

**Work instruction for:**  
**Glucose monitoring for patients with Diabetes Mellitus**

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**Work instruction for:**  
**Glucose monitoring for patients with Diabetes Mellitus**

**1. PURPOSE**

Describes the activities corresponding to glucose monitoring in diabetic patients receiving treatment for TB in order to prevent hyperglycemia or hypoglycemia.

**2. SCOPE**

These instructions apply to the clinical and study team involved in the care of people with diabetes. It includes instructions on glucometer use and appropriate documentation and reporting of information to the responsible physician, in order to maintain optimal and stable glucose levels, especially while taking anti-tuberculosis treatment. Depending on clinical study team orientation, responsibilities may vary.

**3. RESPONSIBLE FUNCTIONS**

Function	Activity
<b>Investigator</b>	<ul style="list-style-type: none"> <li>• Ensure glucose levels stay within the range specified by the physician for the patient.</li> <li>• Indicate the target glucose value range for the patient.</li> <li>• Indicate the frequency for monitoring the sugar level in the study participants (daily, twice a day, only if there are symptoms, etc.)</li> <li>• Make appropriate referrals for nutrition and endocrinology according to the participant's needs.</li> <li>• Provide counseling on the importance of maintaining glucose levels within their indicated range during the context of TB treatment, particularly if it includes medications with possible action on glucose levels such as levofloxacin, moxifloxacin, and linezolid.</li> <li>• Maintain communication with the team responsible for the participant's care to know progress and know any change in the participant's condition or medication.</li> </ul>
<b>Study Coordinator/ Delegated staff</b>	<ul style="list-style-type: none"> <li>• Identify participants who require glucose monitoring support.</li> <li>• Ensure that all diabetic participants keep a glucose level control in their medical records and the treating physician evaluates progress periodically.</li> <li>• Ensure that the recruitment and retention team is informed of all patients who are diabetic.</li> <li>• Provide support for social assistance coordination and consultation according to the needs of the patient.</li> </ul>

<b>Recruitment/Retention staff/Delegated staff</b>	<ul style="list-style-type: none"> <li>• Ensure study team is aware of the participants who require glucose monitoring.</li> <li>• Train the applicable study team staff on the use of a glucometer.</li> <li>• Ensure that team has access to a blood glucose meter and test strips for measuring glucose levels.</li> <li>• Ensure that the patient and team are familiar with the symptoms of hyperglycemia and hypoglycemia</li> <li>• Ensure that the field team has a glucometer, lancets, strips and biosafety materials.</li> <li>• Provide support and education to the patient (and family members) for their glucose management including signs/symptoms, recording blood sugar levels, using a glucometer, etc.</li> <li>• Inform study team of abnormal levels according to the parameters established by the doctor for each participant.</li> <li>• Inform the nurse of any new situation faced by the patient that may cause alterations in glucose levels such as low food intake, vomiting, lack of resources to obtain food, new infections, stress, use of alcohol, lack of medications, etc.</li> </ul>
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#### 4. ABBREVIATIONS AND DEFINITIONS

**ADA** American Diabetes Association

**CDC** Centers for Disease Control and Prevention

**HgA1C** Hemoglobin A1C -- reflects the average blood glucose over the past two to three months; expressed as a percentage (%)

**eAG** estimated average glucose – average glucose measured by the glucometer; expressed as mg/dL

#### 5. PROCESS

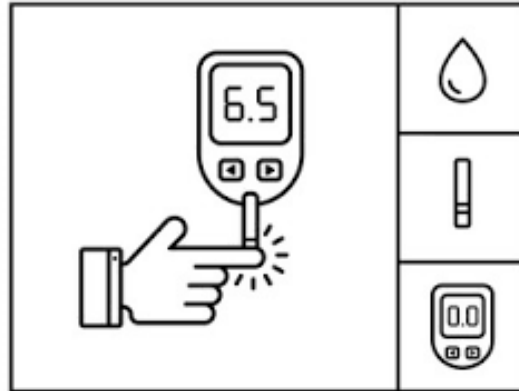
##### 5.1. Patient Counseling

The following topics are suggested to review when counseling TB patients with diabetes.

- Importance of maintaining glucose level within range specified by doctor
- Effects of the evolution of TB disease on glucose level
- Possible effects of some medications on glucose level
- Possible changes in diabetes medication as TB resolves
- Identification of signs and symptoms that may indicate hypo or hyperglycemia
- Treatment for hypoglycemia
- Monitoring and documentation of glucose levels

## 5.2. Glucometer use

General tips on how to use a blood sugar meter (glucometer) below. It is recommended to have a practice session to familiarize yourself with the characteristics of the equipment.



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1. Make sure the meter is clean and ready to use.
2. After removing a test (reagent) strip, immediately close the container tightly. The test strips can be damaged if exposed to moisture.
3. Wash your hands with soap and water. Dry them well. Massage your hand so that the blood flows to your finger. Do not use alcohol because it dries out the skin.
4. Use a lancet to prick yourself on the ball of your finger ("pad"). Press down from the base of your finger to gently put a small amount of blood on the test strip. Put the strip in the glucose meter (glucometer). Note that some meters ask to first insert the test strip before putting the blood on the strip. Always follow the manufacturer's instructions.
5. After a few seconds the value will appear. Write down and track your results. Add notes on anything that may have caused the numbers to not be within your target range, such as food, activity, etc.
6. Dispose of the lancet in a sharps container and dispose of it in a trash container. Test strips and lancets must not be reused.
7. Do not share blood sugar monitoring equipment, such as lancets, with anyone, even family members.
8. Store the test strips in the container provided. Do not expose them to humidity, extreme heat or cold temperatures.
9. Before you run out of supplies (lancets or strips) make sure you stock up.

## 6. REFERENCES

Monitoring Your Blood Sugar

<https://www.cdc.gov/diabetes/managing/managing-blood-sugar/bloodglucosemonitoring.html>

## 7. SUPPORTING DOCUMENTS

[SP-025-CT Management of Comorbidities](#)

**7. APPENDEX**

<b>MY RESULTS</b>			
<b>Day</b>	<b>Hour</b>	<b>Glucose value (mg/dL)</b>	<b>Observations</b>

Glucose blood levels per ADA : Before meals: 80 to 130 mg/dL and 1 -2 hours after meals below 180 mg/dL

Target blood levels*	My goals	My results
Before meals: 80 to 130 mg/dL		
1-2 hours after meals: Below 180 mg/dL		

Source: CDC

*\*your target levels indicated by your physician might be different.*