Public Health Playbook for the COVID-19 Vaccination Program

January 14, 2021

Executive Summary

Local public health carries the mandate to manage routine immunizations and respond to previous pandemics and large-scale outbreaks of vaccine preventable diseases. Local public health has the infrastructure, experience and established relationships to organize and oversee the COVID-19 immunization campaign within local communities.

This Playbook is intended to provide guidance to the leadership of local public health agencies as they proceed with the development of their local COVID-19 vaccination campaign plans.

The objectives of this Playbook are as follows:

- To support adaptive plans being created by the third week of January to achieve the goal of at least 75% of the population in each local public health jurisdiction is immunized with the COVID-19 vaccine as soon as vaccine supply arrives.
- To establish the options for a collaborative approach to the mass immunization program.
- To articulate the content, local plans require to achieve "readiness" to carry out the mass immunization program.
- To ensure First Nations, Inuit and Métis people and other populations at higher risk are meaningfully engaged in the mass immunization program.

To achieve these objectives, the Playbook has identified a set of recommendations across 11 key components. The recommendations and key takeaways from each component are summarized below.

1. Governance

In order to effectively and quickly rollout the COVID-19 vaccination campaign, local partners from across sectors, will need to be involved in system-level planning, scenario modeling and immunization within their settings and communities.

It is recommended that, in addition to their internal Incident Management System (IMS) framework, each local public health agency establish a local IMS table to provide overall direction in the preparation, launch and operations of the immunization campaign. For those agencies that do not already have a table established they are encouraged to include Liaison Officers (LOs) with Health Service Providers (HSP), paramedic and emergency services, and supporting agencies.

In order to ensure that all partners understand their role, and the role of other partners, roles and responsibilities should be clearly documented.

It is recommended that each local public health agency, in collaboration with their IMS Committee, document roles and responsibilities through a RASCI Responsibility Matrix or other method.

2. Communications and Community Engagement

The COVID-19 vaccine rollout will be one of the largest and fastest programs in history. Clear communication and education, and effective community engagement will be key to its success.

To ensure a successful roll out, communications and engagement activities should be proactive, clear, concise and timely to inform and assure the public of what action is being taken to administer the vaccines.

Ontario has many diverse populations including First Nations, Inuit, and Métis peoples, Black and other racialized populations and many diverse languages and cultures. In order to reach these populations, effective and customized communications and community engagement will be required.

It is recommended that thoughtful and purposeful engagement and inclusion is undertaken when developing communications and engagements for diverse audiences, such as First Nations, Inuit and Métis peoples, Black and other racialized populations.

3. Partnership and Engagement

Buy-in for the COVID-19 vaccine program will only be effective if the population trusts the information they are receiving. The transparency of the data-driven, science-based approach to vaccination is in the interests of all. Building and maintaining partnerships will be important factors to gaining trust among different populations to garner support for the program.

Relationships between local public health agencies and community partners are key to building trust with the broader population, including priority groups.

Primary Care has been a key partner in deploying vaccination programs and will continue to be an important partner for a successful COVID-19 vaccination program.

Recognize and involve primary care early as a key partner with valuable expertise in vaccination delivery, promotion/addressing hesitancy and assessment/management of adverse events.

4. Local Prioritization of Populations and Promotion of Vaccine Uptake

A three-phase immunization plan has been developed for Ontario, identifying and prioritizing populations to receive the COVID-19 vaccine. The population served by each local public health agency is unique: varying in size, risk for infection, characteristics and geography. Ontario's three phased plan will require local adaption to meet the specific needs of the region's population. Local public health agencies will need to identify its regional priority population profile for each of the three phases in the immunization plan.

Each local public health agency will need to prioritize sub-populations within each phase of the mass vaccination program and develop promotion campaigns for each.

Prioritization of sub-populations in a consistent and ethical manor will require expert opinion and will face a high degree of public criticism and scrutiny. It is vital that the local public health agencies make these decisions in a consistent manner, and gain trust and accountability with the populations they serve.

Each local public health agency should convene a local vaccine sequence strategy task force to facilitate decision-making.

5. Supplies Management and Distribution

A key role for local public health agencies is to ensure that logistical components of the campaign are well managed and ensure that supplies, including vaccines, are appropriately received, stored and available when and where they are needed. This will include ensuring the cold chain requirements are

met throughout the process and vaccines are properly handled during transportation and administration.

To enable a successful COVID-19 vaccination campaign, local public health agencies will need to leverage their expertise to ensure effective supply management and distribution of the vaccine and other supplies.

The COVID-19 vaccine is currently in limited supply. It is important to have accurate knowledge of the supply levels, optimize the interval between doses, reduce wastage and to track lots through the province in case of recalls. Local public health units will be required to submit four-week inventory planning outlooks, to be updated weekly, to the government to support provincial inventory and distribution management.

Inventory management at all levels is essential to maximize available vaccine supplies and anticipate future needs.

6. Vaccination Approaches

The Ontario COVID-19 Vaccination Distribution Plan considers a variety of vaccination site types to ensure that targeted populations will have appropriate and effective access to the vaccine. A mix of mass immunization clinics, mobile clinics and on-site clinics will be required. Coordinating and implementing a rapid vaccination program of this magnitude will require significant planning by the local public health agencies and its partners. It is expected that local public health agencies and local health partners will actively and consistently work together to maximize distribution in a safe, timely and equitable manner.

Building flexibility and adaptability in the plans to scale delivery as required, both up and down, across different approaches and site types will also be critical.

In response to efforts to rapidly scale up the immunization, leadership of the local public health agencies will lead the integrated plan for expansion of delivery channels, including mass vaccination clinics, on-site immunization and mobile clinics.

7. Human Resources

Staffing requirements will vary across local public health agencies depending on the populations they serve and the resulting local vaccination program plans. Human resources at local public health agencies, and across the healthcare system, are strained from shortages and multiple competing priorities. It is vital that human resources are secured to effectively deliver the COVID-19 vaccination program.

Each local public health agency will need to determine the human resource requirements to appropriately staff immunization clinics. This will include recruitment of staff and orientation and training.

8. Documentation and Reporting

There are several documentation and reporting requirements for local public health agencies, and healthcare providers, to undertake as part of the COVID-19 vaccination campaign. A strong surveillance system will inform ongoing action to close gaps in immunization coverage.

Each local public health agency will need to ensure that they have the systems in place to meet provincial and local requirements for surveillance and monitoring. This includes vaccine safety surveillance, adverse events and number of people vaccinated.

9. Contingency Planning

To succeed in this rapid mass immunization program, continuity of operations is crucial. Identifying potential risks and having mitigation plans in place are vital.

All local public health agencies and health service providers should use their existing Emergency Planning and Business Continuity Plans as a baseline for consistent delivery of vaccinations. Administration sites should also be contacted to determine what the state of their plans are, if extant, and how vaccination will proceed within that context. Consistently updating and communicating these plans due to shifting concerns (e.g. seasonal weather) or logistical changes (e.g. increased supplies of vaccine) must be done regularly.

Each public health agency should ensure that contingency plans are in place to ensure continuation of the vaccination program.

10. Finance

Each local public health agency is accountable for efficiently using funding allocated. The Ministry of Health has asked agencies to track separately costs related to the COVID-19 pandemic response and COVID-19 vaccination program.

Each local public health agency should ensure that COVID-19 related expenses, including those related to vaccination are tracked. Costs related to immunization should be tracked separately from other COVID-19 related costs.

11. Evaluation Approaches

Part of a learning health system is to learn from past experiences to improve future programs. Timely programmatic evaluation will enable local public health agencies and the province to learn from the experience and improve planning and implementation of future programs.

Each local public health agency should develop an evaluation plan that considers both implementation and outcome evaluation questions, with an emphasis on implementation and real-time process improvements.

Table of Contents

Introduction

COVID-19 was declared a global pandemic in March 2020 and continues to impact our economic, social and emotional wellbeing, particularly the health and lives of those most at risk due to age, infirmity and sociodemographic circumstances. Effective and efficient delivery of the COVID-19 vaccines is the key means by which we will overcome this pandemic. Through the course of 2021, local public health will carry the major responsibility in leading this campaign.

Local public health carries the mandate to manage routine immunizations and respond to previous pandemics and large-scale outbreaks of vaccine preventable diseases[1]. Local public health has the infrastructure, experience and established relationships to organize and oversee the COVID-19 immunization campaign within local communities.

Ontario has developed a three-phased https://files.ontario.ca/moh-covid-19-vaccine-distribution-implementation-plan-en-2020-12-11-v3.pdf that identified priority populations, varied vaccination sites and methods with anticipated timelines and doses (Figure 1). In alignment with this plan, each local public health agency will build a robust and detailed plan including its overall approach to the storage and handling of the vaccines, planning and deploying immunization clinics, partnering with stakeholders to support the immunization clinics and ongoing communications and engagement of partners and eligible populations.

