

## CHOOSING A TEMPERATURE MONITORING DEVICE

Health Care Providers (HCP) are responsible for purchasing their own vaccine thermometers. HCPs can purchase the thermometer that best suits their individual needs and can follow up with their supplier directly with any concerns, training and warranty. HCPs need to review all instructions that come with their device to ensure they understand how the device works (as each device is different).

- When choosing a temperature monitoring device, be sure that the device you choose has the following features:
  - ✓ Must measure temperature to the 0.1°C
  - ✓ Must be able to track the minimum & maximum temperatures since the last time the device was cleared, plus the current temperature.

A data logger is also recommended by SMDHU for HCPs who store over \$5000.00 of vaccine. Data loggers are programmed to take temperatures at timed intervals. These devices record the temperatures taken at these intervals and store the data, which can be used to determine the exact length of time the vaccine was exposed to temperatures below 2.0 °C or above 8.0 °C. This greatly reduces the amount of vaccine wasted at your office in the event of a cold chain break. Another option is a thermometer with a built in data logger. This type of thermometer is much more expensive but eliminates the need to have two devices.

### Digital Min/Max Thermometer:

Glycol Thermometer



### Uninterrupted Temperature:

Monitoring Device: Data Logger



### Combination Device:

Glycol Min/Max Thermometer combined with Data Logger



Digital Maximum-Minimum Thermometers	Data Loggers
<ul style="list-style-type: none"> <li>• Provide current, minimum and maximum temperatures that have been reached over a period of time</li> </ul>	<ul style="list-style-type: none"> <li>• Provide continuous temperature recording at pre-programmed intervals</li> </ul>
<ul style="list-style-type: none"> <li>• Record to increments of 0.1 °C</li> </ul>	<ul style="list-style-type: none"> <li>• Record to increments of 0.1°C</li> </ul>
<ul style="list-style-type: none"> <li>• Maximum-minimum thermometers provide three readings:               <ol style="list-style-type: none"> <li>1) the current temperature</li> <li>2) the maximum temperature reached since it was last reset</li> <li>3) the minimum temperature since it was last reset</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>• Does not replace the need for twice daily observation and documentation of current, min and max temperatures</li> </ul>
<ul style="list-style-type: none"> <li>• Digital maximum-minimum thermometers should have a display screen so the temperature can be visually checked whenever going into the refrigerator and will allow for troubleshooting if temperatures are at +3 °C or +7 °C</li> </ul>	<ul style="list-style-type: none"> <li>• Readings can be downloaded on a computer</li> </ul>
<ul style="list-style-type: none"> <li>• Glass bottle probe sealed and filled with nontoxic glycol solution. This type of probe best mimics the actual temperature of the vaccine (in the vial) instead of the air temperature</li> </ul>	<ul style="list-style-type: none"> <li>• Should be equipped with a digital display screen so the temperature can be visually checked on a regular basis</li> </ul>
<ul style="list-style-type: none"> <li>• Triple display that simultaneously shows current, minimum and maximum temperature</li> </ul>	<ul style="list-style-type: none"> <li>• The exact length of time the vaccine was exposed to temperatures below 2.0°C or above 8.0°C can be determined</li> </ul>
<ul style="list-style-type: none"> <li>• Alarm continues even when temp returns to within range, this will alert staff that the temp did go out of range while the office was closed</li> </ul>	<ul style="list-style-type: none"> <li>• Alarm continues even when temp returns to within range, this will alert staff that the temp did go out of range while the office was closed</li> </ul>

## References

[http://health.gov.on.ca/en/pro/programs/publichealth/oph\\_standards/docs/guide\\_vaccine\\_storage.pdf](http://health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/guide_vaccine_storage.pdf)  
<http://www.simcoemuskokahealth.org/JFY/PCPortal/PCPCategories/Immunization.aspx>