

This FAQ has been developed to provide all Health Care Professionals that store and/or handle Provincially funded vaccines in acute care settings, additional information to ensure vaccines are stored in accordance with the requirements as outlined within the [Alberta Vaccine Storage and Handling Policy for Provincially Funded Vaccine](#) and [AHS Vaccine Storage and Handling Standard](#).

All AHS staff members, handling vaccine, including clinical and nonclinical staff, will be familiar with all aspects of routine and urgent vaccines storage and handling protocols as per AHS Standards and individual Zone Guidelines including:

- the importance of the Cold Chain and implications of cold chain excursion incidents;
- recommended vaccine storage and handling practices; and
- the immediate and appropriate action to be taken in the event of a vaccine exposure to light or temperature outside the recommended storage conditions.

A number of frequently asked questions have been developed based on the following topics on your practice setting and involvement with the storage and handling of provincially-funded vaccines.

- Vaccine Storage and Handling, including training and education
- Vaccine Ordering
- Vaccine Storage and Handling Transport Equipment

Clinical practitioners administering provincially-funded vaccines in acute care settings are required to be familiar with the following:

- Vaccine Storage and Handling

Pharmacy staff and nursing staff responsible for the management of publicly-funded vaccine within a program, unit, or site are required to be familiar with the following:

- Vaccine Storage and Handling, including training and education
- Vaccine Ordering
- Vaccine Storage and Handling Transport Equipment

Cold Chain

1. What is “cold chain”?

Cold chain refers to the process of ensuring all vaccines are stored, handled, transported, and maintained at their optimum recommended temperatures of +2.0°C to +8.0°C from the time of manufacture until vaccine administration to the patient.

2. What is a cold chain excursion?

A cold chain excursion occurs when vaccine is exposed to light, or to temperatures outside of the recommended range. A cold chain excursion can reduce the effectiveness of the vaccine leading to lower than expected levels of immune stimulation.

3. Why did Alberta Health (the Ministry of Health) develop a Vaccine Storage and Handling Policy?

The Alberta Vaccine Storage and Handling Policy for Provincially Funded Vaccine sets standards of practice to ensure that provincially funded vaccines are stored and handled appropriately by adhering to the national vaccine cold chain management policy and best practice guidelines. In addition, the new policy ensures provincially funded vaccines provided to Albertans are potent, minimizing the risk of compromising the safety and efficacy of these biological products and providing maximum protection to patients. [Alberta Vaccine Storage and Handling Policy for Provincially Funded Vaccine](#)

4. Why is cold chain relevant to my practice?

It is important vaccines are available for patients as part of their medical care. Vaccine cold chain must be maintained in order to provide effective protection against vaccine preventable diseases. We all play a role in contributing to a healthy community. This also aligns with Alberta Health Services (AHS) Patient First Strategy and AHS Values of CARES and standards for professional practice.

5. If I discover a cold chain excursion, what do I do?

- When a cold chain excursion is discovered, vaccine must not be discarded. Vaccine must be immediately quarantined to a backup functioning and monitored vaccine refrigerator and labeled ‘Do Not Use – Cold Chain Excursion’. If a backup refrigerator is not available, contact your vaccine provider (AHS Pharmacy or your Vaccine Storage and Handling AHS Zone Contact) for further guidance. For information on Vaccine Storage and Handling Zone Contact refer to Question 18.
- A cold chain excursion report form must be completed with details of the cold chain incident and vaccines involved. The link to the Cold Chain Excursion Reporting Form as well as an Algorithm for Managing a Cold Chain Excursion can be found at:
 - [Cold Chain Excursion Reporting Form](#)
 - [Algorithm for Managing a Cold Chain Excursion](#)
- If vaccine is urgently required, this should be communicated with your vaccine provider (AHS Pharmacy or AHS Vaccine Storage and Handling Zone Contact). For information on Vaccine Storage and Handling Zone Contact refer to Question 18.
- Each site/unit storing provincially funded vaccine must have completed a Cold Chain Management Plan which includes an Emergency Response Plan.