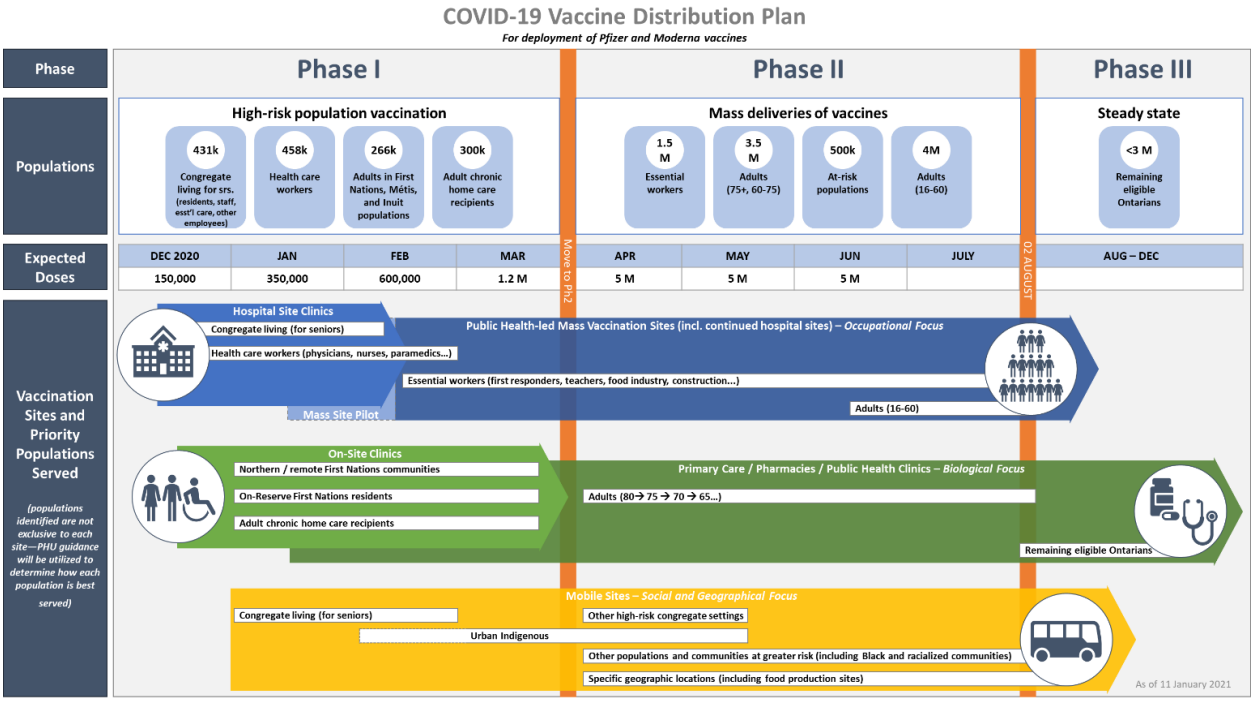

Figure 1 Ontario COVID-19 Vaccine Distribution Plan

This Playbook is intended to provide guidance to the leadership of local public health agencies as they proceed with the development of their local COVID-19 vaccination campaign plans. It will also serve to

[1] Health Protection and Promotion Act, the Ontario Public Health Standards

provide the province with an understanding of the overall approach that local public health will take, working with local community partners to fulfill the provincial phases to bring COVID-19 vaccination to the population of Ontario. It will be a road map to how Ontario will bring COVID-19 under control, enabling us to return to much more normal lives.

The objectives of this Playbook are as follows:

- To support adaptive plans being created by the third week of January to achieve the goal of at least 75% of the population in each local public health jurisdiction is immunized with the COVID-19 vaccine as soon as vaccine supply arrives.
- To establish the options for a collaborative approach to the mass immunization program.
- To articulate the content, local plans require to achieve "readiness" to carry out the mass immunization program.
- To ensure First Nations, Inuit and Métis people and other populations at higher risk are meaningfully engaged in the mass immunization program.

1. Governance

The Ministry of Health sets priorities and targets and supports healthcare system implementation. The local public health agencies lead local vaccination programs working with partners from health and municipal sectors. Ontario Health supports coordination with local health system partners. Healthcare organizations support and facilitate operations where requested and develop enabling policies and strategies to support immunization. Unions and colleges work with others to support vaccination of their members. Healthcare workers participate in the vaccination program as immunizers and recipients, counsel patients, address patient concerns and questions and combat myths.

Due to the sheer size and speed of Ontario's phased vaccination campaign, local public health agencies and regions will need to partner across sectors to effectively administer a mass immunization campaign. Local partners, from across sectors will need to be involved in systems level planning, scenario modelling and immunizing within their settings. Such partners could use and build upon the infrastructures already in place to support the vaccination campaign.

It is recommended that, in addition to their internal Incident Management System (IMS) framework, each local public health agency establish a local IMS table to provide overall direction in the preparation, launch and operations of the immunization campaign. For those agencies that do not already have a table established they are encouraged to include Liaison Officers (LOs) with Health Service Providers (HSP), paramedic and emergency services, and supporting agencies.

IMS Committee Membership and Roles

The IMS Committee should consist of leadership from regional/city departments and Public Health emergency operations, according to what collaborative processes best work in local jurisdictions. Additionally, members of the IMS Committee should bring together external stakeholders (i.e. local

municipalities, hospitals, Ontario Health and Community Response Table) to coordinate efforts related to mass vaccination for the entire region/community/city.

Principles for establishing membership include:

- Efficiently maximizing on partnerships from relevant stakeholders.
- Capability for engaging vulnerable populations.
- Technical and logistical knowledge for planning for different scenarios related to vaccination campaigns.

Please refer to Appendix 1 of this document for sample Terms of References and IMS committee structures.

Roles and Responsibilities

It is recommended that each local public health agency, in collaboration with their IMS Committee, document roles and responsibilities through a RASCI Responsibility Matrix or other method.

There are many partners involved in the successful implementation of the vaccination campaign. Clearly documenting roles and responsibilities through a RASCI Responsibility Matrix (Responsible, Accountable, Supporting, Consulted and Informed) or other tool will help ensure all partners have a clear understanding of their own role and responsibilities, and those of the other partners. It will allow for more seamless partnership and effective implementation.

For examples of roles and responsibilities documentation, refer to Appendix 1.

2. Communications and Community Engagement Approach

To ensure a successful roll out, communications and engagement activities should be proactive, clear, concise and timely to inform and assure the public of what action is being taken to administer the vaccines.

The roll out of the COVID-19 vaccines will be one of the largest and most rapid mass vaccination programs in history. It's important to ensure clear communication and education about the safety, efficacy and availability of the vaccines. Challenges to consider may include the balancing of perceptions about the vaccines, the ability to impact or change behaviour, as well as ensuring important logistical information is communicated in a clear and timely way.

With many partners involved, it is also important to centralize communications to minimize confusion and establish one go-to source for information. Centralization of communications could involve the lead

for communications in the IMS structure facilitating a “communications sub-group" of all organizations’ communications leads to align approaches across organizations.

Guiding Principles

Communication plans to support the vaccine roll out should:

- Consider the audience. Communications should be inclusive to reach and engage members of the public from diverse backgrounds, ages, etc.
- Clearly communicate the facts about the benefits of receiving the vaccine.
- Reassure and ensure trust in the safety and efficacy of the vaccines and address misinformation.
- Identify and address barriers to vaccination.
- Clearly communicate the who, what, when, where and how of vaccine administration. Reassure the public that the healthcare system can safely and effectively administer the vaccine(s).
- Be transparent with the public on the plans for distribution, including acknowledging the unknowns.
- Educate the public on the types of vaccines available and expectations throughout the process (including when more than one dose is indicated).
- Balance other public health measures throughout the process (ex. continue to communicate the need for ongoing mask wearing, hand hygiene, limiting interactions to household, and staying home when sick).
- Consider the role of science (facts, information) and emotion (perceptions, feelings).
- Consider developing change management strategies and communications guidance, such as FAQs, for addressing vaccine hesitancy and address commonly raised issues.
- Keep a close eye on communication strategies by other local public health agencies in similar contexts who are ahead in their roll out process in order to build on these learnings.
- Leverage existing relationships at regional and provincial levels. Work together to ensure consistent communications and sharing resources with other local public health agencies and partners.
- Consider targeted engagement with those eligible to receive the vaccine as roll out continues.
- Regularly communicate and engage with targeted populations. For example, continual communication and engagement with LTC and RH operators including weekly calls to answer questions and address barriers.

For more considerations related to communications and community engagement, refer to Appendix 2.

Communication Modes and Media Platforms

Consider using a broad set of communication modes and media platforms. These can include:

- Websites and webpages
- Social Media platforms including Twitter, Facebook, Instagram, YouTube, TikTok, WhatsApp
- Print media such as national and local newspapers, local community newsletters, direct mail, flyers, etc.
- YouTube and other video sharing platforms
- Outdoor and public spaces media including billboards, bus shelters ads, etc.

Engagement and Communication to Diverse Audiences

It is recommended that thoughtful and purposeful engagement and inclusion is undertaken when developing communications and engagements for diverse audiences, such as First Nations, Inuit and Métis peoples, Black and other racialized populations.

When developing communications and engagement for diverse audiences, consider the following:

- Consider your multilingual and culturally diverse approach beyond English and French (Arabic, Somali, Simplified Chinese, Spanish, etc.) and the need for diverse communication products (e.g., accessible literacy level messaging, recorded audio messages, explanatory graphics vs. descriptive text). Engage early with these audiences to understand the diversity of communications needs and messaging. Are there specific cultural, socio-economic, linguistic barriers to accessing or feeling comfortable to receive the vaccine.
- Consider First Nations, Inuit and Métis peoples, Black and other racialized populations and partners in terms of any adapted services or communications. Partnerships with community serving agencies can be a helpful intermediary to better understand these communities' needs and existing barriers.
- Connect with key stakeholders and intermediaries you have been working with to date that can help you bridge information about the COVID vaccine with hard to reach populations (settlement agencies, community health centres, neighbourhood hubs, faith organizations, cultural and community groups).
- Consider special needs populations and parents of children with special needs (this includes access and support at vaccination site for these populations).
- Partnerships with community and community-serving organizations are critical to understanding and addressing the needs of specific groups including pre-existing barriers, misconceptions and sources of mistrust of health professionals.
- Similar to testing, vaccination sites should be accessible and familiar, especially to populations facing a higher proportion of barriers. Local public health agencies should work with community organizations to identify accessible, familiar spaces to help build a trusting relationship with local residents, and to help reduce barriers to access.
- Ensure open channels and joint planning with hospitals and other healthcare communications staff.
- Engage with elected officials from your area to champion facts about the vaccines and share logistical information when it becomes available.
- Consider your public engagement approach: are there mechanisms for obtaining and soliciting public feedback either through an online forum, polling, focus groups, or key informant interviews? Consider reporting back information on "what was heard" to measure sentiment over time and demonstrate commitment transparency. This may also be a useful input to determine if communications need adjustment.

