

COLD-CHAIN MANAGEMENT

Quick Reference

Cold Chain Management:

The processes to maintain optimal temperature conditions during the transport, storage, and handling of biological products, starting at the manufacturer and ending with administration of the product to the client. (SIM)

Quick tips:

- The optimal temperature for refrigerated vaccines is between 2°C to 8°C (36°F to 46°F)
- The optimal temperature for frozen vaccines is -15°C to -50°C (+5°F to -58°F)
- Protection from light is necessary for some products
- When a cold chain break has been identified after a vaccine has been administered, the duration and temperature of the exposure is taken into account to assess a product's viability.
 - o Serological testing or revaccination may be suggested
- Designate one staff member and a back up to be fully trained in vaccine storage and handling protocols and in procedures for managing cold chain breaks
 - o All staff members should be familiar with site's policies and procedures for vaccine storage and handling
- Follow steps to protect vaccines during immunization clinics
- Dedicated vaccine storage units must be selected carefully, used properly, and maintained appropriately to protect vaccine supplies
- Vaccines, appropriate ice/gel packs, and proper insulating material should be transported in insulated containers that have been qualified to ensure that they are capable of maintaining the vaccine temperature of 2°C to 8°C for the necessary duration
- Daily, weekly, quarterly, and annual maintenance tasks should be performed to ensure proper functioning of equipment
- Proper continuous temperature monitoring devices must have an out of range alarm, be capable of showing current temperatures as well as minimum and maximum temperatures, and be calibrated to be accurate within +/- 0.5°C (+/- 1°F)
- Temperatures on vaccine storage units must be checked and recorded a minimum of twice per day
- Do frequent environmental scans to prevent cold chain breaks due to human error
- Develop a back-up plan for power outage/ refrigerator failure
- Refer to SIM Chapter 9: **Section 4** for Management of Cold Chain Incidents
- Print out and post SIM Chapter 9: **Appendix 9.1** Store Biological Products Properly

References

Saskatchewan Immunization Manual: Chapter 9 – **Management of Biological Products**

National Vaccine Storage and Handling Guidelines for Immunization Provider 2015: **Section 1. Cold Chain**

Vaccine Storage and Handling (CDC, 2016): **Toolkit**