Clinical Vaccine Storage and Handling

6. What am I required to do when I receive the vaccine for an individual patient?

- When vaccine is delivered, the temperature monitoring device must be checked immediately to determine the recommended temperatures of +2.0°C to +8.0°C have been maintained.
- Vaccine should be administered as soon as possible. Otherwise the vaccine can continue to be stored and monitored regularly for recommended temperatures of +2.0°C to + 8.0°C in the insulated container until it is administered. Continuous vaccine storage longer than eight (8) hours requires storage in an appropriate refrigerator (a domestic or lab grade refrigerator with external temperature monitoring).

7. What are the requirements for proper vaccine storage for Ward Stock?

- A purpose-built vaccine refrigerator (also referred to as a pharmacy, lab-style or laboratory grade refrigerator) is the recommended standard for storing vaccines to keep them within the +2.0°C to +8.0°C temperature range.
- For storage of low volumes of vaccines, domestic refrigerators are acceptable if the refrigerator and freezer compartments have separate external doors and have been assessed for consistent temperatures of +2.0°C to +8.0°C.
- Bar fridges are NOT ACCEPTABLE as they are not manufactured to maintain a stable temperature, and may vary widely in temperature throughout the unit. Therefore, they cannot be used for storing vaccines.
- A dedicated refrigerator for vaccine storage is strongly recommended.
 - If vaccine is stored with other medications / blood products, consideration must be given to the frequency of access to these medications / blood products.
 - Frequent access may compromise the temperature stability of that storage unit.
- Trained, designated staff member(s) must be responsible for safe and effective vaccine storage and handling. For further information about vaccine storage and handling training refer to Question 17.
- As well trained designated staff member(s), must be responsible to monitor and document the minimum, maximum and current refrigerator temperatures, using an appropriate [AHS Vaccine Refrigerator Temperature Record](#); at minimum twice daily for each work day (schedule for checks to be determined at the discretion of the manager). The manual temperature log is required as an audit system to ensure cold chain is maintained between +2.0°C to +8.0°C as automatic monitoring systems have failed in the past.
- **Report any cold chain excursion immediately by contacting the department** that distributes your vaccine. As well, a Cold Chain Excursion Report must also be completed. For further detail refer to Question 5.

8. What do I do with vaccines that are outdated/expired, damaged or no longer required?

- In order to minimize vaccine wastage, vaccine should be monitored regularly for expiry dates and vaccine with shortest expiry date should be used first.
- Order vaccine to maintain an adequate supply for 2 to 4 weeks.

- For vaccines that are outdated/expired, do not use for patients and notify the department that supplied the vaccine. The department will advise on the return process of outdated/expired vaccines. This will allow vaccine to be reconciled in the provincial vaccine inventory management system. This is required for accountability of vaccine usage for the provincial immunization programs.
- For vaccines that are damaged, do not use for patients. Do not discard the vaccine. Notify the department that supplied the vaccine in order to request replacement and for directions on returning the damaged product. This is required for accountability of vaccine usage for the provincial immunization programs.
- For vaccines that are no longer required (e.g., vaccine for a specific patient who has been discharged or patient refusal), do not discard the vaccine. This is required for accountability of vaccine usage for the provincial immunization programs.
 - Notify your vaccine provider (AHS Pharmacy or AHS Vaccine Storage and Handling Zone Contact) to arrange for return. Your vaccine provider will provide details on how the vaccine will be returned including if the vaccine needs to be returned in specific insulated containers to maintain cold chain.

9. Can I borrow vaccine from another department or unit?

No, if vaccine is required for an individual patient it should be ordered through AHS Pharmacy or AHS Vaccine Storage and Handling Zone Contact using established processes. This ensures vaccines are:

- Administered to the correct individual for the appropriate reason.
- Monitored and cold chain is maintained at all times.
- Accounted for appropriately in the provincial vaccine inventory system.

Vaccine Ordering

10. How do I order vaccine for ward stock replenishment from AHS Pharmacy?

- For vaccines that are ward stock, pharmacy will replenish supplies (similar to medications that are kept as ward stock) on a regularly scheduled basis.
- Outside of regular ward stock replenishment, please send a request to pharmacy.

