

Managing a Vaccine Fridge Temperature during a Planned Power Cut

**Do not open the fridge during the power cut.
Lock the fridge, to prevent door opening and temperature loss.
Put a sign on the fridge door stating “Power cut. Keep fridge door closed”**

Datalogger

A temperature datalogger should be kept in every fridge. This is a USB temperature data logger for use in vaccine fridges, which operates independently of the power supply as it is battery run. This device will give the temperature recording and time, so that the duration of the temperature excursion and the temperature reached is exact.

Depending on the type, this can store up to a year's worth of data. This should be set to record at 5 minute intervals.

Check frequently to ensure it is working properly and that there is sufficient storage for data.

Keep the room as cold as possible

Without power the fridge will naturally come to room temperature, therefore if the room temperature remains at +8 °C or below then the fridge cannot exceed +8 °C. The lower the temperature of the room, the slower the rate the fridge increases in temperature.

You can reduce the room temperature by:

- Leaving the window wide open.
- If that is not possible, keep internal doors open.
- Turn off any heating well in advance of the planned power cut.
- If the fridge is in a room with a south facing window, close the blinds to prevent the sunshine heating the room.

Fill your fridge

A full fridge will not fluctuate in temperature as quickly as a fridge that is not full.

Place vaccines on higher shelves without touching the sides of the fridge.

If the bottom is empty, fill this space with containers of very cold salty water.

Place these containers in the fridge the day before the power cut to allow the containers to come to fridge temperature.

Ice blocks

Just before the power cut place one or two ice blocks under the water containers, if possible. The ice blocks will only freeze the water. If you do not have space for the water containers, place wrapped ice blocks in the fridge.

Double wrap the ice block with bubble wrap or with paper, to prevent the vaccines freezing. The ice-blocks should never come in contact with the vaccines.

A wrapped ice-block will retain its temperature and thaw slowly.

Record the temperature

Before the power cut record the current fridge temperature, and erase the existing maximum and minimum temperature recording on the fridge.

After power is restored:

- Record the fridge temperature immediately, including the maximum and minimum fridge temperatures
- Reset the fridge temperature when the temperature reaches +8°C or less.
- Reset the maximum/minimum thermometer.
- Monitor the fridge closely (e.g hourly) to ensure that the temperature is consistently stable, then return to twice-daily monitoring.

If the temperature reached during the power cut was **outside 2 °C to 8 °C, quarantine** the vaccines affected by the temperature excursion immediately in a working fridge between +2 °C and +8 °C. E-mail pharmacynio@hse.ie, advising of the **maximum / minimum temperature reached** during the power cut and the **duration** of the temperature excursion. Do not use or discard the vaccines until you receive advice from pharmacynio@hse.ie, about whether the vaccines can still be used or not.

Contingency Plans

Back-up Generator for power supply

Keep sufficient fuel to continuously run the generator for at least 72 hours. A generator should be tested quarterly and serviced annually.

Partner Site

Establish a working agreement with at least one alternative storage facility.

Cool boxes for transport of vaccines to a partner site

Solid walled or vaccine specific soft walled insulated cool boxes and ice packs/gel packs must be used.

The cool box must have a temperature probe inside of it, which is linked to the temperature display on the outside of the cool box.

Cool box temperature should be maintained between +2°C and +8°C at all times.

Use the number of ice packs/gel packs as per cool box manufacturer's instructions.

A data logger should be used in cool boxes where external temperature display records only the current temperature. This will provide an accurate account of temperatures reached and the duration of any temperature breach.

The vaccines must be transported in their original packaging.

See full HSE guidelines for maintaining the vaccine cold chain in vaccine cool boxes: <chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.hse.ie/eng/health/immunisation/hcpinfo/vaccineordering/sopnio02.pdf>

ENSURE THE VACCINES ARE INSURED