- Be mindful of differences in age segments in terms of attitudes, knowledge, beliefs, behaviours, and methods used to engage and access information.
- Evaluate whether more targeted outreach programs are needed in high-risk neighbourhoods either where COVID cases are disproportionately higher, or where populations are harder to reach through traditional communications.
- Consider local influencers across age and culture (religious leaders, sports figures, radio and television personalities, TikTok users, Instagram influencers, elected officials, local heroes and influential business leaders).

3. Partnership and Engagement

Adoption of public health measures are only effective if the population trusts the information they are receiving and there is adequate buy-in for the necessary measures.

Relationships between local public health agencies and community partners are key to building trust with the broader population, including priority groups.

Relationships should be established early and maintained. They should be built on a common understanding and commitment to reciprocation and transparency.

Benefits of these partnerships to local public health agencies include:

- Better awareness of population needs.
- Opportunity to share responsibilities with community partners to improve service delivery.
- Support to engage with populations in languages and ways that are most accessible (e.g., adaptation and translation of key messages and communications products).
- Providing a channel to disseminate information to diverse audiences.

Stakeholder mapping exercises are useful in determining whether you are engaging with a broad representation of partners and that they are adequately categorized for level of influence and efforts required to maintain relationships. Partnerships should be with a broad set of stakeholders can support both communication and engagement, recruitment, as well as locations for potential immunization clinics.

Consider establishing or strengthening partnerships with stakeholders including but not limited to:

- Primary Care Providers, including Family Health Teams, Ontario Health Teams, Community Health Centres, etc.
- Pharmacies
- Local municipalities and politicians
- Indigenous, Black and other racially based communities and organizations
- Culturally aligned community organizations
- Community centres
- Hospitals and other healthcare centres

- Long term care, retirement homes, and other congregate care settings
- Shelters, group homes, and other social housing
- Essential workplaces such as first responders (fire, police, EMS), schools and school boards, construction, food industry, etc.
- Other workplaces such as food production, manufacturing, retail locations, etc.

Partnerships with Primary Care:

Provincial primary care associations are engaging with Ministry of Health and public health leadership to streamline communications, including through point people for primary care in each local public health agency as well as point people in the primary care sector that local public health agencies may draw upon. Lists of primary care providers willing to contribute to the local immunization program are being compiled by primary care associations and will be regularly sent to local public health agencies. There may be an opportunity for the MOH and public health leaders to engage other partners, such as the Ontario College of Pharmacists, in the future.

Recognize and involve primary care early as a key partner with valuable expertise in vaccination delivery, promotion/addressing hesitancy and assessment/management of adverse events.

When engaging primary care, consider the following:

- Leverage existing relationships from participation in the annual Universal Influenza Immunization Program (UIIP) for engagement of primary care organizations and providers for mass vaccination.
- Provide early, frequent and regular communications updates directed to primary care to educate their patients/communities about the vaccine and distribution sequencing to promote vaccine uptake.
- Engage primary care locally through family medicine Community of Practices, local Ontario Health Teams and larger primary care organizations like Community Health Centres and Family Health Teams
- Seek primary care partnerships that have established relationships or mandates for priority populations for vaccination (e.g.: Indigenous health centres, providers serving retirement homes or communities for older adults).

4. Local Prioritization of Populations and Promotion of Vaccine Uptake

Ontario has developed a three phase COVID-19 immunization plan focusing first on high-risk populations then moving toward mass vaccination, and eventually steady state for any remaining Ontarians who want the vaccine (see Figure 1). Further guidance has been provided by the Ministry of Health on prioritizing healthcare workers, however, significant work will remain to implement this framework at the local level.

Each local public health agency will need to prioritize sub-populations within each phase of the mass vaccination program and develop promotion campaigns for each.

This will require local public health agencies to have a solid understanding of the size and characteristics of each sub-population to optimize communication, engagement and recruitment.

Local Adaptation – Provincial Oversight

Local public health agencies will need to prioritize sub-populations within each phase of vaccine rollout based on local needs. These decisions should consider provincial guidance including Ontario's Ethical Framework for vaccine distribution, Ontario's guidance on prioritizing healthcare workers (see Appendix 4), and federal guidance on prioritization of initial doses.

When developing prioritization plans, local public health agencies should consider the following:

- Each region will have different disadvantaged populations to be sequenced so sequencing will necessarily look different across local public health agencies and regions.
- Deviations from provincial approach should be transparent, well explained and clearly identified.
- Community involvement in implementation of provincial approach or any deviations requires wide stakeholder engagement that should be organized by local public health agencies.
- The stakeholder engagement should be led by local public health agencies.
- For maximum uptake, barriers should be eliminated so that individuals can access the vaccine in any channel they prefer.
- All doses will need to be "registered" in the provincial information system and some way of easily credentialing individuals will make it easy to access individual records to examine dosing intervals and vaccine type.

Sequencing Strategy Task Force

Each local public health agency should convene a local vaccine sequence strategy task force to facilitate decision-making.

The task group can help facilitate decision-making of the sequence (order) of the rollout of the vaccine over time to promote consistency, stewardship, accountability and public trust. Operating under the broader Ethical Framework for COVID-19 Vaccination Distribution, this local team will make more granular recommendations on how vaccine will be offered to priority populations and sub-groups including recommendations on promoting uptake of groups that have been sequenced ahead of others, but are not achieving anticipated rates of vaccination due to access barriers.

The task force should be informed by expert opinion including members from diverse priority population groups disproportionately impacted by COVID-19 and will support an effective and expeditious

vaccination strategy by allowing for a transparent process to make these recommendations to the Incident Management System leadership for final decision-making.

The task force should be sufficiently comfortable to engage in a critical and often challenging conversation about sequencing.

See Appendix 4 for an example of a Terms of Reference for the Sequencing Strategy Task Force.

Promotion and Recruitment of Eligible Populations

Recruitment efforts should begin as soon as possible. All societal groups including those disadvantaged (racialized, low-income, disabled etc.) should be identified as part of process for enumerating and recruiting population for immunization.

Consider using the **5** P's of Marketing (People, Product, Place, Price and Promotion) to create the strategy. An example of how the 5 P's of Marketing would apply is provided in Appendix 4. The 5 Ps can help inform you communication plans.

Enumeration of Sub-Populations

To enable appropriate planning for each sub-population, the local public health agency will need to understand the number of potential eligible members, socio-demographic information, geographical information and other population characteristics. This will aid local public health agencies in developing effective vaccination campaign plans including communications and community engagement, vaccination approaches, etc. Refer to Appendix 4 for possible sources of information to enumerate and describe sub-populations.

5. Supplies Management and Distribution

The logistics of the vaccination campaign includes, vaccine storage and handling, cold chain maintenance, a distribution system, and robust inventory management.

To enable a successful COVID-19 vaccination campaign, local public health agencies will need to leverage their expertise to ensure effective supply management and distribution of the vaccine and other supplies.

Distribution System (Delivery and Receiving)

The manufacturers, Ministry of Health as well as federal authorities at Health Canada will continue to provide estimates of when COVID-19 vaccine will be available and in what quantities. Based on the most current and accurate information available the Ministry of Health will continue to provide estimates of when COVID-19 vaccine will be available and in what quantities to each local public health agency. Distribution of the COVID-19 vaccine to each local public health agency jurisdiction will be in alignment with each allocation phase and quantities available. Amounts to be allocated will follow principles for equitable allocation. Vaccines will be delivered, based on the assessments submitted by local health authorities, by the Ministry of Health. Safe and timely delivery is key to this operation and will be conducted in part by contracted partners. Any change to the public health authority's assessment of the

transportation, storage and security arrangements must be immediately communicated to, and confirmed received by, the Ministry of Health's Emergency Operations Centre. It is anticipated that the Ontario Government Pharmacy along with local OPP authorities will deliver vaccine to local public health agencies.

The local public health agency will be responsible for recommending the location of delivery sites, including alternative sites, to the Ministry of Health. Local public health agencies should ensure they have the space, expertise and staff to receive, store and handle the vaccine per current Ministry of Health Vaccine Storage and Handling Protocol. Vaccine storage may require ULT freezers. All vaccine storage, whether stored at ULT or -20◦C or routine vaccine temperatures, require the local public health agency to monitor and document maximum, minimum and current temperatures at least twice daily. The local public health agency will receive and store frozen vaccines and thaw the vaccines in accordance with guidelines and standards issued by the Ministry of Health or other industry or government agencies.

Storage and Handling

Strict attention must be paid to maintaining cold chain requirements when vaccine is being transported, distributed and stored. All vaccines must be stored and handled according to manufacturer and provincial storage and handling requirements, including cold chain and light sensitivity of the vaccine (as applicable). The MOHLTC Vaccine Storage and Handling Protocol outlines roles, responsibilities, and processes for current storage and handling: Vaccine Storage and Handling Protocol, 2018 (gov.on.ca). The MOHLTC resource for Vaccine Storage and Handling Guidelines: Vaccine Storage and Handling Protocol, 2018 (gov.on.ca) is followed by all healthcare providers who store and handle publicly funded vaccine.

