Taupō Medical CENTRE LIMITED

COLD CHAIN MANAGEMENT POLICY FOR TAUPO MEDICAL CENTRE

Taupo Medical Centre 117 Te Heuheu Street Taupo Phone 07 3784080 Email: nurse@taupomed.co.nz or sp@taupomed.co.nz (Nurse Lead) **Cold Chain Accreditation expiry date:** 20/10/25

Cold Chain policy date:	Policy annual review date:
11/03/24	11/03/2025

This policy deals with **Taupo Medical Centre's** cold chain management, pharmaceutical fridge management, vaccine receipt and storage, staff responsibilities, transporting within cold chain, data logger download and details for vaccines as per the National Immunisation Schedule and COVID-19 vaccines.

Contacts for Cold Chain Management		
ROLE	NAME	CONTACT DETAILS
Immunisation coordinator / cold chain coordinator	Janet France-Goss Janet.france-goss@lakesdhb.govt.nz Lorna Holdsworth lorna.holdsworth@lakesdhb.govt.nz	027 280 3024 027 702 0478
IMAC Regional Advisor	Renee Stewart renee.stewart@auckland.ac.nz	027 246 7014
Designated Staff with overall responsibility for cold chain management		
First Cold chain lead for Clinic (Authorised Vaccinator or GP or Pharmacist vaccinator)	Sarah Poupard (Covid Lead + Cold Chain) sp@taupomed.co.nz	Taupo Medical Centre 07 3784080 or 027 649 9196
Second Cold chain lead	Sue Martin sue.martin@taupomed.co.nz	Taupo Medical Centre 07 3784080 or 021 258 7487
Back up Provider details		
Pinnacle Health	Level 1, 95 Te Heuheu Street, Taupo	Sonja 021 948 920 Hannah 0272030287
Taupo Hospital Pharmacy	Kotare St, TAUPO	07 376 1000 ext 5838 A/h request on call pharmacist through duty manager

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COLD CHAIN ACCREDITATION

We are committed to ensuring safe storage of vaccine and all equipment, system and processes are compliant with the National Standards for vaccine storage and transportation for immunisation providers 2017 (2nd edition).

SUPPORTING DOCUMENTS

The vaccine documents listed below provide detailed information to support cold chain management around the National Immunisation schedule and COVID-19 vaccination programme and are available for staff to review and become familiar with, they are stored in the cupboard in Room 2.

- The **Immunisation Handbook,** available online https://www.health.govt.nz/our-work/immunisation-handbook-2020
- **National Standards for Vaccine Storage and Transportation for Immunisation Providers 2017 (2nd edition) updated Sept 2019**. This is available on the Ministry's website at: https://www.health.govt.nz/publication/national-standards-vaccine-storage-and-transportation-immunisation-providers-2017
- **2021 Addendum to National Standards for Vaccine Storage and Transportation for Immunisation Providers 2017 (2nd edition): COVID-19 Vaccine Immunisation Programme**. This is available on the Ministry's website at: https://www.health.govt.nz/publication/2021-addendum-national-standards-vaccine-storage-and-transportation-providers-2017-2nd-edition
- Annual Cold Chain Management Record available on Manatū Hauora Ministry of Health website www.health.govt.nz/coldchain for download and printing
- Medsafe vaccine data are available from https://medsafe.govt.nz/Medicines/infoSearch.asp
- Te Whatu Ora COVID-19 vaccination Operating Guidelines, https://www.health.govt.nz/covid-19-novel-coronavirus/covid-19-vaccines/covid-19-vaccine-information-health-professionals/covid-19-vaccine-operating-and-planning-guidelines

VACCINE REQUIREMENTS, STOCKTAKING & ORDERING

The Clinical lead / Cold Chain lead will be aware of how much vaccine stock is required at any one time, based on demand and consumer population served.

To avoid overstocking and to ensure stock rotation, a minimum stock of National Immunisation Schedule vaccines of **two** weeks is required, and no more the **four** weeks' worth of stock should be held at any given time.

The minimum and maximum stock levels are: (This is worked out using the tables in the National Standards, edit/add to tables as needed for your population and for special groups).

