

Follow-Up on the 2022 Performance Audit:

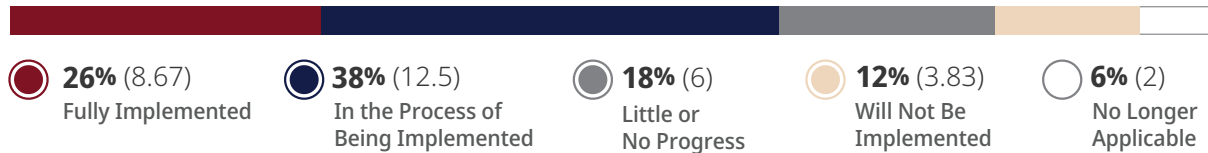
Ministry of Health

Ministry of the Solicitor General

COVID-19 Vaccination Program

// Overall Conclusion

33 Recommended Actions



The Ministry of Health and the Ministry of the Solicitor General, as of October 11, 2024, have fully implemented 26% of actions we recommended in our 2022 audit **COVID-19 Vaccination Program**. The ministries made progress in implementing 38% of the actions we recommended. However, they have made little or no progress on 18% of the recommendations.

The Ministry of Health has fully implemented actions such as establishing a clear, scalable accountability framework that includes all relevant parties for emergency public health situations involving vaccines; and analyzing all reports of vaccine wastage, including from distribution centres, following up on unusual trends or excessive wastage and taking corrective action as needed.

The Ministry of Health was in the process of implementing actions such as seeking expert advice on and setting appropriate, clinically sound vaccination targets by risk group; and creating a comprehensive immunization registry that will allow for more efficient service delivery for all vaccines.

The Ministry of Health and the Ministry of the Solicitor General have made little or no progress on reviewing the differences in compensation to health-care professionals that administer vaccines and updating compensation rates to address differences for future vaccination campaigns.

The Ministry of Health determined that two recommended actions were no longer applicable, primarily due to having concluded some COVID-19 vaccination activities that were significant during the peak of the pandemic. These actions included developing performance indicators that measure the efficiency of mass vaccination sites, collecting this data and comparing it across vaccination sites at least on a semi-annual basis to learn from this information and make improvements; and investigating what barriers businesses faced when using the Verify Ontario application.

The Ministry of Health indicated that it will not be implementing our recommendation to use findings from investigations on misrepresentation and fraud to implement processing controls to improve the security and integrity of vaccination data; and the Ministry of Labour, Immigration, Training and Skills Development will not be implementing our recommendation to assess what authority is needed to enable enforcement officers to effectively enforce compliance with public health measures such as proof of vaccination requirements. The Office of the Auditor General of Ontario continues to support the implementation of these recommendations.

The status of actions taken on each of our recommendations is described in this report (see **Appendix** for more details).

// Status of Actions Taken on Recommendations

We conducted assurance work between April 2024 and July 2024. We obtained written representation from the Ministry of Health and the Ministry of the Solicitor General that effective October 11, 2024, they have provided us with a complete update of the status of the recommendations we made in the original audit two years ago.

1. Vaccine Distribution and Uptake

In our original audit, we found that the government did not consistently apply its prioritization method for the rollout of COVID-19 vaccines across all neighbourhoods in its selection of 114 “hotspot” communities. This resulted in eight lower-risk neighbourhoods receiving vaccines ahead of higher-risk neighbourhoods, and nine higher-risk neighbourhoods being excluded from the “hotspot” strategy.

We also found that, although the Province had a governance structure outlining responsibilities and reporting relationships to support high-level decision-making, that structure did not include organizations such as hospitals, public health units and pharmacies that were integral to delivering the COVID-19 vaccine to the public.

The Province also did not establish any specific vaccination rate goal, or time frame to achieve the goal, for booster shots.

Recommendation 1: Action Item 1

So that in future disease outbreaks, high-risk populations are allocated scarce vaccines according to priority need, we recommend that the Ministry of Health, in conjunction with the Ministry of the Solicitor General, incorporate into its future pandemic response plan the need to consistently apply prioritization methodologies supported by scientific data and make this information publicly available.

Status:  **Fully implemented.**

Details

We found that in July 2023, the Ministry released the Seasonal Respiratory Pathogens Readiness and Response Planning Guide to support the health system's readiness to respond to respiratory pathogens outbreaks and surges. This Ministry considers this Guide a flexible seasonal plan that builds on key learnings from the COVID-19 pandemic, and plans to keep this plan current by reviewing it annually and updating it as required. It notes that "in the context of limited vaccine supply, both short and longer-term prioritization will be required to protect the highest risk and targeted settings to meet the goals of reduced transmission, morbidity and mortality as well as reduced impacts on the health and critical sectors." The Ministry further committed in the Guide to apply consistent methodologies and principles supported by scientific data, experts, and recommendations of committees such as the National Advisory Committee on Immunization (NACI) and the Ontario Immunization Advisory Committee (OIAC), to distribute vaccines in a fair and equitable manner when they are in limited supply, and to make prioritization decisions publicly available.

Recommendation 2: Action Items 1 and 2

To better respond to disease outbreaks and to transition the COVID-19 vaccination program from pandemic response to standard response, we recommend that the Ministry of Health:

- establish a clear, scalable accountability framework that includes all relevant parties for public health situations that require emergency action involving vaccines;
- incorporate the framework and a requirement to review it annually for continued relevance in its future pandemic response plan.

