

Leamington Mennonite Home
Long Term Care

POLICY AND PROCEDURE

CATEGORY: Nursing	SUBJECT: Diabetic Management	SECTION: D
DATE: February 1995	Administrator: <u>J. M.</u>	POLICY: 2
REVISION DATES: May 2013, October 2016, June 2020	Director of Care: <u>Cheryl Allick</u>	

DIABETIC MANAGEMENT

POLICY:

A resident requiring diabetic management will have their needs met by therapeutic diet interventions and nursing management. Documentation will be completed as to medication administration, blood glucose levels (HbA1C q6 months or as ordered by Physician) and resident's response to interventions. The Registered Dietician will monitor the resident upon admission, quarterly and as needed.

Hypoglycemic episodes (blood sugar <4) require documentation in the resident's electronics notes. It also is to be noted to the next Physician rounds unless requires more urgent actions. More than 3 episodes in a 7 day period requires a dietary referral to the Registered Dietician (unless otherwise indicated in individualized care). If a hypoglycemic episode results in the use of Glucagon, then staff are required to follow the Glucagon Use Policy with the required documentation and reporting requirements as outlined in the policy.

Hyperglycemic episodes (blood sugars > 20) require documentation in the resident's electronics notes. It also is to be noted to the next Physician rounds unless requires more urgent actions. More than 3 episodes in a 7 day period requires a dietary referral to the Registered Dietician (unless otherwise indicated in individualized care).

BLOOD SUGAR Levels VIA GLUCOMETER/Flash Glucose Monitoring System

Blood sugar readings via glucometer/flash glucose monitoring system is a valuable assessment tool to assess hypo or hyperglycemia in residents. Upon admission there is a Physician's directive on the medical directive that will be followed until the Physician individualizes the order for the resident. The Registered Staff will perform the procedure as ordered and document it in the electronic records. The program provides both a written record and a graph of the values which can be valuable tool to assess resident's health status change.

OBTAINING BLOOD SUGAR Levels VIA GLUCOMETER

PROCEDURE:

1. Wash your hands and don gloves.
2. Remove test strip from the package and insert into the meter. Avoid touching the strip with your hand. Save the foil to remove the strip later. Turn the glucometer on.

3. Clean the resident's finger with an alcohol swab, then prick with a safety lancet to obtain a drop of blood. Touch and hold the test end of the strip to the drop of blood until after the meter "Beeps". The timer will count down from '60' seconds.
4. After '60' seconds, your test result will appear in the display window.
5. If "Lo" appears, the blood glucose is below 2.2. If "Hi" appears, the blood glucose is above 27.8.
6. Record the test results in the resident electronic records.
7. Using the foil, remove the strip from the meter and discard.
8. Remove the lancet from the pen and discard carefully into the sharps container.
9. Follow the outlined interventions for hypo / hyper blood sugar levels. Contact the Physician if the levels fall within the parameters set out in the medical directives.

Note: There are different glucometer meters. Refer to the instruction guides for use and troubleshooting.

OBTAINING BLOOD SUGAR Levels VIA Flash Glucose Monitoring System (Libre)

This device measures the interstitial fluid glucose levels in adults age 18 and older with Diabetes Mellitus.

Contraindications: remove device if the resident has a medical appointment that includes a strong magnetic electromagnetic radiation eg- X-ray, MRI or CT. Apply a new sensor after the appointment.