For further information on the responsibilities for storing and handling of specific vaccines, local public health agencies should consult manufacture and government guidelines.

Cold Chain

The first two vaccines to be available, Pfizer-BioNTech COVID-19 vaccine and Moderna COVID-19 vaccine), have stringent freezer storage requirements. Local public health agencies should ensure that appropriate cold chain procedures, equipment and capacity are in place by confirming adequate vaccine storage space in designated freezer or ULT units as required as per manufacturer's guidelines.

In order to meet these requirements, local public health agencies should consider the following.

- Arrange to have the initial set-up of the ULT and/or -20◦C freezer unit completed by a certified technician of their choosing, such as the company currently using as part of the routine maintenance procedures for refrigerators as per the current Vaccine Storage and Handling Protocol.
- Facilities storing COVID-19 vaccine in ultra-low cold or freezer storage units should also ensure that annual inspections (including temperature calibration) and regular maintenance of all ULT or freezer storage units is completed by a certified company. A copy of these inspections from facilities may be requested to ensure that vaccine storage and handling conditions are being adhered to.

- Prior to storage of COVID-19 vaccine within ULT and freezer storage units, it is a requirement that the unit is set up so that the vaccine temperatures are stabilized at the recommended temperature range specified by the manufacturer.
- All units must have a back-up power system in place (e.g., generator) and temperatures of the unit must be monitored for 2 to 7 consecutive days. Maximum, minimum, and current temperatures need to be recorded twice daily in a Temperature Logbook and temperatures must be within the required storage temperature range prior to storing vaccine in the storage unit.
- In the event of a power failure or equipment failure, backup storage locations and an emergency means of transporting the vaccine should be identified in advance as available. These arrangements must be confirmed on a regular (e.g. weekly) basis .
- Remote monitoring system that allows for the notification of temperature excursions and power disruptions is recommended on a continuous (24/7) basis.

Storage and Handling During Transportation and Administration

All local public health agencies must have a plan to ensure that cold chain requirements are met and how the vaccine will be stored and handled during vaccine transportation and administration. This transportation to off-site clinics and/or supplied to community and healthcare facilities. Plans and protocols should be in place that include:

- Ensuring that the vaccine only be transported at the temperature conditions recommended by the manufacturer.
- Temperature excursions should be assessed for further evaluation/investigation using a risk-based approach that considers guidance from the vaccine manufacturer, the length of the temperature excursion(s), and the real-time temperature data available.
- Quality agreements should be in place when using contracted third parties. The agreements outline responsibilities between the two parties to ensure the transportation is performed within the established procedures and requirements to maintain product quality.
- The storage and handling procedures at off-site clinics, and community and healthcare facilities should comply with public health requirements and meet manufacturer guidelines.

Physical Security

Arrangements for the physical security of vaccine should be made for all stages of vaccine delivery and storage. Local public health agency will need to plan for the following security requirements:

- Identify a safe and secure site for the storage and security of the vaccine. COVID-19 vaccines must be stored in a locked room where designated freezer and refrigerators are located.
- Identify a designated room for the organization and storage of clinic supplies and a dedicated sharps room including a plan for proper sharps storage and disposal.
- Storage areas should include 24/7 security, including but not limited to security camera monitoring
- Access to storage area(s) must be limited to authorized personnel only.

Inventory Management (Provincial IT System)

Inventory management at all levels is essential to maximize available vaccine supplies and anticipate future needs.

The local public health agency will be responsible for managing inventory for both the first and second dose. Accurate real-time knowledge of vaccine supply and inventory can allow for adjustments to vaccine shipments or clinic schedules as needed. Local public health agencies will need to complete inventory management requirements of the Ministry of Health or other industry and government agencies, including wastage. The inventory system should be able to track vaccine lots so that specified lots can be put on hold or recalled, if needed. Vaccine bar coding could assist in this tracking process.

Local public health agencies will be required to submit four-week inventory planning outlooks, to be updated weekly, to the Ministry of Health to support provincial inventory and distribution management.

6. Vaccination Approaches

The Ontario COVID-19 Vaccination Distribution Plan (Figure 1) includes multiple vaccination site types, including hospital-based clinics, on-site clinics within specific communities, as well as pharmacies and public health and mobile sites.

In response to efforts to rapidly scale up the immunization, leadership of the local public health agencies will lead the integrated plan for expansion of delivery channels, including mass vaccination clinics, on-site immunization and mobile clinics.

Immunization clinics led by local public health agencies should include community partners such as hospitals, family health teams, EMS, pharmacies and others. Mass Immunization Hubs, arenas, schools, mobile clinics and other community settings are potential sites for these clinics.

For each targeted population within the region, the local public health agency will have to determine what type of clinic to offer based on their population's health status, geography, accessibility and resources.

- Mass immunization clinics should be contemplated when larger numbers of people need to be vaccinated in a short period of time.
- On-site immunization and mobile clinics should be contemplated for populations that are too frail to attend a mass immunization clinic (e.g., residents of long-term care homes) or have other unique needs (e.g., homeless, mental health issues) that require a more tailored approach.

Planning for vaccination clinics should include:

- Scope of the campaign i.e., the number of people to immunize will determine how many clinics are required and the staffing and volunteer needs.

- Site identification.
- Staffing plan.
- Collaboration with partners for clinic implementation, including transportation, facilities, security, IT, Human Resources, unions, procurement, schools (when the vaccine is approved for children).
- Addressing the needs of priority populations.
- Quality improvement.

Building flexibility and adaptability in the vaccination clinic plans to scale delivery as may be required, either up or down, will be critical.

Mass Immunization Clinic (MIC) Setup

Clinic setup will vary by site capacity and room layout but should have a logical unidirectional flow. As much as possible, it is recommended that a standard clinic layout be used to avoid confusion among rotating staff. An example of how an immunization clinic can be set-up is provided in Public Health Agency of Canada Planning Guidance for Immunization Clinics for COVID-19 Vaccines (December 7, 2020);

Other resources available to inform clinic set up include:

- Ontario Ministry of Health COVID-19 Vaccination Clinic Operations Planning Checklist
- Government of Canada Planning guidance for administration of COVID-19 vaccine

For examples of mass immunization clinic plans from local public health agencies, refer to Appendix C.

MIC Clinic Site Selection

Clinic sites should be selected based on location, accessibility and amenities. Criteria for site selection should include:

- Location is accessible for families, older adults and people with disabilities (wheelchair accessible).
- Travel to and from site:
    - Parking spaces (enough to maintain traffic flow)
    - Easily reached by public transit (bus, LRT) with short travel times
- Waiting and staging space that allows for sufficient distancing between households. Outdoor is preferred. Consider possibility that people may need to wait outside during inclement weather conditions.
- Security considerations for 24/7 monitoring and security.
- Environmental services:
    - Outdoor winter weather maintenance
    - Indoor cleanliness and sanitation
- Layout and flow to allow for physical distancing, sanitation stations, IPAC measures.
- Disposal of medical waste.
- Indoor amenities:
    - Large open spaces for waiting in line, seating, immunization stations, and waiting after immunization; all while allowing for sufficient space for physical distancing

- Ability to manage one-way flow through clinic
- Ventilation
- Washroom facilities
- Separate rooms for secure storage for admin supplies; vaccine supplies; health & safety supplies (including PPE); laptops; staff personal belongings.
- Space and location of on-site freezers and refrigerators.

MIC Levels and Staffing

When determining the staffing requirements, parameters to consider include:

- Number of vaccine doses an Immunizer can give per hour (immunization rate)
- Number of Immunizers per clinic
- Duration of each clinic
- Number of clinics per day and per week

For more details on considerations related to staffing and example staffing plans, refer to Appendix C for an example from Ottawa Public Health.

7. Human Resources

Each local public health agency will need to determine the human resource requirements to appropriately staff immunization clinics. This will include recruitment of staff and orientation and training.

The human resources required to offer mass immunization clinics for COVID-19 vaccine will be different than those required for past pandemics such as the 2009 H1N1 campaign because of physical distancing and masking requirements. Therefore, it will be necessary for most local public health agencies, particularly those in large urban areas or those offering larger clinics, to secure additional human resources through contractual or affiliation agreements. Local public health agencies may also consider facilitating work of primary care immunizers on-site in a "shared space" clinic, where primary care immunizers may immunize their own patients using their usual remuneration approaches.

Going forward, COVID-19 immunization clinics will need to be arranged for priority populations based on eligibility criteria. The staffing requirements for on-site immunization will be different than those for mass immunization clinics. However, the following assumptions apply to both settings:

- On average, if consent forms have already been completed, the vaccine is pre-loaded into syringes for Immunizers and clients flow continuously through the clinic, an Immunizer can give approximately 14 vaccinations per hour.
- This number drops to 12 vaccinations per hour if the Immunizer must load their own syringes.
- This further drops to 11 vaccinations per hour if the Immunizer must premix vaccines e.g., Pfizer-BioNTech.

Staffing for On-Site Immunization Clinics

Staffing considerations for these clinics will be based on the population, location, and existing/available supports. For example, long term care homes have registered staff, but they may not be able to assist with immunization clinics given other responsibilities. See Appendix 7 for resources to help determine staffing levels.

Work is underway at the Ministry of Health to enable nurses to administer vaccines and for federal insurance program to cover liability for vaccine related incidents.

Staffing for Mass Immunization Clinics

Mass immunization clinics require staffing by non-healthcare and healthcare providers. Consideration should be given to assigning non-healthcare providers to the following roles:

- Screening of clinic attendees for signs and symptoms of COVID-19 illness (Greeters);
- Clinic registration staff (Registration);
- Clinic flow management (Flow Monitors);
- Security (Security);
- Equipment and supply runners (Runners), and
- Vaccine handling and storage oversight (Vaccine Management).