Status:  **Fully implemented.**

Details

The July 2023 Seasonal Respiratory Pathogens Readiness and Response Planning Guide noted in Recommendation 1 states that “expectations in the planning guide are part of an annual planning cycle, the goals of which are to build overall system readiness and resilience for seasonal surges of respiratory pathogens, and to reduce morbidity, mortality and social and health system disruptions. If required, activities identified in the planning guide can be escalated to respond to public health emergencies or pandemics.”

The Guide includes a chapter on Readiness and Response Expectations, which identifies the preparedness and response expectations and accountabilities of lead organizations in functional areas that include:

- surveillance, modelling and evidence;
- risk communications and public health advice;
- vaccines;
- testing;
- outpatient care and therapeutics;
- acute care;
- infection, prevention and control, and outbreak management; and
- supplies and equipment.

In the section on vaccines, the Guide notes that “all health partners should work to increase health worker and the general public’s acceptance of vaccines and refine approaches to ensure vaccination of different segments of the population, such as high-risk groups and equity-seeking populations.” It further indicates that the following organizations would have roles and responsibilities regarding vaccines: the Ministry of Health, Public Health Ontario, public health units, pharmacies, primary care providers and hospitals. For example, pharmacies are expected to manage inventory and cold chain of vaccine supply, and public health units are expected to support access to on-site vaccinations in congregate care settings.

Though not specified in the Guide, the Ministry informed us that its Health Services I&IT Cluster, in collaboration with the Office of the Chief Medical Officer of Health, Public Health as the sponsor, is responsible for developing and maintaining the province’s immunization database for all publicly funded vaccines.

Recommendation 3: Action Item 1

To protect Ontarians, especially those who are at higher risk of becoming severely ill from COVID-19, we recommend that the Ministry of Health:

- seek expert advice on and set appropriate, clinically sound vaccination targets by risk group;

Status:  **In the process of being implemented by December 2024.**

Details

The Ministry indicated in our follow-up that it regularly updates the COVID-19 Vaccine Guidance document based on recommendations from the National Advisory Committee on Immunization (NACI) and the Ontario Immunization Advisory Committee (OIAC). The Guidance document contains resources to support vaccine clinics and administrators in administering COVID-19 vaccines. For example, the Ministry updated the document in April 2024 to clarify recommended dosages for people aged five and older who are moderately to severely immunocompromised.

The Ministry noted that it aligns its definition of high-risk groups with NACI, and it will update this definition based on changes in evidence and expert recommendations from NACI, OIAC and Public Health Ontario. For the purpose of the spring 2024 COVID-19 vaccine campaign, the Ministry indicated in its Guidance document that individuals considered high-risk include:

- adults 65 years of age and older;
- adult residents of long-term care homes and other congregate living settings for seniors;
- individuals six months of age and older who are moderately to severely immunocompromised due to an underlying condition or treatment; and
- individuals 55 years and older who identify as First Nations, Inuit or Metis and their non-Indigenous household members who are 55 years and older.

The Ministry expects to review evidence and recommendations from technical experts such as those from Public Health Ontario and the Pan-Canadian Public Health Network and establish vaccination targets by risk group by December 2024 for the 2024/25 respiratory virus season.

Recommendation 3: Action Item 2

- collect and measure vaccination uptake rates against these established targets;

Status:  **In the process of being implemented by December 2024.**

Details

We found that the Ministry produces weekly reports on vaccination uptake rates and shares them with stakeholders including representatives at Ontario Health, public health units, pharmacies, primary-care providers and hospitals. At the time of our follow-up, each weekly report summarized the number of doses administered by major age groups, where the vaccines were administered (such as pharmacy, clinic, or primary-care provider's office), and vaccination coverage by public health unit. The Ministry also shares vaccination uptake rates of individuals living in long-term care homes and retirement homes with those involved in delivering the COVID-19 vaccine on a routine basis.

The Ministry expects to establish vaccination targets and then to measure vaccination uptake rates against these targets by December 2024.

Recommendation 3: Action Item 3

- update its vaccination strategy on a timely basis in response to new information.

Status:  **Fully implemented.**

Details

The Ministry noted in the July 2023 Seasonal Respiratory Pathogens Readiness and Response Planning Guide (see Recommendation 1) that it is "committed to reviewing vaccination strategies for seasonal respiratory pathogens regularly and updating programs on a timely basis in response to new evidence and expert advice." In this regard, the Ministry updates its COVID-19 Vaccine Guidance based on reviewing new evidence and expert advice such as from the National Advisory Committee on Immunization (NACI). For instance, the Ministry incorporated the NACI January 2024 guidance on high-risk groups, and the NACI March 2024 guidance on the use of the Novavax vaccine in its April 2024 update to the Guide.

2. Vaccine Appointment Booking

In our original audit, Ontarians could book their vaccination appointments through the provincial booking system as well as systems operated by public health units, hospitals and pharmacies. The use of multiple booking systems created inconsistencies in accessibility and encouraged “vaccine shopping” where some Ontarians registered for multiple appointments using different booking systems. According to the Ministry of Health (Ministry), about 227,000 no-show appointments were noted in 2021 in just the provincial booking system alone—appointments that could have been booked by someone else in need of a vaccine.

In addition, we found that while the Ministry can control eligibility criteria for vaccination site operators through the provincial vaccination booking system, other vaccination site operators using their own booking systems, such as some public health units, most hospitals and all pharmacies, could relax the timing of COVID-19 vaccine availability to eligible populations. In some instances, this allowed people who booked through these systems to get an appointment before those who booked through the provincial booking system.

