



White Paper

# From Pandemic to Endemic: Lessons from COVID-19 on Improving Vaccination Campaigns in Canada

May 2022

## Key points at a glance

- McKesson Canada is proud to have played a **significant role in Canada's COVID-19 immunization** campaign, both as a pharmaceutical distributor delivering vaccines to pharmacies and public health sites, and as a pharmacy operator (via its six independent pharmacy banners and its Rexall chain), administering vaccines directly to patients. As of March 2022, Canadian pharmacists have administered more than 17 million doses across the country.
- **The COVID-19 immunization campaign** represents an inflection point in vaccination policymaking in Canada. Public health vaccines will play a more prominent role going forward. This presents an opportunity to optimize the way in which vaccines are delivered to Canadians, by making pharmacy the 'vaccination destination' – the primary source for all public health immunizations.
- By emphasizing the **community pharmacy** as the primary source for vaccines, governments would build upon a strong vaccine model (that has emerged in recent years via the seasonal flu shot campaign) while bringing relief elsewhere in the healthcare system, as well as year-round stand-up capacity for acute outbreaks, as seen with rapid rise of the Omicron variant.
- **Pharmacists** have the experience and expertise to oversee vaccine administration, and they are ideally suited to help vaccine-hesitant Canadians overcome the barriers to getting their dose.
- **Pharmaceutical distributors** have demonstrated that incorporating vaccines into the pharmacy distribution workflow creates efficiency for pharmacists, enabling smoother appointment processes for patients and minimizing vaccine waste. Four of the five provinces that had the largest share of vaccines administered in pharmacy used the existing seasonal flu vaccine distribution model to deliver doses to pharmacies.

## Introduction

Soon after the COVID-19 pandemic began in Canada in the Spring of 2020, it became clear that any return to 'normal' – perhaps not the status quo ante, but at least to some semblance of pre-pandemic life – would not occur until an overwhelming majority of Canadians have been vaccinated. At the time, a COVID-19 vaccine existed only in the designs of biomedical scientists; though the COVID-19 genetic sequence was published in early January 2020, most observers did not anticipate a mass-market vaccine arriving before at least 18 months had transpired. Beyond merely developing the vaccine, the pharmaceutical sector had to tackle the unprecedented challenge of manufacturing, transporting, storing, and administering billions of doses.



As the early spring phase of the pandemic turned to summer, policymakers began to grapple with the logistical challenges associated with mass immunization, particularly because the mRNA technology that underpinned some of the leading vaccine candidates required extreme temperature control. As the country's leader in pharmaceutical distribution, McKesson Canada began raising concerns and proposing solutions with federal and provincial governments on vaccine supply chain readiness in the summer of 2020, followed by a widely cited [white paper](#) in September of that year.

As fall arrived, and with it an increase in COVID-19 case counts, the prospects of one or several promising vaccine candidates improved considerably. On December 9, Health Canada issued an interim order authorizing Pfizer's COVID-19 vaccine for immediate use; similar authorizations followed for vaccines from Moderna, AstraZeneca, and Johnson & Johnson.

Following the authorizations, focus quickly shifted to mapping out how doses would be distributed and administered, requiring the focused collaboration of multiple levels of government, pharmaceutical manufacturers and distributors, public health agencies, and healthcare professionals. The first COVID-19 vaccine dose, manufactured by Pfizer, was administered to an 89-year-old long-term care resident in Quebec City on December 14, 2020.

In the ensuing months, the supply of COVID-19 doses increased considerably, though the arrival of doses was hardly straightforward. By summer 2021, all Canadians aged 12 and up who wanted a COVID-19 vaccine had access to one; by the end of the year, vaccines were available to those as young as five, and adults were encouraged to receive a booster dose. More than 80% of Canadians have received two doses of a COVID-19 vaccine, with more than 82 million total doses administered. Nearly half of Canadians have received a booster.

The emergence of the Omicron variant in late 2021 led to an explosion of case counts and placed Canada's healthcare system under extreme strain. While the initial Omicron data suggest that it is not as deadly as previous variants (particularly among those who have been vaccinated), many experts are adamant that the novel coronavirus will be with us for years to come. Its stubbornly high transmissibility means that our healthcare systems will remain vulnerable. Moreover, it is clear that the best tool policymakers have in their arsenal is vaccination.

