 34% budget cuts in 2015, had a weaker capacity to investigate and intervene.

Other, largely global, issues also emerged such as lack of domestic independence to produce masks and medical equipment and control the pandemic when political authority is outside the jurisdiction (federal level in Canada and south of the border).

One innovation in particular must be mentioned. In the Premier's press conferences, the National Director of Public Health adopted a less formal tone, sometimes using strong language and providing advice based on his own personal experience. Social media networks picked up his public health messages, thus making it possible to speak to hundreds of thousands of citizens whom official channels generally do not reach. Indeed, it was the emergence of an extremely efficient hybrid mode of social communication. Major television networks host experts in basic research, virology, immunology, epidemiology, public health, mental health and infectious disease and other professionals to educate citizens and respond to relevant issues. Public influencers recorded messages aimed at children, teenagers and seniors to encourage them to follow prevention guidelines

and help reduce stress. Rarely has there been such public support for political leaders despite the very significant social and economic distress generated by the pandemic and mitigation measures. Science and research are now making headline news.

### ***Disclosure of interest***

The authors declare that they have no competing interest.

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