Recommendation 4: Action Item 1

To promote effectiveness and equity in vaccination appointment booking for both on-going COVID-19 and any future provincial mass vaccination programs, we recommend that the Ministry of Health:

- co-ordinate with vaccination site operators, including public health units, hospitals and pharmacies, to consistently apply vaccine eligibility criteria across booking sites;

Status:  **Fully implemented.**

Details

We found that the Ministry has provided guidance on vaccine eligibility to vaccination site operators including public health units, hospitals and pharmacies, through channels such as its website and email notifications. For example, in July 2023, the Ministry informed pharmacies about the updated COVID-19 vaccine guidance, including new recommendations on the use of bivalent vaccines for primary series and booster dose recommendations. Included in the communication is guidance on who is recommended for a primary series of COVID-19 vaccine, what is recommended for individuals who are immunocompromised, and children who are five years old.

As for co-ordinating with operators to consistently apply vaccine eligibility criteria across booking sites in future pandemics, the Ministry informed us that it will communicate eligibility criteria to local public health units via guidance or recommendations, and will initiate regular, ongoing

meetings with public health units to review program operations, Ministry recommendations, program evolution and vaccine administration data.

Recommendation 4: Action Item 2

- develop and implement technology options such as that used by Vaccine Hunters Canada to assist the public with finding openings for vaccination appointments centrally;

Status:  **Little or no progress.**

Details

We found that the Ministry was developing a feasibility assessment to evaluate the value and approach for creating a technology solution to assist the public with finding openings for vaccination appointments centrally. The Ministry did not provide details about this assessment at the time of our follow-up, but indicated that it expects to complete the assessment by April 2025.

Recommendation 4: Action Item 3

- assess the feasibility of identifying and pre-registering high-risk individuals so that they are given priority for vaccine appointments and incorporate this in its future pandemic response plan;

Status:  **Little or no progress.**

Details

We found that the Ministry was developing a feasibility assessment (separate from the one mentioned in the previous recommended action) to examine pre-registering high-risk individuals in the context of the epidemiology and landscape of COVID-19 and vaccination. The Ministry did not provide details about this assessment at the time of our follow-up, but indicated that it expects to complete the assessment by April 2025.

Recommendation 4: Action Item 4

- develop an online communication strategy for future mass vaccination program appointment booking to accommodate languages other than English and French, and incorporate this in its future pandemic response plan.

Status:  **In the process of being implemented by March 2025.**

Details

We found that the Ministry has improved its online communication regarding vaccination appointment booking in languages other than English and French. The Ministry has:

- published instructions about how to book a vaccination appointment in 30 languages, the link for these instructions is available on the COVID-19 communication resources webpage;
- added information to the front page of the online booking portal to indicate the availability of booking support in over 300 languages through the Provincial Vaccine Contact Centre, where one can call a phone number during a specified time to speak to an agent; and
- included mentions of booking support in over 300 languages on the COVID-19 vaccine website.

The Ministry informed us that it worked with the Anti-Racism Directorate (ARD) to promote the instructions about how to book a vaccination appointment in 30 languages. As part of the promotion efforts, the Ministry noted that the ARD shared the document with a working group consisting of 17 community representatives and organizations representing perspectives from Black, Muslim, Latin and South Asian and other groups, who then shared the instructions through their own communication channels.

The Ministry also informed us that it plans to operate the Provincial Vaccine Contact Centre (PVCC) until March 31, 2025 and will assess the plan for PVCC to continue providing translation services past March 2025 as the COVID-19 vaccine program continues to evolve in the next few months.

The Ministry expects that by March 2025 it will update its pandemic response plan to recommend booking to occur in multiple languages in addition to English and French during future pandemics.

3. Vaccination Sites and Vaccine Administration

In our original audit, physicians received much higher compensation than nurses and pharmacists for vaccinating at vaccination sites operated by public health units and hospitals. Neither of the ministries provided the oversight necessary to achieve consistent pay for the same work.

Our analysis also indicated that public health units, hospitals, pharmacies, doctors' offices and other primary care settings, responsible for the majority of vaccines administered by the province, were more cost-efficient in delivering vaccines than the private clinics contracted by the Ministry of Health and the Ministry of the Solicitor General ministries. This was because public health units and hospitals operate mass immunization clinics, which are the most cost-efficient delivery channels, and are capable of vaccinating many people at the same time. In comparison, private-sector companies were primarily engaged by the ministries to provide support for public health units in vaccinating hard-to-reach and/or priority populations such as temporary foreign workers, essential workers who cannot work from home, and communities with low vaccine uptake.

Recommendation 5: Action Item 1

So that payments made to vaccinating entities are commensurate with expected performance and output, we recommend that the Ministry of Health, in conjunction with the Ministry of the Solicitor General:

- review the differences in compensation to health-care professionals and update compensation rates to address differences for future vaccination campaigns;

Status:  **Little or no progress.**

Details

We found that the Ministry of Health has not yet assessed compensation processes and rates but plans to do so by December 2024; the Ministry of the Solicitor General indicated that it will provide historical context from the 2020–2023 pandemic response, as required, to inform this work.

Recommendation 5: Action Item 2

- create distinct physician billing codes for different services performed in future vaccination campaigns to enable meaningful analysis of the specific services rendered, and incorporate this process in its future pandemic response plan;

Status:  **In the process of being implemented by March 2025.**

Details

We found that effective July 1, 2023, the Ministry discontinued the sessional fee codes (H409A and H410A) previously used at Ministry-designated COVID-19 assessment centres. Physicians would from then on exclusively bill the Ontario Health Insurance Plan (OHIP) for COVID-19 vaccination services under a distinct fee code (G593A).

