

Public Health Information Management System

Downtime Procedures Guide: Inventory

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Shared Health

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Introduction

1.1. Purpose

The purpose of this guide is to document the procedures that will be used by all PHIMS users in the event that there is an interruption in the availability of PHIMS. There may be a number of situations that disrupt the availability of PHIMS including:

- System maintenance / upgrades
- Power failures
- Computer / network failures

The procedures documented in this guide take into account variations in how the procedures are carried out based on whether the interruption is scheduled or unscheduled.

PHIMS Stakeholders must ensure that:

- All PHIMS users and Shared Health staff are aware of the procedures to be used during an outage
- All PHIMS users and Shared Health staff are aware of the communication plan for downtime and outages

1.2. Background

PHIMS is an integrated, electronic public health record developed to improve and support management of communicable disease cases, outbreaks, immunizations, and inventory. Since the implementation of Immunization, Inventory and Investigation modules; authorized health-care professionals and administrative staff use PHIMS to collect, share and analyze a wide range of health information critical for managing communicable diseases, outbreaks, immunizations and inventory. Authorized users access the application securely via the Internet.

The PHIMS project (formerly known as Panorama) was a partnership between Manitoba Health, Seniors, and Active Living (MHSAL), Assembly of Manitoba Chiefs, Indigenous Services Canada, Regional Health Authorities, and Shared Health. PHIMS has been implemented into Materials Distribution Agency (MDA), regional health authority and First Nation public health locations as well as some select non-public health locations as identified by the partners.

Public Health practitioners must be able to continue delivery of immunization services, including the ability to acquire vaccine inventory, in the event of a system interruption by using alternate means to compensate for the impacts of a system outage.

1.3. Scope

The scope of procedures documented in this guide reflect the needs of public health practitioners working in regional health authorities, First Nations communities (ISC / FN Transferred Communities), MHSAL and at MDA in the event there is a PHIMS outage.

1.4. Definitions

Downtime Procedure

A downtime procedure supports a business process in lieu of the availability of system functions normally provided by PHIMS. The downtime procedure is typically a series of additional manual steps, but may include the use of alternate support systems, assuming they are not impacted by the same system outage.

Recovery Procedure

A recovery procedure is used after PHIMS becomes available in order to make the information in the system consistent with the current state of a process that had been supported by a corresponding downtime procedure during an outage by updating the system with information documented or queued during the outage.

Scheduled Downtime

Scheduled downtime is a planned system outage that occurs during a pre-defined period of time to allow for system maintenance, upgrades and other related operational support activities that impact the availability of PHIMS. Scheduled downtime includes coordinated communication so that impacted users can prepare in advance to invoke downtime procedures, if required.

Unscheduled Downtime

Unscheduled downtime is a system outage that occurs without prior warning. Impacted users must invoke downtime procedures without advanced preparation.

Downstream Systems

A downstream system is a common term used to describe systems that receive information from PHIMS, typically via interface messages (e.g. eChart).

2. PHIMS Outage Impacts

Process	Impact	Downtime Requirement	Recovery Requirement
Requisitioning and Receiving Vaccine Orders	<ul style="list-style-type: none"> ➤ New orders cannot be submitted electronically ➤ Submitted orders cannot be processed for shipment ➤ Placed orders cannot be received electronically ➤ Paper order submissions cannot be entered electronically 	<ul style="list-style-type: none"> ➤ Public health offices should contact the Provincial Vaccine Warehouse for placement of emergency orders ➤ Public health offices may submit manual order forms for non-urgent orders, but should exercise discretion depending on need and length of outage ➤ Orders may be fulfilled by Provincial Vaccine Warehouse using manual process depending on urgency and length of outage ➤ Provincial Vaccine Warehouse will communicate with MHSAL as necessary regarding authorizations ➤ Public health offices should contact the Provincial Vaccine Warehouse if they submitted a requisition prior to downtime that requires urgent fulfillment ➤ Received products should be checked for cold chain breaks and stored as normal 	<ul style="list-style-type: none"> ➤ Orders that are placed manually (phone or fax) will be entered by Provincial Vaccine Warehouse once the system becomes available; public health offices should not create requisitions if they have placed orders manually during downtime ➤ Any orders manually fulfilled will be picked, packed and shipped in the system ➤ Public health offices will receive orders that were shipped during downtime or that were shipped previous, but were not received in the system before the downtime occurred
Inventory Adjustments	<ul style="list-style-type: none"> ➤ Won't have access to holding point inventories ➤ Changes in quantities on hand cannot be updated in the system ➤ Movement of inventory items between holding point locations 	<ul style="list-style-type: none"> ➤ Track adjustments to quantities on hand or product movements on paper 	<ul style="list-style-type: none"> ➤ Update inventory adjustments once system is available ➤ Conduct a physical count to confirm inventory, if many changes of inventory have occurred