Volunteers could be considered for the Greeter, Flow Monitor and Runner roles. Registration and Vaccine Management will likely fall to local public health agency non-healthcare provider staff given that the COVAX application in CCM is being used to record immunization delivery.

Healthcare providers will be required for the following roles:

- Syringe pre-loading (if a decision is made to use this approach) (Syringe Pre-Loaders);
- Immunization (Immunizers);
- Vaccination recovery (Vaccination Recovery);
- Clinic oversight including orientation and support of healthcare provider staff.

Additional sources of healthcare provider staffing for immunization and/or pre-loading syringes may include:

- Nursing agencies/temporary staffing agencies;
- Physicians and nurses who work in other healthcare settings;
- Other healthcare providers such as paramedics, pharmacists, and dentists;
- Medical, nursing and pharmacy students.

Recruitment of Human Resources

It is recognized that many local public health agencies may be experiencing shortages of resources who are qualified to administer vaccines as many of their staff are supporting contact tracing and other aspects of the pandemic response.

It is recommended that local public health agencies evaluate their staffing requirements across areas to determine if staff can be redeployed to the vaccination implementation. Local public health agencies can consider collaborating with Public Health Ontario to implement additional tools and processes that

will help reduce the resource requirements for case and contact management. Tools for prioritization of cases and triaging follow-up to manage high demands on case and contact management teams are found in Appendix 7.

It is recommended that each local public health agency develop a plan to adequately and appropriately staff vaccination clinics through a variety of means. This can include:

- Nursing agencies/temporary staffing agencies;
- Physicians and nurses who work in other healthcare settings;
- Retired physicians and nurses
- Medical, nursing and pharmacy students
- Other healthcare providers such as paramedics, pharmacists, and dentists.

Affiliation agreements should be in place for all staff who are employed by other agencies, particularly for those who will be administering vaccine under a public health medical directive. Such agreements should consider primary responsibility for the following:

- Orientation and training
- Scheduling
- Supervision
- Compensation including benefits
- WSIB coverage.

Of note: volunteers should have WSIB coverage in place, preferably through their umbrella organizations where appropriate e.g., Lions Club, Optimist Club.

Orientation and Training

Providing thorough staff orientation and training prior to the first clinic is vital to the effective functioning of immunization clinics. Staff and volunteers should be oriented to relevant administrative requirements including:

- Human resource requirements such as scheduling, time sheets, key contacts/processes regarding shift changes or other questions, appropriate dress code and PPE requirements for clinic work.
- General issues related to clinic function including their specific roles and responsibilities, clinic flow, cultural and diversity sensitivity considerations, infection prevention and control recommendations, occupational health and safety protocols, COVID-19 precautions.

A variety of teaching modalities is recommended to ensure staff are well-prepared for their first clinic. These include self-study modules, webinars, and just-in-time overviews immediately prior to the clinic opening.

Currently, the Ministry of Health is providing access to COVAX training and work is underway to explore further centralized training on different dimensions to support the vaccination program. The Public Health Agency of Canada has hosted webinars to share information about the Health Canada-approved vaccines and these are available on their website.

8. Documentation and Reporting

Each local public health agency will need to ensure that they have the systems in place to meet provincial and local requirements for surveillance and monitoring. This includes vaccine safety surveillance, adverse events and number of people vaccinated.

Surveillance and Monitoring

The COVID-19 Vaccination Surveillance Plan

The COVID-19 Vaccination Surveillance Plan is one component of a larger COVID-19 Surveillance Plan, important for surveillance and assessment and to inform planning and adjustments to the vaccination program at the local and provincial levels.

Transparency in reporting on vaccine distribution, uptake by prioritized populations, and progress towards targets, with attention to equity, is critical for maintaining public trust and confidence in the process.

Data management systems should easily support the generation of information required for reporting requirements. For the overall response/plan, considerations should also be given on how to analyze and report on coverage including numbers vaccinated overall, in the groups targeted for immunization such as those with underlying medical conditions and working in various occupations, and in various sociodemographic groups (age, gender, race) and geographic regions.

Goals of the Vaccination Surveillance Plan

To inform vaccination strategies during each phase of roll-out by monitoring and reporting out on the following five key areas:

- Vaccine inventory, distribution and wastage
- Vaccine administration and coverage
    - by priority populations targeted in Phase 1 and Phase 2
        - dose administration and coverage by facility (eg LTCH, RH) and resident vs staff
    - for the overall population (Phase 3)
    - among socio-demographic groups (e.g. race, occupation, language, country of birth, age and gender)
    - by geographical areas (e.g. neighbourhoods)
    - accounting for vaccine dosage/scheduling
- Barriers to vaccine uptake
    - Barriers to uptake and reasons for vaccine refusal or vaccine hesitancy
- Public awareness/opinion/beliefs on COVID vaccination
- Adverse events following immunization (AEFI)

Reporting Plan

Information collected under the surveillance plan should be reported internally and externally in a timely fashion using appropriate reporting tools such as dynamic and static dashboards and reports.

Data Sources

Each local public health unit will need to develop or implement data collection tools and processes to collect and report data. Current or proposed local data sources for surveillance reporting include:

1. COVax-ON: Includes a Dashboard for each clinic including the following metrics (as of 9-Jan-2021):
   - # of total doses received
   - # of doses administered by date (no differentiation by 1st vs 2nd dose)
   - Who is receiving the vaccine (LCTH healthcare worker; RH healthcare worker; general HCW; LTCH or RH resident; other employee)
   - # of AEFIs (not yet by type or severity)
2. Local booking systems for appointments. For example, The Ottawa Hospital's (TOH) Booking System includes a Dashboard for TOH clinic bookings, including:
   - Facility name of client (using a free text field that is very laborious to report on)
   - Confirmation of 1st vs 2nd dose appointments
3. Population data for use in planning clinics and estimating vaccination coverage rates:
   - Bed census counts of LTCH and RHs (acquired from the LHIN)
   - Number of LTCH and RH residents and staff (acquired directly from these facilities)
   - Population estimate data (Ministry population estimate and projection data)
4. Survey data: To collect public opinion/awareness of the COVID-19 vaccine and some reasons or barriers for vaccine hesitancy and refusal. Public opinion polls to collect this information can be used.

Further provincial and local work to advocate for data elements and functionalities in COVax that local public health units are not able to extract and report on, as well as for collection of socio-demographic client data and other population health data is essential to inform this response.

Social Determinants of Health Collection and Reporting

Purpose: To assess vaccine uptake for populations at risk or with higher burden of COVID-19. A similar approach proposed below was taken to assess the burden of COVID-19 morbidity and mortality in Ottawa and other local health units.

Client based Socio-Demographic Data Collection

In addition to age and gender, OPH recommends the following socio-demographics be collected for clients (excluding LTCH or RH residents):

- Official Language
- Childhood language
- Born in Canada; If no, how long in Canada
- Identify as Indigenous; If yes, specify First Nations, Métis, Inuit
- Racial identity

- Occupation

Note that some socio-demographic indicators are excluded (e.g. income) due to expected low response and other proxies of these can be used to inform uptake and planning.

The methods to collect sociodemographic data are being proposed for collection beginning in Phase I.

Geographical Mapping of Vaccine Uptake

It is important to collect accurate geographical information (address or at least postal code), to assess geographical (i.e. Neighbourhoods) coverage of vaccine uptake in the population.

Vaccine Safety

Adverse Events Following Immunization (AEFI) Surveillance

Reporting of adverse events following immunization (AEFIs) for COVID-19 vaccines will follow the same procedure as AEFI reporting for all other vaccines, using the Ontario AEFI reporting form for initial reports of AEFIs and iPHIS for case management, until COVID-19 AEFI reporting functionality is built into the case and contact management system (CCM). The AEFI reporting form has been updated to include Adverse Events of Special Interest (AESI) for COVID-19 vaccine safety surveillance identified by the Brighton Collaboration. For questions about AEFI reporting or to notify PHO of a vaccine safety issue please contact ivpd@oahpp.ca.

Key COVID-19 AEFI Surveillance Resources:

- Infectious Disease Protocol, Appendix B (*updated December 2020*)
- Ontario AEFI Reporting Form (*updated December 2020*)
- iPHIS AEFI User Guide (*updated December 2020)*
- Enhanced Reporting Form for Events Managed as Anaphylaxis
- Adverse Events of Special Interest (AESI) for COVID-19 Vaccine Surveillance (*created December 2020)*

Active Vaccine Safety Surveillance

Ontario will be conducting active vaccine safety surveillance for COVID-19 vaccines through the Canadian National Vaccine Safety Network (CANVAS) beginning in late January. CANVAS conducts active vaccine safety surveillance after implementation of new vaccine programs and will be used by multiple Canadian provinces to gather safety information on COVID-19 vaccines. Individuals who have their consent to receive electronic communication (i.e. email) about research studies documented in the COVAX system will receive an email providing information about CANVAS. Clients who consent to participate in CANVAS will complete online questionnaires following vaccination to elicit information about symptoms as well as medically attended events that require reporting as AEFIs. Any AEFIs identified by CANVAS will be referred to local public health agencies for further investigation and entry into the provincial surveillance system. Public Health Ontario will assist CANVAS in referring AEFI reports to the correct local public health agency.

Clinical Advice on Re-Immunization Following Complex AEFIs

Lastly, the Special Immunization Clinic (SIC) Network, a Canadian network of paediatric and adult infectious disease specialists and allergists with expertise in the assessment and management of patients who have experienced a complex AEFI has recently expanded to include additional adult sites in

Ottawa and Toronto, including The Ottawa Hospital, St. Michael's Hospital and University Health Network. Information regarding referral process to the new SIC sites will be shared as soon as it becomes available.

