



Health

Hunter New England
Local Health District

Cold Chain Requirements in General Practice

-loving look after your vaccines

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The Cold Chain



- The 'cold chain' is the system of transporting and storing vaccines within the safe temperature range of +2°C to +8°C to ensure the vaccines remain potent and effective.
- We don't know what COVID vaccine thermostability requirements will be but let's get this right

Why is Vaccine Management Important?



- Vaccines are sensitive biological substances that can become less effective or even destroyed if they are frozen or exposed to temperatures outside the recommended range of 2°C to 8°C, and/or exposed to direct sunlight or UV or fluorescent light.
- The loss of vaccine effectiveness is cumulative and cannot be reversed.

What we will cover



- Storage
- Monitoring equipment
- Essential paperwork
- NSW Health Random Cold Chain Audit
- Cold Chain Breach Reporting



Storage



- Vaccines must be stored in a purpose built vaccines fridge
 - Fridge must be serviced every 12 months.
- All vaccines to be stored in original packaging (light sensitive)
- No vaccines to be stored on the bottom shelf – need to be raised
- No vaccines to be touching the sides
- Do not crowd your fridge
- Recommended to use open weave baskets

Monitoring Equipment's Data loggers



- Data logger Must be
 - set for 5 minute recording intervals and set to run continuously
 - downloaded & saved on your computer every week and when a breach suspected. Advisable to have on shared drive that all staff can access in you absence
 - serviced/calibrated/checked for accuracy every 12 months.
 - battery changed as per manufacturers instruction or when the battery life displayed on either the data logger on the set up screen shows low or every 12 months

Checking battery on Logtag and TinyTag



Logtag – click on summary and check battery status. Anything other than OK needs replacing now

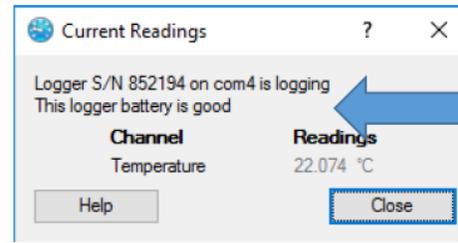
UTRIX-16- 5040050191 Started 17_08_2020, Finished 24_08_2020

Statistics for Started readings

LogTag ID	5040050191
Description	Client Data Logger
Battery status	OK
Time zone	UTC +10:00
Reading interval	5 Minutes
Number of starts	16

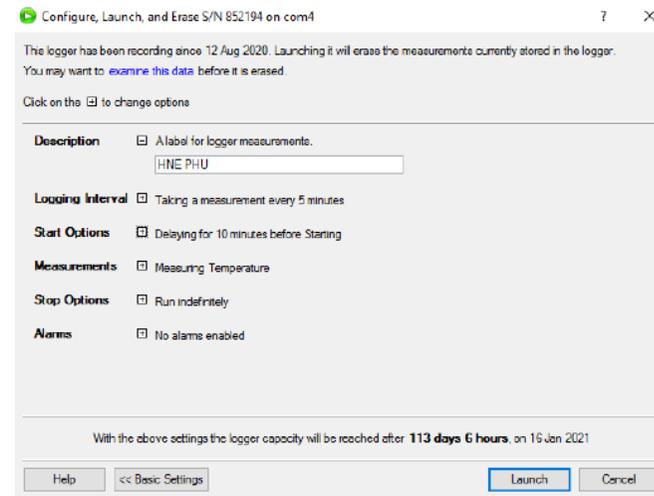


STEP 1 click the clock



STEP 2 look at your battery status and replace as needed.

When you relaunch your data logger please ensure that you change your stop options from “when full” to “run indefinitely” This will prevent the data logger from stopping recording once full in case it is not downloaded one week.



Monitoring equipment – min/max thermometer



- You **must have** a battery operated min/max thermometer for each vaccine fridge and each alternate cold storage. **This is in addition to the built in min/max thermometer on your fridge**
- Current, minimum and maximum temperatures must be recorded and plotted twice daily every day your practice is open
- Battery must be changed every 6-12 months
- Accuracy must be checked every 12 months



4.4 How to check the accuracy of a thermometer ('slush test')

1. Fill a polystyrene or plastic cup with cold water.
2. Place the cup in the refrigerator freezer until a fine layer of ice forms on the top and small sections of ice form within the fluid (this may take up to 2½ hours). The presence of ice is an indication that the temperature of the water has reached 0°C.
3. Place the temperature probe into the middle of the container (be careful not to let the probe touch the container).
4. Observe the temperature on the display screen after 2 minutes.
5. Document the date of the accuracy check.