The Ministry explained that, where mass vaccination services may be required in the future to protect the population against a pathogen, it will use the experience gained during the COVID-19 pandemic to inform fee code development and implementation. New fee codes for such services are not typically added until the Ministry holds a negotiation with the Ontario Medical Association.

The Ministry plans to incorporate this process in its next update of the pandemic response plan by March 2025.

Recommendation 5: Action Item 3

- reconcile payments made to vaccinating entities that bill by doses administered against vaccination data at least on a quarterly basis;

Status:  **Fully implemented for private sector vendors and pharmacies.**

 **Will not be implemented for physicians.**

The Office of the Auditor General of Ontario continues to support the implementation of this recommendation.

Details

We found that the Ministry of the Solicitor General engaged four vendors that supplied health human resources over a limited time frame, mostly in 2021 and 2022. One of these vendors billed by doses administered; the other three billed either through hourly rate or flat rate pricing in accordance with contract terms. For the vendor that billed by doses administered, the Ministry in November 2022 reconciled the vendor's invoices against doses administered as recorded in the COVID-19 immunization database and determined that the vendor's billing was appropriate.

For pharmacies, the Ministry of Health reviewed the claim-reimbursement data in the Health Network System that pharmacies use to bill the Ministry against the COVID-19 immunization database every quarter, and followed up on significant discrepancies. For instance, the Ministry issued a communication to pharmacies in June 2023 to clarify correct use of the user accounts in the immunization database following a review of the 2023/24 first quarter information, which identified a discrepancy of 1,850 doses representing 0.6% of doses that pharmacies billed to the Ministry compared to the number of doses recorded in the immunization database. The Ministry

noted that the overall discrepancy from the second through the fourth quarters of 2023/24 was 1,404 doses or 0.1%, a slight decrease compared to the discrepancy identified in the first quarter.

For physician services, the Ministry of Health indicated that it could not reconcile payments to physicians against vaccination data prior to July 1, 2023 because the Ontario Health Insurance Plan (OHIP) billing system did not have a distinct billing code for vaccination services. Although the Ministry created a distinct billing code for physicians on July 1, 2023 it still cannot reconcile payments to physicians against vaccination data, explaining that the OHIP billing systems and the COVID-19 immunization databases are separate systems that serve different purposes.

Recommendation 5: Action Item 4

- develop performance indicators that measure the efficiency of mass vaccination sites, collect this data and compare across vaccination sites at least on a semi-annual basis to learn from this information and make improvements.

Status: **No longer applicable.**

Details

We found that the Ministry considered this recommendation no longer applicable because mass vaccination clinics are no longer the primary mode of delivery of vaccination, following the World Health Organization's May 2023 statement declaring COVID-19 being no longer a public health emergency of international concern. The Ministry indicated that if mass vaccination clinics are required again to vaccinate a large number of people in a short amount of time, it can assess performance indicators at that time.

4. Immunization Database

In our original audit, the Ministry of Health built a specific database for COVID-19 vaccination records because it did not have a suitable vaccine registry. The Ministry incurred over \$144 million on this database between April 2020 and May 2022. We found that:

- the immunization database was built without sufficient controls and processes to catch erroneous entries;
- patient profile information was not consistently captured, reducing the Ministry's ability to identify high-risk areas and population groups;
- the inventory component of the database was not integrated with all systems in vaccine supply chain, resulting in incomplete data and unnecessary manual data entry;

- the database was not integrated with systems used by physicians and pharmacists; and
- significant costs and time were required to train vaccinators on the new database.

Recommendation 6: Action Item 1

To better protect Ontarians from COVID-19 and other vaccine-preventable diseases in the future, and to improve data quality on vaccination activities, we recommend that the Ministry of Health, in conjunction with Ontario Health and the Information and Privacy Commissioner of Ontario:

- use findings from investigations on misrepresentation and fraud to implement processing controls to improve the security and integrity of vaccination data;

Status:  **Will not be implemented.**

The Office of the Auditor General of Ontario continues to support the implementation of this recommendation.

Details

We found that the Ministry cancelled and reprofiled the specific project aimed at leveraging artificial intelligence to detect fraud to better align with ministry strategy objectives. As a result, it will not implement the recommendation to use investigation findings to implement processing controls.

To improve security and integrity of data in the database, the Ministry informed us that it has focused on strengthening access controls to curtail occurrences of vaccine records abuse and fraud. Specifically, the Ministry noted that it is the responsibility of vaccination site operators to keep training records of their staff for annual privacy training. All access to the COVID-19 immunization database is via named user accounts, where users are assigned roles with specific permissions that restrict access to functionality and data to what is required for their function. In addition, at the time of our follow-up, the Ministry of Public and Business Service Delivery and Procurement's Cyber Security Operations Centre continued to monitor database logs daily to identify suspiciously high counts of records accessed by users, multiple IPs accessing a single account, and suspiciously high counts of log-in status errors, and flag these cases for investigation.

The Ministry noted that it will continue to share findings from fraud investigations and mitigation strategies, as available, with public health units and other channels; and continue to pursue process improvement opportunities.

Recommendation 6: Action Item 2

- improve and update the immunization database to allow vaccination site staff to collect multiple data elements on client risk factors to support efforts to equitably distribute vaccines;

Status:  **Little or no progress.**

Details

We found that the Ministry was assessing and preparing options for an immunization repository in the context of the broader vision to achieve a unified immunization record for Ontario. In our follow-up, the Ministry indicated that by December 2024, it will complete assessment and planning to define future state, including IT solutions and integration, broader public health digital and data pathways, and privacy and legislative requirements and dependencies.

