

Policy Applies to:

Employees of Suite 22, Infection Prevention and Control Nurse, authorised vaccinators and Specialists of Suite 22.

Related Standards

- EQulP 1.5.2 Infection Control
- Infection Prevention and Control Standards NZS8134.3:2008
- National Standards for Vaccine Storage and Transportation for Immunisation Providers 2017

Rationale:

This policy describes requirements supporting cold chain management at Mercy Hospital Dunedin.

Objectives:

- To ensure the correct storage and temperature management of vaccines and cold chain equipment.
- To maintain the integrity of the product that requires cold chain management.
- To maintain certification of Cold Chain Compliance or Accreditation

Implementation:

Cold Chain Accreditation

Mercy Hospital must achieve Cold Chain Compliance (CCC) to be able to provide occupational immunisation programmes, such as the influenza programme.

The documentation from our CCC visit is located in the Cold Chain Influenza Vaccinator folder stored in the vaccine fridge room, located in Suite 22 and templates are held electronically at the following location:

F:\Clinical\Infection Prevention Nurse\Influenza\Cold chain docs

Influenza Vaccine requirements

Influenza Vaccine stock is pre-ordered and timed to arrive when it is nationally released.

Influenza vaccination is available to Mercy hospital staff in the first instance. Where resources and supplies are available vaccinations can be extended to credentialed specialists, Marinoto Clinic staff, and some on-site external service providers who are over 18 years of age.

Ordering and stock keeping of vaccines

We undertake a stock count monthly on the last Monday of the month and order vaccines as appropriate.

All vaccines are logged in the vaccine register including arrival date and time name, batch number, expiry date and total number in stock by the staff member who receives the order and unpacks the order into the cold chain fridge.

The vaccine register can be accessed in the Cold Chain Influenza Vaccinator folder on the 2nd floor, in Suite 22 and templates are saved electronically at the following location:

F:\Clinical\Infection Prevention Nurse\Influenza\Cold chain docs

The vaccine register is saved for 10 years.

Minimum and maximum levels of Influenza vaccine

Minimum influenza vaccine stock during Flu season is 10 doses

Maximum influenza vaccine stock 200 doses

Receiving and storing vaccines

All vaccinating staff must complete a cold chain orientation and know what to do when a vaccine order arrives from the distributor or hospital pharmacy.

- Vaccines are checked to ensure they have arrived within the indicated timeframe on the packaging.
- Vaccines are unpacked from the insulated delivery box as quickly as is practical on arrival.
- Vaccines are left in their original packaging, as this acts as insulation and protects vaccines sensitive to light.
- Vaccine stock is rotated so that those with earlier expiry dates are used first.
- Vaccines are placed in the refrigerator in such a way as to allow for air circulation.

National cold chain audit logger

All staff are aware they need to check each vaccine delivery for any national cold chain audit loggers and are aware that they will need to follow the instructions supplied.

Cold chain equipment – operation and maintenance

Mercy Hospital uses a pharmaceutical refrigerator to store vaccines.

All vaccinators are responsible for ensuring that the pharmaceutical refrigerator:

- is not used to store non-medical materials (e.g., food or lab specimens)
- is positioned in a well-ventilated room
- is away from direct sunlight or a heat source
- is at least 4 to 10 centimetres away from surrounding surfaces to allow air to circulate the condenser
- has nothing placed on the top of it, except the daily minimum/maximum recording charts
- has an independent power point, that is either hard wired into the wall and/or has a large bright notice advising to not unplug
- Has a surge protector if required by the refrigerator manufacturer.

The Southern District Health Board immunisation coordinator will be contacted for consultation when purchasing new equipment or if there are any questions regarding cold chain equipment.

Refrigerator temperature monitoring

The minimum and maximum cold chain refrigerator temperatures are recorded daily from the inbuilt temperature monitor. The minimum and maximum temperatures are reset after they have been recorded.

The minimum and maximum temperatures are recorded at the same time each working day (first thing in the morning is recommended to pick up any cold chain breaches that may have occurred overnight).

The current temperature records are kept on 2nd-floor fridge room in suite 22 and archived in the Influenza Cold Chain Folder with the Infection Prevention and Control Nurse and an electronic template is available in the <file F:\Clinical\Infection Prevention Nurse\Influenza\Cold chain docs>

Fridge daily readings are on the 2nd Floor Vaccine Fridge temperature recording form and stored on top of the fridge.

Fridges that store vaccines will have a data logger. The data logger is set to record the refrigerator temperature every 5 minutes. This is downloaded weekly, on Monday and reviewed alongside the daily minimum/maximum temperature for that week. Any unusual variations are discussed promptly with the SDHB immunisation/cold chain coordinator. The data logger must be downloaded in response to temperatures outside the +2°C to +8°C temperature range.

Saved data files for Log tag is F:\MercyF:\Mercy Shared\Audits\IPC Audits\Audit Tools\Vaccine Fridge. Log tag electronic data file will be saved in this location every Monday. The file is reviewed by Infection Prevention and Control Nurse (IPC Nurse) every Monday and printed for the vaccination files folder stored near the vaccination

The immunisation/cold chain coordinator will be contacted if the temperature goes below 2°C, is between 8°C and 12°C for more than 30 minutes or is more than 12°C.

The following staff can download the data logger:

Name	Designation
Sarah Hydes	IPC Nurse
Chantelle Chapman	Suite 22 Practice Nurse
<i>No data is downloaded over a shutdown period. No cold chain medications are to be stored during the shutdown period due to the inability to monitor fridge temperatures.</i>	

Vaccine Use

One vaccine pack is taken from the cold chain refrigerator and used within the hour. An additional pack is retrieved only once the previous pack has been used.

Evaluation:

- Temperature measurements of cold chain refrigerator.
- Incident Management system
- Weekly LogTag downloaded data

Associated Appendices

Appendix One: Maintenance and Replacement Plan and Schedule

Appendix Two: Process for Vaccine Stored Outside +2°C and 8°C Temperature Range

Appendix Three: Emergency Plan for Dealing with Equipment and Power Failures

Appendix Four: Ordering and Delivery of Cold Chain Vaccines

Associated Documents

The vaccine documents listed below provide detailed information to support our cold chain management and inform the development of this policy.

- *Immunisation Handbook*, www.health.govt.nz
- *National Standards for Vaccine Storage and Transportation for Immunisation Providers 2017* www.health.govt.nz
- *Annual Cold Chain Management Record* www.health.govt.nz
- Medsafe vaccine data sheets www.medsafe.govt.nz/Medicines/infoSearch.asp)
- Immunisation Advisory Centre: The Essential Data Logger Fact Sheet. www.immune.org.nz