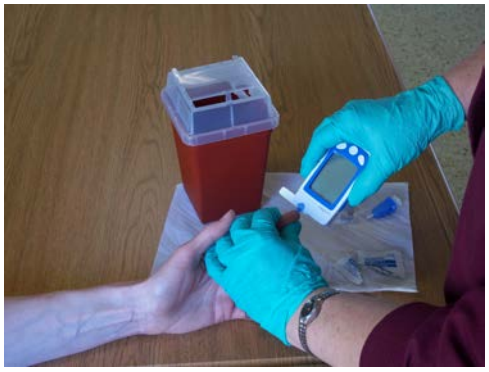
# TOOL KIT FOR IMPLEMENTING SINGLE PATIENT USE GLUCOSE METERS IN LONG-TERM CARE FACILITIES



Recommended by the

**Wisconsin Healthcare-Associated Infections (HAIs) in Long Term Care Coalition**

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# WISCONSIN HEATLHCARE-ASSOCIATED INFECTIONS IN LONG-TERM CARE COALITION

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# I. INTRODUCTION

## Purpose of Tool Kit

To aid facilities in meeting standards of practice to prevent patient-to-patient transmission of blood borne pathogens when using glucose meters.

## Primary Objectives

To develop a step by step process that can be implemented in LTC facilities, which will ensure that each resident whose care requires the use of a glucose meter will have an individual glucose meter that is not shared with other residents.

To ensure the process for cleaning and disinfecting glucose meters adheres to manufacturers recommendations is effective in killing blood borne pathogens.

## Process

- **Step 1**

  Make the commitment to following standards of practice for single patient use glucose meters, engage key staff in the process and educate nursing staff.

- **Step 2**

  Evaluating and choosing a single patient use glucose meter for your facility (involve key staff; consider current practices, cost factors, talk to vendors). You may want to continue with the glucose meter you currently use.

  The choice will be based on your staffs' perceptions on the safety and ease of use of the glucose meter, whether or not your vendor will provide the glucose meters at no cost to you, the cost of test strips, and the frequency/need to complete quality control testing.

  Determine how and where individual glucose meters will be stored.

- **Step 3**

  Develop and write your policies, involve staff using the glucose meters. (See sample.)

- **Step 4**

  Audit for compliance. (See sample.)

# II. SAMPLE POLICY: Single Patient Use Blood Glucose Meters, Best Practice Selection, Use, and Storage Policy

1. The importance of ongoing glucose monitoring is necessary to detect extremes of high or low blood glucose levels and to evaluate the effectiveness of the treatment plan. Individualized glucose parameters are an important component in this monitoring process.

2. Selection of Glucose Monitoring Devices needs to include an evaluation of the accuracy, reliability, range of results, and ease of use, infection control issues, regulatory requirements, and manufacturer's support system. OSHA, CDC, and CMS have regulations that have an impact on blood glucose monitoring devices.

3. Quality Improvement activities should be coordinated by designated staff and should include the following:

   A. Selection and Maintenance of Equipment

      1) A healthcare professional/team (IP, DON, and ADON) should select the glucose meters by using pre-established criteria that address accuracy, storage, dating of strips and solutions, ease of use, maintenance, infection control and quality control measures.

      2) Meters must be operated in strict accordance with manufacturer recommendations.

   B. Staff Training

      1) Annually and with each change in blood glucose meter device, nurses and Certified Medication Assistants (CMA's) will complete a competency including instruction of the meters performance and an overview of the disease process. Competency records must be retained.

      2) Training includes but not limited to:
         a. Operating procedure
         b. Policy/procedure (to include infection control)
         c. Storage
         d. Maintenance
         e. Quality control tests
         f. Demonstrated proficiency

      3) Quality Control (QC)
         a. The ADON or designee is designated to supervise the quality control process and provide ongoing employee education
         b. Follow manufacturer's recommendations for QC testing, high and low control, test strips, accuracy
         c. Follow manufacturer's recommendations for meter's corrective action when QC results are unacceptable or outside parameters
         d. QC Reading will be recorded on the resident's Treatment Administration Record (TAR).

