



SAFE PRACTICE ALERT

Infection Prevention During Blood Glucose Monitoring and Insulin Administration

Background

There is an ongoing potential risk of transmitting blood-borne pathogens through improper use of insulin pens, insulin cartridges, blood glucose meters and fingerstick testing devices¹.

- Fingerstick devices (also called lancet devices and lancets) are used to pierce the skin to obtain droplets of blood for the purpose of blood glucose monitoring.
 - Lancets are inserted into the lancing device and are used to pierce the skin.
 - Some lancet devices are designed to be used multiple times by a single patient (reusable), or can be disposable (one time use only).
- Blood glucose meters are designed to measure blood glucose levels.
- Insulin pens are injector devices that contain a reservoir for an insulin cartridge.
 - This device is intended to be used multiple times by a single patient, using a new needle for each injection.
 - In a health care setting, these devices can be used by health care personnel to safely administer insulin to a patient.
 - Backflow of blood into the insulin cartridge after injection may create a risk of bloodborne pathogen transmission if the pen is used for more than one patient, even when the needle is changed².

Best Practice Reminders

- 1) Fingerstick devices (lancet devices and lancets):
 - Fingerstick devices should never³ be used for more than one person³.
- a) Reusable Devices:
 - These should only be used by individual persons for self-monitoring of blood glucose.
 - These devices often resemble a pen and have the means to remove and replace the lancet after each use, allowing the device to be used more than once, on the same person
- b) Disposable Devices:
 - These are devices that are disposable and prevent reuse through an auto-disabling feature (see Figure 1).
 - In settings where assisted monitoring of blood glucose is performed, single-use, auto-disabling fingerstick devices should be used.



Figure 1: Auto-disabling and disposable fingerstick devices³

2) Blood Glucose Meters:

- When possible, restrict the use of blood glucose meters to single patient use only.
- If the meters must be used to measure another patient's glucose, the device should be cleaned and disinfected after each use, per manufacturer's instructions. If there are no cleaning instructions available, the meter should not be shared.
- Blood glucose meters shall be clearly labelled with the patient's name or other identifying information to verify the correct meter is being used for the correct patient.

3) Insulin pens used to administer multiple doses of insulin:

- Restrict the use of insulin pens to single patient use only.
 - Insulin pens shall be clearly labelled with the patient's name or other identifying information to verify the correct pen is being used for the correct patient.
- Health care personnel orientation and education shall include instruction regarding the safe use of fingerstick and insulin pen devices.
 - Dispose of all used injection equipment at the point of use in an approved sharps container.

References

1. Infection Prevention during Blood Glucose Monitoring and Insulin Administration. Center for Disease Control. <https://www.cdc.gov/injectionsafety/blood-glucose-monitoring.html>
2. Sonoki K, Yoshinari M, Iwase M, Tashiro K, Iino K, Wakisaka M, Fujishima M. Regurgitation of blood into insulin cartridges in the pen-like injectors. *Diabetes Care*. 2001; 24(3):603-4
3. CDC Clinical Reminder: Use of Fingerstick Devices on More than One Person Poses Risk for Transmitting Bloodborne Pathogens

Safe practice alerts are released by Saskatchewan Health in response to information received about patient safety learning opportunities. The intent of a safe practice alert is to provide information that improves the safety of patients in the health care setting.

Safe practice alerts are intended to support the development of best practices and to act as a basic framework for modification so that the end result is a good fit within the Saskatchewan Health Authority