	DTaP-IPV-HepB/Hib	PCV	RV	Hib	MMR	Varicella	DTaP-IPV	HPV
Minimum	24	31	16	8	16	8	8	20
Maximum	54	71	36	16	36	18	18	59
	Tdap	Influenza - adult	Influenza - child	Shingrix	MenB			
Minimum	30	x	x	10	x			
Maximum	60	x	x	40	x			

	Comirnaty (30mcg)	Comirnaty (15/15mcg)	Comirnaty (10mcg)	Comirnaty (3mcg)	Nuvaxovid (5mcg)
Minimum	x	x	x	x	x
Maximum	x	x	x	x	x

NATIONAL IMMUNISATION SCHEDULE VACCINES

We undertake a stock count 2 times per month on the second and fourth Tuesday of the month and order vaccines as appropriate.

For online schedule vaccine order forms, go to the regional distribution stores' National Immunisation Schedule Funded Vaccines website www.fundedvaccines.co.nz/vaccines

Healthcare Logistics distributes influenza vaccine orders to immunisation providers once the vaccine becomes available at the start of the funded influenza programme (from 1 April each year). Providers can order influenza vaccine from the Healthcare Logistics website (www.hcl.co.nz). For more information about ordering influenza vaccine, see www.influenza.org.nz.

All vaccines are logged in the vaccine register which is kept in the cold chain folder in Room 2.

Template for ordering vaccines and stock take of vaccines is on computer, a hard copy of the vaccines ordered, and batch numbers and stock are kept in cold chain folder in Room 2.

S:\Clinical\Nurses\Cold Chain 2024– then access IMMS Stocktake form.

Vaccines ordered via CIR portal.

Stock management, demand, forecasts and allocation are monitored by in the CIR Inventory portal.

Vaccine stocktake is completed daily and entered electronically into the COVID Immunisation Register (CIR) Inventory portal. Vaccine demand is estimated on daily reporting of:

- Stock on hand.
- Stock movements including ordering, transfers, wastage, consumption and stock adjustments.
- Stock consumption.
- Stock waste.

Refer to the current version of the COVID-19 Vaccine Operating Guidelines for details.

RECEIVING AND STORING VACCINES

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

Check that the vaccine delivery has been delivered to correct address (is it for your site?)

Check the vaccines have arrived within the designated timeframe, are what was ordered and have a reasonable expiry date.

Check whether any vaccines have monitoring devices included and follow any instructions provided EXAMPLE - include process for receiving Covid-19 vaccinations as well as funded/non-funded vaccines.

Where no monitoring device is included in the delivery, check the vaccines for any visible signs of exposure to high or freezing temperatures (EXAMPLE -melted ice packs, damp packaging or ice visible on packaging or inside the vaccine).

Record vaccine details (including date received, batch number and expiry day, month and year) in a vaccine register/log or stock management system.

Document the date the vaccines arrived at the provider on the vaccine box or have a documented system for identifying when vaccines were delivered.

Leave the vaccines in their original boxes and place in the pharmaceutical refrigerator.

Store vaccines in columns to allow optimum air circulation. Maintain a gap of at least 25 - 30 mm between the vaccine boxes and the fridge walls and back plate. Do not store vaccines in the Perspex or wire container at the bottom of fridge.

If there are concerns about the condition of the delivered vaccines, quarantine the vaccines in the pharmaceutical refrigerator.

- label the vaccines as not for use until a decision on whether to use the vaccines has been made.
- notify the regional distribution store (or Healthcare Logistics in the case of influenza or non-funded vaccines)
- contact your immunisation coordinator.
- do not return vaccines until you have authorisation to do so from the distributor.
- advise coordinators of all returned vaccines

COVID-19 vaccines:

- The 'count' should be checked off by a second person for an additional layer of security.
- It is good practice to 'sign out' these vials when removed from the fridge for use, allowing a running total of vials which should match stock on hand in the fridge.
- Where there is more than one box in stock a green sticker will be placed on the first box to identify which one should be used first

Check whether any vaccines have monitoring devices included and follow any instructions provided.

When receiving the Covid vaccine please check the following.