4) Every patient will have their own individual blood glucose monitoring device during their stay at the facility. Short term stay residents are encouraged to bring in their home blood glucose monitoring device for consistent practice with their familiar equipment.

5) Each resident's individual blood glucose monitoring device will be stored in an individual zip loc bag, labeled with their name, date of birth, room number (usual patient identifiers). QC strips for the individual device will also be stored in this labeled zip loc bag.

6) Each resident's individually labeled blood glucose bag will be stored in the resident room, in their locked medication drawer, or in the medication room in the glucose meter bin.

7) Residents who bring their blood glucose meters from home will have the meter checked for QC and accuracy. Once the meter is determined to be functioning properly, the meter and QC materials will be placed in an individually labeled zip loc bag and secured per protocol.

8) Upon discharge, the resident who needs to continue blood glucose monitoring at home, but does not have a meter at home for use, will be given a script to obtain their own meter upon discharge. All residents discharged with the need for continued blood glucose monitoring will be referred to a home visit nurse for evaluation and follow up after discharge.

9) Upon discharge of the resident, the blood glucose meter is removed from the bag and disinfected per manufacturer's direction with manufacturer's approved solution. Attention is paid to correct dwell time of the disinfectant. All associated supplies with the meter are disinfected and, if not able to be disinfected, are disposed of. The disinfected glucose meter is placed in a new, clean zip loc bag and ready for the next individual use.

## III. RESOURCES

DQA Memo 11-031, *Glucose Meters and Infection Control*
http://www.dhs.wisconsin.gov/rl_dsl/Publications/11-031.htm

DQA Memo 08-013, *Glucose Meters and Infection Control*
http://www.dhs.wisconsin.gov/rl_dsl/Publications/pdfmemos/08-013.pdf

DQA Memo 09-054, *Cleaning and Disinfecting Glucose Meters Shared Between Residents*
http://www.dhs.wisconsin.gov/rl_dsl/Publications/pdfmemos/09-054.pdf

CDC Clinical Reminder: *Use of Fingerstick Devices on More than One Person Poses Risk for Transmitting Bloodborne Pathogens*
http://www.cdc.gov/injectionsafety/Fingerstick-DevicesBGM.html

*Selected EPA-Registered Disinfectants*
http://epa.gov/oppad001/chemregindex.htm

*Safe Injection Practices Coalition: One and Only Campaign*
http://www.oneandonlycampaign.org/content/print-materials

CMS Survey & Certification Letter 12-30, *Use of Insulin Pens in health Care Facilities*
http://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertificationGenInfo/Downloads/Survey-and-Cert-Letter-12-30.pdf

## IV. PERCEIVED BARRIERS TO SINGLE USE GLUCOSE METERS

A = Answer

1. **"It's too expensive to have each resident have their own glucose meter."**

   A: Most companies provide the glucose meters at no cost, check with different vendors.

2. **"By having individual glucose meters we have increased costs in test strips, nurses times, and documentation because we would need to complete controls on each individual machine."**

   A: Choose a glucose meter that requires control testing only when opening a new bottle of test strips; then, when the nurse uses the last strip, that nurse gets a new bottle and completes the control and documents it in the log or the MAR.

   A: Also check for test strip expiration dates; look for six month shelf life after opening.

   A: Work with your MD/NP's to reduce unnecessary blood glucose testing; review data, then perhaps suggest to MD to do QID testing once a week, rather than daily.

3. **"We don't have room to store all the individual glucose meters."**

   A: Consider placing the glucose meters in the resident room, if they come with a carrying case with a handle, use 3M type of sticky hook in their closet (no need to keep them locked) label the outside of case with resident name, and number each individual machine. Some facilities use zip lock bags to store the glucose meters and label each bag

4. **"It's too hard to make these facility-wide changes with everything else going on."**

   A: Educate the staff in the safety factors with shared devices; find a champion that would lead the team. Involve the staff in choosing the product and processes, so they have a leadership role in the action plan and process improvement.

