



Auditor General
MANITOBA

Report to the Legislative Assembly

Manitoba's Rollout of the COVID-19 Vaccines

Independent Assurance Report

Website Version



April 2023

This page is intentionally left blank.



Auditor General
MANITOBA

April 2023

Honourable Myrna Driedger
Speaker of the Legislative Assembly
Room 244, Legislative Building
450 Broadway
Winnipeg, Manitoba R3C 0V8

Dear Madam Speaker:

It is an honour to submit my report, titled *Manitoba's Rollout of the COVID-19 Vaccines*, to be laid before Members of the Legislative Assembly in accordance with the provisions of Section 28 of *The Auditor General Act*.

Respectfully submitted,

Original Signed by:
Tyson Shtykalo

Tyson Shtykalo, CPA, CA
Auditor General

This page is intentionally left blank.

Table of contents

- Auditor General's comments** **1**
- Report highlights** **3**
- Response from officials** **5**
- Background** **7**
- Findings and recommendations** **9**
- The Government of Manitoba effectively managed the COVID-19 vaccine rollout** **9**
- 1 The Government of Manitoba appropriately administered the COVID-19 vaccines to Manitobans** **10**
 - 1.1 Vaccine Implementation Task Force was created 10
 - 1.2 Priority populations were identified 11
 - 1.3 Data and NACI guidelines informed eligibility expansions 12
 - 1.4 Legislative orders were issued to support hiring more immunizers 13
 - 1.5 System limitations necessitated the use of paper-based methods 14
 - 1.6 Workforce recruitment and training was undertaken throughout the vaccine roll-out 15
 - 1.7 Multiple vaccine delivery models led to broad vaccine accessibility 16
 - 1.8 Processes in place to ensure vaccine recipient eligibility 22
 - 1.9 Vaccine wastage met the target rate 24
 - 1.10 Considerations for future emergency preparedness 24
- 2 The Government of Manitoba appropriately managed the COVID-19 vaccine inventory** **27**
 - 2.1 Vaccines ordered through the Immunization National Operations Centre 27
 - 2.2 Vaccine shipments received were recorded 27
 - 2.3 Vaccine shipments redistributed throughout Manitoba were recorded 28
 - 2.4 Vaccines securely stored at required conditions 29
- Additional information about the audit** **31**
- Summary of recommendations** **33**
- Appendix 1: Timeline of eligibility expansions in Manitoba's COVID-19 vaccine rollout** **35**
- Appendix 2: Timeline of significant events in Manitoba's COVID-19 vaccine rollout** **45**

This page is intentionally left blank.

Auditor General's comments

It has been over 3 years since COVID-19 was declared a global pandemic and governments put in place public health measures to slow the transmission of the virus. The development of effective COVID-19 vaccines was a key turning point in slowing the transmission of the virus.

Acquiring and distributing COVID-19 vaccines in Canada was coordinated among federal, provincial, and territorial governments. Our audit of Manitoba's immunization service delivery and vaccine inventory management found the Manitoba government effectively managed the COVID-19 vaccine rollout.

I would like to acknowledge the extraordinary efforts of public servants and service delivery providers during the vaccine roll out. The successes Manitoba achieved are linked to these efforts. However, these efforts would have been assisted by better tools and practices. System limitations necessitated the use of paper-based methods to collect consent and immunization data in specific situations. A more robust electronic system would reduce some of the risks involved in using paper based methods.

As noted in the report, it's imperative that the government conduct lessons-learned exercises. This will be essential in addressing gaps in emergency preparedness exposed by the pandemic, such as the lack of clear roles and responsibilities. Additionally, lessons-learned exercises are an opportunity to capture best practices and innovations that can be implemented during regular operations.

I would like to thank the many provincial government officials and staff and the many other stakeholders we met with during our audit for their cooperation and assistance. I would also like to thank my audit team for their efforts.

**Original Signed by:
Tyson Shtykalo**

Tyson Shtykalo, CPA, CA
Auditor General



This page is intentionally left blank.

Why we did this audit

- The COVID-19 pandemic resulted in significant implications to society in Manitoba (and around the world) and required a whole of government response.
- Vaccination is a vital response to a pandemic—the Government of Manitoba is responsible for vaccine policy and process decisions within Manitoba.
- Similar work was undertaken concurrently by the Office of the Auditor General of Canada along with other provincial and territorial legislative audit offices.
- Our objective was to determine whether the Government of Manitoba effectively managed the vaccine rollout.

Conclusion

The Province of Manitoba effectively managed the COVID-19 vaccine rollout

Our report includes **3 RECOMMENDATIONS.**

What we found

VACCINE ADMINISTRATION

The Government of Manitoba appropriately administered the COVID-19 vaccines to Manitobans. It:

- Used a task force to plan the rollout of vaccines.
- Prioritized populations based on data and national guidelines.
- Hired and trained staff.
- Achieved broad vaccine accessibility through multiple vaccine delivery models. Provided vaccines to eligible Manitobans.
- Met wastage target rates.

INVENTORY MANAGEMENT

The Government of Manitoba appropriately managed the COVID-19 vaccine inventory. It:

- Ordered vaccines through the Immunization National Operations Centre.
- Recorded vaccines received and redistributed throughout Manitoba.
- Securely stored vaccines at required conditions.

EMERGENCY PREPAREDNESS

There is an opportunity for the Government of Manitoba to apply learnings from COVID-19 to its normal operations.

- Conduct a lessons-learned exercise to capture best practices.
- Clearly define roles and responsibilities during a large-scale emergency.
- Ensure there is a stockpile of emergency supplies.

This page is intentionally left blank.

Response from Manitoba Health

Manitoba Health (MH) would like to acknowledge the work of the Office of the Auditor General (OAG) on its investigation and review of Manitoba's rollout of the COVID-19 vaccines. The detail provided in the report will help inform and strengthen Manitoba's ongoing pandemic (and post pandemic) response, and lead to a more effective and accountable provincial and regional response to future public health emergencies. As it did in the wake of the 2009 H1N1 pandemic, Manitoba Health is committed to incorporating the lessons learned from the COVID-19 vaccine rollout into future pandemic plans.

The COVID-19 vaccine roll out was unprecedented in Canadian history. As of March 6, 2023, 3,410,055 total doses of COVID-19 vaccine were administered in Manitoba and 1,183,600 Manitobans received one or more doses of a COVID-19 vaccine. In comparison, fewer than 700,000 doses of vaccine were administered during the 2009/10 H1N1 influenza pandemic. The COVID-19 vaccine rollout was a massive undertaking that was only made possible through Manitoba Health's partnerships with the Department of Labour, Consumer Protection and Government Services; Shared Health; the regional health authorities; distributed channel partners; independent immunization partners; and Indigenous governments, organizations and communities. These partnerships were vital in ensuring the vaccine rollout was as accessible, timely and smooth as it could be. Manitoba Health is proud of the efforts made in response to the COVID-19 pandemic and would like to congratulate and thank all those involved. The large-scale COVID-19 response continues to be wound down, and the capacity to continue to respond to COVID-19 is being integrated into the normal operations of public health and the broader health system.

Manitoba Health recognizes the recommendations from the OAG and is taking steps to address each of them.

Response from Clerk of the Executive Council

The Government accepts the Auditor General's audit of Manitoba's COVID-19 Vaccine Rollout and acknowledges all the public servants who dedicated countless hours in protecting their fellow Manitobans by effectively administering Manitoba's largest vaccine roll out in response to the unprecedented COVID-19 pandemic.

The Government agrees to undertake exercises on a whole of government basis to apply lessons learned and best practices that can be implemented in normal operations as well as in preparations for future emergency situations.

Manitoba's effective COVID-19 vaccine rollout provided many opportunities to adapt lessons learned to future emergency situations. The Government is committed to applying lessons that foster a state of readiness across all departments to ensure Manitobans receive the support, services, and protection they need.

This page is intentionally left blank.

Background

On March 11, 2020, the World Health Organization (WHO) declared COVID-19 a global public health emergency. The next day, Manitoba announced its first presumptive positive COVID-19 case. As of March 31, 2022, there had been over 136,000 confirmed cases of COVID-19 in the province.

With the declaration of the COVID-19 pandemic, there was a shutdown of many activities and services in Manitoba. Significant implications included stay-at-home orders, the suspension of in-class learning for K-12 students, the closure of child care services, and the requirement for travelers to self-isolate for 14 days upon their return to Manitoba.

Vaccination is a vital response to a pandemic. Vaccines help the body's immune system recognize and fight bacteria and viruses that cause disease by artificially inducing immunity. Immunization, one of the most effective health interventions of modern times, is a routine public health practice in Canada. As the COVID-19 disease was caused by a new strain of virus that people's immune systems had never dealt with, scientists needed time to develop an effective vaccine. In fall 2020, the WHO called for countries to be prepared with an efficient and coordinated plan to roll out COVID-19 vaccines.

Federal, provincial, and territorial governments share responsibility for ensuring Canadians have access to safe and effective vaccines. *Canada's COVID-19 Immunization Plan* (the Plan) acknowledged that rolling out COVID-19 vaccines nationally required collaboration between all governments, Indigenous peoples, experts and partners in Canada and abroad.

The Plan laid out federal, provincial and territorial responsibilities for the COVID-19 immunization response. The Government of Canada would procure vaccines, authorize their use, provide scientific guidance, and support rollout efforts throughout the country. Provincial and territorial governments were responsible for COVID-19 vaccine policy and process decisions within their respective jurisdictions. This included planning, vaccine storage, sequencing doses, and tracking and sharing data.

BioNTech Manufacturing was the first manufacturer to bring forward a COVID-19 vaccine. The Government of Canada announced on December 9, 2020 the BioNTech Pfizer vaccine was approved for use in people 16 years of age or older. This was followed by ModernaTX's vaccine on December 23, 2020. Additional COVID-19 vaccines were approved for use in Canada during our audit period (see **TABLE 1**).



Table 1: COVID-19 vaccines approved for use in Canada during audit period

Name	Manufacturer	Ingredient	Date of Health Canada approval
Comirnaty (previously Pfizer BioNTech COVID-19 vaccine)	BioNTech Manufacturing GmbH	tozinameran	December 9, 2020
Spikevax (previously COVID-19 Vaccine Moderna)	ModernaTX, Inc.	elasomeran	December 23, 2020
Vaxzevria (Previously AstraZeneca COVID-19 Vaccine)	AstraZeneca Canada Inc.	ChAdOx1-S [recombinant]	February 26, 2021
COVISHIELD	Verity Pharmaceuticals Inc/Serum Institute of India (in partnership with AstraZeneca Canada Inc)	ChAdOx1-S [recombinant]	February 26, 2021 (expired September 16, 2021)
Janssen COVID-19 Vaccine	Janssen Inc.	Ad26.COV2.S [recombinant]	March 5, 2021
Nuvaxovid	Novavax Inc.	SARS-COV-2 recombinant spike protein	February 17, 2022
Covifenz	Medicago Inc.	virus-like particles (VLP) of SARS-CoV-2 spike protein	February 24, 2022

Source: Health Canada

The Government of Manitoba effectively managed the COVID-19 vaccine rollout

Canada's *COVID-19 Immunization Plan* (the Plan) outlined that each provincial and territorial government would administer the COVID-19 vaccines in their respective jurisdictions by:

- Making decisions about how to sequence vaccines doses within the populations they serve.
- Planning and operating immunization clinics.
- Administering vaccines to individuals.