Recommendation 6: Action Item 3

- consult with distribution partners and other parts of the vaccine supply chain to evaluate user experience of the inventory component of the immunization database, to identify ways to provide better oversight of inventory across Ontario, and to reduce waste;

Status:  **In the process of being implemented by December 2024.**

Details

We found that in fall 2023, the Ministry concluded its contractual relationship with one of the COVID-19 vaccine distribution partners. As part of the decommissioning process, the Ministry guided and supported the inventory reconciliation process with distribution partner staff and identified some gaps in knowledge in reconciling vaccine inventory in the COVID-19 immunization database. The Ministry documented observed user experience challenges and identified gaps in knowledge, which included the need for better training, a single point of data-entry solution, and a dedicated person or team with enhanced knowledge of inventory management.

The Ministry indicated that by December 2024, it will consider the lessons learned and assess the feasibility to improve automation to processes such as recording shipments, wastage, cold chain, and adjustment for its other distribution partners. It plans to wind down the COVID-19 immunization database by March 31, 2026 and so will not be gathering additional information from distribution partners on their user experience with the inventory component of the database.

Recommendation 6: Action Item 4

- consult with health-care providers in different settings to evaluate the user experience of the immunization database and streamline it as much as possible;

Status:  **Little or no progress.**

Details

The Ministry indicated that by December 2024, it will develop a common consultation and evaluation framework to gather user experience to comprehensively review the immunization database, and complete assessment and planning to define future state, including IT solutions and integration, broader public health digital and data pathways, and privacy and legislative requirements and dependencies. It will align this work with other areas of the Ministry that are working on public health digital strategies and the modernization of the Ministry's immunization solutions, including the plan to wind down the COVID-19 immunization database by March 31, 2026.

Recommendation 6: Action Item 5

- if separate systems remain, undertake needed work such as engaging with vendors or developing interim solutions, to integrate external information systems, such as electronic medical records and third-party inventory systems, with the immunization database;

Status:  **Little or no progress.**

Details

The Ministry indicated that by December 2025, it plans to complete consultation with Ontario Health and other stakeholders to develop a roadmap to integrate a public health digital platform, which will host various health information systems, with electronic medical records and pharmacy systems. The Ministry indicated that it plans to prioritize immunization data integration in this exercise.

Recommendation 6: Action Item 6

- create a comprehensive immunization registry that will allow for more efficient service delivery for all vaccines;

Status:  **In the process of being implemented by December 2025.**

Details

We found that the Ministry plans to wind down the COVID-19 immunization database. At the time of our follow-up, the Ministry had begun work on the following initiatives in relation to a comprehensive immunization registry:

- the Immunization Repository Optimization Program (renamed Immunization Repository Consolidation Program), which will streamline and consolidate the two provincial immunization databases (one for COVID-19 vaccines and one for other vaccines such as those included as part of the Immunization of School Pupils Act);
- a Public Health Digital Platform vision, including the desired future state of immunizations in Ontario as a key component; and
- the Decision Intelligence Digital Platform vision, which will enable the systematic collection, exchange, integration, use and dissemination of public health vaccination data for Ontarians.

The Ministry plans to develop a high-level plan for the immunization registry, along with possible legislation, policy and program changes, by December 2025.

Recommendation 6: Action Item 7

- explore legislative options to require collection of data about the vaccine recipient, vaccinator and vaccine for all vaccinations including the COVID-19 and other routine vaccines for adults and children.

Status:  **In the process of being implemented by December 2024.**

Details

We found that the Ministry has developed an initial workplan toward the implementation of this recommendation. At the time of our follow-up, the workplan, which was an iterative document, included steps such as engaging senior members of the Office of the Chief Medical Officer of Health to gather insights on the existing landscape around sociodemographic data collection, and identifying the specific requirements outlined in existing legislation related to vaccination data collection in Ontario, with the potential to expand provisions to cover all vaccinations.

For example, the Covid-19 Vaccination Reporting Act, 2021 requires persons or entities who administer COVID-19 vaccines to report information such as the following to the Ministry:

- the individual's name, phone number or email address, and date of birth;
- the vaccinator's name, contact information and professional designation; and
- the vaccine product name, date of administration and lot number.

The Act does not require vaccinators to collect sociodemographic data from people receiving COVID-19 vaccines, which may include ethnic origin, race, language, household income and household size. In addition, this Act does not apply to other routine vaccines for adults and children.

The Ministry plans to, by December 2024, prepare information collected from its literature review and jurisdictional scans and share it with relevant ministry partners for their consideration of legislative options.

5. Vaccine Wastage

In our original audit, while the province wasted about 9% of the vaccines it received from the federal government as of the end of June 2022, the wastage was 38% between February and June 2022 when demand for boosters was much lower than the province anticipated. Two private-sector organizations contracted by the Ministry of the Solicitor General and the Ministry of Health wasted 20% and 57% of the vaccines delivered to them. Targets for minimizing wastage were not included in the contracts with them.

Recommendation 7: Action Item 1

To better inform future demand forecasting and minimize vaccine wastage, we recommend that the Ministry of Health:

- establish a provincial waste-minimization target with a focus on closed vials;

Status:  **In the process of being implemented by December 2024.**

Details

We found that the Ministry, in June 2023, completed a jurisdictional scan of strategies to mitigate vaccine wastage in other parts of Canada and other countries including Australia, Israel, South Korea and the United States.