WARNINGS:

- a) if the glucose levels are changing rapidly (more than 0.1 ml/L per minute) interstitial fluid glucose levels measured by the sensor **may not** accurately match the blood glucose levels. When blood sugars are rising and falling quickly, check the sensor glucose readings by doing a blood glucose test.
- b) do a blood glucose glucometer test if the sensor gives a LOW Glucose read OR a Glucose going low message
- c) do a blood glucose glucometer test if you do not see a current glucose number OR Glucose Trend Arrow
- d) If visual or other assessments indicate a suspected low or high glucose level that is not indicated by the Flash Sensor - do a blood glucose glucometer test
- e) on occasion there may be an inaccurate sensor reading (do a blood glucose glucometer test to verify) and if the problem continues, remove the Sensor and apply a new one.
- f) Excessive sweat or movement may loosen the Sensor and give inaccurate reading – remove and change. Severe Dehydration and excessive water loss may cause inaccurate readings.
- g) **DO NOT reuse Sensors.**
- g) The Sensor Pack and Sensor Applicator are packaged as a set and have the same Sensor code. Check that Sensor codes match before use.
- h) SKIN IRRITATION: some residents may be sensitive to the adhesive that attaches the sensor to the skin – if irritation is noted around or under the sensor – remove and stop using the system. **DO NOT** try to treat the irritation with lotions/creams/ointments/sprays/ barrier patches in order to continue wearing the sensor.
- i) taking **Ascorbic acid** may falsely raise your Sensor glucose reading.
- j) taking **Salicylic acid** may slightly lower the Sensor glucose readings

Storage and Handling of Flash Glucose Monitoring Systems:

- The Sensor Pack is sterile unless opened or damaged.
- Store kit between 4 – 25 degrees C. Do Not Freeze.
- Do Not use past the expiry Date.

PROCEDURE:

- Wash your hands and don gloves.
- Open and prepare Sensor Kit – ensure codes match.
 - Line up dark marks on Sensor applicator and Sensor. On a hard surface, press down firmly on Sensor applicator until it comes to a stop. Lift Sensor out of the pack
 - CAUTION:** Sensor Applicator contains a needle- DO NOT TOUCH inside Sensor Applicator OR put back in to Sensor Pack.
- Select site as indicated by the manufacturer- Libre – back outer aspect of the upper arm and cleanse the skin with an alcohol wipe. Allow to dry.
- Place Sensor Applicator over site. PUSH down firmly to apply Sensor. Gently pull Sensor Applicator away.
- Ensure that Sensor is secure. Discard Applicator and Sensor Pack in the Sharps container.
- Following the Product information sheet – press Start new Sensor on the Reader. Hold reader within 4 cm(1.5inches) of the Sensor to scan it. **WAIT 60 MIN** then the Sensor can be used to check glucose levels.
- Turn reader on by pressing the home button. Hold reader within 4 cm(1.5inches) of the Sensor to scan it.. The Reader shows your glucose readings.
- Read product manual for additional features such as: review history, daily graph, average glucose, daily patterns, time in target, low glucose events.

How to preform a Sensor Accuracy Check:

- Scan the sensor at time when blood sugar is changing slowly – take reading. Blood sugar must be above 4.4 mmol/L in order to preform the test.
- Perform a blood glucometer test. Compare the readings. The Sensor system is performing if the comparison is within 20%. Example: The Sensor reads 10.0 mmol/L and the Glucometer reading is between 8.0 and 12 mmol/L. There is a LAG time between the blood glucose level and the interstitial glucose levels – it takes a few minutes for the glucose to move from blood into the interstitial.

Hypoglycemic Care: Conscious Resident

Hypoglycemia can happen quickly and may be caused by:

- More physical activity than usual
- Not eating on time
- Eating less than resident usually does
- Too much medication
- Effects of drinking alcohol

Resident's with low blood sugar can exhibit the following signs and symptoms:

- Trembling, light headedness, nausea
- Irritability/ anxiousness
- Sweaty, headache / weak /drowsy
- A numbness or tingling in their tongue or lips
- Confusion/disorientation

- Loss of consciousness
- Seizures

Check the resident's glucometer. If below 4 mmol/L, and the resident is **conscious**, **IMMEDIATELY** give **one** of the following to raise blood glucose quickly (provides 15 g carbohydrate)

- 15 ml (3 tsp/1 tablespoon) sugar – dissolved in water OR 3 packets of table sugar dissolved in water
- 175 ml (3/4 c) regular soft drink. **DO NOT use diet pop**
- 125 ml (½ c) any regular juice
- 15 ml (1tablespoon) of honey
- 15 g glucose in the form of glucose tablets
- 6 lifesavers (1=205g of carbohydrate) ensure no choke risk! **WAIT 10 TO 15 MINUTES**

Then recheck the resident's blood sugar. If still low: **TREAT AGAIN** as outlined above.

