

PROTECT YOUR VACCINES PROTECT YOUR PATIENTS

Immunizations help save lives, prevent serious illnesses and are recognized as one of the most effective public health interventions available today.

Vaccines have very specific storage and handling requirements that must be followed to maintain effectiveness. Most vaccines must be stored within +2°C to +8°C at all times or otherwise have very clear cold chain requirements. Vaccines exposed to temperatures outside of their specified range may have reduced potency, resulting in lack of protection against vaccine preventable diseases. By implementing and adhering to proper vaccine storage and handling practices, health care providers can help ensure vaccines administered retain their potency and reduce costly vaccine wastage resulting from adverse storage conditions (ASCs).

In 2019, refrigerator malfunctions at HCP facilities in York Region led to ASCs impacting:



\$190K+
worth of vaccine



4,457
doses of vaccine

To minimize the risk of vaccine exposure to temperatures outside of +2°C to +8°C and the subsequent time and resources required to mitigate such incidents, York Region Public Health is recommending all health care providers assess the suitability of vaccine refrigeration storage units and consider upgrading to purpose-built vaccine storage units to ensure vaccines are stored safely.

As per the [Ministry of Health Vaccine Storage and Handling Guidelines \(2012\)](#) purpose-built vaccine refrigerators are best at maintaining the required vaccine storage temperatures between +2°C to +8°C and preventing unintended heating or freezing of vaccines when combined with proper vaccine storage and handling practices. Although they are considerably more expensive than domestic and bar refrigerators, purpose-built refrigerators have many features that are ideal for vaccine storage and make them a worthwhile investment towards the goal of infectious disease prevention and patient safety.



	Recommended	Acceptable Depending on type	Not Recommended
Refrigerator Type	Purpose-built	Domestic*	Bar
Designed for	✓ Vaccine storage	✗ Food/drinks	✗ Food/drinks
Temperature variation tolerance	✓ Narrow	~ Varied	✗ Very Wide
Air circulation	✓ Constant, Fan-forced	✗ Intermittent	✗ Sporadic
Internal temperature distribution	✓ Even	✗ Uneven	✗ Very uneven
Defrost mechanism to prevent freezing	✓ Excellent	~ Varied	✗ Very poor
Automatic temperature recovery	✓ Rapid	~ Varied	✗ Delayed
Effects of changes in ambient temperature	✓ Minimal	~ Varied	✗ Significant

*Frost-free domestic refrigerators are acceptable but require significant modifications to store vaccines. Manual defrost and cyclic defrost domestic refrigerators are not recommended.

All refrigerators at Health Care Provider facilities must be inspected by York Region Public Health prior to storage of publicly-funded vaccines. Please contact the Vaccine Inventory Program at 1-877-464-9675 ext. 74033 for more details.

References: [Ministry of Health Vaccine Storage & Handling Guidelines \(2012\)](#); [Government of Canada National Vaccine Storage & Handling Guidelines for Immunization Providers \(2015\)](#)