The Plan further expected that each provincial and territorial government would manage the COVID-19 vaccine inventory by:

- Working through the federal National Operations Centre to order vaccines when needed.
- Receiving and documenting vaccine shipments.
- Managing and tracking vaccine shipments within their jurisdiction's immunization delivery system.
- Securely storing vaccines at required conditions and temperatures.

We expected that the Government of Manitoba would follow the approach set forth in *Canada's COVID-19 Immunization Plan*. We concluded that the Government of Manitoba effectively managed the COVID-19 vaccine rollout, but we have made recommendations to prepare for the next large-scale public health emergency.

We based our conclusion on the following findings:

- The Government of Manitoba appropriately administered the COVID-19 vaccines to Manitobans **(SECTION 1)**.
- The Government of Manitoba appropriately managed the COVID-19 vaccine inventory **(SECTION 2)**.

More details about the audit objective, scope, approach, and criteria are in the About the Audit section at the end of this report.

This audit was undertaken concurrently with similar work conducted by the Office of the Auditor General of Canada, and other provincial and territorial legislative audit offices.

These audits provide Manitobans, and Canadians, a picture of how various jurisdictions rolled out their COVID-19 immunization programs.

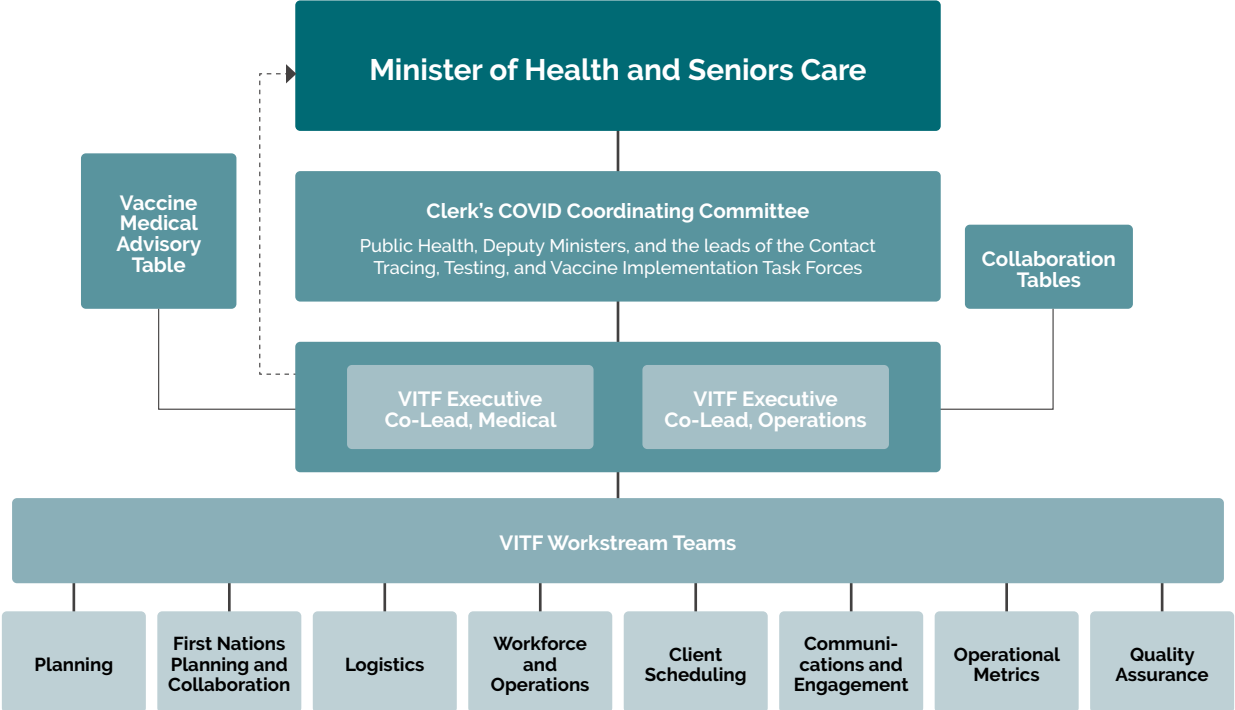
1 The Government of Manitoba appropriately administered the COVID-19 vaccines to Manitobans

1.1 Vaccine Implementation Task Force was created

In November 2020, with the anticipated arrival of a vaccine for COVID-19, the Government of Manitoba created a Vaccine Implementation Task Force (VITF). The VITF's mandate was to build a COVID-19 vaccination implementation program with a target of administering vaccines to 75% of Manitoba's population.

Once established, the VITF began planning Manitoba's rollout knowing there would not be enough COVID-19 vaccine supply to meet initial demand. Guidance from the World Health Organization (WHO) suggested that governments prioritize at-risk populations to receive the first available vaccines. A leadership group which included the Deputy Minister of Central Services, the Clerk of Executive Council, the Chief Provincial Public Health Officer and the VITF Operations and Medical Co-Leads, decided who would be the priority populations in Manitoba. These decisions were based on the advice of a Vaccine Medical Advisory Table that included 27 physicians from a broad range of specialties, a pharmacist, and 2 nurses. The VITF's organizational structure is shown in **EXHIBIT 1**.

Exhibit 1: Vaccine Implementation Task Force (VITF) – Governance and Organizational Structure



Source: VITF records

The VITF recognized that this immunization campaign would be significantly larger than previous campaigns carried out in Manitoba. For example, 381,365 doses were administered during the annual influenza campaign in 2019-2020 and 695,333 doses were administered during the 2009-2010 H1N1 pandemic. Vaccinating 75% of Manitoba's population for COVID-19 would require over 2 million doses.

The VITF used existing public health expertise, and incorporated lessons learned from the H1N1 pandemic into the COVID-19 vaccine rollout. The response to the H1N1 pandemic had taught public health officials the importance and benefits of:

- Pandemic pre-planning.
- Recognizing that managing an unknown is challenging.
- Working in partnership with community, provincial and national jurisdictions.
- Communication between partners and with the public.
- Mass immunization clinics.

The Government of Manitoba also drew staff, resources, and skills from areas such as Shared Health, regional health authorities (RHAs), Treasury Board, Crown corporations, departments, and other organizations into the work of the VITF.

1.2 Priority populations were identified

The Government of Manitoba indicated early on in the COVID-19 vaccines rollout its approach to immunization would be based on medical advice from provincial public health officials and the **National Advisory Committee on Immunization (NACI)**.

NACI's preliminary guidance on priority populations for COVID-19 immunization, issued November 3, 2020, were individuals that were:

- At high risk of severe illness and death from COVID-19.
- Most likely to transmit COVID-19 to those at risk of severe illness and death from COVID-19 and workers essential to maintaining the COVID-19 response.
- Contributing to the maintenance of other essential services for the functioning of society.
- Living or working conditions put them at elevated risk of infection and where infection could have disproportionate consequences, including Indigenous communities.

By the end of December 2020, NACI recommended the initial doses of the (then) limited COVID-19 vaccine supply should be offered in 2 stages.

- Stage 1: Residents and staff of congregate living settings who provide care for seniors; health-care workers including all those who work in health-care settings and personal support workers whose work involves direct contact with patients; adults in Indigenous communities where infection can have

National Advisory Committee on Immunization (NACI) provides the Public Health Agency of Canada medical, scientific, and public health advice relating to vaccines used for humans.

disproportionate consequences; and adults 70 years of age and older beginning with adults 80 years of age and older, then decreasing the age limit by 5-year increments to age 70 as supply becomes available.

- Stage 2: Health-care workers not included in the initial rollout; residents and staff of all other congregate settings; and essential workers.

The VITF developed a priority plan for COVID-19 immunization based on NACI guidance and adapted to Manitoba's context. The VITF's plan included 4 stages of sequencing within 5 population groups:

- Health-care workers and congregate living staff.
- Congregate living facilities residents.
- First Nations.
- General population.
- Essential workers.

The VITF's main objective was to protect the health-care system by administering vaccines as quickly as possible to the priority populations listed above, according to its sequencing plan.

1.3 Data and NACI guidelines informed eligibility expansions

The decision to expand eligibility within the priority population groups also considered both National Advisory Committee on Immunization (NACI) guidelines and additional factors specific to Manitoba. This included: the supply of vaccine expected to be available, information about the population available at the time, and appointment data tracked by the Vaccine Implementation Task Force (VITF).

Between December 12, 2020 and May 14, 2021, COVID-19 vaccine eligibility was expanded 57 times until everyone over 12 was eligible for their first dose. We expected that each eligibility expansion would follow the VITF's prioritization framework and be consistent with NACI guidelines. We compared each eligibility expansion to the prioritization framework and the NACI guidelines in place at the time.

We found that supply uncertainty limited the VITF's ability to roll out the vaccine exactly as planned. For example:

- The first shipment of doses came earlier than expected.
- Initially the doses had to be administered where they were delivered.
- There were changes to the amount of vaccines and timing of deliveries after initial allocations were made by the supplier.
- There were changes to clinical guidance, placing limitations on who could receive a specific type of vaccine.

We selected a judgmental sample of 10 of the 57 eligibility expansions to examine changes in eligibility, determine the rationale for each change, and assess the reasonableness of these decisions. We reviewed related data and reports that were available at the time of each expansion. These included:

- **Epidemiology** and surveillance reports related to:
 - The high incidence of COVID-19 among health-care workers.
 - The high incidence of COVID-19 in personal care homes.
 - The high incidence of severe outcomes in older populations.
 - The high incidence of COVID-19 in specific communities.
- A data science report that showed the results of work done to support decisions made on community-based eligibility.
- Data and reports that showed the higher incidence of COVID-19 among First Nations, and the younger age they experienced severe outcomes compared to others.

Based on the evidence reviewed and the NACI guidelines in place at the time, we found that all 10 eligibility expansions in our sample were reasonable prioritizations for COVID-19 vaccines.

1.4 Legislative orders were issued to support hiring more immunizers

The Vaccine Implementation Task Force (VITF) recognized that to preserve existing health-care resources and administer the COVID-19 vaccines as quickly as hoped, additional staff were necessary. While the regional health authorities were expected to staff vaccine clinics with their own public health staff, the Government of Manitoba issued public health orders under existing legislation to enable hiring non-traditional immunizers.

The Regulated Health Professions Act (the Act) classifies **administering a vaccine** as a **Reserved Act**. Further, the Act states "No person shall perform a reserved act... unless the person is a member of a regulated health profession, and is authorized by regulation to perform the reserved act". The Act also enables the responsible Minister to, by order, authorize a person or class of persons to perform one or more reserved acts.

Epidemiology: The branch of medicine which deals with the incidence, distribution, and possible control of diseases and other factors relating to health.

