

Influenza Vaccine Storage and Handling Guidelines for Health Care Agencies, Retirement Homes, Workplaces and Other Organizations Participating in the UIIP

Vaccines are sensitive biological substances that can lose their potency and effectiveness if they are frozen or exposed to heat and/or light.

The cold chain includes all of the materials, equipment and procedures used to maintain vaccines in the required temperature range of **+2°C to +8°C** from the time of manufacture until the vaccines are administered to individuals.

Health care agencies and workplaces play a critical role in protecting the health of Ontarians by ensuring that the administered influenza vaccines retain their potency and that vaccine wastage is reduced. In preparation for and during immunization clinics, proper vaccine storage and handling practices must be followed when storing, packing, transporting, and administering vaccines at the clinic.

Vaccine Storage prior to Clinics

- A hard-sided, insulated container with ice and/or gel packs and a temperature monitoring device (e.g. digital maximum-minimum thermometer, data logger) is required to pick up the vaccines from the vaccine supply source.
- To retain their potency and to be effective, vaccines must be stored and handled between **+2°C to +8°C** at all times.
- Always store vaccines on the middle shelves of the refrigerator and away from the walls, floors and cold-air vents.
- Never store vaccines in refrigerator door shelves or drawers as vaccines

may be exposed to warmer temperatures.

Packing a Cooler for Vaccine Transport to Clinics

- A hard-sided, insulated container is required for vaccine transport and temporary storage to ensure that vaccines are maintained between **+2°C to +8°C**.
- Icepacks come out of the freezer at a temperature of approximately **-20°C**. Keeping the icepacks at room temperature for a period of time (approximately 30-60 minutes) allows the ice at the core of the icepack to rise to **0°C**. This process is called “conditioning”.
- An icepack is adequately “conditioned” as soon as beads of water cover its surface. The conditioning process usually takes approximately 20 to 30 minutes.
- Vaccines are vulnerable to freezing if icepacks have not been correctly “conditioned”.
- Only pack the amount of vaccine you expect to use during the influenza immunization clinic.
- Pre-chill the insulated container by placing conditioned ice and/or gel packs inside for at least 1 hour.
- When packing the insulated container, ensure that the vaccines are packed with a temperature monitoring device.

- If a digital maximum-minimum thermometer is used, the probe/sensor must be placed in the centre of a vaccine box to get an accurate temperature reading.

Transporting Vaccines in the Community (Outside the Office Setting)

- A hard-sided, insulated container (which maintains the internal temperature within the +2°C to +8°C range with icepacks) are required for transporting vaccine to community clinics.
- Vaccine must never be transported or left in the trunk of a car due to the risk of exposure to temperature extremes.

Protecting Vaccines during Influenza Immunization Clinics

- Temperature readings in the insulated container should be monitored to ensure that temperatures are maintained within +2°C to +8°C.
- Record temperatures:
 - a) Before leaving the office with the insulated container,
 - b) Upon arrival at the clinic location, but prior to the immunization clinic,
 - c) At 1 hour intervals during the immunization clinic,
 - d) On completion of the clinic, however before transport back to the office, and
 - e) After return to the office, but before the vaccines are put back in the refrigerator.
- The temperature monitoring device should also be visually inspected each time the insulated container is opened..

- Every effort should be taken to minimize the number of times that the insulated container is opened during the immunization clinic.

As most insulated containers can only maintain the required temperature range for a maximum 4 hours, transport of vaccine for longer than 4 hours will require the ice and/or gel packs to be replaced with frozen conditioned ice and/or gel packs during the immunization clinic. Following these practices will ensure that the vaccine cold chain is maintained, and that unused vaccines that are returned to the refrigerator have not been exposed to temperatures below +2°C or above +8°C. Every effort must be made to ensure that the vaccine cold chain is maintained. The potency and efficacy of influenza vaccine may be compromised if the cold chain is not maintained. Clients who are immunized with exposed vaccines may need to be recalled by the health care practitioner and re-immunized to ensure that they are protected against the disease.

Contact your local health unit immediately for assistance whenever your influenza vaccine has been exposed to temperatures below +2°C or above +8°C. The health unit will assess all provincially funded vaccines that have been exposed to determine whether they can be used.

Please refer to the *Vaccine Storage and Handling Guidelines* (available at http://www.health.gov.on.ca/english/providers/program/pubhealth/oph_standards/ophs/progstds/pdfs/guide_vaccine_handling_storage_en.pdf) for additional information.