**The main question confronting policymakers is how to best establish a permanent vaccination campaign that is affordable, accessible, sustainable and that relieves pressure on our fragile healthcare system.**

This paper asserts that community pharmacy, supported by Canada's pharmaceutical distributors, is the logical and optimal destination for COVID-19 vaccination campaigns in Canada. As stated in our November 2020 white paper on [COVID-19 immunization readiness](#), community pharmacies have the healthcare expertise and experience, the geographical footprint, and the established business practices to best serve Canada's public health vaccination needs going forward. Given that patient behaviour, including that related to immunization, is driven in large part by convenience, any successful vaccination strategy requires predictability of supply, efficient logistics and clear communications.

The paper outlines three broad recommendations:

- Canadian governments should engage community pharmacy as the principal 'vaccination destination' for Canadians, building on the efficiency, affordability, and convenience that Canada's pharmacies offer.
- The pharmaceutical distribution system should be considered the primary vehicle for managing the flow of vaccines and related supplies to pharmacies across the country.
- Canada's immunization system requires 'surge capacity' to quickly expand vaccination should the need arise, as occurred following the onset of the Omicron variant in late 2021.

## Recommendation 1:

### Make pharmacy the 'vaccination destination' for Canadians

The COVID-19 pandemic has surfaced the importance of comprehensive, timely, and affordable access to vaccines in Canada. The pandemic has also altered the way in which immunization policy is considered. Prior to the arrival of COVID-19, vaccines were often administered on a relatively routine basis, with most Canadians encountering immunization policy either through the routine vaccines administered to children or through the annual seasonal influenza campaigns.

The pandemic has demonstrated the importance of building immunization capacity to administer vaccines to a majority of the population in a very short timeframe, often with minimal advance warning. For policymakers, there are critical aspects of immunization policy that require considerable planning. For example, the development of vaccine manufacturing capacity has surfaced as an issue of national sovereignty. Public health officials similarly grapple with vaccine hesitancy in the population that can be pivotal in achieving herd immunity.

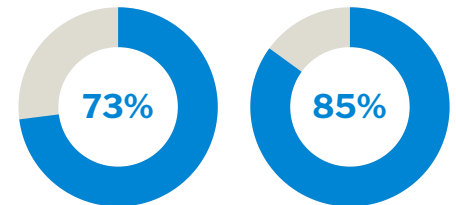
One takeaway from the pandemic is the valuable role that community pharmacy can play in ensuring immunization is accessible to all who need vaccines in a manner that is comprehensive, convenient, and affordable.



We encourage policymakers looking to establish strong and sustainable immunization capacity within the healthcare system to fully engage with the community pharmacy sector. McKesson Canada recommends that the federal and provincial governments engage the community pharmacy sector as the principal destination for public health immunizations in Canada.

By and large, Canadians agree that pharmacy is the ideal principal destination for vaccines. A June 2021 survey of Canadians conducted on behalf of the Neighbourhood Pharmacy Association of Canada by two professors from the University of Toronto found that convenience is the major factor driving patient preference for vaccine sites (respondents found only mass immunization clinics set up specifically for COVID-19 vaccines to be more convenient than pharmacies).<sup>1</sup>

While mass immunization clinics can handle huge volumes of patients in a relatively short amount of time, they are not sustainable. Adopting community pharmacy as the primary 'vaccination destination' would also enable pharmacists to engage with vaccine-hesitant populations; 73% of those who had received one dose and 85% of those who had received a second dose reported that they would accept a COVID-19 vaccine from a pharmacist if offered one on the spot. **Unlike mass vaccination clinics, pharmacies benefit from access to patients who may not be planning to receive an immunization, but whose interaction with a healthcare professional can lead to a successful vaccination decision on the spot.**



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In addition to enabling more convenient access to vaccines for patients, engaging the pharmacy sector to be the main vaccine channel would alleviate stress and generate resource savings elsewhere in the healthcare system. **By allowing pharmacists to perform the bulk of immunizations in Canada, governments would create opportunities for physicians and nurses to focus on other aspects of patient care, particularly given the backlogs created by the pandemic in screening of chronic diseases, surgical procedures, and regular medical checkups.**