In April 2021, while the eligibility age for the general population was 50 years and older (30 years and older for First Nations people), eligibility was opened up to everyone 18 years and older who lived, or worked in certain occupations, in specific communities, or in specific geographic areas. In our sample, we found epidemiological data showed COVID-19 was more prevalent in these areas, and therefore, supported this decision.

COVID-19 vaccines are **administered** to the client by needle, typically in the arm.

Reserved Act: An act, identified in legislation, that is done with respect to an individual in the course of providing health care.

The Minister of the then Department of Health, Seniors and Active Living issued orders on December 9, 2020, February 10, 2021, April 6, 2021 and June 30, 2021 that allowed the VITF to recruit people from additional occupations to administer vaccines, providing they met other necessary qualifications.

1.5 System limitations necessitated the use of paper-based methods

The Public Health Act required all immunizers to obtain informed consent from clients (orally or in writing) prior to administering their vaccine. The VITF developed a COVID-19 vaccines paper consent form used in most of the clinical settings to document the required consent (an exception would be, for example, informed consent provided verbally to a doctor that would be documented directly in the patient's electronic medical record). The forms were available electronically on the provincial government website for clients to print in advance and in hard copy at the vaccine clinic sites. Clients entered their personal information, including their Personal Health Identification Number, on the paper form. There were multiple versions of the paper form throughout the COVID-19 vaccine rollout.

In addition to documenting consent, the paper forms were also used to capture data. Every health-care provider and facility in Manitoba was required to account for every dose of vaccine ordered and administered. The immunizer was required to document the immunization including the type of vaccine given, date, and lot number. This was usually documented on the paper form for later entry into the Public Health Information Management System (PHIMS) (Manitoba's electronic public health record). The data on the paper form was entered into PHIMS at a later date, or immediately by the immunizer, depending on how the vaccine clinic was set up.

We were told implementing changes to PHIMS to enable efficient, real-time data entry, or begin using an alternate electronic system were not feasible during the pandemic where immunizing large numbers of people quickly was the priority. These limitations resulted in the reliance on the paper form. As most of the COVID-19 vaccine doses administered during our audit period were first documented on a paper form, hundreds of thousands of paper forms were generated. These forms also need to be securely stored according to appropriate document retention standards.

A data quality team (about 150 people at the peak of the rollout), was put into place to ensure the data in the system was accurate. If a client noticed their vaccination record online was incorrect or missing, provincial or RHA staff would have to locate the corresponding paper form to verify the information and then make adjustment in PHIMS if needed.

The VITF introduced electronic consent forms for use in school-based clinics. However, the clinic staff found the process problematic (see **PAGE 22**) and the paper consent forms were still relied on.

We recognize that paper consent forms would still be required in areas with poor internet connectivity or by individuals without access to a computer. However, during our audit period, most vaccinations were at supersites—which were located in urban centres (see **SECTION 1.7**) where appropriate internet

connectivity should have been available. An electronic system that could reduce reliance on paper-based methods and address the weaknesses noted would better support a future mass immunization program in Manitoba.



Recommendation 1

We recommend that the Department of Health review its processes for documenting informed consent and vaccine administration information, identify the risks involved in using paper-based methods, and implement changes to its system to mitigate those risks.

Manitoba Health Response: Manitoba Health uses the Public Health Information Management System (PHIMS), an electronic database, as the means to document vaccine administration. In certain instances, including during the COVID-19 immunization program, paper-based methods are used to collect vaccine administration and informed consent information prior to entry into PHIMS. Manitoba Health acknowledges that these methods carry risks to data quality and is committed to reducing the use of paper-based methods. Manitoba Health has piloted an eConsent process and consideration is being given to how it may be implemented in the future.

1.6 Workforce recruitment and training was undertaken throughout the vaccine roll-out

The Vaccine Implementation Task Force (VITF) planned to obtain the additional human resources needed to support the rollout from redeployed government and health-care staff, new hires, students as part of their practical experience, and contracted private organizations.

The VITF, through Shared Health, developed a shared staff pool of mostly term and casual positions to support COVID-19 immunization clinics operating in Manitoba. On January 13, 2021, the VITF reported a workforce of 1,666 staff (existing resources and new hires) supporting the rollout. By June 1, 2021 the VITF reported its vaccine rollout workforce comprised 4,405 staff.

Manitoba Health developed a list of Approved Immunization Training Programs, and on December 10, 2020 the Manitoba Government announced a partnership with Red River College (now Red River College Polytechnic) to provide training. These programs were divided into 3 categories:

- Potential immunizers with no recent immunization experience.
- Experienced immunizers with no PHIMS experience.
- Experienced immunizers with PHIMS experience.

This training was a condition the additional immunizers were required to meet under the Order(s) under *The Regulated Health Professions Act*. The VITF developed training requirements, checklists and processes to ensure only trained staff were scheduled to work in the clinics. It also developed tools to forecast clinic staffing requirements, and Operations Manuals for the different delivery channels outlining the key roles, main tasks, and training/orientation required by the role.

We were told by multiple people that the COVID-19 vaccines rollout would not have reached its immunization target without the additional staff. However, we were also told that the administrative burden was high and access to additional administrative staff would have been helpful.

Further, a consistent theme we heard from VITF representatives, provincial officials, RHA staff, and others involved, was the significant effort and commitment by both management personnel and staff throughout the rollout. We were told about consistent 16-hour work days, 7-day work weeks and staff not taking vacation time for 2 years.

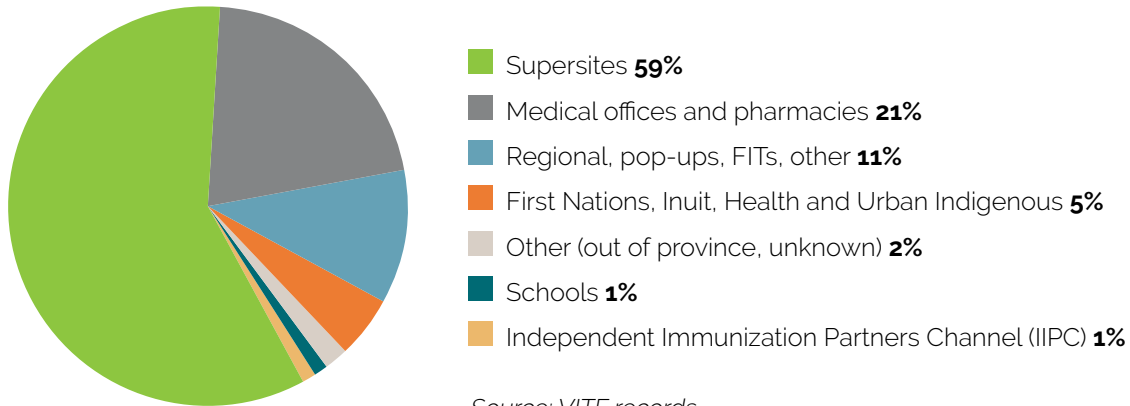
1.7 Multiple vaccine delivery models led to broad vaccine accessibility

Lessons learned from the H1N1 pandemic showed the best way to provide immunizations quickly and effectively to a large percent of the population in a short time is through easily-accessible mass immunization clinics. Another lesson learned from the H1N1 pandemic was that alternatives to fixed vaccination sites to reach vulnerable or at-risk populations that experience challenges in accessing a fixed site were needed. Examples included residents of personal care homes, shelters, correctional centres and group homes.

The Vaccine Implementation Task Force (VITF) rolled out COVID-19 vaccines through multiple channels. During the audit period, 2.8 million COVID-19 vaccine doses were administered in Manitoba. **FIGURE 1** shows the per cent of these doses administered through various delivery models. Provincial epidemiology reports indicate that by March 31, 2022:

- 82.8% of all Manitoba residents had been partially vaccinated.
- 79.2% had been fully vaccinated.
- 42.1% had received one additional dose.

**Figure 1: Proportion of doses administered through Manitoba's vaccine deliver models
December 16, 2020 – March 31, 2022**



RADY PILOT SITE

The VITF expected the first vaccine shipment in January 2021. On December 9, 2021 it was notified that a shipment would arrive in Manitoba on December 15, 2020 which was earlier than anticipated. The manufacturer also required that its vaccine had to be administered at the delivery location and stored between -60 C and -80 C, in other words, at an ultra-low temperature.

The VITF established the Rady Pilot Site at University of Manitoba Rady Faculty of Health Sciences campus in Winnipeg while planning the other distribution channels for distributing and administering the COVID-19 vaccine. This facility was previously used for a flu vaccine clinic, and had an ultra-low temperature freezer, which was required to maintain the **cold chain** of this vaccine. The Rady Pilot Site opened on December 16, 2020 and it operated until Winnipeg's RBC Supersite was opened on January 4, 2021.

The Rady Pilot Site was staffed by Winnipeg Regional Health Authority (WRHA) public health nurses whose regular role included immunization. They were provided COVID-19 vaccine-specific training materials developed by the vaccine manufacturer, and additional training materials developed by other WRHA staff.

Cold chain is the process used to maintain optimal conditions during the transport, storage and handling of vaccines, starting at the manufacturer and ending with administration to the client.

SUPERSITES

The VITF planned to establish up to 13 mass immunization clinics, called Supersites, with a cumulative capacity of providing 20,837 doses each day. It ultimately opened 10 Supersites in urban locations across Manitoba with a cumulative capacity of 23,968 doses each day. The VITF developed a Supersites Operational Manual to guide the operations of Supersites.

To support location selection, the VITF analyzed population data and developed modelling tools to determine the desired capacity of Supersites for each health region. The VITF developed a list of facility requirements and obtained accelerated approval from Treasury Board for timely leasing and fit-up of the locations. We were told it was challenging to find Supersite locations as some communities simply did not want them.

In January 2021, the VITF launched its first 2 Supersites. See **TABLE 2** for the Supersites that operated in Manitoba. As **FIGURE 1** on page 17 shows, the greatest proportion of Manitoba's COVID-19 vaccinations during the audit period took place at Supersites.

Supersites – client flow models

The VITF used 2 different client flow models for Supersites: Traditional Immunization model and Accelerated Vaccine Program (Accelerated) model. The VITF initially set up the Winnipeg RBC Supersite with the Traditional model, but found that it could not achieve the desired capacity.

The Traditional Immunization model has the client cycle through the stages of the clinic (pre-arrival, registration, waiting area, immunization station, recovery area). Often the immunizer is responsible for many of the component parts of the process, such as obtaining informed consent, immunization, recovery observation, data entry.

The Accelerated model breaks down the immunization process into separate components (for example obtaining informed consent, pre-drawing the vaccine into needles, entering data) with a staff position dedicated to each component. This allows staff to focus on one job, specifically the immunizer. Clients remain in one spot in a "trunk line" while the immunizer moves from client to client using a mobile cart.

The VITF set up the Supersite in Morden with the Accelerated model and adjusted the RBC Supersite to the Accelerated model. The RBC Supersite initially opened with a daily capacity of 2,077 doses. Its daily capacity after expanding its footprint, and switching to the Accelerated model, was 10,560.