11. How do I order vaccine for individual patients from AHS Pharmacy?

- For vaccines for individual patients, a prescriber's order should be written for that patient and sent to pharmacy. Pharmacy will then supply the vaccine specifically for administration to that patient.
- If pharmacy does not stock vaccine required contact your AHS Vaccine Storage and Handling Zone Contact. For information on AHS Vaccine Storage and Handling Zone Contact refer to Question 17.

12. How do I order vaccine for ward stock replenishment from the AHS Vaccine Storage and Handling Zone Contact?

- If provincially funded vaccine is supplied by the AHS Vaccine Storage and Handling Zone Contact, follow up with your AHS Vaccine Storage and Handling Zone Contact. For information on AHS Vaccine Storage and Handling Zone Contact refer to Question 17.

Vaccine Storage and Handling

13. How is vaccine delivered to AHS sites?

There are two routes for vaccine delivery:

13.1 Vaccine delivery from AHS Zone Vaccine Depot to AHS Pharmacies:

- A designate from the pharmacy department will order vaccine using the Alberta Vaccine Inventory (AVI) system.
- AHS Zone Vaccine Depot receives the order, processes and will ship vaccine under cold chain to the participating pharmacy using established delivery processes.
- Pharmacy then provides this vaccine to:
 - Patient care areas for ward stock from AHS Pharmacy.
 - Patient care areas for individual patients from AHS Pharmacy.
 - Cold chain is maintained at all steps in the process.

13.2 Vaccine delivery from AHS Zone Vaccine Depot to AHS Patient Care Areas:

- When AHS Pharmacy does not provide provincially funded vaccines follow up with you AHS Zone Vaccine Storage and Handling Contact. For information on AHS Zone Vaccine Storage and Handling Contact refer to Question 17.
- Vaccines will be delivered from the AHS Zone Vaccine Depot to the specific unit under cold chain.

14. When vaccine is delivered, how will it be transported?

- In order to maintain the recommended temperatures of +2.0°C to +8.0°C vaccines will be transported and delivered using equipment that maintains these temperatures. A temperature monitoring device will be placed in the insulated container to track temperatures and ensure vaccine cold chain has been maintained during transport.

Vaccine Storage and Handling Equipment

15. How should the vaccine refrigerator be maintained and cleaned?

- Routine maintenance and cleaning of vaccine storage equipment helps to ensure optimal functioning, to maintain required temperatures, to extend the useful life of the appliance and to prevent bacterial and fungal growth. For specific information refer to the AHS Vaccine Storage and Handling Standard found at:
 - [Vaccine Storage and Handling AHS Webpage](#)
 - [Vaccine Refrigerator Cleaning/Maintenance Log](#)

Vaccine Storage and Handling Training and Education

16. Will there be any vaccine storage, handling, and cold chain management education, training, or support for my practice?

- Yes, AHS Province-wide Immunization Program has developed a Vaccine Storage and Handling Standard which contains additional resources as well as AHS Zone Vaccine Storage and Handling Contact information. This can be found at: <http://www.albertahealthservices.ca/info/Page14001.aspx>
- In addition an AHS Vaccine Storage and Handling e-learning course, which includes 7 modules, is available on [MyLearningLink \(MLL\)](#).
 - Training is required for individuals who administer vaccines or are involved in vaccine storage and handling.
 - These modules were designed to provide a vast variety of education related to this topic; departments and/or programs can review and select the modules most appropriate for their teams in order to meet the requirements of Alberta Health.
- A Practice Wise Session webinar on vaccine storage and handling can be found on the AHS Province-wide Immunization Program web site.

17. How do I reach my AHS Zone Vaccine Storage and Handling Contact?

- Your AHS Zone Vaccine Storage and Handling Contact can be found on the Immunization Program Standards Manual, Vaccine Storage and Handling Standard under Zone Contact at the link below: <http://www.albertahealthservices.ca/info/Page14001.aspx>