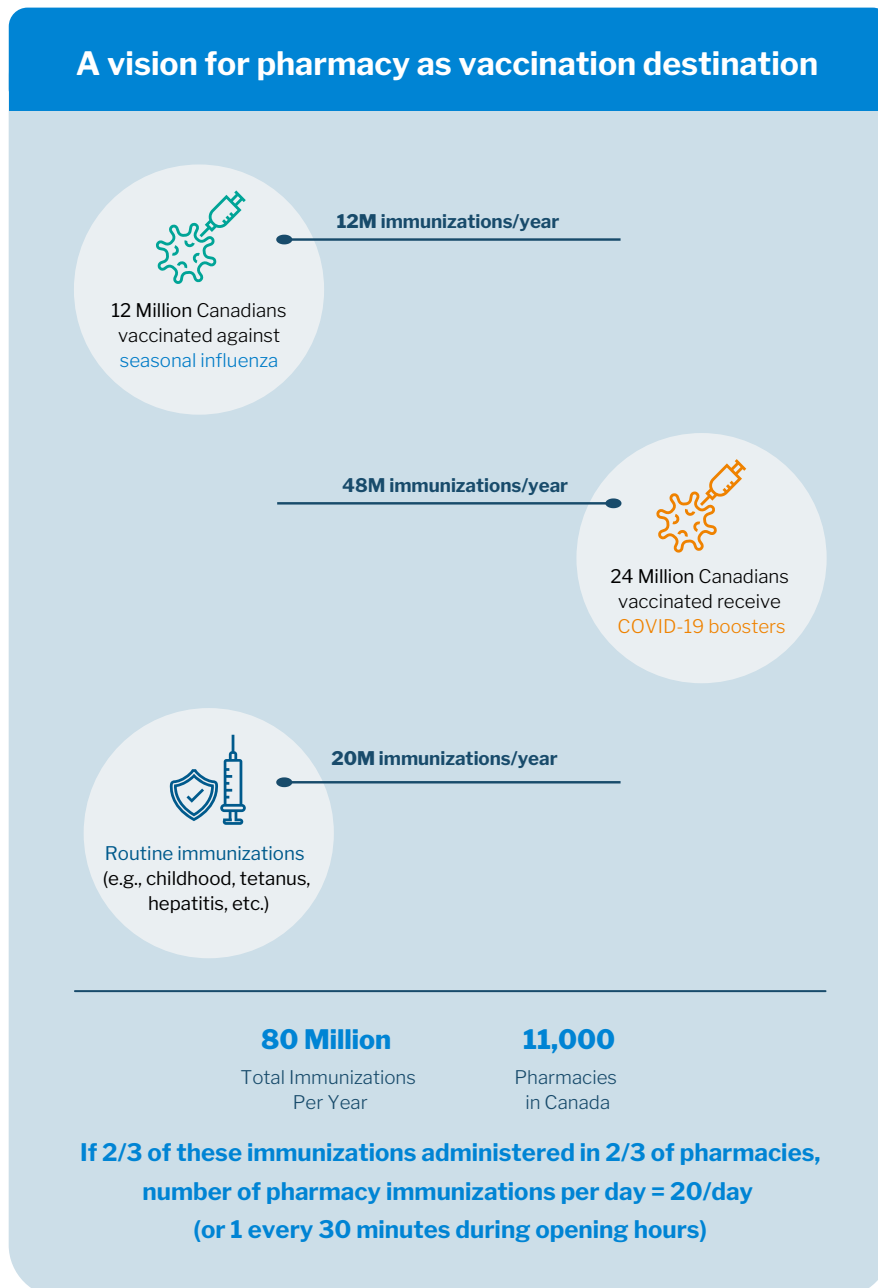
Enabling optimal pharmacy-based immunization would require governments at all levels to collaborate to build on the many lessons learned during the COVID-19 immunization campaign. McKesson Canada encourages immunization policymakers to consider the following observations:

- Community pharmacy requires infrastructure to handle larger volumes of vaccinations. Specifically, governments could benefit from leveraging existing investments pharmacists have made to ensure adequate temperature-controls within their pharmacy.
- Similarly, governments should consider creating more efficient data-management standards that are harmonized across jurisdictions and that better integrate pharmacy-level dose-tracking with provincial information technology systems (in many cases, pharmacists had to duplicate administrative work given the lack of IT integration).
- There is a need to better equip healthcare practitioners, including pharmacists, nurses, doctors, and public health officials, with tools to help combat vaccine hesitancy.
- Identifying pharmacy as the primary immunization channel requires clear objectives for pharmacy-based vaccinations, ensuring that pharmacists and governments have a shared understanding of expectations for vaccine administration. These objectives should be reflected in pharmacy funding frameworks
- In certain provinces, rules regarding pharmacist and pharmacy technician scope of practice require updating (namely what public vaccines can be administered to which age groups, as well as pharmacy technician

<sup>1</sup> <https://neighbourhoodpharmacies.ca/sites/default/files/2021-07/NPAC%20Webinar%20Presentation%202021%2007%2015%20E.pdf>

injection authority), such that pharmacy vaccination throughput can be maximized without compromising patient safety.