Table 2: Manitoba's COVID-19 vaccine Supersites

Location	Regional Health Authority	Client flow model	Date opened
Winnipeg – RBC Convention Centre	Winnipeg Regional Health Authority	Accelerated	January 4, 2021
Brandon	Prairie Mountain Health Authority	Traditional	January 18, 2021
Thompson	Northern Regional Health Authority	Traditional	February 1, 2021
Selkirk	Interlake Eastern Regional Health Authority	Traditional	March 8, 2021
Morden	Southern Health – Santé Sud	Accelerated	March 22, 2021
Winnipeg – Leila Soccer Complex	Winnipeg Regional Health Authority	Accelerated	May 7, 2021
Dauphin	Prairie Mountain Health Authority	Traditional	May 10, 2021
Steinbach	Southern Health – Santé Sud	Traditional	May 18, 2021
Gimli	Interlake Eastern Regional Health Authority	Traditional	May 29, 2021
The Pas	Northern Regional Health Authority	Traditional	June 8, 2021

Source: VIFT records

FOCUSED IMMUNIZATION TEAMS (FIT)

On December 23, 2020, Health Canada approved a second COVID-19 vaccine commonly known as Moderna. This new vaccine had fewer transportation and storage limitations than the first approved vaccine. This meant the Government of Manitoba could make vaccines available to other initial priority groups, such as personal care homes. Manitoba received its first shipment of Moderna on December 30, 2020.

Manitoba expanded the eligibility criteria for the COVID-19 vaccine to residents of personal care homes on January 11, 2021. The VITF launched the Focused Immunization Teams (FIT) to reach this population. FITs traveled to various congregate living settings to immunize the people living there. The VITF prioritized the personal care homes in each health region and outlined FIT staff roles. Each FIT was to be planned based on the number of immunizations they would be doing at the facility. As eligibility criteria expanded, FITs immunized other congregate living populations.

FIRST NATIONS PARTNERS

NACI identified Indigenous communities as a priority for COVID-19 immunization as Indigenous people were disproportionately affected by the past H1N1 pandemic and also the COVID-19 pandemic. The Manitoba government recognized that coordination would be required for COVID-19 vaccine service delivery in this area, as both the provincial and federal governments have responsibilities related to health service delivery in First Nations communities in Manitoba.

In December 2020, The Government of Manitoba formalized a committee to advise the VITF on decisions related to First Nations as a priority population and coordinate vaccine delivery to First Nations communities in Manitoba. It had representatives from the Government of Manitoba, First Nations-appointed health experts, and the Government of Canada.

The VITF initially allocated 5,300 doses of the first shipment of the Moderna vaccine to First Nations. Starting January 7, 2021, vaccines were sent to First Nations communities to begin immunizations on health care workers and residents of personal care homes.

Using epidemiological evidence, it was recognized that First Nations people were experiencing severe symptoms of COVID-19 approximately 20 years younger than the rest of the population. In February 2021, an age eligibility difference was set for the first time, which allowed First Nations people to receive the vaccine 20 years of age younger than others.

First Nations vaccine teams

In March 2021, Ongomiizwin, which is the Indigenous Institute for Health and Healing at the University of Manitoba, Rady Faculty of Health Sciences, recruited people through the University of Manitoba to an additional staff pool of immunizers.

Immunizers in this staff pool were required to take the same training offered through the (former) Red River College, described on page 15. However, we were told that access to this training was delayed as the training agreement in place was only for provincial employees. The agreement was amended to include these staff.

Any First Nation community (remote or drive-in) could request support from this shared staff pool to host a vaccine clinic. These mobile teams also assisted with administering vaccines in provincial Northern Affairs Act communities adjacent to First Nation communities in remote areas of Manitoba.

POP-UP CLINICS

Pop-up clinics were launched in February 2021. They were generally operated by regional health authorities in smaller rural, remote and northern population centres and remained in a fixed location for a short duration. They were expected to operate under the guidance of the *Supersites Operational Manual*.

MEDICAL OFFICES AND PHARMACIES

Medical offices and pharmacies are part of ongoing immunization programs, and together, have provided most of Manitoba's influenza immunizations since pharmacists became eligible to administer seasonal influenza vaccines in 2014/15.

As vaccines became more available and there was stable distribution, medical offices and pharmacies started to offer doses across the province. Medical offices and pharmacies were invited to apply to become a COVID-19 immunization partner as of February 8, 2021.

There was an expectation that partners would complete an onboarding process before they were provided a supply of COVID-19 vaccines. The medical offices and pharmacies were required to use their own staff to administer the vaccines. Pharmacy partners were required to sign an information-sharing agreement in order to access PHIMS to enter the immunization records.

The VITF allocated vaccines to one specific pharmacy to target the Métis population in Manitoba.

COVID-19 vaccinations became available through medical offices and pharmacies in March 2021.

As **FIGURE 1** on page 17 shows, medical offices and pharmacies administered the second-highest proportion of COVID-19 vaccines in Manitoba during the audit period.

URBAN INDIGENOUS CLINICS

In April 2021, the VITF announced a new delivery channel, Urban Indigenous clinics. The VITF partnered with 5 host organizations to offer these clinics. It was an attempt to provide a culturally safe space for people to receive their vaccine and address other barriers such as distrust of the health-care system and vaccine hesitancy.

Urban Indigenous clinics were opened by early May 2021, in Winnipeg, Brandon, Portage la Prairie, and Thompson. The host organization provided and managed the space and operated the clinic, while the local RHAs provided the clinical staff to administer the vaccines. Both appointments and walk-in service was available.

On May 14, 2021, the government requested that only people who self-identify as, or share a household with, First Nations, Métis or Inuit, attend Urban Indigenous clinics.

On September 24, 2021, the government indicated that Urban Indigenous clinics in Winnipeg were open to all members of their communities, in addition to Indigenous people.

INDEPENDENT IMMUNIZATION PARTNERS CHANNEL

The VITF set up the Independent Immunization Partners Channel (IIPC) to distribute the COVID-19 vaccine directly to health service providers, such as hospitals and personal care homes, immunize residents or clients using their own human resources. This initiative was intended to reach these populations more quickly, and to reduce dependency on FIT teams (see **PAGE 19**).

By July 31, 2021, 75% of individuals 18 years and older had received 2 doses of a COVID-19-vaccine. By August 11, 2021, 75% of individuals 12 years and older had received 2 doses which meant that the VITF had achieved its original objective for these age groups.

The IIPC was operational by July 2021. The VITF required IIPC participants to register for online COVID-19 vaccine-specific training, and collected and tracked proof of completion. The IIPC program guidelines state partners are required to only provide immunization to those that meet the current vaccine eligibility criteria.

SCHOOL-BASED CLINICS

In September 2021, the VITF started school-based clinics. Regional health authorities (RHAs) have a regular school-

based immunization program where they attend schools and offer immunizations to students in particular grades. The VITF leveraged this school-based program model to offer COVID immunizations to students. Clinics were offered during school hours, and in some cases continued to operate outside of school hours as a pop-up clinic for all members of the community. The VITF's aim for this channel was to provide greater vaccine coverage rates within Manitoba, and prevent COVID-19 outbreaks in schools. The RHAs staffed these clinics, drawing on the shared staff pool if needed. Schools could opt-out of this channel.

The VITF used electronic consent forms to obtain parental consent in advance of school-based clinics and developed a process for informed consent for the young people aged 16 and 17 who could, by law, sign their own consent form. We were told the electronic consent form was problematic for clinic staff and guardians in areas where internet connectivity was unreliable or unavailable, and for families without access to internet, meaning paper copies were printed and taken to the clinic anyway.

1.8 Processes in place to ensure vaccine recipient eligibility

The Manitobans first eligible for the vaccine were health-care workers whose work involved direct contact with patients and who met one of these other criteria:

- Work in critical care units, born on or before Dec. 31, 1970.
- Work in acute care facilities, born on or before Dec. 31, 1960.
- Work in long-term care facilities, born on or before Dec. 31, 1960.
- Be assigned to COVID-19 immunization clinics.

This first cohort, initially, had to travel to the Rady Pilot Site to be vaccinated.

The Vaccine Implementation Task Force (VITF) set up an appointment system for clients to book appointments at clinics across Manitoba (not including medical offices and pharmacies). Initially this booking system was only through a call centre by phone until the provincial online booking system began to be used for Supersites in mid-March 2021. Appointments at pop-ups were initially required to be booked through the call centre, and appointments were booked through the Urban Indigenous Centre.

Client eligibility to receive a vaccine was controlled through the use of screening questions when appointments were being set up, or when the VITF declared a certain sub-population as entirely eligible

(for example residents of personal care homes). However, the controls used were not strict, meaning sometimes a person who was not eligible would receive a vaccine.

We were told that the VITF relied on people who wanted a vaccine to answer the screening questions honestly. We were also told of instances where people who did not want to receive a vaccine paid someone else to pose as them and receive the vaccine. The initial person could then obtain a vaccine card without actually having received the vaccine. We were also told of situations where clinic staff would use professional judgement and provide a vaccine even though the individual did not meet the criteria. These situations included:

- A person would show up to a clinic that met the age eligibility criteria accompanied by their spouse who did not meet the criteria but wanted to get the vaccine as well. Clinic staff would consider giving the ineligible spouse the vaccine, especially if it was an older couple who had made significant effort to get to the clinic or if they had some other sort of accessibility challenge.
- A family unit that consisted of both First Nations and non-First Nations people. The First Nations people would be eligible for the vaccine 20 years younger than the non-First Nations people, but otherwise living in the same circumstances.

The *Supersites Operational Manual* guided clinic staff to post the eligibility criteria at specific locations throughout the clinic and assess the eligibility of clients. It also provided guidance on what to do if there were questions about eligibility. The screening tool and operational guidelines were kept up to date to reflect eligibility changes.

We were told it was challenging to conduct eligibility screening for second and subsequent doses in remote areas where there was unreliable or no internet coverage, as it limited access to PHIMS. To address this challenge, staff would telephone the relevant regional office to obtain and confirm the necessary information. We were told this arrangement was not unique to the COVID vaccine rollout and has been used with other vaccine rollouts.

We were also told of communication weaknesses in the eligibility process. Some regional health authority representatives told us of situations where they were operating a clinic in an area with poor internet connectivity and clinic staff would not be aware of an eligibility change that occurred part way through the day.

We observed clinic staff verifying client eligibility during several site visits. We noted that eligibility was confirmed several times during the intake process.

Medical offices and pharmacies did not have access to the VITF appointment system. They could provide immunizations through their own appointments or allow walk-ins, but were expected to immunize clients according to Manitoba's COVID-19 eligibility criteria. We were told the VITF did not do inspections to see if partners were adhering to this requirement and there are limited opportunities to uncover queue jumping through PHIMS data, so the VITF relied on others to report any potential problems. The VITF could remove medical offices or pharmacies from its COVID-19 immunization roster if program requirements were not met, however, we were told there were no instances of this.

