

Nuances to Ontario's COVID-19 immunization prioritization

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Over one year has passed since the emergence of the SARS-CoV-2 virus and Canada's first COVID-19 case. Since then, the nation has seen 910,000 confirmed cases and 22,000 deaths.¹ Now, Canada has approved four vaccines, and administered 3.9 million doses.² But the initial vaccine roll-out was slow. On December 14th, 2020, Ontario administered the first COVID-19 vaccine in the nation.³ Just one month later, Pfizer announced that only half of the promised shipments would be delivered over the next four weeks, citing production issues at their Belgium factory.⁴ At the same time, the only other approved vaccine, Moderna, also hit delays, thought to be due to the European Union's export restrictions on COVID-19 vaccines.⁵ The result was a significant slowing in immunization across the nation, with some mass vaccination clinics closed, first doses cancelled, and second doses delayed. To this day, the race between injections and infections continues, as SARS-CoV-2 continues to spread, and new variants of the virus emerge, threatening the efficacy of our currently available vaccines. In a reality where COVID-19-related morbidity and mortality is a daily guarantee, but vaccination deliveries are not, the question of how to prioritize groups for immunization becomes ever more pressing.

To prioritize populations, leaders first decide on the goal of immunization. With COVID-19, the goals are to reduce severe illness and death, and to maintain the healthcare system and essential services of society. Prior to any approved vaccines, Canada's National Advisory Committee on Immunization recommended key populations for early immunization: those at high risk of severe illness or death, those most likely to transmit the virus to high-risk populations, those essential to maintaining services and healthcare, and those living in congregate settings.⁶ Aware of the limited vaccine supply, the Ontario government laid out a plan to vaccinate groups in three overlapping phases.⁷ The first phase aimed to immunize high-risk healthcare workers, long-term care residents and staff, and Indigenous adults in remote and high-risk communities. In practice, prioritization has not been so straightforward.

First-priority groups are not all created equal. Of these, undoubtedly, the highest risk group in Canada has been long-term care residents, who represented 80% of COVID-related deaths in the first wave.⁸ But, because Canada's first approved vaccine had to be maintained in special freezers, Ontario chose to administer vaccines from hospitals. As a result, much of the initial vaccine supply went to hospital-based healthcare workers and staff, in lieu of long-term care residents. With disruptions in vaccine deliveries, the delay in vaccinating Canada's highest risk population became even more significant. Among the populations for early immunization, long-term care residents and staff should have been first.

Even within a priority population, there are nuances in prioritizing individuals for immunization. For example, not all healthcare workers have an equal risk of viral exposure and transmission. However, many hospital hubs have offered immunizations to all their physicians and staff, including those who are not exposed to the virus. Anecdotal stories about fully vaccinated low-risk individuals are widespread: the hospital CEO, the physician or IT employee working remotely, the receptionist behind a glass wall, or a staff member on leave. Meanwhile, many patient-facing providers working in the community and in high-risk congregate settings (e.g., shelters, prisons) still await their vaccinations today. In designating hospitals as immunization hubs, hospital staff were unintentionally prioritized over higher risk healthcare workers in non-hospital settings.

As we go, we are learning lessons in vaccination prioritization, lessons that have become even more important because Canada's vaccine supply was disrupted significantly. In the second phase of Ontario's vaccine roll-out, 8.7 million people will be vaccinated, beginning with those aged 79 years and older, those in high-risk congregate settings, frontline essential workers, and those with high-risk chronic conditions. Of the groups prioritized, and of the individuals within each group, who is truly at highest risk? With a vaccine supply vulnerable to disruptions, and a population vulnerable to COVID-19 mortality and morbidity, we are ethically obligated to consider carefully the nuances of immunization prioritization.

References

1. WHO Coronavirus Disease (COVID-19) Dashboard [Internet]. World Health Organization [cited 2021 Mar 16]. Available from: <https://covid19.who.int/>
2. Ritchie H, Ortiz-Ospina E, Beltekian D. Coronavirus (COVID-19) Vaccinations [Internet]. Our World In Data [cited 2021 Mar 16]. Available from: <https://our-worldindata.org/covid-vaccinations>
3. Ontario Delivers First COVID-19 Vaccine in the Country [Internet]. Ontario Newsroom; 2020 Dec 14 [cited 2021 Mar 16]. Available from: <https://news.ontario.ca/en/statement/59635/ontario-delivers-first-covid-19-vaccines-to-frontline-health-workers>
4. The Canadian Press. Pfizer reducing Canada's vaccine deliveries on production issues [Internet]. BNN Bloomberg; 2021 Jan 15 [cited Feb 27, 2021]. Available from: <https://www.bnnbloomberg.ca/pfizer-cutting-back-vaccine-deliveries-to-canada-due-to-production-issues-1.1549123>
5. MacCharles T, Ballingall A. Here's why Moderna's COVID-19 vaccine shipments to Canada have been delayed [Internet]. Toronto Star; 2021 Feb 8 [cited 2021 Mar 16]. Available from: <https://www.thestar.com/politics/federal/2021/02/08/heres-why-modernas-covid-19-vaccine-shipments-to-canada-have-been-delayed.html>
6. Ismail SJ, Zhao L, Tunis MC et al. Key populations for early COVID-19 immunization: preliminary guidance for policy. *CMAJ*. 2020 Nov;192(48):E1620-32. doi:10.1503/cmaj.202353
7. Government of Ontario [Internet]. Queen's Printer for Ontario; c2012-2021. COVID-19 vaccines for Ontario | COVID-19 (coronavirus) in Ontario [cited 2021 Feb 27]. Available from: <https://covid-19.ontario.ca/covid-19-vaccines-ontario>
8. Webster P. COVID-19 highlights Canada's care home crisis. *Lancet*. 2021 Jan;397(10270):183. doi:10.1016/S0140-6736(21)00083-0