

Pharmacy's Contribution to Vaccination Within an Integrated Health System: A Policy and Research Dialogue

Presented by:

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Participant Affiliations

- CanAge: Canada's National Seniors' Advocacy Organization
- CANImmunize
- Centre for Effective Practice
- Centre for Vaccine Preventable Diseases, University of Toronto
- Dalla Lana School of Public Health, University of Toronto
- Office of Health System Partnership, Department of Family and Community Medicine, University of Toronto
- East Toronto Family Practice Network
- Grand River Hospital
- Inner City Health Associates
- JRL Research & Consulting
- Leslie Dan Faculty of Pharmacy, University of Toronto
- National Institute on Ageing
- Neighbourhood Pharmacy Association of Canada
- Office of the Chief Medical Officer of Health, Ontario Ministry of Health
- Ontario College of Family Physicians
- Ontario College of Pharmacists
- Ontario Health
- Ontario Medical Association
- Ontario Pharmacists Association
- OPEN Council
- Pharmacy Association of Nova Scotia
- Public Health Ontario
- School of Pharmacy, University of Waterloo
- St. Mary's General Hospital
- Toronto Public Health
- Université d'Ottawa
- University of Toronto
- Wholehealth Pharmacy Partners

Meeting Goals

In our current climate, fraught with vaccination fatigue, decreased vaccine confidence and barriers to immunization access, it is more challenging than ever to meet/maintain adequate vaccine coverage. This meeting marks the first time the Centre for Vaccine Preventable Diseases (CVPD), the Leslie Dan Faculty of Pharmacy (University of Toronto), the School of Pharmacy (University of Waterloo) and the Ontario Pharmacy Evidence Network (OPEN) have formally shared expertise on the use of innovation, evidence and system policy to support practice change. Bringing together stakeholders including pharmacists, physicians, public health, policymakers and community members, the overarching goal of the meeting was to develop ways to better integrate pharmacy into vaccination efforts by sharing expertise on programmatic and logistic barriers to immunization in Ontario, describing innovations to address these barriers, and recommending priorities to increase coverage through pharmacy-based immunization delivery.

Part I

Vaccine delivery update and pharmacy immunization services

Session summary: Speakers and discussions laid the groundwork for how vaccination data are recorded in Ontario, presented an overview of Ontario pharmacy-based vaccination services, and highlighted current research and policy gaps.

Immunization coverage and barriers to vaccine uptake

The first speaker presented an overview of vaccination programs and policies in Ontario for various age and risk groups, and described challenges in our ability to accurately measure vaccine coverage:

- *Routine vaccine record entry into the provincial immunization repository is limited, and data infrastructure is not available to measure coverage in most populations other than school-aged children.*
- *Inability to determine vaccine uptake for routine immunizations until the child reaches school age.*
- *Limited data available to determine populations with low coverage based on social determinants and high-risk criteria (e.g., immunocompromised populations)*
- *Limited ability to measure vaccine coverage via billing codes and surveys.*

Strategies to increase vaccine uptake: The speaker explained how focusing on external non-psychological barriers that we may be able to control may prove an optimal strategy in increasing uptake: awareness (lack of vaccine information and knowledge of how to get the vaccine), access (lack of access to a primary care provider, long distance to clinics, and inconvenient clinic hours), affordability (lack of affordable transportation and time off work) and activation (lack of immunization reminders and not having a recommendation from a trusted healthcare provider, a critical deterrent for many).

Pharmacy-based immunization services: an overview

The second speaker highlighted the success of pharmacy-based vaccination services in Ontario for influenza and COVID-19 vaccine delivery and spoke of the variation in pharmacist scope of practice across Canada.

In Ontario, the pharmacy team is comprised of technical staff (pharmacy assistant and pharmacy technician) and clinical staff (pharmacy student, pharmacy intern, and pharmacist). Of these roles, pharmacists, technicians, students and interns are authorized to inject, following completion of necessary training. Students and interns are eligible to conduct clinical duties but must do so under pharmacist supervision. Pharmacists in Ontario do not currently have the ability to prescribe vaccines or to administer vaccines for measles/mumps/rubella (MMR), diphtheria and tetanus (with or without pertussis) or polio. Additionally, at the time of the meeting, pharmacy technicians could not administer non-COVID-19 and influenza vaccines.

