

Glucometer

NAME: _____ DATE: _____

PURPOSE: Teaching / Practice
 Test Result: Pass / Fail / Retest

Scenario Overview

The scenario is set in the newborn care ward where a glucometer has malfunctioned. Participants should assess and troubleshoot the device, implement needed repairs and return the device for use.

Reminder to Facilitator

The facilitator team decides what is essential for participants' understanding. We suggest the team underline or mark these essential items in the **INFORMATION/RESULT** column before beginning the session to ensure these are highlighted throughout the practice.

ALWAYS REMEMBER THE CANDIDATE SHOULD START WITH THE 4 Ss

- Safety:** for you, the staff around you and the patient on the device
- Setting:** for possible checks and repairs to the devices
- Supplies:** adequate tools and spare parts for this device
- Shout:** for additional technical support if necessary

Begin Scenario

SETTING THE SCENE: The nurse has a 7-week-old boy in the ward who is said to be very drowsy. She cannot get the glucometer to work and is worried that the baby may have a low blood glucose. She has rung you and asked for your help. **WHAT DO YOU DO?**

#	ACTION REQUIRED	INFORMATION / RESULT	COMMENTS:
1	Go to the ward and introduce yourself to the in-charge.	Sister Edith is glad to see you.	
2	Ask what the problem is.	The nurse has a 7-week-old boy in the ward who is said to be very drowsy. She cannot get the glucometer to work and is worried that the baby may have a low blood glucose.	
3	Ask to see the device.	The glucometer is on a cabinet in the newborn care unit. Associated glucometer strips are stored next to it.	
4	Ask if it is okay for you to do some minor checks on the machine where it is.	Sister Edith is happy for you to do so.	
5	Perform minor checks on the device. Check the expiry date on the glucometer strips. Does the nurse have access to new glucometer strips?	The glucometer strips are expired. Sister Edith says that the pharmacy should have additional strips, and sends a messenger to request them.	
6	What will you do next? Assess whether or not the expired glucometer strips were leading to inaccurate results by performing a quality control test with the device. Is a Quality Control solution available?	There is a Quality Control solution available in the stores behind the nurses' station.	

continue to the following page 

#	ACTION REQUIRED	INFORMATION / RESULT	COMMENTS:
7	<p>Quickly perform a Quality Control test with the nurse.</p> <p>Turn on the glucometer. Select Quality Control setting if available.</p> <p>Insert one of the new strips into the glucometer. Wipe the first droplet away from the tip of the Quality Control solution bottle, and allow the second drop to fall on the strip. Check that the device passes the Quality Control test.</p>	The device passes the Quality Control test.	
8	<p>Explain your findings to Sister Edith.</p> <p>The device has passed the Quality Control test with the new strips, so the expired strips must have been the problem. It can be used immediately.</p>	Sister Edith is told what the problem was. She quickly takes the blood sugar of the patient. His blood sugar is very low, and she takes steps to increase his blood sugar.	
9	<p>Wait for Sister Edith to assess and treat the patient. Then, explain next steps needed to prevent this from happening again.</p> <p>Expired strips should never be used with the glucometer. However, even strips that are not expired may give poor or inconsistent results, if they have been stored without the lid being completely closed. Staff should perform Quality Control tests regularly to ensure the device is functioning well in an emergency.</p>	Sister Edith believes that additional orientation is needed for the staff on the ward and sets a date for you to come and help explain why this type of preventive maintenance is necessary for situations like the one just experienced.	
10	<p>Document corrective activities taken and next steps in maintenance & repair records.</p>	Activities and CPD session orientation information are documented.	

THANK YOU

i REMIND PARTICIPANTS

Never use the back or the inner part of the heel for blood collection. This may cause artery, nerve, or bone damage. Readings should correspond with the clinical condition of the patient; if strips are expired or the patient's measurement site is not clean, measurements can be inaccurately high or low.

⚠ INFECTION PREVENTION AND CONTROL

Be sure to wash your hands thoroughly and to put on gloves before handling any equipment. After every use, remember to disinfect all consumables and equipment before using them again.

Scenario end

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