Essential paper work



- Stickers on your fridge, power point and meter box



- Certificates of completion of NSW Health Vaccination and Cold Chain Management online training
- Vaccine management policies that are reviewed every 12 months
- Written procedures for what to do during a power failure
- Daily temperature graph
- ANNUAL STRIVE FOR 5 SELF AUDIT/ QARS

NSW health facilities Vaccine Refrigerator protocol



NSW HEALTH

Vaccine Refrigerator Protocol



REFRIGERATOR MONITORING

- CHECK** refrigerator temperatures twice a day during operational hours and **aim for 5° C**
- RECORD** the minimum, maximum and current temperatures on the NSW Health vaccine refrigerator temperature chart
- RESET** the thermometer after recording temperatures
- ACT** if temperatures are outside of the recommended temperature range of +2°C to +8°C or the fridge has alarmed. Follow the cold chain breach protocol steps below.

COLD CHAIN BREACH STEPS

- 1** Take **corrective ACTION** where possible. Is the refrigerator door closed, refrigerator plugged in/turned on. Contact engineer if a refrigerator malfunction is suspected.
- 2** **ISOLATE affected vaccines/medicines** and label **'DO NOT USE'**. Ensure vaccines can continue to be stored between +2°C to +8°C. Vaccines may need to be transferred to an alternative monitored refrigerator or cooler.
- 3** **REPORT breach** immediately to your manager/delegate Ph:
- 4** **DOWNLOAD the data logger** or review the back to base or automated temperature monitoring system and investigate potential cause and duration of breach.
- 5** **NOTIFY the public health unit** (1300 066 055) if temperature is <+2°C or > +8°C (excludes fluctuations up to +12°C ≤15 mins e.g. vaccine delivery). PHU will require cold chain breach reporting form, data logging and twice daily temperature readings to assess breach.
- 6** **DO NOT DISCARD** vaccines until advice is received.
- 7** **OTHER MEDICATIONS** - Notify facility Pharmacy Service provider. **DO NOT** use medications until advice is received from Pharmacy.
- 8** **DOCUMENT** all activity on the back of the 'NSW Vaccine Refrigerator Temperature Chart - Fortnightly', i.e. thermostat adjustment, restocking, power outage, data logger removal etc. **SUBMIT an IIMS/Ims+** for breaches resulting in vaccine wastage or patient recall and revaccination.

Order the **NSW Vaccine Refrigerator Temperature Chart - Fortnightly** from Toll Stream Direct. **ORDER NUMBER: NH700227**

August 2020 © NSW Health, SHPN (HP NSW) 200495

Username

Password

Remember me

LOGIN



Vaccine Storage and Cold Chain Management Summary

13.4 NSW Health Vaccine Refrigerator Temperature Chart

Order the NSW Health Vaccine Refrigerator Temperature Chart via the Stream Direct Catalogue as a POD print item (item number NH700227)

18/70227 031210 Holes Punched as per AS2828.1: 2019

BINDING MARGIN - NO WRITING

VACCINE REFRIGERATOR TEMPERATURE CHART - FORTNIGHTLY

Date range: ___/___/___ to ___/___/___

Facility: _____ Location: _____

Fridge ID/name: _____

Instructions for use

Record and plot maximum, minimum and current temperatures on chart TWICE daily.

RESET temperature monitoring device after recording temperatures.

TAKE CORRECTIVE ACTION if temperatures out of range (+2-+8°C) excluding fluctuations up to +12°C for 15 minutes.

Refer to cold chain breach steps below.

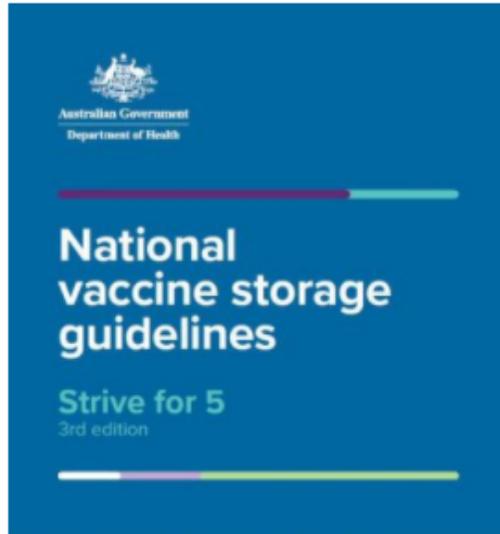
	Date		AM		PM		AM		PM		AM		PM		AM		PM		AM		PM		AM		PM		
	Exact Time	Record Max Temp °C																									
TOO WARM	+12																										
	+11																										
	+10		Danger! Temperatures ABOVE 8 DEGREES are TOO WARM. TAKE IMMEDIATE CORRECTIVE ACTION																								
	+9																										
	+8																										
TOO COLD	+7																										
	+6																										
	+5																										

Date: _____
on behalf of person responsible
Doing so/for:



Health
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National Vaccine Storage Guidelines resource collection order resources here



In this collection

[Collection description](#)

[Guidelines](#)

[Posters](#)

[Stickers](#)

[Appendices](#)

Collection description

This collection provides links to the full set of our National Vaccine Storage Guidelines 'Strive for 5' resources.