- Public health officials should work with pharmaceutical distributors and community pharmacists **to establish a vaccination 'surge protocol' that would consist of a set of processes to quickly increase the number of vaccines administered in pharmacy.** These could include timely pre-positioning of vaccines and related material with pharma distributors for quick distribution to community pharmacies, working with provincial pharmacy associations to pre-establish an allocation and vaccine pre-booking strategy, and reducing friction between government appointment and data entry systems and those used by pharmacies.



<sup>2</sup> <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1310009625>

## Recommendation 2:

### Leverage the pharmaceutical distribution system to make vaccine administration as efficient as possible

Canada's pharmaceutical distribution system is the ideal vehicle for managing the flow of vaccines. Pharmaceutical distributors have strong relationships with governments, pharmacies, hospitals, and clinics, as well as the industrial capacity and expertise to ensure the safe, secure, and speedy movement of vaccines and related supplies.

As of March 2022, McKesson Canada has delivered nearly 14 million COVID-19 vaccine doses to more than 5,000 pharmacies and public health units in six provinces that represent 92% of the Canadian population.<sup>3</sup> This amounts to 17% of all COVID-19 vaccine doses distributed across the entire country.

When the need to contribute to the distribution of COVID-19 vaccines emerged in December 2020, Canada's pharmaceutical distributors had an efficient model to build on, having been involved in seasonal influenza campaigns for several years. The public health flu distribution model was first developed by McKesson Canada in 2013 to ensure the efficient and equitable movement of flu shots from provincial depots to pharmacy clinics, built on a just-in-time model that ensured minimal waste and disincentivized hoarding practices.

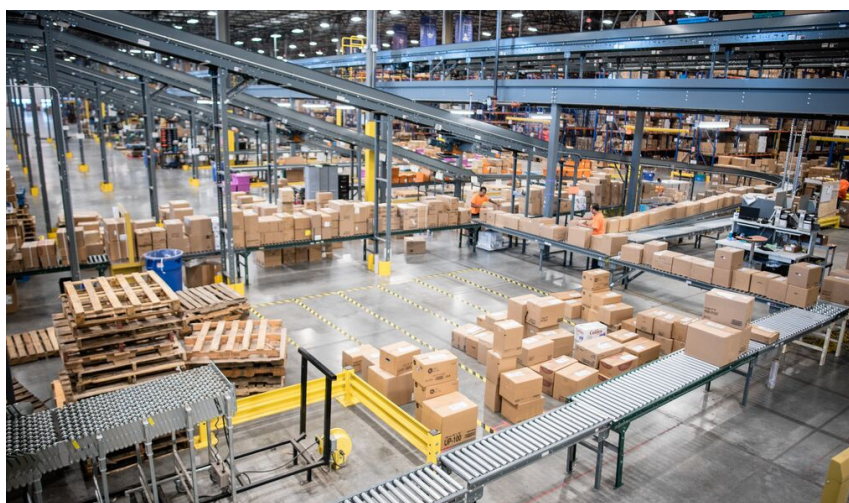
The flu vaccine model is also built to service the preferred destination for immunization for Canadians: community pharmacy.<sup>4</sup> Currently, seven provinces work with pharmaceutical distributors to ensure the delivery of flu vaccines to pharmacies (in Alberta and Quebec, additional public health vaccines can be administered via pharmacy).

In addition to enabling Canadians to get their flu shots at their local pharmacies, the public flu distribution model has led to a 25% reduction flu vaccine waste, a 63% reduction in patients turned away because doses are out of stock, improved 'cold-chain' delivery integrity of doses, and better visibility and reporting of vaccine supply.<sup>5</sup>

In short, the public vaccine distribution model, initially developed for flu shots, provided a blueprint for ensuring COVID-19 vaccines could be stored, transported, and administered in the most efficient way possible.