1.9 Vaccine wastage met the target rate

Managing vaccine wastage helps to control costs and, in a situation where supply is limited, to achieve as complete coverage of the targeted population as possible. Manitoba Health tracked vaccine wastage prior to COVID-19. We noted that the Vaccine Implementation Task Force's (VITF) Operational Manuals indicated the industry standard for vaccine wastage is approximately 5% and all wastage must be tracked.

The VITF had a process for tracking and reporting COVID-19 vaccine wastage. This included identifying the reasons for the wasted vaccine(s), and maintaining records of amounts of vaccine wastage within the Public Health Information Management System (PHIMS). Wastage figures would be entered into PHIMS directly, or documented on a paper log for PHIMS data entry later on.

We found that vaccine wastage varied among delivery channels. We were told this was expected and one reason for delaying the launch of certain delivery channels until later in the campaign when supply was more abundant. We were also told that unreliable internet coverage to access PHIMS meant wastage could not be reported into the system right away, so this resulted in delays in maintaining timely inventory counts.

The VITF provided us its wastage rates for selected dates through the COVID-19 rollout. It was:

- At July 1, 2021 – 0.7%.
- At November 1, 2021 – 2.1%.
- At March 31, 2022 – 5%.

We found the VITF met its desired 5% benchmark for COVID-19 vaccine wastage during our audit period.

1.10 Considerations for future emergency preparedness

The COVID-19 pandemic exposed gaps in emergency preparedness in Manitoba. It resulted in significant disruptions and required considerable and sustained efforts from provincial public servants. We recognize this was a unique emergency event, and noted situations where the Government of Manitoba benefitted from in-house functions that could quickly respond to an ever-changing pandemic landscape. At the same time, there are opportunities for future improvement.

An Incident Command System (ICS) is a standard approach to manage emergencies involving multiple organizations and/or jurisdictions. ICS is used to minimize organizational conflicts and encourage cooperation toward a common set of objectives. The Government of Manitoba used an ICS to enable elevated and timely decision-making to address the COVID-19 pandemic. The Vaccine Implementation Task Force (VITF) was connected to this ICS. We do note this centralized task force model was not planned for or tested in advance. Rather, we were told planning for pandemic-scale immunization was confined to the health care system.

We were also told the planning and implementation of the COVID-19 vaccines rollout was too top down, had little room for suggestions on how things could be done better based on regional expertise and local knowledge, and was a fairly confusing overall structure. These issues are reflected in internal reports on lessons learned from the COVID-19 vaccines rollout. In our view, this indicates that clear roles between and within Manitoba Health, Shared Health, the RHAs, Materials Distribution Agency, partners, and committees was a challenge.

As well, we were told the COVID-19 vaccines rollout created an administrative burden that was not addressed despite the scaled-up workforce. In particular, we were told more data entry personnel would have been helpful to input information into PHIMS. This is also reflected in the lessons learned, which indicated the high demands the COVID-19 vaccines rollout placed on staff led to poor documentation.

We did not audit the Government of Manitoba's governance of, nor its preparedness for, the COVID-19 vaccines rollout. We recognize that this was a significantly larger vaccine rollout than the H1N1 pandemic. However, best practices in emergency planning suggest that:

- Engaging stakeholders ensures the full context of the planning environment, including impacts, jurisdiction and capacities.
- Clearly defined and well understood roles and responsibilities strengthens collaboration and facilitates efficient use of time and resources.
- Identifying and preparing for the risks associated with a high-impact pandemic like COVID-19 requires cross-government participation in pandemic scenario planning.

EMERGENCY RESPONSE WAREHOUSE

Manitoba's H1N1 lessons learned report states the government will maintain a permanent stockpile of personal protective equipment for health professionals for future incidents. The Government of Manitoba had previously met this commitment and kept a stockpile of masks, gowns, syringes, and other resources that would be necessary in a pandemic. However, the provincial government closed down this program in 2016.

The Government of Manitoba is implementing a new emergency response warehouse. This will include the rotation of stockpile supplies into normal use in order to avoid items expiring and being discarded.



Recommendation 2

We recommend that the Government of Manitoba, led by the Deputy Ministers Committee, perform lessons learned exercises from the COVID-19 vaccine rollout and apply any learnings and best practices that can be implemented in normal operations as well as in its preparations for a future, emergency situation, including:

- Clearly defining stakeholder roles and responsibilities on any centralized committees and advisory tables.
- Performing exercises that test response plans on worst-case scenarios, on a government wide basis.
- Identifying all human resources requirements including in program support roles such as administration and data entry.
- Implementing and maintaining a current stockpile of emergency supplies.

Clerk of the Executive Council Response: The Government agrees to undertake exercises on a whole of government basis to apply lessons learned and best practices that can be implemented in normal operations as well as in preparations for future emergency situations. Specifically, the Government will take the following actions in response to Recommendation 2 of the audit:

- The Government will document the Task Force model that effectively identified and assembled relevant expertise from across the Government to administer the vaccine program. This analysis will record how silos were broken down to create a whole-of-government response with appropriate operational, logistical, planning and clinical expertise in place overseen by a committee of Deputy Ministers empowered to achieve results. The analysis will include describing the stakeholders that interacted with each component of the Task Force to identify their roles and responsibilities and which other entities to include in future emergency situations.
- The Government will review at regularly pre-determined intervals the assigned roles, responsibilities and capabilities associated with a large scale response to ensure appropriate response capacity exists at all times. This approach will include the recognition that unprecedented disaster events like the COVID-19 pandemic will, by definition, require innovative systems and processes. Reviews will therefore focus on ensuring Manitoba can be flexible to unexpected scenarios and adapt plans accordingly.
- The Government has implemented a warehouse of emergency supplies that supports the health system in Manitoba while incorporating resource readiness approaches like supporting local suppliers. Complimentary to the approach on the warehouse and supplies, Public Health will examine the planning surrounding vaccines and antivirals as well.

2 The Government of Manitoba appropriately managed the COVID-19 vaccine inventory

2.1 Vaccines ordered through the Immunization National Operations Centre

In February 2021, the Government of Manitoba issued a news release stating it had reached an agreement to purchase 2 million doses of a new Canadian-researched, and Manitoba-produced, mRNA COVID-19 vaccine. The Government of Manitoba reached a **term sheet** with a private firm in an agreement to develop a COVID-19 vaccine.

We found that this agreement was never finalized and the Government of Manitoba did not advance any money to the firm.

We did not find any other instances where Manitoba tried to obtain COVID-19 vaccines other than through the National Operations Centre (NOC). As such, we found that all COVID-19 vaccines administered in Manitoba during our audit period were ordered through the NOC.

Term sheet:

- Sets out the key terms of a transaction being discussed or agreed to in principle by the parties.
- Shows the serious intent of the parties to enter into a definitive transaction agreement.
- Is typically not legally binding.

2.2 Vaccine shipments received were recorded

We confirmed with the Public Health Agency of Canada (PHAC) the vaccines sent to Manitoba, as well as the dates they were received, the number of doses, the lot number, and the expiry dates. We compared PHAC's information to the Vaccine Implementation Task Force's (VITF) records, and initially found differences between the 2 regarding both the number of shipments and doses sent to Manitoba.

We selected all of the records that appeared to be part of the difference between the VITF records and PHAC information. We also selected a representative sample of 47 of the 146 shipments that Manitoba had recorded in the Public Health Information Management System (PHIMS) to see if the details of the recorded shipments agree to the original shipping documents. The shipping documents were missing 1 packing slip. We found:

- Part way through the COVID-19 vaccine rollout, PHAC recognized that an additional dose could be drawn from each vial. We noted that the VITF accounted for this change differently than the information recorded by PHAC.
- The VITF records for each of the shipments that we received agreed with the details of the packing slip except 2 which showed the incorrect expiry date.
- All of the VITF records had a corresponding record to the PHAC information.
- We were able to reconcile the differences regarding the number of shipments and doses.

2.3 Vaccine shipments redistributed throughout Manitoba were recorded

Good Manufacturing Practices (GMP) are part of quality assurance. They ensure that drugs are consistently produced and controlled. Drugs must meet the quality standards for their intended use—as outlined in the marketing authorization, clinical trial authorization or product specification.

Manitoba's Materials Distribution Agency (MDA) has been certified a **Good Manufacturing Practices** (GMP) facility since 2012, through its Health Canada-issued Drug Establishment Licence. Health Canada inspects establishments holding this licence for compliance with GMP regulations within the *Food and Drug Regulations* of the *Food and Drugs Act*. The MDA has been a central distribution point for vaccines in Manitoba during that time period and, as such, was positioned to be a centralized distribution facility for Manitoba's COVID-19 vaccines rollout.

Early in the campaign, one of the vaccines had to be shipped directly to the location where it would be administered due to concerns about product stability and cold chain requirements (see text box on **PAGE 17**). As more was learned about the initial Pfizer vaccine, transportation restrictions were eased and it could be received by MDA for redistribution to other locations. Manitoba's first shipments of Moderna, and the other vaccines approved for use in Canada (see **TABLE 1**) were shipped from the manufacturers to MDA for redistribution to Manitoba's various COVID-19 vaccine delivery channels (see **SECTION 1.7**).

We selected a sample of 68 redistribution shipments recorded in the Public Health Information Management System (PHIMS) and matched the details to the pick list and other documents showing evidence the vaccine was received at the destination. We found that the shipping records matched the PHIMS records with the exception of 48 shipping dates. We were told this was because PHIMS requires users to enter a same day shipping date. This means shipments prepared on a Friday for transport the following Monday are shown as shipped on the Friday.

During our site visit to MDA we were provided an overview of its processes related to the GMP designation. We were also shown the stationary and mobile freezers used to maintain the cold chain requirements of the COVID-19 vaccines, and we observed staff use pick lists and adhere to cold chain protocols to package vaccines for transportation in response to orders from various COVID-19 immunization locations in Manitoba.

We were told by MDA staff that the vaccine rollout required significant overtime. We noted that MDA received a letter of acknowledgement from the Government of Manitoba recognizing its efforts during COVID-19.

2.4 Vaccines securely stored at required conditions

SECURITY

The Vaccine Implementation Task Force (VITF) performed risk assessments on an ongoing basis during the COVID-19 vaccines rollout. Initially it identified vaccine theft as a high risk. As more COVID-19 vaccines were approved for use in Canada, and supply became abundant, the VITF adjusted its assessment of vaccine theft to be lower risk.

The VITF contracted with security companies to transport vaccines within Manitoba and to guard vaccines where they were stored. These security companies were used based on the amount of vaccine being transported/stored and other security in place.

We reviewed the approvals from Treasury Board for the agreements with the security service providers. We also reviewed the contracts with the security service providers and invoices from them to see that the security was provided. We reviewed all of the invoices for transportation and invoices for guarding storage for a total of 11 locations across Manitoba for a cumulative total of 113 weeks. We found that the VITF took adequate steps to provide security for the vaccines.

HANDLING AND STORAGE

Vaccine handling and storage is critical to minimize vaccine loss and limit the risk of administering vaccine that is less effective. Vaccine manufacturers outline the requirements for proper handling of their vaccines.