In addition, in December 2023, the Ministry sought feedback from participating provinces on reporting vaccine wastage, including asking whether jurisdictions used the same calculation for measuring open and closed vial wastage.

The Ministry indicated that it will use these findings to inform the development of a waste-minimization target, reporting and mitigation strategies, and will aim to develop it by December 2024.

Recommendation 7: Action Item 2

- require all vaccination entities and distribution centres to report on wastage, include a clause in future contracts with these entities to keep wastage below this waste-minimization target, and incorporate these in its future pandemic response plan;

Status:  **In the process of being implemented by December 2024.**

Details

We found that the Ministry's agreement with pharmacies includes provisions that require them to maintain real-time inventory, including monitoring and reporting wastage, in the COVID-19 immunization database. The Ministry sent reminder emails to pharmacies to reinforce this requirement in spring 2023, fall 2023 and spring 2024. The Ministry also relies on immunization database trainers of pharmacies to share details on wastage-reporting requirements to support the pharmacies in using the database.

As well, the Ministry included a clause in its contract with two vendors that provide shipping, handling and distribution services for COVID-19 vaccines to keep wastage below a waste-minimization target that is yet to be established, effective September 13, 2023. The contract further stipulates that vendors will conduct real-time inventory reconciliation and remediation activities in the COVID-19 immunization database and investigate unusual inventory trends or excessive wastage, and take corrective action as needed to ensure the accuracy of the inventory.

As noted in the previous recommended action, the Ministry aims to develop a waste-minimization target by December 2024.

Recommendation 7: Action Item 3

- analyze all reports of vaccine wastage, including from distribution centres, follow up on unusual trends or excessive wastage and take corrective action as needed.

Status:  **Fully implemented.**

Details

We found that the Ministry monitors vaccine wastage at pharmacies and distribution centres to ensure they use proper inventory management practices to minimize excessive wastage.

The Ministry has provided instructions and guidance to pharmacies and distribution centres to ensure they report wastage information correctly in the immunization database. The Ministry applies business rules or logic statements to identify potentially erroneously reported wastage

information. Such rules or statements include wastage information with the same identification number reported twice and within five minutes of each other, or if the reporting organization indicated that the wastage occurred because the vaccines have expired, but the vaccine lot has in fact not yet expired.

If the Ministry detects unusual or excessive wastage, it investigates this wastage and requests the reporting organization to confirm if the reason for wastage and quantity wasted are valid.

6. Vaccine Mandates and Policies, and Evaluation of Evidence-Based Alternatives

In our original audit, the provincial government did not effectively enforce the proof of vaccination (vaccine passport) requirements leading to inconsistent adoption across the province and reducing its intended effect of reducing transmission and increasing vaccine uptake.

Enforcement officers were required to announce themselves at the beginning of a visit and could not assess the normal operation of the business uninfluenced by the presence of inspectors, including whether the business was using the Verify Ontario application as mandated in early 2022.

Despite significant evidence to support enacting vaccine mandates in hospitals, the Ministry of Health decided not to implement a vaccine mandate on hospital workers, indicating that its decision was informed by the Chief Medical Officer of Health's analysis of evidence available at that time. This analysis was not provided to us.

Recommendation 8: Action Item 1

To support enforcement efforts to limit transmission and encourage vaccination of vaccine-preventable diseases such as COVID-19 and those that may emerge in the future when science-based evidence indicates this is a societal benefit, we recommend that the Ministry of Health, in conjunction with the Ministry of Labour, Immigration, Training and Skills Development:

- assess what authority is needed to enable enforcement officers to effectively enforce compliance with public health measures such as proof of vaccination requirements, and incorporate this in its future pandemic response plan;

Status: Incorporate in pandemic response plan by the Ministry of Health:

In the process of being implemented by December 2024.

Assess enforcement officer authority by the Ministry of Labour, Immigration, Training and Skills Development: **Will not be implemented.**

The Office of the Auditor General of Ontario continues to support the implementation of this recommendation.

Details

We found that the Ministry of Labour, Immigration, Training and Skills Development has indicated that it will not implement this recommendation because future enforcement of any public health measures is dependent upon the nature of the pandemic and the types of workplaces that are most impacted, and the Ministry is unable to predict what type of enforcement challenges may be associated with a future pandemic scenario. The Ministry is committed to collaborate with the Ministry of Health to inform the development of any regulatory frameworks to advance public health measures required at that time, as well as on compliance and enforcement approaches to further any of these public health regulations. The two ministries have responsibilities to co-operate and exchange information as outlined in a 2008 Memorandum of Understanding on reportable diseases, communicable diseases and/or outbreaks of infectious diseases that are, or may be, occupational health hazards.

The Ministry of Health indicates that, by December 2024, it will engage with staff from within the Ministry and other ministries such as the Ministry of Long-Term Care and the Ministry of Labour, Immigration, Training and Skills Development to identify lessons learned during the COVID-19 pandemic, and incorporate these lessons into the updated pandemic response plan. In July 2023, the Ministry released the Seasonal Respiratory Pathogens Readiness and Response Planning Guide. The Ministry's goal for this plan is to build overall system readiness and resilience for seasonal surges of respiratory pathogens. This plan includes chapters on public communications, vaccines, and outbreak management, which support activities related to public health measures. The Ministry indicated that it can escalate the activities in this plan to respond to a pandemic if needed and it plans to review this plan annually.