1. Vaccines are for Taupo Medical Centre
2. Temperature loggers are within range.
3. Remove vials from box and inspect that there has been no leakage or tampering of vaccine.
4. Record time of delivery, date, and signature of person on both the box of vaccines and paperwork
5. Place vaccines in vaccine fridge in Room 2.
6. Record on CIR vaccines have arrived and record in Covid Register (folder on top of fridge).

COVID-19 VACCINES:

Refer to the current version of the COVID-19 Vaccine Operating Guidelines for details.

DISPOSAL OF NATIONAL SCHEDULE VACCINES

Before disposing of vaccines (other than for expiry reasons), we will contact the local immunisation/cold chain coordinator. Refer to National Standards for Vaccine Storage and Transportation for Immunisation Providers 2017 for more information on vaccine disposal and returning vaccines for destruction.

DISPOSAL OF VACCINES AND CONSUMABLES ORDERED VIA CIR PORTAL

Disposal of consumables

Consumables should be disposed of according to existing procedures (e.g. disposal into sharps bin and/or biohazard bags). Follow your local procedures to arrange collection of the sharps bin.

Disposal of damaged, empty and expired vaccine vials

If a vial is expired, broken, damaged or not suitable for use, confirm destruction with clinical lead (who may obtain further advice from 0800 IMMUNE).

The process for destruction and disposal of expired vials is as follows:

1. Remove the lid.
2. Deface the vial.
3. Place the vial(s) in the Interwaste vial disposal bin.
4. Record the wastage in the CIR Inventory.

Interwaste will provide a 20-litre-sized container in which to dispose expired (full), empty, broken or damaged vials. Expired vials should be defaced before disposal. When the container is almost full, contact Interwaste on 0800 102 131 to arrange for pick-up. Interwaste will deliver a new disposal container at the same time and remove the existing container. Interwaste will destroy the vials in an appropriate manner.

Ensure the lid of the Interwaste disposal container remains closed when not in use.

Disposal of vaccines drawn up but not administered and empty vaccine syringes

Vaccine doses that have been drawn up but not administered must be disposed of in the sharps bin provided. Similarly, empty/used vaccine syringes should be disposed of in the sharps bin. Seal and remove sharps bins when filled and store them in a secure area for transportation and final disposal.

Disposal of vaccine packaging

Ensure all packaging the vaccine is sent in is destroyed to ensure packages cannot be replicated. Once all vials in a packet have been used, black out all vaccine-related information on the label using a permanent marker. The vaccine box must be securely destroyed. Tear off the lid of the cardboard vaccine box which has the label on it and place in the shredding bin, secure document destruction bin or biohazard bag. The remainder of the non-identifiable cardboard box can be placed in normal waste.

TEMPERATURE MONITORING AND DATALOGGER REVIEW

All staff are responsible for ensuring that the vaccines they administer are stored correctly and are expected to receive cold chain orientation.

- Minimum requirements for monitoring refrigerators that store vaccines. National Schedule Immunisation vaccines and / or COVID-19 vaccines are two monitoring systems, run on two different sensors. This is usually min/max thermometer which is checked daily and a continuous (24 hour) Matos Wireless monitoring system which is reviewed weekly.

Daily

- The cold chain staff record minimum and maximum daily fridge temperature, from the inbuilt temperature monitor, on each vaccine fridge and document in the Annual Cold Chain Management Guide (ACCMR) every morning the clinic is open at the same time each day. The minimum and maximum temperatures are reset after they have been recorded. Each fridge has its own ACCMR with name of fridge written clearly on top. All vaccinating staff can do this recording. Directions are contained in cold chain folder on how do this.
- The current temperature records are recorded in each of the Annual Cold Chain Management Records (ACCMR) which is kept on top of the fridge. Ensure all relevant clinical staff are trained on how to check and reset the minimum/maximum thermometer and how to record the minimum and maximum temperatures and know what to do if the temperature is outside the +2°C to +8°C range.

Weekly

- Review the Matos wireless continuous monitoring data weekly and review alongside the daily minimum/maximum temperature readings.
- Any unusual variations are discussed promptly with the immunisation/cold chain coordinator.
- The person completing the Matos wireless continuous temperature review should also note this on the ACCMR that is kept on top of the fridge. If there are any temperatures that appear out of the +2˚C to +8˚C range, the person doing the Matos wireless continuous temperature review should check the ACCMR for those dates to see if any vaccines had arrived or a vaccine stocktake undertaken, which may account for the temperature deviation.

