ASSESSMENT & PREPARATION

Glucometer

Glucometers provide a rapid approximate measurement of whole blood glucose to help direct treatment.

USE FOR
- Initial assessment of all infants admitted to the neonatal unit
- Directing ongoing management for patients

STANDARD OF CARE
Glucose levels in all newborn patients should not fall below 2.5 mmol/L (45 mg/dL).

To calculate mmol/L from mg/dL: \( \text{mmol/L} = \frac{\text{mg/dL}}{18} \)
To calculate mg/dL from mmol/L: \( \text{mg/dL} = 18 \times \text{mmol/L} \)

1. COLLECT ALL MATERIALS
   - glucometer
   - lancets
   - glucometer strips
   - alcohol
   - cotton swabs

2. PREPARE DEVICE
   Turn on device by pressing power button or inserting a glucometer strip into the port until you feel a “click.”

3. PREPARE PATIENT
   Follow hand washing protocol and put on gloves.
   Manage patient’s pain.
   - A: Clean skin on the outer edge of the patient’s heel using alcohol.
   - B: When dry, prick foot on safe areas as indicated.
   - C: Wipe away first drop of blood.

4. CHECK GLUCOSE LEVEL
   Collect second blood drop on tip of the glucometer strip.
   Read and record glucose level.
   Treat according to ward protocol if glucose is less than 2.5 mmol/L.

5. CONCLUDE ASSESSMENT
   Using a dry cotton swab, apply pressure to the heel to stop the bleeding.

COMPLICATIONS
- Bruising
- Bleeding
- Nerve or bone damage
- Pain
- Infection
- False readings

Ensure the glucometer is accurate for neonatal blood glucose range.
Blood glucose samples should never be taken from the finger of a neonate.

DISINFECTION & INFECTION PREVENTION
- Clean hands with soap and water or alcohol before and after handling glucometer materials that will be used on patients.
- Always wipe the glucometer with 70% alcohol between patients.
- Dispose of strip in hazardous waste container.
- Dispose of used lancet in sharps container.

Refer to the General Infection Prevention Module.
Glucometer

Glucometer and strips should be stored in a clean, dry, and secure area. Keep strips container tightly closed when not in use. Care should be taken to ensure that glucometers and strips remain in the ward and are accessible for use when required.

**DAILY MAINTENANCE**

Wipe the glucometer with 70% alcohol using gauze or a cotton swab before first use and between patients. Do not submerge device or drip alcohol onto glucometer strip reading slot.

**PREVENTIVE MAINTENANCE**

Perform calibration OR a quality control test on glucometers with control solution every week or when changing glucometer strip containers to ensure consistent results.

If the glucometer is **not turning on**

- Try inserting a glucometer strip until you feel a “click”

If the glucometer is **still not turning on**

- Try charging the glucometer or replacing the batteries

If the glucometer is providing results consistently incompatible with the patients’ conditions

- Check the expiration date of your glucometer strips. If the strips are expired, try using non-expired strips
- If results are still inconsistent perform a quality control test using control solution

1) Allow the strip to absorb a drop of the control solution
2) The control solution should test as a “Pass”

CONTACT A TECHNICIAN OR MAINTENANCE DEPARTMENT IF DEVICE CONTINUES TO NOT WORK PROPERLY AFTER ADDRESSING THE COMMON ISSUES