Recommendation 8: Action Item 2

- develop an inspection process to identify the venues that are subject to proof of vaccination requirements and track the compliance activities;

Status:  **Will not be implemented.**

The Office of the Auditor General of Ontario continues to support the implementation of this recommendation.

Details

We found that the Ministry of Labour, Immigration, Training and Skills Development has indicated that it will not implement this recommendation because future enforcement of any public health measures is dependent upon the nature of the pandemic and the types of workplaces that are most impacted. As a result, the Ministry is unable to predict what type of enforcement challenges may be associated with a future pandemic scenario. The Ministry committed to

using a risk-based approach to develop inspection and enforcement plans in the event of future provincial emergencies where a vaccine has been identified as a reasonable and effective means of controlling future pandemic infections.

Recommendation 8: Action Item 3

- investigate what barriers businesses faced when using the Verify Ontario application, such as lack of understanding of how to use the technology or Internet connection, take corrective action as needed and incorporate this in its future pandemic response plan.

Status: **No longer applicable.**

Details

We found that the Verify Ontario application is no longer in use. As such, the recommendation is no longer applicable.

Going forward, the Ministry committed to sharing information and lessons learned with the Ministry of Labour, Immigration, Training and Skills Development and other partners to inform the Ministry's future pandemic response plan.

Recommendation 9: Action Item 1

To better protect Ontarians from COVID-19, and other highly transmissible vaccine-preventable diseases as may be required in the future, we recommend that the Ministry of Health, in conjunction with the Chief Medical Officer of Health, establish criteria to use when deciding whether to reintroduce proof of vaccination requirements and incorporate these in its future pandemic response plan.

Status: **In the process of being implemented by December 2024.**

Details

We found that the Ministry of Health developed a workplan in November 2023 to further the implementation of this recommendation. At the time of our follow-up, the Ministry was determining the scope of a jurisdictional and literature review in relation to this recommendation.

The Ministry indicated that the Office of the Chief Medical Officer of Health, Public Health will develop proposed criteria to use when deciding whether to reintroduce proof of vaccination requirements by December 2024, which will be considered as part of the Ministry's annual process to refine and improve the pandemic response plan.

Recommendation 10: Action Item 1

To uniformly protect populations that are vulnerable to severe outcomes from disease outbreaks, and minimize transmission, death and hospitalization, we recommend that the Ministry of Health publicly explain its rationale in the future when it makes decisions on vaccine mandates and policies that are incongruent with science-based information and expert advice.

Status:  **In the process of being implemented by December 2024.**

Details

We found that the Ministry of Health issues Infectious Diseases Protocol appendices for diseases that are designated as diseases of public health significance, including those that are vaccine-preventable, to guide public health units' approach to prevent, detect and manage these diseases. These appendices are publicly available. For example, the protocol appendix for measles, a vaccine-preventable disease, was updated in March 2024. The appendix outlines reporting requirements, case definition, case management, prevention and control measures (including the use of vaccines), and is based on recommendations from the National Advisory Committee on Immunization.

Similarly, the Ontario Immunization Advisory Committee at Public Health Ontario provides science-based information to the Ministry and the public. For example, in September 2023, the committee issued a document on clinical considerations for the co-administration of respiratory syncytial virus (RSV), COVID-19 and influenza vaccines among older adults in long-term care facilities. As well, in March 2023, the committee issued a document on the recommended time interval between date of last COVID-19 vaccination dose or confirmed COVID-19 infection and date of a spring 2023 booster dose, to respond to a request from the Ministry earlier that year. These committee documents are also publicly available.

The Ministry noted that it will continue to use science-based information and expert advice to inform decision-making with respect to provincial public health measures. It also noted that evidence and rationale for provincial public health measures, which may include vaccine mandates and policies, would be part of any risk analysis and public communications that it will play a role in. The Ministry plans to include commitments or principles that incorporate public communication regarding decisions on any potential public health measures supported by evidence and science in its updated provincial pandemic response plan by December 2024.

7. Leadership Communication and Public Education

In our original audit, the provincial government did not clearly and consistently communicate the importance of vaccination to the public and did not dispel misinformation regarding the safety of Moderna in early 2022 after media reports about its side effects. Experts informed us that they believed the government's communication approach sometimes undermined public confidence in vaccination.

The Ministry also did not clearly explain the rationale for its decision-making on vaccine distribution nor provide clear and sufficient information to help Ontarians make informed choices about booster doses.

Recommendation 11: Action Item 1

To support increases in immunization rates and minimize hospitalizations and death from COVID-19, and to support informed public decision-making on COVID-19 vaccination, we recommend that the Ministry of Health:

- more clearly convey to the public the underlying scientific data and how that data support its decisions on vaccine distribution priority groups, co-ordinate communications with public health units, and incorporate this process in its future pandemic response plan;

Status:  **In the process of being implemented by March 2025.**

Details

We found that in August 2023, the Ministry developed a communications approach for the Seasonal Respiratory Pathogens Readiness and Response Planning Guide that outlines the approach to engage public health units, health system partners and partner ministries, and inform the public on the benefits, ease and safety of co-administration of COVID-19 and influenza vaccines. The goal of this communication was to reduce the public's risk of infection from seasonal respiratory pathogens between August 2023 and February 2024.

The Ministry also regularly updates the COVID-19 Vaccine Guidance document based on recommendations from the National Advisory Committee on Immunization and the Ontario Immunization Advisory Committee. The Guidance document contains resources to support vaccine clinics and administrators in administering COVID-19 vaccines. For example, the Ministry updated the document in April 2024 to clarify recommended dosages for people aged five and older who are moderately to severely immunocompromised, and is planning another update for the fall 2024 campaign.