Process	Impact	Downtime Requirement	Recovery Requirement
	cannot be reflected in the system		
Physical Count	<ul style="list-style-type: none"> ➤ Won't be able to print physical count sheets ➤ Won't be able to update quantities on hand after physical count 	<ul style="list-style-type: none"> ➤ If possible, do not begin new physical counts until system is available ➤ If necessary, revert to paper based process for performing physical count 	<ul style="list-style-type: none"> ➤ If physical count performed, update inventory in system
Returns	<ul style="list-style-type: none"> ➤ Returns cannot be created or processed 	<ul style="list-style-type: none"> ➤ Hold product(s) to be returned until return can be created and processed in system 	<ul style="list-style-type: none"> ➤ Create and process returns
Cold Chain Breaks	<ul style="list-style-type: none"> ➤ Adverse Storage Conditions cannot be created or managed by MDA 	<ul style="list-style-type: none"> ➤ Revert to manual process to document cold chain break 	<ul style="list-style-type: none"> ➤ Create Adverse Storage Condition
Inventory Reports	<ul style="list-style-type: none"> ➤ Inventory reports cannot be generated 	<ul style="list-style-type: none"> ➤ N/A 	<ul style="list-style-type: none"> ➤ Generate inventory reports as necessary

3. Notification of Outage - Use of Downtime Procedures

Impacted users and regional Information Services departments must be notified of scheduled or unscheduled downtime so that downtime procedures can be invoked as necessary.

Action	When	Responsibility
Notification of Scheduled Downtime		
<p>Communication of scheduled downtime to PHIMS Production Notification Group (includes users and regional IT support) via email notification.</p> <p>The communication should include the scheduled date and time, as well as an expected duration (if known).</p> <p>If length of outage is known or anticipated to be more than 2 days, notify the Provincial Vaccine Warehouse and appropriate MHSAL staff so they can initiate manual order fulfillment processes.</p>	<p>Up to four (4) days in advance, or as soon as possible depending on the urgency of scheduling an outage.</p>	<p>Shared Health</p>
Notification of Extension to Downtime		
<p>Communication of extension of downtime to PHIMS Production Notification Group (includes users and regional IT support) via email notification.</p> <p>The communication should include the scheduled date and time, as well as an expected duration (if known).</p>	<p>Upon knowledge of the requirement for extension of the downtime.</p>	<p>Shared Health</p>
Notification of Unscheduled Downtime		
<p>Communication of unscheduled downtime to PHIMS Production Notification Group (includes users and regional IT support).</p> <p>The communication should include an expected duration (if known).</p>	<p>Upon detection of outage.</p>	<p>Shared Health</p>

4. Preparing for Downtime

Prior to the start of a scheduled outage, or in preparation for an unscheduled outage, any manual forms that are required should be pre-printed and available as necessary.

Form	When	Responsibility
Vaccine and Biologics Order Form		
Manitoba Health, Healthy Living and Seniors > Public Health > Communicable Disease Control > Vaccine and Biologics Order Form	Have available at all times	Public Health Clerk or Public Health Nurse
Cold Chain Failure Response Form		
Manitoba Health, Healthy Living and Seniors > Public Health > Communicable Disease Control > Cold Chain Failure Response Form	Have available at all times	Public Health Clerk or Public Health Nurse

5. Downtime Procedures (scheduled or unscheduled)

Action	When	Responsibility
Ordering Vaccines		
Phone the Provincial Vaccine Warehouse	In case of emergency	Public Health Office
Submit Vaccine and Biologics Order Form via fax or submit electronically by email, if possible	For non-urgent orders, in the event of prolonged outage	Public Health Office
Fulfillment of Vaccine Orders		
Implement manual procedures for fulfillment of vaccine orders	During prolonged outage that impacts ability to meet shipping requirements	Provincial Vaccine Warehouse
Wait to fulfill vaccine orders	During short-duration outages that do not impact ability to meet shipping requirements	Provincial Vaccine Warehouse
Receiving Vaccine Orders		
Check received product(s) and store as normal	During any outage	Public Health Office or Provincial Vaccine Warehouse
Validate quantities of product(s) received and record on receiving document	During any outage	Public Health Office or Provincial Vaccine Warehouse
Cold Chain Break		
Follow regional or provincial recommended guidelines for cold chain failures	During any outage	Public Health Office
Document a Cold Chain Failure Response Form	During any outage	Public Health Office

6. Notification of Recovery

Impacted users must be notified at end of outage so that recovery procedures can be invoked as necessary. Recovery should not be started until formal communication of outage end from Shared Health.

Action	When	Responsibility
Notification of Downtime End		
Communication via email of end of scheduled/unscheduled downtime to PHIMS Production Notification Group (includes users and regional IT support).	Upon end of outage.	Shared Health

7. Recovery Procedures

Action	When	Responsibility
Submitted Vaccine Orders		
Enter any manually submitted vaccine orders	Upon end of outage	Provincial Vaccine Warehouse
Fulfilled Vaccine Orders		
Enter any picked, packed and shipped vaccine orders	Upon end of outage	Provincial Vaccine Warehouse
Received Vaccine Orders		
Enter any vaccine orders received from the Provincial Vaccine Warehouse	Upon end of outage	Public Health Office
Enter any vaccine orders received from the manufacturers	Upon end of outage	Provincial Vaccine Warehouse
Cold Chain Breaks		
Enter an Adverse Storage Condition	Upon end of outage	Public Health Office or Provincial Vaccine Warehouse