Generally speaking, provinces that used the wholesale distribution system to ship vaccines to pharmacy had higher rates of pharmacy immunization than those that did not – four of the five provinces with the largest share of doses administered in pharmacy used the flu shot model for 'last mile' delivery.

McKesson Canada recommends that the federal and provincial governments engage Canada's pharmaceutical distributors as the primary system for delivering vaccines and supplies across the country. Doing so would ensure an efficient, cost-effective system of vaccine distribution that is already fully integrated with pharmacy workflows and requires little investment in transportation and storage capacity.



<sup>3</sup> B.C., Alberta, Saskatchewan, Ontario, Quebec, New Brunswick and P.E.I.

<sup>4</sup> Public opinion polling conducted by the Neighbourhood Pharmacy Association of Canada finds that seven in 10 Canadians favour having increased immunization options in pharmacy.

<sup>5</sup> Source: Canadian Association for Pharmacy Distribution Management.

Achieving this objective would require adapting existing practices to address the challenges identified during the COVID-19 immunization campaign.

- As the immunization campaign matures, greater efficiencies will be realized by leveraging and augmenting the investments in vaccine infrastructure. While the public flu vaccine model provided a blueprint for distributing and administering vaccines to broad segments of the population in a limited timeframe, COVID-19 immunization effort required quickly ramping up infrastructure, staffing, business processes, and transportation networks that existed in limited ways or not at all (such as for frozen vaccines). Canada's new 'vaccine infrastructure' reflects the investment in large quantities of regular and ultra-low temperature freezers, as well as cold-chain and frozen pack outs to ensure the viability of the vaccine doses from end to end.
- The existing COVID-19 vaccine packs are best suited for surges in demand for vaccine. As we enter what will likely be a semi-permanent immunization campaign, pharmacies would benefit from the ability to order smaller quantities of vaccine. McKesson Canada encourages Health Canada to work with COVID-19 manufacturers to package their vaccines into smaller sizes, such as 1-vial and 5-vial packs, vs. 10-, 25-, or 195-vial packs, particularly as demand plateaus or patient populations become more targeted (e.g., pediatric vaccines).
- There are opportunities to improve the administrative processes related to immunization, such as by establishing organized coordination activities and communications among manufacturers, distributors, and governments to reduce resource-intensive data entry into provincial inventory tracking systems that were not designed for batch uploading of thousands of distribution transactions.
- A significant gap in the current immunization campaign relates to the liability indemnification and insurance coverage for pharmaceutical distributors for government-owned inventories, particularly for novel vaccines with unknown risk profiles. There is a need for a solution that limits the liability of the pharmaceutical distributors given they are not the product manufacturer and they do not own the products, aligned with the approach taken in the third-party logistics industry.