All temperature records whether manual or electronic must be stored for 10 years.

Cold Chain Breach

- The data logger is downloaded and reviewed in response to any temperature breach outside +2°C to +8°C range. The local immunisation advisor must be notified to advise next steps.
- All vaccinating staff can review the datalogger information. The Clinical Lead is the person primarily responsible for reviewing the datalogger on a weekly basis on Mondays or the first day after any period of being of being closed and if away, will nominate someone to do this in their place.

The following staff have been trained to review the Matos wireless continuous temperature data (minimum of two staff required, all vaccinators should know how to do this, and it must be included on the new clinical staff orientation process):

Name	Designation	Date
Sarah Poupard	Cold Chain Lead	11/03/2024
Sue Martin	Cold Chain Lead	11/03/2024

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COLD CHAIN EQUIPMENT- OPERATION AND MAINTENANCE

Taupo Medical Centre uses two pharmaceutical refrigerator(s) to store vaccines. The fridge(s) are:

1)	Matos Aria 374 R Litre Glass Door Fridge	Purchased 10/04/22	SN:100003754454
2)	Matos Aria Eco 300 R/G	Purchased 16/08/22	SN: 10000357758

Moving the fridge/s from where it was first assessed for CCA or obtaining new equipment such as dataloggers or chilly bins, will require an updated policy to be submitted and signed off.

All vaccinators are responsible for ensuring that the pharmaceutical refrigerators:

- are not used to store non-medical materials (e.g., food or lab specimens)
- are positioned in a well-ventilated room, with ambient temperature monitoring / recording.
- are away from direct sunlight or a heat source.
- are at least 4 to 10 centimetres away from surrounding surfaces to allow air to circulate around the condenser.
- have nothing placed on the top of it, except the daily minimum/maximum recording folder. In OT baby-scales on the fridge.
- have an independent power point with a surge protector
- the fridges are serviced on an annual basis by a technician from Rollex Medical NZ Ltd. This is due May 2024.
- are not more than 10 years old.
- the Clinical Lead will contact our immunisation coordinator when purchasing new equipment or if we have any questions about cold chain equipment.

Equipment		Location in clinic	Maintenance and replacement plan
Taupo Medical Centre - 117 Te Heuheu Street Taupo			
Refrigerator 1: Date purchased: SN: Replacement of fridge by:	**Matos Aria 374R** Glass Door Fridge 10/04/22 100003754454 10/04/2032	Room 2	Yearly maintenance check by Rollex Medical NZ Ltd Due: 16/05/2024 **Any issues with fridge call 24/7 service** nzservice@rollexmedical.co.nz 09 274 0707 A/H 0508 765 539
Refrigerator 2: Date purchased: SN: Replacement of fridge by:	**Matos Aria Eco 300 R/G** 16/08/22 10000357758 16/08/2032	OT Area	
In-built minimum and maximum monitoring device		Vaccine refrigerator	Probe is in the fridge and is set to record temperatures at 5-minute intervals. Daily min/max checks completed by 9am and recorded in the Annual Cold Chain Management Record Sheet
Electronic temperature monitoring devices: MATOS Wireless monitoring		Vaccine refrigerator	Expected replacement date: with fridges in 2032. https://www.matosmonitoredsolutions.com/solutions/real-time-temperature-monitoring/ Username: TaupoMC Password: matos
Defrosting Refrigerators			Vaccine fridge is self-defrosting

<table>
<tr><th>Equipment for portable storage and transport</th><th>Location in clinic</th></tr>
<tr><td>Chilly bin/s:
Polystyrene boxes labelled TMC and Bin Number</td><td>Check 6 monthly for integrity, wear and tear, and replace as necessary.
Located in storage room in Kaimanawa Wing and in the loft above reception</td></tr>
<tr><td>Ice packs:
Cool-Pac Ice Pads/Chill Wrap</td><td>The Chill wrap / Cool-Pac pads are kept frozen in the freezer in staffroom in Administration Building tearoom.
Spare Chill Wrap in bottom bed drawer in Room 2.</td></tr>
<tr><td>Insulation material
Foil insulation, shredded paper in mesh bags</td><td>Kept in polystyrene boxes.
Shredded paper has been placed in mesh bags for easier packaging of vaccines.
Insulation material replaced post cold chain breach as needed</td></tr>
<tr><td>Data logger/s</td><td rowspan="4"><u>Maintenance and Replacement Plan:</u>

These devices are set to PUSH to START for when needed in cold chain failure they are not used in the vaccine fridges.