If there has been a rise in the blood sugar level then follow these guidelines:

Next Meal MORE THAN 1 hour away: serve a snack of ½ of a sandwich OR cheese and crackers

Hypoglycemic Care: Unconscious Resident

If glucometer is below 4 and patient is **not conscious** give Glucagon as per individualized medical directive and medication administration insert directives. Follow the directions on the insert in the Glucagon kit for reconstitution and the technique for administering the injection.

Wait 10 minutes, then recheck the resident's blood sugar.

If still low and resident is conscious: **TREAT AGAIN** with the oral interventions as above.

If resident does not regain consciousness : DO NOT REPEAT GLUCAGON. Send to ER.

If resident does regain consciousness : DO NOT REPEAT GLUCAGON

- Phone physician: if on insulin, hold the insulin. Follow situational insulin orders.

Complete documentation/ reporting requirements as outlined in the Glucagon Use Policy.

Hypoglycemic Care: Residents on Oral Medication

Residents on oral hypoglycemic medications – non-insulin dependent diabetics are at risk for several days as oral medications can remain in the system for 3 days.

Check glucometer reading for 3 days BID to ensure blood sugars are in an acceptable range.

Hyperglycemic Care

Hyperglycemia may be caused when the food intake, activity and medication are not in balance. It may also occur when there is illness or the resident is under stress.

Follow the individualized medical directives outlined for the resident's care for hyperglycemia. Otherwise a glucometer reading higher than 20 requires staff to notify the Physician.

Hyperglycemia doesn't cause symptoms until glucose values are significantly elevated. Symptoms of hyperglycemia develop slowly over several days or weeks.

The longer blood sugar levels stay high, the more serious the symptoms become.

Early signs and symptoms

Recognizing early symptoms of hyperglycemia can help you treat the condition promptly. Watch for:

- Frequent urination
- Increased thirst
- Blurred vision
- Fatigue
- Headache

Later signs and symptoms

If hyperglycemia goes untreated, it can cause toxic acids (ketones) to build up in your blood and urine (ketoacidosis). Signs and symptoms include:

- Fruity-smelling breath
- Nausea and vomiting, Abdominal pain
- Shortness of breath
- Dry mouth
- Weakness
- Confusion
- Coma

Hyperglycemia Interventions

Fluid replacement: Encourage fluid intake orally (preferably water) to rehydrated fluids lost through excessive urination, as well as help dilute the excess sugar in your blood.

Blood Glucose Review: Print a month of blood glucose levels from the electronic documentation, along with the food intake record and forward to the RD and Physician for review.

DIABETIC FLOW SHEET, SLIDING SCALE INSULIN MEDICATION RECORD

To provide clear and accurate documentation when a resident requires insulin on a sliding scale, a Diabetic Flow Sheet, Sliding Scale Insulin Medication Record will be maintained.

PROCEDURE:

1. When a resident's blood sugar is unstable and the Physician has ordered regular dosing insulin and a sliding scale insulin, the Registered Staff will initiate a diabetic flow sheet, sliding scale insulin medication record sheet.
2. The flow sheet will be kept in the MARS book with the resident medication records. Upon completion it will be filed in the resident's chart under the care plan section with the MARs/Tars documents. The Registered Staff will document the resident name, date, time, blood sugars, the insulin sliding scale Physician order, any comments and staff initials.
3. The flow sheet and the MARS are to be signed off by the Registered Staff giving the insulin. All blood sugars are to be recorded in the resident's electronic documentation record.