While only one of the COVID-19 vaccines required storage at ultra-low temperatures (ULT), they all had specific storage requirements according to the manufacturers' specifications.

For Manitoba's COVID-19 vaccines rollout, ULT freezers, regular freezers and/or refrigerators were located where vaccines would be stored. The Government of Manitoba's *Cold Chain Protocol* required that the temperature of these units be monitored and logged twice daily.

To test some of the controls that are in place to ensure the integrity of vaccines, we selected a representative sample of freezers or refrigerators for a selection of dates during the audit time period to verify that the temperature for the unit in question was monitored and logged at the required intervals for the selected 24-hour period. Our sample was made up of 136 logs. We found that for all logs we viewed that contained recorded temperatures, these temperatures fell within the acceptable range for the vaccine(s) being stored in that particular unit. However:

- All of the temperature logs at one site had been destroyed when the site was decommissioned, so we were unable to view 14 (10%) of the logs in our sample.
- 28 of the temperature logs, or 21% of our sample, were missing entries.
- 94 temperature logs, or 69% of our sample, showed that the temperature was monitored at the required times.

The *Cold Chain Protocol* states a required action for daily temperature monitoring is to take the fridge(s) and room temperature twice daily (including units with continuous temperature monitoring and recording devices), first thing in the morning and again at the end of the business day. It also states the Vaccine Coordinator or back-up will keep the *Temperature Log for Vaccines and Biologics* and *Vaccine Storage Trouble Shooting Records* for a period of three (3) years (to monitor historical and seasonal patterns).



Recommendation 3

We recommend that the Department of Health ensure that appropriate controls established to maintain the integrity of vaccines are performed as expected.

Manitoba Health Response: Vaccines for Manitoba's immunization program are held at the provincial vaccine warehouse, a facility licensed and regularly audited by Health Canada. Manitoba Health will develop a plan to monitor application of and compliance with Manitoba's Cold Chain Protocol once vaccines have been distributed to service delivery organizations.

Additional information about the audit

This independent assurance report was prepared by the Office of the Auditor General of Manitoba on the COVID-19 vaccine rollout. Our responsibility was to provide objective information, advice and assurance to assist the Legislature in its scrutiny of the government's management of resources and programs, and to conclude on whether the Province effectively managed the COVID-19 vaccine rollout and complies in all significant respects with the applicable criteria.

All work in this audit was performed to a reasonable level of assurance in accordance with the Canadian Standard for Assurance Engagements (CSAE) 3001—Direct Engagements set out by the Chartered Professional Accountants of Canada (CPA Canada) in the CPA Canada Handbook—Assurance.

The Office applies Canadian Standard on Quality Control 1 and, accordingly, maintains a comprehensive system of quality control, including documented policies and procedures regarding compliance with ethical requirements, professional standards, and applicable legal and regulatory requirements.

We have complied with the independence and other ethical requirements of the Code of Professional Conduct of the Chartered Professional Accountants of Manitoba, which are founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

In accordance with our regular audit process, we obtained the following from management:

1. Confirmation of management's responsibility for the subject under audit.
2. Acknowledgement of the suitability of the criteria used in the audit.
3. Confirmation that all known information that has been requested or that could affect the findings or audit conclusion, has been provided.

Audit objective

Our objective was to determine whether the Province effectively managed the COVID-19 vaccine rollout.

Scope and approach

The audit examined the plans and activities of the Vaccine Implementation Task Force (VITF) and how they implemented the COVID-19 vaccine rollout in Manitoba. The audit period we examined was November 1, 2020 to March 31, 2022.

We did not assess other aspects of the government's response to the COVID-19 pandemic. We also did not assess other relevant aspects of the vaccine rollout that were the responsibility of the federal government, such as approval of vaccines. We did not audit how the RHAs implemented the plans of the VITF in the regions. We did not examine public health records to determine if clients met the provincial eligibility criteria in place at the time they were vaccinated.

We interviewed government staff, reviewed information provided by the government, and documented processes.

As part of our audit work we:

- Interviewed VITF staff as well as other staff from the Department of Health.
- Interviewed staff from Materials Distribution Agency.
- Interviewed staff from RHAs and other stakeholders.
- Examined legislation, policies and practices, data files, records, reports, correspondence and other documentation provided by the government.
- Chose representative samples to assess the inventory management practices followed to conclude on our criteria.
 - 47 of 146 vaccine shipments received.
 - 68 of approximately 20,000 vaccine redistributions.
 - 68 of approximately 20,000 freezer days.
- Chose a judgmental sample of 10 eligibility sequencing decisions to assess their reasonableness.
- Documented processes and activities undertaken as part of the rollout.
- Confirmed the vaccines received with the Public Health Agency of Canada.

Criteria

To determine whether the Province effectively managed the COVID-19 vaccine rollout, we used the following criteria sourced from *Canada's COVID Immunization Plan*:

Criteria
The Province managed the COVID-19 vaccine inventory appropriately.
The Province appropriately administered the COVID-19 vaccines to Manitobans.

Period covered by the audit

The audit covered the period between November 1, 2020 and March 31, 2022. This is the period to which the audit conclusion applies. However, to gain a more complete understanding of the subject matter of the audit, we also examined certain matters that preceded the audit coverage period.

Date of the audit report

We obtained sufficient and appropriate audit evidence on which to base our conclusion on March 7, 2023, in Winnipeg, Manitoba.

Summary of recommendations

RECOMMENDATION 1

We recommend that the Department of Health review its processes for documenting informed consent and vaccine administration information, identify the risks involved in using paper-based methods, and implement changes to its system to mitigate those risks.

Manitoba Health Response:

Manitoba Health uses the Public Health Information Management System (PHIMS), an electronic database, as the means to document vaccine administration. In certain instances, including during the COVID-19 immunization program, paper-based methods are used to collect vaccine administration and informed consent information prior to entry into PHIMS. Manitoba Health acknowledges that these methods carry risks to data quality and is committed to reducing the use of paper-based methods. Manitoba Health has piloted an eConsent process and consideration is being given to how it may be implemented in the future.

RECOMMENDATION 2

We recommend that the Government of Manitoba, led by the Deputy Ministers Committee, perform lessons learned exercises from the COVID-19 vaccine rollout and apply any learnings and best practices that can be implemented in normal operations as well as in its preparations for a future, emergency situation, including;

- Clearly defining stakeholder roles and responsibilities on any centralized committees and advisory tables.
- Performing exercises that test response plans on worst-case scenarios, on a government wide basis.
- Identifying all human resources requirements including in program support roles such as administration and data entry.
- Implementing and maintaining a current stockpile of emergency supplies.

Clerk of the Executive Council Response:

The Government agrees to undertake exercises on a whole of government basis to apply lessons learned and best practices that can be implemented in normal operations as well as in preparations for future emergency situations. Specifically, the Government will take the following actions in response to Recommendation 2 of the audit:

- The Government will document the Task Force model that effectively identified and assembled relevant expertise from across the Government to administer the vaccine program. This analysis will record how silos were broken down to create a whole-of-government response with appropriate operational, logistical, planning and clinical expertise in place overseen by a committee of Deputy Ministers empowered to achieve results. The analysis will include describing the stakeholders that interacted with each component of the Task Force to identify their roles and responsibilities and which other entities to include in future emergency situations.
- The Government will review at regularly pre-determined intervals the assigned roles, responsibilities and capabilities associated with a large scale response to ensure appropriate response capacity exists at all times. This approach will include the recognition that unprecedented disaster events like the COVID-19 pandemic will, by definition, require innovative systems and processes. Reviews will therefore focus on ensuring Manitoba can be flexible to unexpected scenarios and adapt plans accordingly.
- The Government has implemented a warehouse of emergency supplies that supports the health system in Manitoba while incorporating resource readiness approaches like supporting local suppliers. Complimentary to the approach on the warehouse and supplies, Public Health will examine the planning surrounding vaccines and antivirals as well.

RECOMMENDATION 3

We recommend that the Department of Health ensure that appropriate controls established to maintain the integrity of vaccines are performed as expected.

Manitoba Health Response:

Vaccines for Manitoba's immunization program are held at the provincial vaccine warehouse, a facility licensed and regularly audited by Health Canada. Manitoba Health will develop a plan to monitor application of and compliance with Manitoba's Cold Chain Protocol once vaccines have been distributed to service delivery organizations.

Appendix 1: Timeline of eligibility expansions in Manitoba’s COVID-19 vaccine rollout

Timeline of eligibility expansions in Manitoba’s COVID-19 vaccine rollout	
Date	First dose eligibility
December 12, 2020	<p>Health-care workers whose work have direct contact with patients and also meet one of these criteria:</p> <ul style="list-style-type: none"> • Work in critical care units, born on or before Dec. 31, 1970. • Work in acute care facilities, born on or before Dec. 31, 1960. • Work in long term care facilities, born on or before Dec. 31, 1960. • Be assigned to COVID-19 immunization clinics.
December 20, 2020	<p>Health-care workers whose work involves direct contact with patients and meet at least one of the following criteria:</p> <ul style="list-style-type: none"> • Work in critical care units, born on or before Dec. 31, 1980. • Work in long term care facilities, born on or before Dec. 31, 1962. • Work in acute care facilities, born on or before Dec. 31, 1960. • Be assigned to COVID-19 immunization clinics.
December 24, 2020	<p>Health-care workers whose work involves direct contact with patients and who meet at least one of the following criteria:</p> <ul style="list-style-type: none"> • Work in critical care units (expanded to no longer have any age restrictions). • Work in long-term care facilities, born on or before Dec. 31, 1962. • Work in acute care facilities, born on or before Dec. 31, 1962 (expanded from 1960). • Be assigned to a COVID-19 immunization clinic or testing site (expanded to include testing sites).
December 28, 2020	<p>Health-care workers whose work involves direct contact with patients and who meet at least one of the following criteria:</p> <ul style="list-style-type: none"> • Work in critical care units. • Work in long-term care facilities, born on or before Dec. 31, 1964 (changed from 1962). • Work in acute care facilities, born on or before Dec. 31, 1964 (changed from 1962). • Be assigned to a COVID-19 immunization clinic or testing site.

Timeline of eligibility expansions in Manitoba's COVID-19 vaccine rollout

Date	First dose eligibility
December 29, 2020	<p>Health-care workers whose work involves direct contact with patients and who meet at least one of the following criteria:</p> <ul style="list-style-type: none"> • Work in critical care units. • Work in long-term care facilities, born on or before Dec. 31, 1967 (changed from 1964). • Work in acute care facilities, born on or before Dec. 31, 1967 (changed from 1964). • Be assigned to a COVID-19 immunization clinic or testing site.
December 30, 2020	<p>Health-care workers whose work involves direct contact with patients and who meet at least one of the following criteria:</p> <ul style="list-style-type: none"> • Work in critical care units. • Work in long-term care facilities, born on or before Dec. 31, 1969 (changed from 1967). • Work in acute care facilities, born on or before Dec. 31, 1969 (changed from 1967). • Be assigned to a COVID-19 immunization clinic or testing site.
December 31, 2020	<p>Health-care workers whose work involves direct contact with patients and who meet at least one of the following criteria:</p> <ul style="list-style-type: none"> • Work in critical care units. • Work in long-term care facilities, born on or before Dec. 31, 1972 (changed from 1969). • Work in acute care facilities, born on or before Dec. 31, 1972 (changed from 1969). • Be assigned to a COVID-19 immunization clinic or testing site.
January 2, 2021	<p>Health-care workers whose work involves direct contact with patients and who meet at least one of the following criteria:</p> <ul style="list-style-type: none"> • Work in critical care units. • Work in long-term care facilities, born on or before Dec. 31, 1974 (changed from 1972). • Work in acute care facilities, born on or before Dec. 31, 1974 (changed from 1972). • Be assigned to a COVID-19 immunization clinic or testing site.

