

Cold Chain Back-up Plan

Back-up plan implementation

When the power goes off:

1. Immediately isolate vaccines in the Purpose-Built Vaccine Fridge (PBVF). Keep refrigerated between +2°C and +8°C and put a sign on the fridge stating '*Power out. Do not use vaccines. Keep fridge door closed.*'
2. Closely monitor the fridge temperature with a minimum/maximum thermometer and/or a battery-operated portable data logger.
3. If the temperature rises to +8°C, move vaccines to alternative monitored storage arrangements.

Purpose-built vaccine fridge

- > The PBVF may warm quickly during a power failure depending on the quality and design of your vaccine fridge and the ambient temperature of your facility. Providers may need to contact the fridge manufacturer to establish this time period and document this in your back-up plan.
- > If vaccines are at risk of being exposed to temperatures greater than +8°C for longer than 15 minutes use alternative monitored storage arrangements as per your organisation's back-up plan.

When the power is returned and the PBVF temperature is +8°C or lower:

- > Record the minimum, maximum and current fridge temperature and reset.
- > Download the data logger and check numerical temperature readings (example below).
- > Ensure the fridge temperature has returned to between +2°C and +8°C prior to returning vaccines.
- > If a cold chain breach has occurred report it to the Immunisation Section on 1300 232 272 and include all the information outlined in the [Cold Chain Breach Flowchart](#).
- > **Do not use or discard any vaccines until you have received advice from the Immunisation Section.**
- > Monitor the PBVF temperature hourly for 4 hours, then twice daily as recommended.

Example of numerical readings from data logger

06:05PM	8.7°C
06:10PM	9.2°C
06:15PM	9.9°C
06:20PM	10.4°C
06:25PM	10.9°C
06:30PM	11.4°C
06:35PM	11.9°C
06:40PM	11.1°C
06:45PM	8.4°C

Alternative vaccine storage

In the event of a power failure an alternative means of vaccine storage is recommended to allow providers to continue to store vaccines between the recommended temperatures of +2°C and +8°C, thereby minimising vaccine loss and disruption to businesses. The recommended options may include any of the following:

1. **A back-up power supply e.g. generator or battery/solar back-up**
2. **A monitored PBVF off-site**
 - > Ensure an agreement has been put in place with the relevant organisation (e.g. local hospital/pharmacy) prior to the event. Also consider that this organisation may also be affected by a power failure.
3. **An Esky or cooler**
 - > Ensure the Esky or cooler is large enough to accommodate:
 - o all vaccines, loosely packed
 - o ice packs or gel packs
 - o insulating material e.g. polystyrene chips or bubble wrap
 - o minimum/maximum thermometer (available from the Immunisation Section)
 - > Pack the Esky or cooler according to the [National Vaccine Storage Guidelines: Strive for Five 4th Edition 2025](#).
 - > Monitor the temperature 15 minutely for the first two hours, then hourly while vaccines are being stored in the Esky or cooler.

Never transport vaccines to another vaccine refrigerator, cooler or cold box without a minimum/maximum thermometer or data logger to monitor the temperature.

If there is no suitable alternative monitored storage option, isolate the vaccines and leave them in the vaccine refrigerator with the door closed for the duration of the power outage.

Domestic refrigerators (including bar fridges) are not built or designed to store vaccines and must not be used for vaccine storage.

Refer to the [National Vaccine Storage Guidelines: Strive for Five 4th Edition 2025](#) or the Immunisation Section, SA Health for further advice.

- > All sites must have a separate battery-operated minimum/maximum thermometer for use in the event of a PBVF failure as per *Strive for 5* guidelines. Having one in your PBVF routinely may help prevent vaccine loss in the event data is unable to be retrieved from the data logger.

Reference: [National Vaccine Storage Guidelines: Strive for Five 4th Edition 2025](#)