Challenges to pharmacy-based immunization delivery in Ontario were described:

- *Pharmacists do not have authority to prescribe vaccines and lack access to publicly funded supply (other than influenza and COVID-19 vaccines).*
- *Unknown if those who are referred by pharmacist to another setting for vaccination actually follow through.*
- *Adding vaccination responsibilities to pharmacies can result in staffing and workload challenges.*
- *All new vaccines must be added to the list that pharmacy professionals can administer, which creates delays in ability to vaccinate.*
- *Incomplete/inaccessible vaccination histories; difficult to determine vaccine eligibility.*
- *Changes and inconsistencies in vaccine eligibility and policy are confusing for both pharmacists and patients.*
- *Lack of pharmacists (and other primary care providers) in rural/remote/northern communities.*

Panel discussion centered on the following themes:

Importance of collaboration during the pandemic and beyond: The pandemic demonstrated the importance of convenience when the public is accessing healthcare, including immunization services. It also showed the unique ability of pharmacies and pharmacy professionals to adapt and form partnerships to fit the needs of the communities they serve. Unprecedented collaboration across primary care, public health, pharmacies, business partners, etc. was key to successful vaccine delivery, and will be important to continue in order to increase vaccine uptake.

Challenges in pharmacy and primary care deserts: There are regions of Ontario, primarily rural and remote areas, with a limited or complete absence of pharmacy and other primary care services; collaborations and engagement of community partners will be an essential tool to understand how best to address the healthcare needs of the individuals in these communities.

Need for patient-focused solutions to increase vaccine uptake: The public will feel empowered to make optimal decisions about vaccination if they are knowledgeable about vaccine-preventable diseases and the benefits of vaccinations.

Part II

Innovative approaches to vaccination

Session summary: Speakers shared approaches to engaging with community groups, strategies to improve equity and innovation, and perspectives from jurisdictions outside of Ontario.

Key innovation in the delivery of vaccination services in Nova Scotia

The first speaker presented an overview of an innovative electronic system that was used to facilitate COVID-19 vaccine delivery in Nova Scotia. Appointment scheduling, booking and eligibility pre-screening was done province-wide through CANImmunize, which allowed for efficient administrative processes, access to previous COVID-19 vaccination history, documentation and seamless billing.

Building on this success, Nova Scotia is currently conducting a pilot whereby 25 pharmacies with dedicated clinic time can access and provide all publicly funded vaccines. They can also prescribe/administer non-publicly funded vaccines (billed to drug plan, where applicable), reducing the vaccination burden on other provider types while supporting uptake.

Community engagement to better serve equity-deserving groups.

The second speaker described how Ontario's complicated vaccination policies often neglect to prioritize implementation, confuse the public and inadvertently reinforce inequities. Community-engaged equitable health policy can only occur through the ongoing collaboration between healthcare and community groups to identify goals, and eventually lead to policies that align with the lived reality of priority groups.

Whose health are we protecting anyway?

Professional allegiances and public immunization

The third speaker illustrated the importance of thinking beyond traditional routes when considering what might compel fundamental change to improving equitable access to vaccines.

Innovative methods may include self-administered vaccines and training under-vaccinated communities to serve their own needs, thereby building public trust.

Panel discussion centered on three main themes:

Balancing expanded vaccine access with documentation: Ontario has a very complex process for vaccination documentation. Surveillance and registries are important but increasing accessibility to vaccines should be a higher priority problem. How to best document and share vaccine data will be the next problem to tackle once we have figured out the accessibility piece.

Self-administered vaccination in a climate of vaccine hesitancy: Radical task shifting of vaccine delivery (from healthcare professional to the general public) is inevitably going to have hiccups along the way but may also be successful in combating the current climate of scientific suspicion. With design changes, we may see some of the hesitancy dissipate as objections become asked and answered.

Nova Scotia's experiences with vaccination-related barriers and challenges: Technology barriers are challenging since not everyone has internet access and/or comfort with online booking. System navigation beyond COVID-19 is an additional challenge. With other publicly funded vaccines, time is spent by patients and providers on determining eligibility. Access to care is also a problem; in some cases, patients must speak with several providers before finding a place with vaccine, and some are likely to give up the search along the way.

Part III

Shared opportunities for the future

Meeting attendees assembled into small groups to discuss three questions:

Discussion Question 1: What innovations in vaccination delivery and uptake do you think will be in place in the coming 5-10 years?

Discussion Question 2: How can uptake and delivery of vaccinations for people in Ontario be improved through the contributions of pharmacy teams?