'Strive for 5' refers to 5 degrees Celsius (°C) — the point midway between +2°C and +8°C which is the temperature range recommended for vaccine storage. Many vaccines are damaged or destroyed at temperatures outside this range.



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Reporting a cold chain breach- do not discard any vaccines until you speak to the PHU



Managing a Cold Chain Breach

Check and record vaccine fridge temperatures twice daily

If temperatures have gone below 2°C OR above 8°C

ISOLATE
VACCINES

AND

ALERT &
DO NOT USE

AND

DO NOT
DISCARD

Ensure vaccines can continue to be stored between +2°C to +8°C. Vaccines may need to be transferred to an alternative monitored fridge or cooler
*Record temperatures on the NSW Health Vaccine Cooler Temperature Chart available at www.health.nsw.gov.au/manage-ccb

DOWNLOAD DATA LOGGER
AND INVESTIGATE

- Investigate cause
- Download and review data logger readings
- Review twice daily min/max temperature chart
- Identify if vaccines have been affected by a previous breach

Temperature above +8°C to less than +12°C for less than 15 minutes?

NO

YES

REPORT

Record temperatures
Reset min/max thermometer
Wait until fridge is within +2°C to +8°C
No further action required

Government funded vaccines

Private vaccines/medications

Report to the Public Health Unit (PHU)
Business hours: 1300 066 055
After hours: Isolate vaccines & contact PHU next business day

For privately purchased vaccines and medications, contact the manufacturer for advice

Complete and return the *Cold Chain Breach Reporting Form to the PHU and await advice
Download the CCB form at www.health.nsw.gov.au/ccb

For more information visit www.health.nsw.gov.au/manage-ccb





- Ensure surgeries at compliant with the requirements of Strive for 5 and NSW Cold Chain Toolkit for Immunisation Provider
- Conduct random cold chain audits on 50% of GP surgeries in HNE by December 2020

How will audits help



- Random cold chain audits assist in identifying GP's who require assistance with management of vaccines.
- The random audits will identify practices as either compliant or non compliant
- This enables HNE Immunisation team and PHN to work in partnership to ensure community confidence in the delivery of vaccines in our area.





Home > Immunisation programs

Immunisation programs



Alerts

- > [Immunisation Toolkit for GPs - NEW](#)
- > [NSW Immunisation Schedule - 1 July 2020](#)
- > [2020 flu vaccine - information for providers](#)
- > [Vaccination advice during COVID-19](#)
- > [Pharmacist vaccination](#)



Immunisation providers

- > [More information](#)
- > [Immunisation Toolkit for GPs - NEW](#)
- > [GP updates](#)
- > [Public Health Units 1300 066 055](#)
- > [Adverse events following immunisation](#)
- > [Vaccine ordering link](#) 
- > [Cold chain management](#)
- > [Cold chain learning module \(with certificate of completion\)](#) 

Cold Chain Toolkit for Immunisation Providers

August 2020

NSW Health

Take home to do list – rotate your stock



- Ensure you have battery operated min/max thermometers
 - Batteries changed every 6-12 months
- **Ensure your fridge is serviced every 12 months**
- **Ensure your data logger is set for 5 minute recording, battery is replaced and serviced as per manufacture instructions or every 12 months and is set to run continuously**
- Ensure no vaccines are stored on the floor of your fridge and always in their original packaging
- **Ensure you and another staff know how to download your data logger AND attach this file to an email**
- **COMPLETE YOUR ANNUAL STRIVE FOR 5 SELF AUDIT or QARS**
- Consider purchasing extra PBVF now if you need additional storage. This will need to be logged for 72 hours before vaccines can be stored in it

Additional resources



- NSW cold chain toolkit for Immunisation Providers
- Strive for 5
- Temperature Graph
- <https://www.health.gov.au/resources/publications/national-vaccine-storage-guidelines-strive-for-5-vaccine-fridge-temperature-chart-poster>
- Safe Vaccine Storage Checklist
- <https://www.health.nsw.gov.au/immunisation/Documents/safe-vaccine-storage-checklist.pdf>
- **Better Health Centre: Email.** nslhd-bhc@health.nsw.gov.au **Fax.** 02 9887 5452

NSW Health Online Cold Chain Learning Module -
https://nswhealth.seertechsolutions.com.au/public_content/HETICP/HETI/CCMWebv3/story_html5.html

