Interprofessional Clinical Practice Standard – Procedure

Title: Blood Glucose Monitoring (BGM)

Performing Quality Control (QC)

Professional Responsible/for use by:
Physicians, Registered Midwives, Registered Nurse Practitioners, Registered Nurses, Medical Laboratory Technologists, Licensed Practical Nurses and nursing students within their scope of their practice.

The profession performing BGM is responsible for ensuring Quality Control procedures are carried out as indicated.

Each operator must complete 5 patient tests, and successfully run 1 HI QC and 1 LO QC within a 12 month period, to maintain certification.

Indications/Care Outcomes:

Indications for Quality Control:
- Immediately prior to patient testing if not done in last 24 hours
- Minimally, once per week for glucose meters without scheduled QC
- Upon opening a new bottle of test strips or control solution
- If meter is dropped or battery replaced
- After daily meter cleaning
- If inaccurate results suspected (i.e.; results do not match patients clinical presentation)
- When meter troubleshooting warrants
Definitions:
The Quality Control process allows users to monitor the “variables” of blood glucose testing in order to consistently obtain RELIABLE test results.

The variables of Blood Glucose Monitoring are:
- Equipment – glucose meter
- Reagents – test strips and control solutions
- Operators – trained and using correct technique

Equipment:
- High control solution
- Low control solution
- Glucose meter
- Test strips
- Clean gloves

Procedure:
Refer to: ACCU-CHEK Inform II or Performa Quick Reference Guide.

Key Principals:
- Both High and Low QC solutions must be run successfully(PASS).
- Expiration dates of control solutions and test strips must be valid.
- Mix control solutions well prior to test strip application.
- Always **discard the first drop of control solution** prior to sample application.
- If QC Fails twice with no obvious resolution:
  - Use another meter if available.
  - Order Laboratory blood glucose.
  - Perform basic troubleshooting:
    - Appendix A

Note: This is a controlled document. Any document appearing in paper form should always be checked against the VIHA Intranet (electronic version) prior to use. The electronic version is always the current version.
## Interpreting Results:

<table>
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<th>IF</th>
<th>THEN</th>
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<tr>
<td>Both levels of Quality Control <strong>PASS</strong></td>
<td>• Proceed with patient testing</td>
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| Either level of Quality Control **FAIL** | • DO NOT perform ANY patient testing.  
• Use another glucose meter.  
• Request a Lab Collection for glucose.  
• Perform basic glucose meter trouble shooting (See Appendix A). |
Appendix A
Basic Trouble Shooting

Perform Quality Control Testing

Quality Control PASS

Proceed with Patient Testing

Quality Control FAIL

Check Control Solutions
- Expiration dates valid?
- Correct solution used for QC test selected?
- Solutions mixed properly prior to test strip application?

Check Test Strips
- Expiration dates valid?
- Test strip inserted correctly?
- QC solution applied correctly?

Check Meter
- Meter clean? (i.e.: Is there any residual blood, dirt, cleaner on meter?)
- Low battery? Need replacement?
- Temperature?
- Any error codes? Please Document!!!

Repeat Quality Control Testing

WHY Run Quality Control Tests?
The Quality Control process allows monitoring of the "variables" of blood glucose testing in order to consistently obtain RELIABLE test results.

The Variables are:
The freshness of the test strips & control solutions
The performance of the meter
The technique of the person performing the test.

WHEN to perform Quality Control Tests?
Prior to patient testing
Once every 24 hours
When a new bottle of test strips are opened
After cleaning the meter.
If meter is dropped.
If inaccurate results are suspected.

Notes and Reminders:
BOTH High and Low QC tests must be Run and Pass

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Date last reviewed (r)/ Revised (R): Autumn 2012

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