

# PACKING A COOLER (ESKY) FOR THE TEMPORARY STORAGE OF VACCINES

Containers specifically designed for transporting vaccines should be used, if available. If such a container is not available, these guidelines should be used for packing vaccine supplies in the following instances:

Transporting to off site clinics E.g. residential aged care facility, home visit to a patient, or other institution; when defrosting a vaccine fridge; A power failure of more than four hours.

## Step 1 Condition the Ice packs

Ice packs are water filled and come out of the freezer at a temperature of about  $-18^{\circ}\text{C}$ . Gel packs also have freezing points below  $0^{\circ}\text{C}$  and present a risk of freezing vaccines unless they are appropriately **conditioned** for use in the cooler or cold box. One of the greatest risks to vaccines from freezing occurs when they are transported in a cooler or cold box and this risk increases if the ice packs/ gel packs are not correctly 'conditioned'.

**Conditioning** is a term which refers to leaving the ice pack(s)/gel pack(s) at room temperature to allow the ice or gel at the core to rise to about  $0^{\circ}\text{C}$ .

This minimises the risk of damaging vaccines from freezing.

### How to condition ice packs

Condition the ice packs as follows:

- Remove ice packs from the freezer.
- Lay out ice packs in single row on their sides (where possible) leaving a 5cm space around each ice pack to allow maximum air exposure to reduce the 'conditioning' time.
- Wait until ice pack(s) begins to sweat. This will take up to one hour at  $+20^{\circ}\text{C}$  and a lot less at higher temperatures.
- The ice pack is conditioned as soon as water begins to 'slosh' about slightly inside the ice pack.

### How to condition gel packs

- Usually gel packs will take longer than ice packs to condition so that they are safe to use for vaccine transport.
- Follow the manufacturer's instructions on correct conditioning of the gel pack. There is no 'one rule fits all' approach to conditioning all the available gel packs. However there are some industry standards that can be used to guide conditioning if gel packs have been stored in the freezer at  $-20^{\circ}\text{C}$  for a minimum of 36 hours.
- Conditioning of frozen gel packs for the times prescribed in the Table on the next page enables the initial chill factor to be removed from the packs.

## Guide to time needed to condition small and large gel packs

### Gel packs weighing *less than* 750gm

- If ambient (room) temperature is *over*  $+15^{\circ}\text{C}$ , condition for 45 minutes before use.
- If ambient temperature is less than  $+15^{\circ}\text{C}$ , condition for 1 hour before use.

### Gel packs weighing *more than* 750 gm

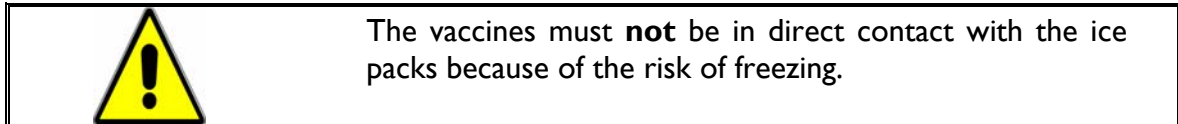
- If ambient (room) temperature is *over*  $+15^{\circ}\text{C}$ , condition for 1 hour before use.
- If ambient temperature is less than  $+15^{\circ}\text{C}$ , condition for 1½ hours before use.

## Step 2 Set-up the Esky/Cooler

### Either

Pack the vaccines inside a cold box (eg Esky™) as follows (see diagram below):

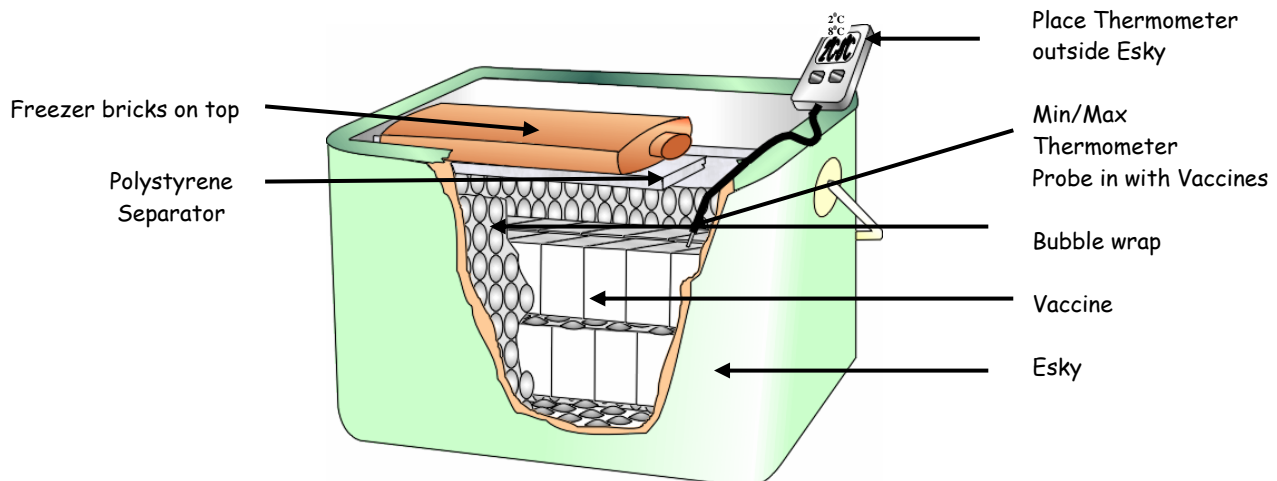
- Place the ice packs on top of the vaccines, but separated from the vaccines, by a layer of polystyrene foam, shredded paper, or, bubble wrap plastic.
- Ensure the vaccines, Cold Chain Monitor (CCM), ice packs and filler material are packed to ensure they do not move around during transport.
- Vaccines must be packed in such way as to ensure the ice packs do not come into direct contact with the vaccines or CCM and cold air can circulate freely around the vaccine.



### Or

- Place vaccines (and time-temperature monitors and freeze monitor as required) in a small Styrofoam container
- Close the lid and secure with tape
- Pack the small Styrofoam container inside a larger insulated container and surround it with freezer bricks
- Close and secure the lid of the large container.

Remove vaccines only as they are required, making sure the lids are replaced on both the small and large containers each time. If the time-temperature monitors, freeze indicators, or the min/max thermometer are used, they should be checked before administering the vaccine. If the time-temperature monitor indicates that vaccine is being subjected to temperatures above 10<sup>0</sup>C while being transported, use more freezer bricks to reduce and maintain the internal temperature at the correct level



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