

Influenza Vaccine Storage and Handling Guidelines for Health Care Agencies and Workplaces

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

The vaccine 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 cooler with icepacks and a thermometer 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.
- Never store vaccines in refrigerator door shelves as vaccines kept in the door shelves will be exposed to warmer temperatures.

Packing a Cooler for Vaccine Transport to Clinics

- Hard-sided, insulated coolers are required for vaccine transport and temporary storage to ensure that the

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. 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 cooler by placing conditioned ice packs or coolant packs inside for at least an hour.
- When packing the cooler, ensure that the vaccines are packed with a temperature-monitoring device (e.g. a digital maximum-minimum thermometer). 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 in the trunk of a car due to the risk of exposure to temperature extremes.
- Temperature readings in the insulated cooler should be recorded once before leaving the office with the cooler.

Protecting Vaccines during Influenza Immunization Clinics

- Temperature readings in the insulated cooler should be recorded:
 - a) Upon arrival at the clinic location, but prior to the immunization clinic,
 - b) Every 3 hours during the immunization clinic (if the clinic is longer than 3 hours),
 - c) On completion of the clinic (before transport back to the office), and
 - d) After return to the office, but before the vaccines are put back in the refrigerator.
- Every effort should be taken to minimize the number of times that the cooler is opened 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 vaccine 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 outside the recommended values below +2°C or above +8°C (as per *Vaccine Storage and Handling Guidelines*, pg. 3). 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 (2006 or as current)* (available at

https://www.publichealthontario.ca/portal/server.pt/gateway/PTARGS_0_11863_9334_1181_14011_43/http%3B/ptpublisher.phportal.srv.ehealthontario.ca%3B7087/publishedcontent/publish/ssh/pho/communities/programs/infectious_diseases/vaccine_storage_guide_janurary_2006_2.pdf) for additional information.