



Vaccine Storage and Handling Checklist: Be ready for your cold chain inspection

Each pharmacy that wishes to store and provide publicly funded influenza vaccine, as part of the Universal Influenza Immunization Program (UIIP) must meet the requirements set out in the Ministry of Health's document, [Vaccine Storage and Handling Guidelines \(March 2012\)](#). It is important that all pharmacists planning to participate in the UIIP familiarize themselves with this document and contact their local Public Health Unit with any questions.

Public health units will likely only have one opportunity to conduct the required cold chain inspection for your pharmacy. The checklist below is intended only as a reference tool to help you prepare to pass the inspection from the first time.

Temperature Monitoring Device

Vaccines must be stored between +2°C and +8°C. Ideally, a vaccine refrigerator will have temperatures reading between +4°C and +5°C so that there is some leeway should temperature fluctuations occur. The most common device used to monitor vaccine refrigerator temperatures is the "maximum-minimum" thermometer, which you may be able to acquire directly from your local health unit... *(not available through all public health units)*

- Temperature monitoring device is present and records maximum, minimum and current temperatures to the tenth of a degree.
- Thermometer sensor is located on the middle shelf inside an empty vaccine box to help stabilize temperature readings.
- Record the maximum, minimum and current temperatures for the recommended period of 7 days prior to inspection or storing vaccine in your refrigerator. Your local health unit may request temperature logs for a longer period.
- Temperatures must be documented at minimum twice daily and also include the date, time and initials of the person documenting
 - Aim to take the temperatures in the morning and afternoon
 - Log books are available through your local public health unit
 - Ensure the thermometer is reset after recording all temperatures and each time the fridge has been opened.

Materials and supplies

Specific materials and supplies are required to be present on the exterior of your vaccine refrigerator and/or in close proximity. These resources are available from your local public health unit.

- Temperature log book

- *How to monitor your refrigerator temperature magnet*
- *Protect your vaccines – Protect your patients poster*
- The most recent version of the *Vaccine Storage and Handling Guidelines*
- Insulated container with packing materials (i.e. ice packs, ice blanket) and an extra thermometer

Refrigerator organization and inventory management

It is important to ensure that you keep your vaccine inventory to what you anticipate you will administer in one month. Ordering vaccine frequently, rather than overstocking, will limit vaccine wastage in the event of a temperature excursion and ensure that vaccines are not wasted unnecessarily. Once vaccine has arrived at your facility, it cannot be returned to public health for redistribution.

Vaccines must be:

- Stored in the middle of the refrigerator away from the walls, floors and vents
- Stored on the internal shelves (i.e. not in the door or in the drawers)
- Organized by product (space is maintained between each vaccine product)
- Protected from light (as specified by the manufacturer)
- Rotated, ensuring those with the longest expiry dates are placed behind shorter-dated vaccines and previously exposed vaccines are used first
- Only current dated vaccine present in refrigerator
- Stored with other biologics (no food, beverages, medical and/or laboratory specimens). Only water bottles can be placed on empty shelves or in the door, to help stabilize temperatures.
- Removed only at the time of vaccine administration
- Marked with the date opened and discarded as per manufacturer's instructions (multi-dose vials)

Refrigerator specifications

There are three different refrigerator types that are used to store publicly funded vaccines: purpose-built, domestic and bar. Purpose-built refrigerators are preferred as no modifications are necessary to store vaccines; however, they are considerably more expensive than domestic and bar fridges. Domestic and bar fridges will require some modifications in order to safely store vaccine. Your local public health unit can provide consultation.

No matter which fridge you choose, the following requirements are reviewed during a cold chain inspection:

- The fridge is stored in a well-ventilated area, out of direct sunlight and away from external walls.
- The fridge is lockable or located in an area with limited access and/or a locked room.
- The electrical outlet is not easily accessible OR if easily accessible, has an MOH *Do Not Unplug* sticker posted beside the electrical outlet, OR is covered by a metal cage.

- Regular maintenance is performed to ensure optimal refrigerator function:
 - ice build-up is kept to < 1 cm
 - cleaned and dusted
 - seals are tight
 - door hinges are tight

Policies and procedures

All pharmacies storing publicly funded vaccine should have written policies and procedures to ensure staff awareness regarding vaccine storage and handling practices. All staff that has responsibilities under these policies and procedures must be familiar with the *Vaccine Storage and Handling Guidelines* (March 2012).

- Train all staff in procedures for checking temperatures, resetting thermometers and what to do when there is a temperature excursion (so that they are able to demonstrate it, when requested during the inspection)
 - Notify your local Public Health Unit immediately when temperatures go out of the +2°C and +8°C range and do not use the vaccine until Public Health has deemed the vaccine suitable for use.
- Appoint one person as the lead to monitor vaccine storage and handling practices.
 - Appointing a back-up is also important to ensure consistency.
- Develop a contingency plan in the event of refrigerator malfunction, power failure or other emergency.
 - Ensure all staff are familiar with this plan and it is kept close to the vaccine refrigerator.