# V. SAMPLE: Procedural Steps for Blood Glucose Monitoring

**Step 1:** Gather all supplies.

**Step 2:** Introduce self and inform resident of procedure.

**Step 3:** Wash hands or sanitize hands.

**Step 4:** Put on gloves.

**Step 5:** Prepare finger to be lanced by either having resident wash hands in warm water with soap and dry thoroughly **OR** wipe finger with alcohol wipe. (Alcohol must dry thoroughly before finger is lanced.)

**Step 6:** Use a single patient use Needle Safe Lancet to lance the resident's finger lateral to the finger tip, obtaining blood sample of appropriate size. An insufficient blood sample may result in an inaccurate result.

**Step 7:** Place used lancet in sharps container.

**Step 8:** Wipe any blood from lanced finger with gauze or cotton ball and cover with a band aid, if needed.

**Step 9:** Dispose of gauze/cotton ball and testing strip in waste basket.

**Step 10:** Remove gloves.

**Step 11:** Wash hands.

**Step 12:** Put on a new pair of gloves.

**Step 13:** Wipe glucose meter with disinfectant and place in resident's individual and labeled plastic bag. Follow manufacturer's recommendation for disinfectant type for meter.

**Step 14:** Remove gloves.

**Step 15:** Wash hands.

# VI. SAMPLE: Device Evaluation Tool

## PRODUCT SAFETY EVALUATION

**Name - Device Evaluated:**

**Name – Evaluator:**

*Check the most appropriate answer for each question.*

**1** = Strongly agree **2** = Agree **3** = Neutral **4** = Disagree **5** = Strongly disagree.

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 1. I can activate the safety feature with one hand. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 2. I can see the tip of the sharp when I need to (even when the safety feature is activated. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 3. It is impossible NOT to use the safety feature. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 4. This product can be used as quickly as I expected. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 5. This product is easy to handle while using gloves. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 6. This product is easy to learn and understand. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 7. There is a distinct change (audible or visible) when safety feature is activated. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 8. I like the product. | ☐ | ☐ | ☐ | ☐ | ☐ |

# VII. SAMPLE: Competency of Glucose Meter Monitoring

| Name - Nurse Evaluated | Unit | Date |
|---|---|---|
| | | |

| Wearing Name Tag? ☐ YES ☐ NO | Name - Nurse Observer |
|---|---|
| | |

**Scoring:** **1** – Yes, completed properly **2** – Few exceptions noted **3** – No, major errors noted

| Action | Score | Items to Review |
|---|---|---|
| 1a. Check MD order for monitoring schedule. | | |
| 1b. Gather equipment (meter, test strips, lancet, alcohol swab, gloves, sharps container). | | |
| 2. Take equipment to bedside, use paper towel barrier, and inform resident of procedure; provide privacy. | | |
| 3. Turn meter on. Compare code number on meter with number on test strip bottle per manufacturer's directions. | | |
| 4. Use proper hand hygiene. | | |
| 5. Apply gloves. | | |
| 6. Remove test strip from container, close cap immediately, and insert strip in meter when meter displays "Insert strip" per manufacturer's directions. | | |
| 7. Cleanse resident's finger with soap and warm water or alcohol and air dry thoroughly to avoid false reading. | | |
| 8. Puncture side of finger (not tip) by holding single patient use safety lancet perpendicular to skin and pricking site with lancet. Lightly squeeze or milk the puncture site, until a hanging drop of blood has formed; apply drop of blood to reaction zone on test strip. | | |
| 9. Place barrier under meter if placed on a surface. Note meter results. | | |
| 10. Dispose of lancet in sharps container. | | |
| 11. Cleanse resident's finger or blot dry. Apply pressure to puncture site, if necessary. | | |
| 12. After reading result, dispose of test strip per facility policy. | | |
| 13. Remove gloves. | | |
| 14. Wash hands. | | |
| 15. Dispose of barrier. | | |
| 16. Return clean equipment to storage area. | | |
| 17. Record result on MAR and compare result with previous level and parameters. | | |
| 18. Notify MD if results are outside of resident's parameters. | | |

**Comments:**