Timeline of eligibility expansions in Manitoba's COVID-19 vaccine rollout

Date	First dose eligibility
January 3, 2021	<p>Health-care workers whose work involves direct contact with patients and who meet at least one of the following criteria:</p> <ul style="list-style-type: none"> • Work in critical care units. • Work in long-term care facilities, born on or before Dec. 31, 1975 (changed from 1974). • Work in acute care facilities, born on or before Dec. 31, 1975 (changed from 1974). • Be assigned to a COVID-19 immunization clinic or testing site.
January 5, 2021	<p>Health-care workers whose work involves direct contact with patients and who meet at least one of the following criteria continue to be eligible to make an appointment for immunization:</p> <ul style="list-style-type: none"> • Work in critical care units. • Work in long-term care facilities, born on or before Dec. 31, 1975 (changed from 1974). • Work in acute care facilities, born on or before Dec. 31, 1975 (changed from 1974). • Be assigned to a COVID-19 immunization clinic or testing site. • Work in a laboratory handling COVID-19 specimens (new, no age restrictions). • Work on a designated COVID-19 hospital ward (new, no age restrictions). • Work in provincial or federal correctional facilities (new, no age restrictions).
January 7, 2021	<p>Vaccine was shipped to First Nation communities to immunize priority populations such as:</p> <ul style="list-style-type: none"> • Health-care workers in remote or isolated communities. • Residents and staff of personal care homes or Elder care facilities. • People aged 60 or older in remote and isolated communities. • People aged 70 or older in non-remote communities.
January 9, 2021	<p>Expanded to include:</p> <ul style="list-style-type: none"> • Health-care workers assigned to a COVID-19 immunization clinic or designated COVID-19 testing site (no age restrictions) and now may include some individuals who do not have direct contact with patients, based on their role; and • Emergency response services (ERS) and specialty patient transportation workers registered with their applicable college or association in Manitoba, born on or before Dec. 31, 1975. This group includes professionals who perform ERS and patient transportation by land and air such as paramedics, emergency medical responders, nurses and respiratory therapists.

Timeline of eligibility expansions in Manitoba's COVID-19 vaccine rollout

Date	First dose eligibility
January 10, 2021	Expanded to include: <ul style="list-style-type: none"> • Home-care workers employed by a regional health authority (RHA), an RHA-contracted service provider, or a self- and family-managed care client, born on or before Dec. 31, 1960.
January 11, 2021	Expanded to include: <ul style="list-style-type: none"> • All personal care home residents.
January 11, 2021	Expanded to include: <ul style="list-style-type: none"> • Home-care workers born on or before Dec. 31, 1965 (changed from Dec. 31, 1960) who are employed by a RHA, employed by an RHA contracted service provider or employed by a self- and family-managed care program client.
January 12, 2021	Expanded to include: <ul style="list-style-type: none"> • Health-care providers who work in hospital emergency and urgent care departments (change: no age restrictions).
January 13, 2021	Expanded to include: <ul style="list-style-type: none"> • Staff employed in congregate group care settings who provide direct care to individuals in the Community Living disABILITY Services, Child and Family Services, Homeless Shelters and Family Violence Shelters.
January 19, 2021	Expanded to include health-care workers who provide direct care in: <ul style="list-style-type: none"> • Long-term care facilities including personal care homes (expanded to include all ages, previously limited to those born Dec. 31, 1983, or earlier).
February 1, 2021	Expanded to include: <ul style="list-style-type: none"> • Additional designated COVID-19 wards in Thompson, The Pas and Flin Flon.
February 3, 2021	Eligibility criteria include: <ul style="list-style-type: none"> • Health-care workers in non-remote First Nations communities, including health-care workers with direct patient/client interaction, such as doctors, nurses, health-care aides, home care workers, medical transportation drivers, and other direct service providers. • First Nations alternative isolation accommodation workers at sites managed/ supported by First Nations organizations. • Traditional Healers/ Knowledge Keepers, as they play a key role as part of the health workforce, to ensure those who did not meet the age criteria or who live off-reserve can also access vaccination if they choose.

Timeline of eligibility expansions in Manitoba's COVID-19 vaccine rollout

Date	First dose eligibility
February 10, 2021	Expanded to include: <ul style="list-style-type: none"> • Health-care workers in acute care facilities, emergency response services and specialty patient transportation, and home care workers born on or before Dec. 31, 1980 (expanded from 1975).
February 12, 2021	Expanded to include: <ul style="list-style-type: none"> • All health-care workers who provide direct patient care in acute care facilities, emergency response services and specialty patient transportation, and home care workers (change: no age restrictions).
February 16, 2021	Expanded to include: <ul style="list-style-type: none"> • COVID-19 alternative isolation accommodations (no age restrictions). • Facilities providing services insured by Manitoba Health and Seniors Care: <ul style="list-style-type: none"> – Primary care clinics (family physicians and/or nurse practitioners, for example, born on or before Dec. 31, 1960). – Diagnostic laboratories (born on or before Dec. 31, 1960). – Outpatient laboratories (born on or before Dec 31, 1960). – Outpatient surgical units (born on or before Dec. 31, 1960). – Specialty physician clinics, such as cardiology, gynecology and psychiatry (born on or before Dec. 31, 1960).
February 17, 2021	Expanded to include: <ul style="list-style-type: none"> • People who work in congregate living facilities, including licensed personal care homes, born on or before Dec. 31, 1955.
February 18, 2021	Expanded to include: <ul style="list-style-type: none"> • People who provide direct patient care services insured by Manitoba Health and Seniors Care born on or before December 31, 1965 (expanded from 1960).
February 19, 2021	Expanded to include: <ul style="list-style-type: none"> • People who work in licensed personal care homes, with no age restrictions (expanded from Dec. 31, 1965).

Timeline of eligibility expansions in Manitoba's COVID-19 vaccine rollout

Date	First dose eligibility
February 22, 2021	Expanded to include: <ul style="list-style-type: none"> • All staff who work in eligible congregate living facilities, born on or before Dec. 31, 1960 (expanded from Dec. 31, 1955). • Health-care workers providing services insured by Manitoba Health and Seniors Care in one or more of the following settings, with no age restrictions (expanded from Dec. 31, 1965): <ul style="list-style-type: none"> – Primary care clinics (e.g., family physicians and/or nurse practitioner clinics). – Outpatient diagnostic imaging facilities. – Outpatient laboratories. – Outpatient surgical units. – Specialty physician clinics, such as cardiology and psychiatry.
February 26, 2021	Expanded to include: <ul style="list-style-type: none"> • Individuals born on or before Dec. 31, 1928. • First Nation people born on or before Dec. 31, 1948.
March 1, 2021	Expanded to include: <ul style="list-style-type: none"> • Individuals born on or before Dec. 31, 1930. • First Nation people born on or before Dec. 31, 1950.
March 3, 2021	Expanded to include: <ul style="list-style-type: none"> • Individuals aged 89 and older. • First Nations people aged 69 years and older.
March 5, 2021	Expanded to include: <ul style="list-style-type: none"> • Individuals aged 87 or older. • First Nation people aged 67 years or older.
March 8, 2021	Expanded to include: <ul style="list-style-type: none"> • Individuals aged 80 or older. • First Nation people aged 60 years or older.
March 11, 2021	Expanded to include: <ul style="list-style-type: none"> • Anyone working in an acute care facility, not just those who have direct contact with patients.
March 12, 2021	Expanded to include: <ul style="list-style-type: none"> • All congregate living workers aged 40 or older (previously aged 60 or older).

Timeline of eligibility expansions in Manitoba's COVID-19 vaccine rollout

Date	First dose eligibility
March 13 or 14, 2021	Expanded to include: <ul style="list-style-type: none"> • Health-care workers, working in outpatient health-care settings including clinics, diagnostic imaging, laboratories, patient transport, blood donor centres, surgical centres, elderly day programs and home-based care (expanded to include workers without direct patient care, no age restrictions). • People working in congregate living facilities (no age restrictions).
March 15, 2021	Expanded to include: <ul style="list-style-type: none"> • Individuals aged 77 or older and First Nation people aged 57 or older. • People aged 50 to 64 with other high-risk conditions if they want the AstraZeneca/COVISHIELD vaccine.
March 17, 2021	Expanded to include: <ul style="list-style-type: none"> • Individuals aged 73 or older. • First Nation people aged 53 or older.
March 19, 2021	Expanded to include: <ul style="list-style-type: none"> • Individuals aged 69 or older. • First Nation people aged 49 or older.
March 22, 2021	Expanded to include: <ul style="list-style-type: none"> • Individuals aged 65 or older. • First Nation people aged 45 or older.
March 29, 2021	Expanded to include: <ul style="list-style-type: none"> • Individuals aged 64 or older. • First Nation people aged 44 or older.
March 31, 2021	Eligibility changed: <ul style="list-style-type: none"> • For people aged 55 to 64 with prioritized health conditions set out by the province who want the AstraZeneca/COVISHIELD vaccine.
April 7, 2021	Expanded to include: <ul style="list-style-type: none"> • Individuals aged 62 or older and First Nation people aged 42 or older. • People aged 55 or older if they want the AstraZeneca/COVISHIELD vaccine (those aged 55 to 62 require specific high-risk health conditions that put them at higher risk of severe outcomes from COVID-19).

Timeline of eligibility expansions in Manitoba's COVID-19 vaccine rollout

Date	First dose eligibility
April 9, 2021	Expanded to include: <ul style="list-style-type: none"> • Individuals aged 60 or older. • First Nation people aged 40 or older.
April 14, 2021	Expanded to include: <ul style="list-style-type: none"> • Individuals aged 59 or older. • First Nation people aged 39 or older.
April 16, 2021	Expanded to include: <ul style="list-style-type: none"> • Individuals aged 57 or older. • First Nation people aged 37 or older.
April 19, 2021	Expanded to include: <ul style="list-style-type: none"> • Individuals aged 54 or older. • First Nation people aged 34 or older. • All individuals aged 40 and over who want the AstraZeneca/COVISHIELD vaccine. Previous prioritization for individuals with specific health conditions will no longer be in place.
April 21, 2021	Expanded to include: <ul style="list-style-type: none"> • Individuals aged 50 or older. • First Nation people aged 30 or older. • Front-line police and firefighters.
April 23, 2021	Expanded to include: <ul style="list-style-type: none"> • All people aged 18 and older who live or work in specified jobs in 3 priority communities in Winnipeg, including Downtown East, Point Douglas South and Inkster East.
April 26, 2021	Expanded to include: <ul style="list-style-type: none"> • All people aged 18 and older who live or work in specified jobs in the Northern Regional Health Authority. • All people aged 18 and older who live or work in specified jobs in the Seven Oaks West community.