Log Tags are kept in Room 2 – 2nd drawer in bed.
Each one is labelled Chilly Bin 1, 2 or 3
Spare CR2032 are also located with the Log Tags.

Data loggers will be replaced on a 5-yearly schedule.
Immunisation Coordinators will undertake annual temperature validation of the data logger. The Immunisation coordinator will liaise with TMC to set a date for this.
If there are any concerns the data logger will be sent away for calibration by the service provider. A loan log tag is available from the Immunisation Coordinator if required.</td></tr>
<tr><td>Type – Log Tag 1
Model – TRED30-16R
Serial Number 6061000662
Date Purchased: date 01/04/2020
Expected Replacement Date: date 01/04/2025</td></tr>
<tr><td>Type – Log Tag 2
Model – TRED-30-16R
Serial Number – 6061002322
Date Purchased: date 01/04/2020
Expected Replacement: date 01/04/2025</td></tr>
<tr><td>Type – Log Tag 3
Model- TRED30-16R
Serial Number – 6061024634
Date Purchased – 06/04/2021
Expected Replacement: 06/04/26</td></tr>
<tr><td>Digital Thermometers:
2x Lab Thermometers: LT-102
Purchased from Bell Technology:
Ph: 09 525 1875
Date of Purchase unknown</td><td>The LT-102 thermometers not used in the vaccine fridges. They are for use when transferring vaccines in the case of a cold chain failure.
Bell technology advise calibration is not necessary for these devices.
Battery must be checked 6 monthly.
Spare CR2032 are also located: Room 2 in 2nd drawer under bed.</td></tr>
<tr><td colspan="2">All Data loggers have visible external display for offsite clinics</td></tr>
<tr><td colspan="2">If the refrigerator or other equipment is moved, this table must be updated.</td></tr>
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MONITORING AND PREPARING CHILLY BINS FOR OFFSITE TRANSPORTATION AND STORAGE

Before transporting vaccines offsite, the chilly bin must be pre-cooled, and the vaccines packed appropriately.

How to pre-cool the chilly bin

- Remove the required amount of ice packs from the freezer where they are kept and remove any ice build-up.
- Place half the amount of ice packs on paper towels on a bench or desk to condition it (ie allow 'frost' to form and melt off).
- Place the bottom insulation matting in the empty chilly bin.
- Place the data logger inside.
- Place the top insulation matting in the chilly bin covering the probe and the bottom insulation matting.
- Place the remaining ice packs (those that aren't conditioning) in the chilly bin on top of the insulation matting and close the chilly bin.
- Start the data logger (with a 15-minute start delay, avoiding initial over temperature alarms).
- After 15 minutes, review, document and begin to monitor the temperature in the chilly bin.
- Once the temperature is below +5°C assess the stability of the temperature. When the temperature changes less than +0.5°C between 3–5-minute readings, it can be considered stable enough to add the vaccine.
- When the temperature has stabilised open the chilly bin and remove the ice packs, the top insulation matting and the probe and pack the vaccine you will be transporting into the chilly bin.
- Document how long the precooling took so that we can allow for this when transporting vaccines offsite.