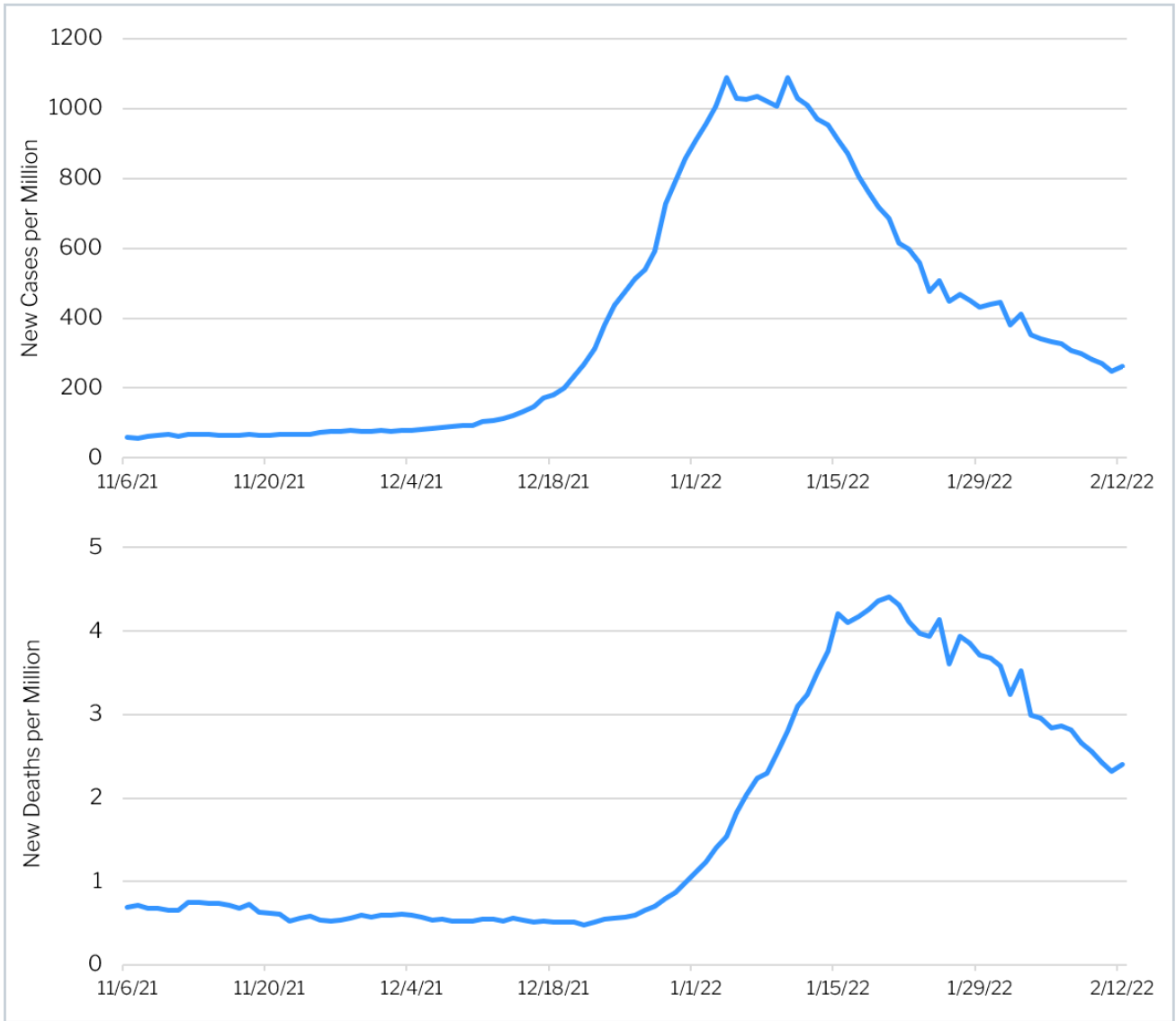
### **Recommendation 3:**

## **Adapting the lessons of the Omicron wave to build 'surge capacity' into the immunization system**

The onset of the Omicron wave in late 2021 fundamentally altered the way public health officials approached the COVID-19 pandemic. The rapid appearance of a COVID-19 variant that is considerably more transmissible than previous variants required that public health measures better suited to earlier waves of the pandemic be abandoned. In particular, Omicron's transmissibility demonstrated the limits of a 'test-and-trace' approach to containing the spread of the disease. Instead, officials focused on encouraging all eligible Canadians to acquire a booster dose as quickly as possible. As the figures below demonstrate, the swift increase in COVID-19 cases observed in December 2021 was matched by a spike in vaccine distribution, with the number of doses shipped in mid-December approaching five times the amount shipped in early November).