The COVax Solution for Health Units

COVAX is the common denominator solution for recording all administered doses of COVID-19 Vaccines and tracking of inventory in Ontario.

This means that the solution will continue to evolve as the vaccine program grows through the next phases of the Vaccine Strategy. The original COVax solution, the first release, was stood up quickly as the base viable product and subsequent releases will continue to improve the functionality and to match the program needs (e.g. prioritizing populations).

The COVax solution is meant to support the administration of all vaccine preparations (Pfizer, Moderna, others as licensed and available), in all settings including hospital-based clinics, LTC and rest and retirement settings, Mass Immunization Clinics, Specialty clinics (e.g. workplaces) and individual settings (pharmacies/primary care).

COVax is an intuitive direct recording system that supports full COVID-19 immunization data, and real time inventory tracking. On occasion, when the electronic recording solution is replaced by paper notations, (no internet connection or no staff ability to electronically record) the data must be entered as soon as possible to ensure vaccine safety and supply. Where the vaccination client lists have been preloaded prior to vaccination, into the system, the data entry is quick. Where all the data elements need manual entry, it requires 2-3 minutes/record. Recording the immunization is a requirement of standard clinical practice and the responsibility of the vaccinator. As cooperative provincial models of vaccine delivery develop, in the many varied environments across Ontario, local public health agencies may be asked or elect to help with the data entry for the COVax solution.

Local public health agencies will continue to work with the COVax solution as it evolves in support of a strong Ontario Vaccination strategy. The future plans for the COVax product currently include:

- future releases in support of improved usability,
- an appointment scheduling module,
- pathways for COVax use with EMR systems supporting primary care, etc.
- digitalization of COVID-19 Vaccine AEFIs reporting

9. Contingency Planning

Each local public health agency should ensure that contingency plans are in place to ensure continuation of the vaccination program.

Contingency planning is critical to ensure that the vaccination program is maintained, should elements of the primary plan face unforeseen challenges. Continuity of operations depends on identifying and managing those resources and situations most at risk of disrupting the program, such as staff absence,

physical site security, information technology systems and power supplies. A strong contingency plan considers these elements according to local public health risks and contexts so that the vaccine program continues to serve its region's residents in the manner best suited to them, despite unexpected challenges that may emerge.

Plans should be simple, well-communicated, and not reliant on a single person being present or available. If an interruption to vaccination is required to safeguard personnel at the delivery site, immediate risk to life and limb must be prioritized. At all times, vaccine stocks and supplies required for delivery should be safeguarded and accounted for, through the cooperation of health care partners where feasible. At all times interruptions to vaccination sites must be immediately communicated to the Ministry of Health's Emergency Operation Centre, and the local public health agency's IMS structure.

Procedures should be considered in place for the following emergencies:

- Active threat
- Bomb threat
- Building evacuation
- Earthquake
- Fire
- Release of hazardous material
- Medical emergency
- Power outage
- Severe weather
- Shelter in place
- Team member tests positive for COVID-19
- Transportation blockades

Appendix 9 includes a checklist for addressing a power outage. Having "surge capacity" staffing, or over-staffing, may address unexpected staff absences. Systems to cancel clinics and notify clients may be important to establish.

Alternate locations should be determined in advance to mitigate the risks associated with the above emergencies whereby if space cannot be used. Protocols for security and communication with emergency responders should be set in advance to assist in emergency response. Visible security should be present in mass immunization clinics.

Backup vaccine freezers/refrigerators should be identified, and transport processes identified to safeguard vaccine supply against emergencies. Vaccine refrigerators should be connected to backup power.

10. Finance

Boards of health are accountable for using funding efficiently as outlined by the fiduciary requirements domain of the organizational standards within the Ontario Public Health Standards. The Ministry of Health (MOH) must ensure that there is efficient use of public resources and ensuring value for money. Part of the requirements within the standard are for local public health agencies to provide financial reports as requested to the MOH.

Each local public health agency should ensure that COVID-19 related expenses, including those related to vaccination are tracked. Costs related to immunization should be tracked separately from other COVID-19 related costs.

COVID-19 costs are tracked separately by the MOH through special reporting of both case and contact management cost estimates as well as global extraordinary costs associated with the COVID-19 response. Therefore, appropriate financial tracking should be completed by local public health agencies. In conversations with the Ministry, it is recommended that costs related to immunization are tracked separately from other COVID-19 costs.

Reporting on immunizations is a regular reporting element for quarterly reports. Local public health agencies should use existing processes to track and report immunization costs.

Costs tracked should include but not limited to:

- Local public health agency staff costs in Full Time Equivalents (FTEs) and dollar value
    - Ideally, a separate time code (COVID Immunization) should be created within the local public health agency's human resource enterprise program
    - Staff involved in the COVID immunization planning and operations should code their time with the COVID immunization code
    - Overtime may also be tracked separately (based on reporting of extraordinary costs)
- Materials and Supplies / Other Operating Costs in dollar value
    - A separate project code (COVID Immunizations) should be created within the local public health agency's enterprise program
    - Costs associated with the COVID Immunization campaign should be coded using the separate project code
    - Subcategories to track may include but are not limited to (based on reporting of extraordinary costs in 2020): Travel & Accommodation, Supplies & Equipment, Purchased Services, Communications

Local public health agencies can also track the following for more detailed internal analysis:

- Staff costs in FTEs for partners involved in community mass immunization clinics

Post campaign economic evaluation can be completed by assessing and comparing metrics such as cost per dose, cost per clinic/delivery method, and other economic metrics.

11. Evaluation Approaches

Each local public health agency should develop an evaluation plan that considers both implementation and outcome evaluation questions, with an emphasis on implementation and real-time process improvements.

Evaluation should be considered from the onset of the vaccination program, with dedicated evaluators working with the planning and implementation teams. Evaluations require stakeholder input including clients, employees, volunteers and partner agencies.

A variety of evaluative processes can be used, including:

- Review of clinic data collection tools and provincial data sources (e.g. COVax)
- Review of information reported on daily debriefing by staff after each clinic
- Review of client evaluations conducted during the waiting period at clinics or online after the clinic
- Review of Serious Event Forms and Incident Reports
- Client, staff and volunteer surveys
- Formal staff and volunteer debrief sessions at the end of the campaign

Gathering and analyzing all evaluations should be completed in a timely fashion to ensure that nothing is lost. A written summary report including the processes used in running the clinics, quantitative summary data (e.g., numbers of clinics, numbers vaccinated, numbers of adverse events), evaluation outcomes and lessons learned will support future clinic planning.

The table below provides a framework for local public health agencies to consider when developing their evaluation plans.

Areas	Sub-Areas	Evaluation Questions	Examples of Sub-questions (not an exhaustive list)	Data sources
1. Priority populations/ Equity	Planning, communication, implementation	How equitable was the immunization campaign?	a) How equitable was the process of identifying priority populations who are more severely impacted by COVID (e.g., health, job loss, economic impact, etc.)? Was it equitable, evidence-based and applied consistently? b) What was the uptake of the vaccine in the priority populations? What were the demographics of priority populations who received the vaccine? Did they receive it in a timely manner? (e.g., number of people who took single dose and double dose) c) What factors contributed to vaccine hesitancy in the priority populations and what was done to address these factors (including building on community partnership, influential communication strategy, etc.)? d) What was done to make vaccines accessible for the priority populations (e.g., access to booking system, vaccination location, AODA accessibility, translation services, etc.)?	Surveys of: • Priority populations • Clinic clients • Immunization planning and/or implementation team COVAX-ON
2. Outcome -Vaccine uptake in general population	Planning, communication	What was the uptake of the vaccine in the general population and what factors influenced and inhibited the uptake of the vaccine?	a) What was the population's awareness and knowledge about the vaccine and their intentions regarding vaccination? b) What was the uptake of the vaccine in the general population? (e.g., number of people who took single dose and double dose) What were the demographics of the general population who took the vaccine? c) How did the vaccination coverage rates affect disease transmission (number of days to herd immunity), severity of illness, number of hospitalizations, number of ICU- beds occupied, etc.? d) What were the barriers to vaccination for general population (e.g., access to booking system, vaccination location, translation services, childcare, etc.)? e) How well did we address the barriers to vaccination for general population (e.g., communication, transportation, etc.)? f) What are the positive influencers/change agents to vaccination?	Surveys of: • General and targeted populations • Clinic clients • Immunization planning and/or implementation team COVAX-ON Epidemiology and Data Analytics
3. Outcome – Vaccine hesitancy in general population	Planning, communication	What was the vaccine hesitancy level in the general population and what factors contributed to the vaccine hesitancy?	a) How many people were vaccine hesitant? What were their characteristics? b) What factors contributed to vaccine hesitancy in the general population? c) What was done to address vaccine hesitancy (including building on community partnership, improving the communication strategy, addressing public's perception of safety and its impact on their decision to vaccinate etc.) and what were the outcomes of those interventions?	Surveys of: • General and targeted populations • Immunization planning and/or implementation team