Packing vaccines for transport or storage in chilly bins

- Pre-cool the chilly bin as described above. However, cooling can take longer if it is a large chilly bin. This is why a test of how long the chilly bin takes to cool, must be done prior to ANY vaccine taken offsite so that the cooling time is already known.
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- Place the boxes of vaccine to be relocated into the pre-cooled chilly bin, sitting on the bottom insulation matting. The boxes of vaccine can be packed in any orientation and in multiple layers, leaving space in the middle for data logger.
- Place the data logger in between two boxes in the middle, ideally with the probe level or just below the top of the boxes of vaccine or place the probe into a box of vaccine which is in the middle top position of the boxes of vaccine.
- Some data loggers sit on top of the chilly bin as they have a visual temperature display, and the probe is fed through a hole in the chilly bin lid. If this is the case, place the probe into a box of vaccine.
- Cover the boxes of vaccine and the data logger with the insulation matting and then add the ice packs that have been conditioning for at least 15 minutes on top of insulation. Wipe these conditioned ice packs dry before use. Make sure the vaccines are not frozen by contact with or exposure to the ice packs.
- Close the chilly bin and secure the lid using the clips on the container.
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- Complete the relevant paperwork, the 'Off-Site Immunisation Chilly Bin Temp Log'. Must have a hard copy of these documents every time vaccine is transported away from base. Temperature must be recorded every 20-30 minutes while chilly bin holds vaccine.
- Do not start travelling until the loaded chilly bin temperatures have stabilised at between +2°C and +8°C.

- Note: if you need to leave your base before the chilly bin temperature is stable you must continue to monitor the temperature every 3-5 minutes until it is stable (and document this).
- Place the ice packs that were used for pre-cooling back in the freezer. It is strongly recommended to take extra ice packs out for the day in a separate chilly bin in you need further ice packs to reduce the temperature.

Note: It may be necessary to place ice packs and/or insulation material around the side of the insulated container if it is a large space; you will need to experiment to find the best combination for your equipment. Any chilly bin (small or large) may require material e.g. cardboard, shredded paper or matting, to protect vaccine boxes from moving around whilst travelling.

Ambient temperature: all providers must have a system in place for measuring and recording the ambient air temperature when storing COVID vaccines at room temperature, this includes in Outreach & drive thru settings.

HANDLING TEMPERATURE BREACHES OF NATIONAL SCHEDULE IMMUNISATION VACCINES

This process is taken from the National Standards for Vaccine Storage and Transportation 2017

Vaccine temperatures are recorded outside required temperature range (below +2°C or above +8°C) *

*When one-off temperature variations, involving National Schedule Immunisation Vaccines, of up to 12°C for less than 30 minutes occur for known reasons (eg, stocktake), you do not need to notify the immunisation/cold chain coordinator; however, you must document the variations in your records. **This does not apply to buffered probes eg probe in glycol solutions.**

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Quarantine the vaccines.

- Label and quarantine all the vaccines involved.
- Ensure the vaccines are kept within the required temperature range of +2°C to +8°C. Seek alternative storage arrangements, if required, as per your cold chain policy.
- Communicate with colleagues to ensure the vaccines are not used until further notice.
- Document the incident.

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Confirm and define the incident.

- Review the refrigerator temperature records and download information from the data logger to clarify the cold chain before this event.
- Confirm current refrigerator temperatures.
- Check the refrigerator's service history to date.

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Collect as much information as possible.

- What monitoring has taken place (maximum, minimum and/or current thermometer readings)?
- For how long were the vaccines stored outside the required +2°C to +8°C range (minutes, hours or days)?
- Identify all vaccines stored in the refrigerator, the length of time they were stored, usual stock turnover and expiry dates.
- Identify any previous events involving these vaccines where the temperature has gone outside the required +2°C to +8°C range.
- Is it likely that any individuals received a compromised vaccine?

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Contact your local immunisation/cold chain coordinator with all the available information and work with them through to resolution. Ensure that you fully document the incident and outcomes.

HANDLING TEMPERATURE BREACHES OF COVID 19 VACCINES

- Please refer to coloured table below for COVID vaccine temperature breaches of +8°C to +30°C (up to +25°C only for Nuvaxovid)
- Label the vaccines 'not for use'.
- If the refrigerator is currently running within the +2°C to +8°C range, leave the labelled vaccines in your refrigerator.
- If the refrigerator is not within the +2°C to +8°C range, look for obvious reversible causes (door open, power interruption).
- Contact your Immunisation Coordinator or Regional Immunisation Advisor for advice and further actions.
- Document the steps and actions you have taken.
- If advised to by your local co-ordinator or CL, pack your labelled vaccines into a chilly bin, with a temperature monitoring device and consider transporting to your back-up provider (see table in section 9 of this policy for details).