Discussion Question 3: What research questions/areas of study are critical to help us understand how to support policy and practice to improve uptake and delivery of vaccinations for people in Ontario with a focus on pharmacy teams?

The group discussed potential methods and strategies to increase coverage through changes in policy and practice, with a focus on how the role of pharmacy professionals can continue to evolve to help address the public's immunization needs. A number of opportunities arose from this discussion; these are categorized into four key themes and listed below.

I. TRANSITION FROM COMPLEXITY TO SIMPLICITY

Much of Ontario's vaccination systems, processes, and infrastructure can be complicated, from health policy to vaccine eligibility criteria to the methods used to record vaccination data. The group advocated for methods to simplify the general and pharmacy-based vaccination process.

- Create defined *immunizer* role within the pharmacy team, separate from other clinical duties, especially for periods of high demand.
- Equip pharmacists and pharmacy technicians with the scope of practice to give all vaccines.
- Allow pharmacists to prescribe vaccines or remove prescription requirement altogether.
- Train staff to prioritize opportunistic vaccination via screening for coverage during routine patient engagement.

Research is needed to better understand potential challenges, determine optimal workflow and processes, and ensure pharmacists have the vaccination information they need to counsel patients.

II. REACH OUT TO CITIZENS FOR INNOVATIVE IDEAS

To increase vaccine confidence and vaccine acceptance, engage/rely on community leader partnership to direct initiatives that would be most effective with their residents.

- Engage with community leaders to spread the message of the importance of vaccination.
- Leverage pharmacy professionals' role and reputation as trusted healthcare providers to partner with communities with the goal of identifying and building services that address their specific health needs.
- Use social media and artificial intelligence to target specific groups, communities and leaders.

III. STRENGTHEN VACCINE MESSAGING AND DELIVERY THROUGH A "ONE VOICE" APPROACH

Vaccine messaging could be streamlined, with all healthcare professionals (HCPs) working together to share one common and consistent message. The use of revamped vaccination

branding that aligns with society's widespread acceptance of self-care strategies might lead to an improved reception from the public.

HCPs working together as advocates for the common goal of vaccination:

- Use of common vaccine promotion messaging from pharmacists, other primary care providers, and public health.
- Share and implement best practices to engage/remind patients of vaccine eligibility (for example, in Saskatchewan, public health nurses call patients to book upcoming vaccinations).
- Pharmacy and primary healthcare teams should find ways to collaborate, connect, and share data including vaccination records.
- Integrate pharmacy services into the public health service delivery model to ensure constant collaboration and access to publicly funded vaccine.

New and effective messaging about vaccines:

- Emphasize the safety of vaccines and strict regulations for vaccine approval.
- Use of emotional messaging from HCPs aligned with community members and leaders, and perhaps even celebrities.
- Focus vaccination strategies on reducing barriers for those who want or may want the vaccine instead of trying to change the minds of 'anti-vaxxers'.

Research needed to better understand how pharmacists and other HCPs should be framing vaccines to achieve patient buy-in/trust.

IV. PUSH FOR INNOVATION TO MOVE THE NEEDLE ON VACCINE DELIVERY AND UPTAKE

Our first priority should be how to get people vaccinated, regardless of the setting or provider. Research is needed on how to meet the patient where they are with creative solutions for vaccine delivery, and possible new definitions of who can be an immunizer, while maintaining patient safety.

Being patient-centric with vaccine delivery:

- Dermal, oral, and nasal mist vaccines to offer choice for those with needle-phobia.
- Application of methods used in other health protection programs (such as cancer screening via fecal occult blood test mailed kits) to vaccination.
- Incentives or mandates to compel pharmaceutical companies to redesign vaccines to facilitate self-administration.

Develop programs that address gaps in health protection:

- Build vaccination-related infrastructure in communities where it is missing, such as self-vaccination or use of a trained layperson as a vaccinator to address low uptake in areas within pharmacy and primary care deserts.

Align vaccination with age-friendly health-related certification:

- Tie in a life-course approach to vaccination to policy and certification (for example, aligned with the United Nations' Decade of Healthy Aging, a community can only be certified as age-friendly if there is access to public health including vaccinations, for all ages).

We are grateful to the meeting participants for their openness to collaborate, willingness to share their experiences, new ideas on how to impact vaccine uptake, engagement in the process, and enthusiasm to create change.