	Areas	Sub-Areas	Evaluation Questions		Examples of Sub-questions (not an exhaustive list)	Data sources
4.	Implementation - vaccine administration at the various clinic settings (e.g. pharmacies, MD offices, traditional MIC, mobile units, etc.)	Planning, communication, implementation	What was the effectiveness of the vaccine administration process? Were vaccination targets met? (e.g., wait times, timeliness of services, coverage rates)	a) b) c) d) e) f) g) h) i) j) k) l) m) n)	How effective was the appointment mechanism for the vaccination? How effective was the use of various clinic settings (e.g., pharmacies, MD offices, MICs, mobile units, etc.) for administering the vaccines? How accessible were they (e.g., close to transit/ availability of parking? How effective was the clinics' design/layout, set-up and space usage? How efficient was the execution/vaccine administration? (e.g., wait times, timeliness of services, coverage rates, ability to meet minimum/maximum vaccination rate thresholds) What was the frequency, intensity and characteristics (including types of vaccines) of the Adverse Events Following Immunization (AEFI)? Were communication and implementation plans adjusted accordingly? How efficient and effective was the staffing model for the clinics? (e.g., was there enough staff to meet needs) How well were the roles and responsibilities of the clinic management and staff implemented for the clinics, including support functions such as security, housekeeping, etc.,? How effective was the online and just-in-time trainings for the clinics staff? How effective was the use of technology and information systems to facilitate the administration of the vaccine (e.g., provincial IT system for documenting, reporting and scheduling)? Were there sufficient IT supports and resources available for the clinics? Were best practices for IPAC and OH&S followed at the clinics? How effective was the vaccine and supplies management and distribution? (e.g., delivery and receiving, storage and handling, cold chain and wastage, allocation, inventory management, etc.) How effective was the internal communication in keeping clinics staff, management, and suppliers informed about clinics operations? How effective was the external communication? (e.g., general communication about vaccine and coverage to the public, specific pre-vaccine and post-vaccine communication for the clients)	Surveys of: • General and targeted populations • Clinic clients • Immunization planning and/or implementation team • Support teams (IT, HR, Security, Procurement, Communications) COVAX-ON data (including AEFI data) Epidemiology and Data Analytics HR, Procurement, and Communications data IPAC and OH&S guidelines and data
5.	Interjurisdictional collaboration	Planning, communication	What was the effectiveness and efficiency of the interjurisdictional collaboration?	a)	How efficiently do jurisdictions work together in terms of communication, roles and responsibilities, direction, and how did it affect the following systems: supply, distribution, storage and transportation, information and tracking, financial, and workforce systems?	Surveys of: • Immunization planning and/or implementation team at Federal, Provincial, and Local levels • Support teams (IT, HR, Procurement, Communications) COVAX-ON data

Conclusion

Planning for the implementation of the COVID-19 vaccination program within each local public health agency and within multiples sectors and settings is a challenging task that is made possible by Public Health's experience and expertise in mass vaccination programs. Successful planning and implementation of the COVID-19 vaccination program can only be achieved in partnership with many sectors across each agencies' geographic regions.

Local public health agencies are committed to leading and coordinating the vaccination program to ensure an effective roll out as determined by vaccine coverage rates and community trust in this work.

This Playbook is our framework to guide preparations as we progress through the COVID-19 vaccination program. It is an essential tool as we join up our collective efforts to put the COVID-19 pandemic squarely in our rear-view mirror.

Acknowledgments

This playbook has been created by The Council of Medical Officers of Health's COVID-19 Vaccination Working Group with direct support from the Ministry of Health and Ontario Health Toronto Region Health.

Appendices

Appendix 1: Governance

Examples of Governance Structures and Processes

The following documents are available in the Appendix Folder of the SharePoint Site:

- Sample COVID Vaccination Clinic IMS Committee ToR
- Sample/Draft COVID Mass Immunization Task Force Draft Roles and Responsibilities
- Peel COVID Vaccine IMS governance Structure
- Sample EOC Ops IMS Structure
- Sample MOU agreement between local public health agency and partner
- COVID Vaccination Advisory Committee ToR

Example of a Roles and Responsibility Documentation

The following document is available in the Appendix Folder of the SharePoint Site:

- Example of a Draft Roles and Responsibilities Matrix

Appendix 2: Communications and Community Engagement

Additional Resources

- Communicating effectively about immunization: Canadian Immunization Guide
- Toronto Public Health Report Addressing Vaccine Hesitancy

Communications and Community Engagement Considerations

Media Relations

- Have a consistent and trusted spokesperson (or very small number of spokespeople with specific areas of responsibility).
- Be responsive to media partners and be first to communicate new developments in your area or in lockstep with the Province.
- When appropriate, pitch proactive media opportunities to profile good news, the work of staff on the front line or to clarify possible instances of misinformation.
- Hold regular media briefings/technical briefings with experts to leverage your media partners as a channel to the public.

Tactics and Placement

- Consider different populations in your area and their preferred way of receiving information. Although social media will reach many residents, consider a variety of tactics, including any in-kind support from your local municipality(ties) (social services inserts, bill payment inserts, local media, ad buys, leveraging elected officials' newsletters and social media, mail drops, radio ads, digital ad buys such as banners and pre-rolls, bus shelter ads, multilingual radio, print ads, signage outside of key sites or in popular establishments such as pharmacies and grocery stores).
- With regards to social media, be mindful of demographic profiles on each platform and try to modify the message and tone to the desired demographic (Twitter, Facebook, Instagram, YouTube, TikTok, WhatsApp). This will minimize confusion and amplify unified messaging.
- Establish the primary social media channels as the main sources of information and encourage partners to share/RT/Like content. This will minimize confusion and amplify unified messaging.
- Consider using video to provide reassurance and model desired behaviour.
- Leverage leaders/influencers for vaccine update. For example, many of the early success in long term care homes were when management went first to get the vaccine.
- Phone lines and even mail-outs should be considered for populations with less access to internet-based information sources.

Website

- Keep your website up-to-date daily.
- Establish one web resource as the go-to for information. Partners can include high level landing content on their respective websites but should point to the dedicated website or webpage.
- Ensure that you focus on the user experience in terms of layout and design.
- Consider linking to Provincial and federal resources where possible for information that is standardized.

Tone and Accessibility

- Ensure the tone is empathetic, given some people may be hesitant of the new vaccine.

- Translate key information in other languages.
- Communicate competence and expertise, conveyed through an appropriate and trusted spokesperson(s).
- Communicate with honesty and openness (what you know, when you intend to get more information).
- Acknowledge what you are hearing, how you are feeling, provide reassurance.
- Ensure web design and information meets accessibility standards under the Accessibility for Ontarians with Disabilities Act.
- Be clear, concise and aim for a grade 5-6 reading level for all communications.

Internal Communications

- Remember to keep your internal employees informed in advance, or as promptly as possible, of any public announcement. This should be a priority action.
- Suggested tactics include weekly emails from the Medical Officer of Health to staff, daily media scans or sharing 2-3 key messages of the day, hosting virtual town hall meetings (monthly or quarterly) and conducting employee pulse checks and reporting back on "what was heard" to measure sentiment over time.
- Invite employees to share public health information and facts with their networks, friends and family via social media.
- Identify a clear contact that employees can reach out to with any questions.

Provincial/Federal Communications and Engagement Channels

There are a number of communications channels available from the federal and provincial governments that provide consistent and fact-based information on COVID-19 and vaccines. Consider referring to these channels as part of your communications.

Examples of Communication Documents and Plans

The following documents are available in the Appendix Folder of the SharePoint Site:

- 2020 Nov 20 OHT ESO COVID Community Response Strategy
- COVID Vaccine Caregiver information Letter
- COVID Vaccine LTC Operator Information Letter
- COVID-19 Vaccine Fact Sheet
- Essential Caregiver Designation Form
- Examples of Comms Products
- IPHCC – Engaging Indigenous communities with COVID Vaccine Implementation
- Email OPH – Updates PSO – Mises a jour to Faith Leaders
- Poster Physical Distancing – Masks - Algonquin
- Public Service Announcement in Indigenous Languages: PSA Inuktitut
- Email of Key messages for this week
- System Navigation support in neighbourhood clusters via WhatsApp

Appendix 3: Partnership and Engagement

No additional resources.

Appendix 4: Local Prioritization of Populations and Promotion of Vaccine Uptake

Additional Resources

- The Government of Ontario COVID-19 immunization plan
- Ontario's Ethical Framework for COVID-19 Vaccine Distribution
- Ontario Ministry of Health COVID-19: guidance for Prioritizing Health Care Workers for COVID-19 Vaccination (Version 1.0, January 8, 2021)
- Government of Canada Guidance on the prioritization of initial doses of COVID-19 vaccine(s)
- Canada's Pandemic Vaccine Strategy

Sample Terms of Reference for Sequencing Strategy Task Force

The following document is available in the Appendix Folder of the SharePoint Site:

- Draft Prioritization Task Force ToR

Example of 5 P's of Marketing Applied to Vaccine Promotion Planning

People

- Establish baseline population understanding/acceptance.
- Steps should be taken to determine the baseline trust in the vaccine and the various VDAs (surveys, focus groups, discussions with thought/faith/knowledge leaders).
- Recruitment efforts need to begin with understanding questions, knowledge gaps and uncertainty in ALL sub-populations particularly those severely impacted by COVID-19 infections.
- Trusted leaders/voices in important disadvantaged populations should be engaged ASAP to begin understanding of any unique reasons for vaccine hesitancy and engage and distribute messages.
- Community engagement will guide the education and knowledge development portion of the recruitment initiative.
- Link with trusted healthcare partner in these communities where sub-populations will look for answers to more complex questions associated with the vaccine, this includes organizations like community health centres.
- Feedback is important and many different strategies should be explored (surveys, focus groups, web-based interaction, hotline, community meetings, creation of community-based committees).
- Seniors are more compliant and therefore it can be expected that coverage rates will likely be high, and this may assist with uptake and therefore reduction in deaths and hospitalizations.