Shelf Life of Covid-19 Vaccines according to type:

Vaccine:	Comirnaty (30mcg & 15/15mcg) 12+Yrs	Comirnaty Paediatric (3mcg) 6mths to 4yrs Comirnaty Paediatric (10mcg) 5-11yrs	Novovax Nuvaxovid
Refrigerator (+2°C to +8°C)	10 weeks with expiry printed on box label	Undiluted 10 weeks with USE BY on box label	6 months
Room Temp (+2°C to +30°C)	Stable in vial for 12 hours from the first puncture. (6 hours in a syringe)	Stable for 2 hours prior to adding diluent, 12 hours from adding diluent. Doses kept in syringes may be stored for up 6 hours cumulatively.	Opened: up to 6 hours (+2°C to +25°C only)
Use by (i.e.: administer to patient)	Stable in vial for 12 hours from the first puncture. 6 hours in a syringe.	Must use by 6 hours from time diluent added (+2°C to +30°C)	Must be used within 6 hours from first opening vial

EMERGENCY PLAN FOR HANDLING POWER OR EQUIPMENT FAILURE

In the event of a power failure and/or equipment failure, the refrigerator will be monitored using an independent digital thermometer or data logger with a visible display and the door kept closed. If the power failure extends beyond 4 hours or the internal refrigerator temperature is above +8ºC seek alternative refrigeration.

Event	Action	Responsibility
Power failure or equipment failure and temperature rises above +7.5˚C	• Pre-cool chilly bin ready for transport to back up provider. • Contact immunisation coordinator. • Pack vaccines for transport in accordance with the National Standards for Vaccine Storage and Transportation for Immunisation Providers 2017 2nd Ed and take with a data logger to back up site.	Sarah Poupard Geniver Martin Sue Martin All nurses and MCAs are trained in Cold Chain Failure.
Equipment failure and refrigerator temperature is below +2ºC degrees	• Quarantine vaccines in the refrigerator, download the data logger. • If datalogger temperature confirms temperatures below +2˚C, prepare to move your vaccines to your alternative refrigeration site as listed below. • Contact immunisation coordinator for further advice.	Sarah Poupard Geniver Martin Sue Martin All nurses and MCAs are trained in Cold Chain Failure.
If the refrigerator temperature is above +8ºC	• Quarantine the vaccines. • Download the data logger. • Discuss with immunisation/cold chain coordinator. • Pack vaccines for transport in accordance with the National Standards for Vaccine Storage and Transportation for Immunisation Providers 2017 2nd Ed, and take with a min/max thermometer to:	Sarah Poupard Geniver Martin Sue Martin All nurses and MCAs are trained in Cold Chain Failure.

Back up provider details:

Pinnacle Health Level 1, 95 Te Heuheu Street, Taupo Sonja 021 948 920 or Hannah 0272030287	**Taupo Hospital Pharmacy** Kotare St, TAUPO 07 376 1000 ext 5838 A/h request on call pharmacist through duty manager

Before transporting vaccines, check the alternative facility has power and storage capacity for the vaccines and is in a secure location.

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POLICY REVIEW

All new staff will be orientated to this cold chain management policy and our cold chain process. Staff will sign the back page to acknowledge that they have received cold chain specific training and information.

This cold chain policy is reviewed and updated annually or when changes are made to designated cold chain staff, equipment or processes (whichever comes first).

The immunisation/cold chain coordinator will be informed:

- when there is a significant change in staff responsible for cold chain management
- before purchasing a new pharmaceutical refrigerator or cold chain equipment, including chilly bins and temperature monitoring equipment
- in the event of a cold chain breach before disposing of vaccines
- for cold chain management advice.

The undersigned accept this document as this service's cold chain management policy.

Signature of 1st designated staff member:		**Signature of 2nd designated staff member:**	
Position	Authorised Vaccinator	Position	Authorised Vaccinator
Name	Sarah Poupard	Name	Sue Martin
Date policy approved: 11/03/2024.			
Date of next cold chain policy review:	11/03/2026.		

Clinical staff who have been orientated to the cold chain process and policy for this service. All vaccinators working at this site under this cold chain policy have read and understood this document.