Timeline of eligibility expansions in Manitoba's COVID-19 vaccine rollout

Date	First dose eligibility
April 28, 2021	<p>Expanded to include:</p> <ul style="list-style-type: none"> • All people aged 18 and older who live or work in specified jobs in the communities of Point Douglas North and Downtown West in Winnipeg and Brandon Downtown. • All people who live or work (in any role) in the Northern Regional Health Authority, as well as Churchill.
April 30, 2021	<p>Expanded to include:</p> <ul style="list-style-type: none"> • People aged 30 to 39 with priority health conditions who want the AstraZeneca/COVISHIELD vaccine. • People aged 18 and older who: <ul style="list-style-type: none"> – Are pregnant. – Are a client of Community Living disABILITY Services. – Work in any health-care setting including outpatient settings (expanded from previous eligibility). – Work in the vaccine warehouse. • All adults aged 18 and older who live or work in specified jobs in these priority communities: <ul style="list-style-type: none"> – Prairie Mountain Health – Brandon East End. – Winnipeg Regional Health Authority – Inkster West and Fort Garry South. – Interlake–Eastern Regional Health Authority – Powerview - Pine Falls.
May 3, 2021	<p>Expanded to include:</p> <ul style="list-style-type: none"> • All Indigenous people aged 18 and older.
May 4, 2021	<p>Expanded to include:</p> <ul style="list-style-type: none"> • All adults aged 18 and older who live or work in specified jobs in the Winnipeg communities of River East South, St. Vital North and Seven Oaks East. <ul style="list-style-type: none"> – Eligible jobs in these communities include: <ul style="list-style-type: none"> » Kindergarten to Grade 12 schools. » Child-care providers. » Food-processing facilities. » Grocery or convenience stores. » Gas stations. » Public health inspectors or workplace safety and health officers. » Anywhere that serves food (e.g. restaurants or food banks).
May 5, 2021	<p>Expanded to include:</p> <ul style="list-style-type: none"> • Individuals aged 45 or older.

Timeline of eligibility expansions in Manitoba's COVID-19 vaccine rollout

Date	First dose eligibility
May 7, 2021	Expanded to include: <ul style="list-style-type: none"> • Individuals aged 40 or older.
May 10, 2021	Expanded to include: <ul style="list-style-type: none"> • Individuals aged 30 or older.
May 12, 2021	Expanded to include: <ul style="list-style-type: none"> • Individuals aged 18 or older.
May 14, 2021	Expanded to include: <ul style="list-style-type: none"> • Individuals aged 12 or older.
November 19, 2021	Expanded to include: <ul style="list-style-type: none"> • Individuals aged 5 or older.
July 20, 2022	Expanded to include: <ul style="list-style-type: none"> • Children ages 6 months to 4 years who: <ul style="list-style-type: none"> – Have certain medical conditions including: <ul style="list-style-type: none"> » Chronic lung disease. » Airway abnormalities. » Congenital or chronic heart or circulatory diseases. » Moderately to severely immunocompromised due to a medical condition or treatment. » Neurologic disorders (including developmental delay). » Diabetes, chronic kidney disease, or any chronic disease related to premature birth. – Are First Nations, Inuit or Métis, regardless of where they live.
August 5, 2022	Expanded to include: <ul style="list-style-type: none"> • Individuals aged 6 months or older.

Source: VITF records

Appendix 2: Timeline of significant events in Manitoba's COVID-19 vaccine rollout

Timeline of significant events in Manitoba's COVID-19 vaccine rollout during period under examination	
Date	COVID-19 vaccine rollout event
March 11, 2020	World Health Organization declared COVID-19 a global pandemic.
March 12, 2020	Manitoba announced its first presumptive positive COVID-19 case.
November 10, 2020	Vaccine Implementation Task Force is created.
December 9, 2020	Pfizer BioNTech COVID-19 Vaccine (Comirnaty) was approved for use in Canada for individuals 16 years of age and older.
December 9, 2020	Order issued under <i>The Regulated Health Professions Act</i> to authorize additional health service providers to administer COVID-19 vaccines.
December 15, 2020	Manitoba received its first shipment of vaccine (Pfizer).
December 16, 2020	Manitoba administered its first vaccines (Rady pilot site).
December 18, 2020	First Nations health experts join the vaccine planning process and the Vaccine Implementation Task Force First Nations table is created.
December 23, 2020	COVID-19 Vaccine Moderna (Spikevax) was approved for use in Canada.
December 30, 2020	Manitoba received its first shipment of second vaccine (Moderna).
January 4, 2021	First Supersite (RBC Convention Centre) opened.
January 6, 2021	Second doses began to be administered.
January 7, 2021	5,300 doses of COVID-19 vaccine are sent to First Nations communities.*
January 11, 2021	Focused Immunization Teams began administering vaccines.
January 11, 2021	Over 10,000 doses of COVID-19 vaccine administered.*
January 18, 2021	The Brandon supersite opened.

Timeline of significant events in Manitoba's COVID-19 vaccine rollout during period under examination

Date	COVID-19 vaccine rollout event
January 20, 2021	Over 20,000 doses of the COVID-19 vaccine administered.*
January 31, 2021	100% of PCHs had been visited by FIT teams.*
February 1, 2021	The Thompson supersite opened.
February 8, 2021	Pop up clinic opened at Notre Dame site for First Nations health-care workers.
February 8, 2021	Applications began to be received for Medical Offices and Pharmacies to become partners.
February 10, 2021	Order issued under <i>The Regulated Health Professions Act</i> to authorize additional health service providers to administer vaccines.
February 26, 2021	Astrazeneca COVID-19 Vaccine (Vaxzevria) was approved for use in Canada.
February 26, 2021	COVISHIELD was approved for use in Canada (expired September 16, 2021).
March 2, 2021	Vaxport opened at Thompson airport.
March 5, 2021	Janssen COVID-19 Vaccine was approved for use in Canada.
March 8, 2021	First allocation of vaccines to Medical Offices and Pharmacies.
March 8, 2021	Supersite in Selkirk opened.
March 9, 2021	Manitoba received first shipment of COVISHIELD Vaccine.
March 14, 2021	Over 100,000 doses of COVID-19 Vaccine administered.*
March 22, 2021	Supersite in Morden opened using the Accelerated Vaccination Program (Hockey Hub model).
March 23, 2021	RBC Convention Centre Supersite in Winnipeg added an additional floor and began using the Accelerated Vaccination Program (Hockey Hub Model).
March 26, 2021	Vaxport becomes backup location for Thompson supersite.
April 6, 2021	Order issued under <i>The Regulated Health Professions Act</i> to authorize additional health service providers to administer vaccines.

Timeline of significant events in Manitoba's COVID-19 vaccine rollout during period under examination

Date	COVID-19 vaccine rollout event
April 20, 2021	Manitoba announced partnering with 5 community organizations to establish Urban-Indigenous clinics in Brandon, Thompson, Portage La Prairie, and 2 in Winnipeg.
April 27, 2021	Urban Indigenous Clinic in Brandon opened.
April 29, 2021	Urban Indigenous Clinic in Winnipeg at AHWC opened.
April 29, 2021	Urban Indigenous Clinic in Winnipeg at Ma Mawi Wi Chi Itata Centre opened.
May 4, 2021	Urban Indigenous Clinic in Thompson opened.
May 4, 2021	Urban Indigenous Clinic in Portage La Prairie opened.
May 7, 2021	Supersite opened on Leila Ave in Winnipeg opened.
May 10, 2021	Supersite in Dauphin opened.
May 11, 2021	Vaccines allocated to pharmacy specifically addressing Métis population.
May 18, 2021	Supersite in Steinbach opened.
May 29, 2021	Supersite in Gimli opened.
June 8, 2021	Supersite in The Pas opened.
June 11, 2021	Over 1,000,000 doses of COVID-19 vaccine administered.*
June 30, 2021	Order issued under <i>The Regulated Health Professions Act</i> to authorize additional health service providers to administer vaccines.
July 7, 2021	Over 75% of eligible Manitobans received at least one dose of COVID-19 vaccine and over 50% received two doses.*
July 8, 2021	Independent Immunization Partners channel operational.
August 30, 2021	Last appointments held at Leila supersite.
September 13, 2021	School-based COVID-19 immunization program announced.

Timeline of significant events in Manitoba's COVID-19 vaccine rollout during period under examination

Date	COVID-19 vaccine rollout event
September 15, 2021	Manitobans are eligible to book a third dose if they meet requirements.
October 6, 2021	Over 2 million doses of COVID-19 vaccine administered.*
October 25, 2021	Gimli supersite transitioned to a pop-up clinic.
November 15, 2021	Manitoba received first shipment of Janssen vaccine.
November 19, 2021	Pfizer pediatric COVID-19 vaccine authorized for use in children 5-11.
November 23, 2021	Manitoba received first shipment of Pfizer Pediatric vaccine.
December 1, 2021	Thompson supersite closed and replaced by RHA-run pop-up clinic.
January 5, 2022	Over 2,500,000 doses of COVID-19 vaccine administered.*
February 17, 2022	Nuvaxovid was approved for use in Canada.
February 24, 2022	Covifenz was approved for use in Canada.

*Numbers and percentages of doses administered are based on government reports and are unaudited.

Source: VITF records

» Vision

Government accountability and public administration excellence for Manitobans.

» Mission

To provide independent information, advice and assurance on government operations and the management of public funds.

» Values

Independence – We are independent from government and our work is objective and unbiased.

Integrity – We act with honesty and uphold high ethical standards.

Innovation – We promote innovation and creativity in what we do and how we do it.

Teamwork – We work as a team by sharing each other's knowledge and skills to reach our goals.

Auditor General

Tyson Shtykalo

Assistant Auditor General – Performance Audit

Stacey Wowchuk

Director – Strategic Operations

Melissa Emslie

Audit Principal

Dallas Muir

Audit Team

Lisa Holowchuk

Nanditha Murugesan

Communications Manager

Frank Landry

Admin Support

Jomay Amora-Dueck

Tara MacKay

Graphic Design

Waterloo Design House



Auditor General
MANITOBA

For more information, please contact our office at:

Office of the Auditor General
500-330 Portage Avenue
Winnipeg, Manitoba R3C 0C4

Phone: 204-945-3790 Fax: 204-945-2169
contact@oag.mb.ca | www.oag.mb.ca

- [Facebook.com/AuditorGenMB](https://www.facebook.com/AuditorGenMB)
- [Twitter.com/AuditorGenMB](https://twitter.com/AuditorGenMB)
- [Linkedin.com/company/manitoba-auditor-general](https://www.linkedin.com/company/manitoba-auditor-general)