Product (Vaccines)

- Translate scientific information about the vaccines into easily understand materials.
- Highlight individuals who have already been vaccinated and their health.
- Make vaccine information easy to access – YouTube, Tik Tok, etc.
- Respond to misinformation and rumours promptly and completely.
- Investigate vaccine adverse events thoroughly and provide feedback in a transparent manner.
- Explain the different vaccines and why certain people are getting one and not the other.
- Provide clear language explanation how this vaccine works and its differences from traditional virus vaccines (inactivate or live attenuated).

Place (Clinics and Access Points)

- Ensure the vaccine is easily available through multiple channels (doctors, pharmacies, local public health agency clinics).
- Reduce barriers to access including moving the vaccine to neighbourhood locations such as local physicians and pharmacies, setting clinics across the day and evening, create a welcoming environment while still following IPAC guidance.
- Put clinic locations in neighbourhoods that have experienced substantial infection rates.
- Clinic times should include evenings and weekends to allow for those without sick time/time off to get vaccine.
- Establish appointment system so access time is identified and dependable.
- Establish reminder system for subsequent doses and ensure multiple reminders.
- Courteous and knowledgeable staff at the clinics should be available to answer any questions that arise at time of vaccination.
- Chose places that are easily accessible to those without a car (but ensure nearby parking for those who do own a car).
- While line-ups are not anticipated, ensure that there is sufficient registration and lobby space to receive a number of people and maintain distance.

Price

- Ensure easy access to parking (reduced rate or free).
- Allow for paid sick time off for vaccination appointment.
- Support paid sick time after vaccination for S/Es recuperations.
- Offer free transportation to clinic sites for disadvantaged populations.
- Promote the vaccine as free for anyone who wants it including those without OHIP coverage.

Promotion

- Multi-channel promotion campaign driven by known questions and uncertainties about the vaccine.
- Get information to places where individuals tend to make the decision to be vaccinated which is often during an encounter with their personal physician or healthcare provider.
- Ensure that healthcare providers are knowledgeable.
- Align this with understanding of populations above to reduce hesitancy (see People above).
- Use credible spokespersons that are unbiased.
- Identify channels where hesitant populations are seeking answers to provide information where it is being sought.

Potential Sources of Information on Sub-populations

1. Essential workers (as defined by province and federal governments):
    - Municipal infrastructure (water etc.) – request head count from governments
    - First responders (including the military but not including HCWs) – request head count from government
    - Front line workers (e.g. retail workers, finance etc.) – census estimates
    - Government decision makers – survey

- Education sector (i.e. teachers, ECEs etc.) – request information from school boards and childcare centres
- Postal Service – request information from federal government
- Corrections/prisons/detention centres – request information from provincial/federal governments
- Transportation infrastructure (province to decide which categories) – request information from governments and/or transportation organizations
- Utilities – (hydro, gas, etc.)

2. Age bands – proceed from highest age group to lowest
    - Use census as best estimate of each age band
    - Population density maps to investigate clustering of older individuals to influence immunization access points including public health agency clinics
    - Housing providers (e.g. social housing identifying clusters of older individuals)
3. Co-morbidities (if identified as influencing morbidity)
    - Enumeration via Institute for Clinical Evaluative Sciences (IC/ES)
    - Disease advocacy/service organizations (Canadian Cancer Society)
    - Use to adjust the age bands if vaccine continues to be in limited supply
4. Disadvantaged Populations
    - Homeless individuals
    - Local epidemiology – geographic clustering, sociodemographic information (e.g. racialized and low-income populations)
    - Regional epidemiology – industry specific populations

Appendix 5: Supplies Management and Distribution

Resources Referenced in Playbook

- Vaccine Storage and Handling Protocol, 2018 (gov.on.ca).
- Government guidelines and information storing and handling of specific vaccines

Appendix 6: Vaccination Approaches

Additional Resources

- Public Health Agency of Canada Planning Guidance for Immunization Clinics for COVID-19 Vaccines
- Ontario Ministry of Health COVID-19 Vaccination Clinic Operations Planning Checklist
- Government of Canada Planning guidance for administration of COVID-19 vaccine

Examples of Planning Documents for Immunization Clinics

The following documents are available in the Appendix Folder of the SharePoint Site:

- Ottawa Public Health DRAFT Clinic Planning document (COVID-19 VaccDist Implementation Plan)
- COVID19 LTC Strike Team After Action Report
- Muskoka MIC Plan (COVID Mass Immunization Module.docx)
- Example of MIC Setup Criteria (Criteria MIC Set up Draft 1 2014 12 11.docx)
- Example MIC Site Assessment Form (MIC Site Assessment Form September 2014.docx)
- Example of Decision-Making Tool for number of clinics and staffing levels (MIC Scenarios Table Final 2016 01 14.xlsx)
- Example of plan to vaccinate entire population (MIC Vaccination Toronto entire population 2015 12 02.docx)
- Example MIC Flowchart (Sample MIC Flowchart 2014 12 11.pdf)
- Example mass immunization plan PowerPoint presentation (TPH MIC Immunization Plan uploaded presentation.ppt)

Appendix 7: Human Resources

Resources to Determine Staffing Requirements

The following documents are available in the Appendix Folder of the SharePoint Site:

- Example of Decision-Making Tool for number of clinics and staffing levels (MIC Scenarios Table Final 2016 01 14.xlsx)

Appendix 8: Documentation and Reporting

Additional Resources

- Infectious Disease Protocol, Appendix B (*updated December 2020*)
- Ontario AEFI Reporting Form (*updated December 2020*)
- iPHIS AEFI User Guide (*updated December 2020)*
- Enhanced Reporting Form for Events Managed as Anaphylaxis
- Adverse Events of Special Interest (AESI) for COVID-19 Vaccine Surveillance (*created December 2020)*
- For questions about AEFI reporting or to notify PHO of a vaccine safety issue please contact ivpd@oahpp.ca
- Special Immunization Clinic (SIC) Network
- Public Health Ontario How vaccine safety is monitored in Canada

COVID-19 AEFI Surveillance Resources

- Infectious Disease Protocol, Appendix B (*updated December 2020*)
- Ontario AEFI Reporting Form (*updated December 2020*)
- iPHIS AEFI User Guide (*updated December 2020)*
- Enhanced Reporting Form for Events Managed as Anaphylaxis
- Adverse Events of Special Interest (AESI) for COVID-19 Vaccine Surveillance (*created December 2020)*

COVax Considerations for Local Public Health Agencies

Based on the early experience of some local public health agencies, the following considerations may be helpful for other agencies to consider as they begin to use COVax.

- The situation is evolving constantly, and software changes are frequent, sometimes hourly
    - Staff need to be agile and comfortable in discomfort
- You will have to begin (possibly before you feel you are ready) and continue to adapt as you expand very quickly to include other:
    - Service Delivery Locations (local public health agency, Long Term Care and Retirement Homes (LTCH and RH, respectively), and community partners (pharmacies, other clinic locations)
    - Vaccines
    - Target populations
    - Staff capable of vaccinating (local public health agency staff, community partners, first responders, pharmacies, primary care clinicians)
- Minimum Viable Product
    - The COVax Solution has been developed quickly, in response to an urgent demand, to facilitate the rapid on-boarding of many SDLs around the province. It is currently considered a Minimum Viable Product but will continue development to increase and improve functionality. As such, its functionality and appearance change frequently.
- Training materials were initially developed for hospitals and are now being adapted for local public health agency

    - Use those training materials and appreciate that they will provide a ***general sense*** of roles and responsibilities
    - Fulsome training in the COVax Solution will take place on-the-job
- The way local public health agency clinics are setup and run will vary depending on:
    - Location of the clinic (local public health agency, LTCH, RH, pharmacy, or community clinician's office)
    - Size of the clinic (large mass immunization clinic vs primary care provider's office)
    - Vaccine availability

Challenges

- The rapid pace at which the situation changes.
- Uncertainties in terms of product availability (i.e. - timelines and quantities)
- The need to deal with multiple products with differing:
    - Presentations
    - Required doses
    - Storage and handling requirements
- The extreme storage and different handling requirements of the two vaccines currently available.

Suggestions for Local Public Health Agencies Getting Started

In preparation for launch, the following should begin as quickly as possible and should be carried out as parallel processes:

COVax Solution User Accounts

- Identify staff for specific roles in COVax Solution (Inventory Managers; Check-In; Vaccinators; Check-Out; Bulk Data Uploaders; Dashboard)
- Request COVax Solution user accounts, for each of the above, from the Ministry
- Guide staff in the completion of setup and authentication of their respective USER accounts
- Provide role-specific training (Live/video recordings; Job Aid documents; training accounts for role practice in COVax Solution training environment)

Prioritized Client Lists

- Using Ministry-provided templates, create lists of prioritized Clients (i.e. – those who will receive the vaccine)
    - For example, request LTCH fill out the template, providing information to populate the requested fields, on each of their staff. The LTCH then encrypts the file and sends it back to the local public health agency.
- Pre-load the information, collected using the templates, into the COVax Solution. Having Client Profile information pre-loaded will decrease time at Check-In.

Scheduling of Prioritized Clients

- A scheduling component of the COVax Solution is currently under development but is not available at present and may not be available until February 2021.

- Therefore, local public health agencies must use existing clinic scheduling processes for scheduling of clients.
- At present, there is no logic built into the COVax Solution to prevent clients from receiving one vaccine for their initial dose, and a different vaccine for their second dose.
    - Creating processes to minimize this possibility E.g. by offering only one type of vaccine at any given SDL will need to be developed in the interim

Appendix 9: Contingency Planning

Additional Resources

The following documents are available in the Appendix Folder of the SharePoint Site:

- Contingency Plans for Vaccine Storage & Handling

Appendix 10: Finance

No Additional Resources.

Appendix 11: Evaluation Approaches

Additional Resources

- Post-clinic evaluation form for staff and volunteers
- Client evaluation form