By signing this, I acknowledge that I have received training and information in relation to Taupo Medical Centre's cold chain policy and processes.

Nurse	Designation	Date	Signature
Sarah Poupard	CL – Authorised Vaccinator		
Sue Martin	CL – Authorised Vaccinator		
Geniver Martin	CL – Authorised Vaccinator		Currently on Maternity Leave
Brooke McCarty	Authorised Vaccinator RN		
Jean Chegwidden	Non- Clinical Nurse		
Lorraine Savage	Authorised Vaccinator RN		
Jane Maisey	Authorised Vaccinator RN		
Michelle Morley	Authorised Vaccinator RN		
Hellene Ross	Authorised Vaccinator RN		
Caitlin Macgee	Authorised Vaccinator RN		
Olya Halm	Authorised Vaccinator RN		Currently on Leave
Erin Lempriere	Non-Vaccinator RN		
Julie Mudford	Non-Vaccinator RN		
Whaiora Walker	Non-Vaccinator EN		
Abby Carson	Non – Vaccinator RN		
Ange Guy	Non-Vaccinator RN		
Sarah Izett	Non- Vaccinator Student Nurse		Student Nurse
Judith Tunnicliffe	Non- Vaccinator RN		Casual Nurse

Appendix 1. Cool Project and Chilly Bin Preparation

https://www.immune.org.nz/sites/default/files/resources/Written%20Resources/COOL%20Project%20Stakeholder%20Summary%20Report%20including%20packing%20protocol_FINAL%20December%202017%2010%20Jan%202018%20with%20probe%20price%20Feb%202018.pdf

Appendix 2 -Instructions on how to use, download and review the data logger and Matos Wireless Monitoring

See Cold Chain Folder

Appendix 3 Vaccine documents

As per best practice, access to Medsafe data sheets for vaccines is available online as needed from:
https://www.medsafe.govt.nz/

Appendix 4: Patient demographic stock min/max level based on

The number of:

1065	Children aged under five years (including casuals 1784)
290	Children aged 11 years[1,2](including casuals 501)
244	Children aged 12 years[1] (including casuals 427)
X	Adolescents aged 14 years who have not received HPV in a school-based programme
516	Adults aged 45 and 65 years (45Y 277 and 65Y 239 & 45Y C 394/65YC 342)
3762	Adults aged 65 years and older (Influenza) (including casuals 5143)
X	Individuals eligible for influenza vaccine (those with medical conditions & pregnant women

[1] Depending on whether there is a school-based programme delivered in your region.
[2] When ordering Tdap, take into consideration the number of vaccines you require for those who are pregnant.

Appendix 5: IMAC Cold Chain Resources

https://www.immune.org.nz/vaccines/cold-chain

Taupō Medical
CENTRE LIMITED

Extra Contact Numbers

Immunisations Coordinator:

Janet France-Goss – 027 280 3024

Janet.france-goss@lakesdhb.govt.nz

Lorna Holdsworth – 027 702 0478

lorna.holdsworth@lakesdhb.govt.nz

Contact for Cold Chain Problems:

As above + IMAC Regional Advisor

Renee Stewart – 027 246 7014

Renee.stewart@auckland.ac.nz

Local GP Practice Contact Numbers:

Taupo Health Centre – 07 3787060

Wellspring Medical – 07 376 5575

Pihanga Health Centre – 07 384 7576 (Turangi)

Health Reporoa – 07 333 7301 (nurse led clinic) or reporoasms@raphs.org.nz

Mangakino Health Centre - 07 882 8299

Whiria Te Tangata – 0800 944 742 or 027 395 7648 or whiria@wtttm.maori.nz

Local OIS Service:

Pinnacle – 07 376 0060

Send referrals either via BPAC or to Taupo.Programme@pinnacle.health.nz

Local Well Child Providers:

Plunket – 0800 184 803, new referrals email to email lakes.admin@plunket.org.nz

Tuwharetoa Health – 07 384 2882, new referrals email to www.thct.co.nz

Oranga Tamariki for potential concerns re child abuse:

Phone 0508 326 459 in an emergency always call **111,** email contact contact@ot.govt.nz

Domestic Violence Support:

0800 733 843, in an emergency always call **111**