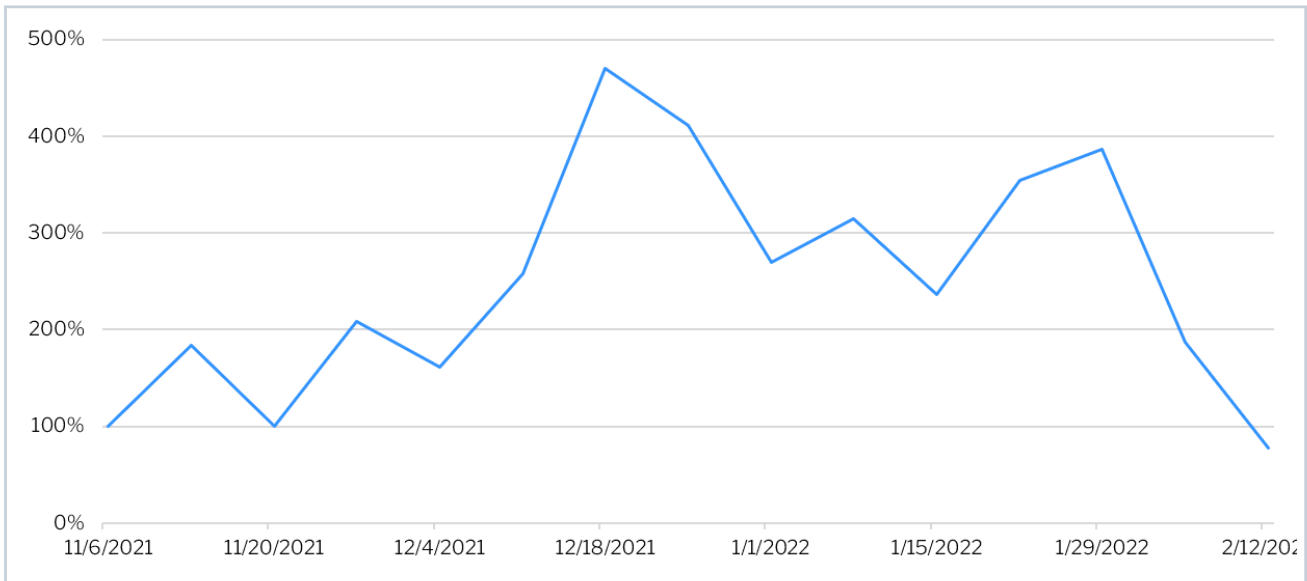


Figure 1: Daily new confirmed COVID-19 cases and deaths per million people (seven-day rolling average)



Source: [Our World in Data: https://ourworldindata.org/covid-deaths](https://ourworldindata.org/covid-deaths)

Figure 2: Weekly McKesson Canada Vaccine Distribution (November 6, 2021 = 100%)



Source: Internal McKesson Canada figures



While one of the lessons of the Omicron wave is that future episodes of this pandemic are likely to be distinct from those that preceded them, the following recommendations can help prepare Canadians for a similar quick rise in cases:

- Work with pharmaceutical distributors and community pharmacists **to establish a vaccination ‘surge protocol’ that would consist of a set of processes to quickly increase the number of vaccines administered in pharmacy.** These could include pre-positioning a significant amount of vaccines and related material with pharma distributors for quick distribution to community pharmacies, working with provincial pharmacy associations to pre-establish an allocation and vaccine pre-booking strategy, and reducing friction between government appointment and data entry systems and those used by pharmacies.
- Provide provisional, if not permanent, **vaccine administration authorization to pharmacy technicians** to increase the potential pharmacy throughput.
- Develop and disseminate **resources to support pharmacists working with vaccine-hesitant patients.**
- Ensuring a **short-term critical stockpile of COVID-19 related drugs** (including the recently authorized antiviral Paxlovid), with particular attention paid to ICU drugs in the event that COVID-19 cases spike quickly

## Conclusion

By any measure, Canada’s immunization performance has been a success. As of this date, Canada leads the G7 with the highest share of its population having been vaccinated against COVID-19 (86%).

Community pharmacy has played a critical role in enabling access to vaccines across the country. Pharmacists have administered more than 17 million doses, limited only by decisions made by governments around vaccine dose allocation.

The rise of the Omicron variant accelerated plans for the administration of booster doses across the country and suggests that there will likely be further booster doses required, including possible co-administration of COVID-19 and seasonal flu vaccines in the fall.

McKesson Canada is proud to have participated in the country’s fight against the coronavirus, marshalling its distribution and community pharmacy assets and networks to do as much as possible to get vaccines into arms. As we look forward to a future of increasingly common, regular and comprehensive vaccination campaigns, we encourage governments across Canada to enable the pharmacy sector to do its part. McKesson Canada recommends the federal and provincial governments use pharmaceutical distributors and community pharmacy as the main providers of all public health vaccines in the country.

In addition to drawing on the expertise and experience of pharmacists in administering vaccines, particularly around issues of vaccine hesitancy, optimizing the pharmacy channel’s allocation of doses would relieve pressure elsewhere in the healthcare system. Using pharmaceutical distributors to ship vaccines would ensure an optimal and efficient integration of vaccine deliveries into pharmacy workflows, enhancing predictability and reducing waste. Our vision is one of improving health outcomes for all Canadians and, as such, we believe that making pharmacy the premier vaccination destination is a critical step in that direction.

## About McKesson Canada

Our vision is to improve care in every setting — one product, one partner, one patient at a time.

We partner with hospitals, physicians, pharmacies, nurses, biopharmaceutical manufacturers and others across the spectrum of care to build healthier communities. By helping our partners be as successful as possible, we work together to improve patients’ lives.

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