The Ministry indicated that it aims to update its pandemic response plan by March 2025 to include information on how underlying scientific data support decisions on vaccine distribution priority groups, and how it will co-ordinate communications with public health units.

The Ministry also has the following processes in place to support communication with public health units regarding COVID-19 vaccines:

- participating in vaccine operations, planning and guidance calls with COVID-19 vaccine leads from every public health unit in Ontario, and as part of these guidance calls, receiving feedback from public health units to refine Ministry communication to the public—these calls were occurring on a weekly basis up until the fall 2023 campaign, and since then reduced to a biweekly basis; and
- distributing communication products such as key messaging memos, fact sheets, news releases and social media toolkits to public health units and other vaccine delivery channels.

Recommendation 11: Action Item 2

- in conjunction with Public Health Ontario, improve the clarity of its communications on who should get vaccinated and when to actively promote COVID-19 vaccination to the hesitant, such as by conferring with an external stakeholder group to assess whether its messaging is clear to the average person in the public;

Status:  **Fully implemented.**

Details

We found that the Ministry published guidance on its COVID-19 vaccines website on who should get their next dose and when for protection that may have decreased over time. At the time of our follow-up, the guidance stated that those at an increased risk, such as people aged 65 and older and people aged six months and older who are moderately to severely immunocompromised due to an underlying condition or treatment, should receive an additional dose in spring 2024. The guidance also stated that individuals outside of these groups may choose to receive an additional dose if it is recommended by a health-care provider or if they are starting or completing a primary series, and that all other individuals should wait until further recommendations are available closer to fall 2024.

The Ministry also promoted COVID-19 vaccination through initiatives including the Scarborough Health Network VaxFacts+ Clinic and the SickKids COVID-19 Vaccine Consult Service. The VaxFacts+ Clinic provides one-on-one phone consultation with qualified doctors from the hospital and individuals across Ontario. The SickKids service, which concluded in March 2023,

provided confidential phone service for parents to discuss the COVID-19 vaccine with a paediatric registered nurse.

The Ministry indicated that the COVID-19 marketing campaign has concluded. It committed to working with Public Health Ontario and external stakeholder groups in future scenarios to apply best practices and lessons learned to communications materials to ensure greater clarity in messaging and communications.

Recommendation 11: Action Item 3

- provide the public with easy access to current information on available resources and COVID-19 trends, including the underlying health conditions of people with COVID-19 in hospital;

Status:  **Fully implemented.**

Details

In addition to the details discussed regarding the previous recommended action, the Ministry provided updates on COVID-19 and other respiratory illness trends through the Chief Medical Officer of Health. For instance, in October 2023, the Chief Medical Officer of Health participated in radio, print and television interviews, and in December 2023, spoke to reporters from various media outlets in advance of the holiday season. At the time of our follow-up, the Ministry had no future plans for COVID-19 marketing, but it committed to leveraging the learnings from the marketing campaign to provide the public regular access to information in future communications during similar circumstances.

The Ministry publishes COVID-19 cases trend data such as the percentage of people testing positive by age group, and the number of deaths with COVID-19 as the underlying cause of death. In addition, Public Health Ontario publishes the Ontario Respiratory Virus Tool, which provides epidemiological information on respiratory virus activity in Ontario, including COVID-19, influenza and RSV. Information reported includes case trends, outcomes (such as hospital bed occupancy and deaths) and outbreaks. The public can access these datasets on the Internet.

Recommendation 11: Action Item 4

- review and report on the effectiveness of its communication and awareness strategy on the safety and efficacy of the COVID-19 vaccine, including its effectiveness at combatting misinformation and incorporate lessons learned from this review in its future pandemic response plan.

Status:  **Will not be implemented.**

The Office of the Auditor General of Ontario continues to support the implementation of this recommendation.






Details

At the time of our follow-up, the Ministry had no future plans for COVID-19 marketing or further work to review the effectiveness of its communication and awareness strategy. We continue to support this recommendation as learning from the communication and awareness strategy from the COVID-19 pandemic can add value to future campaigns.

The Ministry indicated that it will consider communication, scientific evidence and combatting misinformation for future pandemics in its future iterations of the pandemic response plan.

// Appendix

Recommendation Status Overview

| | # of Action Items | Fully Implemented  | In the Process of Being Implemented  | Little or No Progress  | Will Not Be Implemented  | No Longer Applicable  |
|-------------------|-------------------|--|--|--|--|---|
| Recommendation 1 | 1 | 1 | | | | |
| Recommendation 2 | 2 | 2 | | | | |
| Recommendation 3 | 3 | 1 | 2 | | | |
| Recommendation 4 | 4 | 1 | 1 | 2 | | |
| Recommendation 5 | 4 | 0.67 | 1 | 1 | 0.33 | 1 |
| Recommendation 6 | 7 | | 3 | 3 | 1 | |
| Recommendation 7 | 3 | 1 | 2 | | | |
| Recommendation 8 | 3 | | 0.5 | | 1.5 | 1 |
| Recommendation 9 | 1 | | 1 | | | |
| Recommendation 10 | 1 | | 1 | | | |
| Recommendation 11 | 4 | 2 | 1 | | 1 | |
| Total | 33 | 8.67 | 12.5 | 6 | 3.83 | 2 |
| % | 100 | 26 | 38 | 18 | 12 | 6 |