A. Introduction

The Glucometer TRUE METRIX™ is designed for obtaining capillary blood samples. Any patient with an altered level of consciousness not explained by history or injury or any patient with a history of diabetes will have a blood glucose level checked and documented Protocol 36 Additionally, any patient with a complaint of a seizure, weakness, fatigue, dizziness, nausea, vomiting and all other vague medical complaints patients will receive a glucose test.

B. Procedure

BLS

1. Assemble the equipment:
    a) TRUE METRIX™ Blood Glucose Meter
    b) Alcohol wipe
2. Remove a test strip from the bottle. Tightly close the bottle immediately after removing the test strip.
3. With meter off, insert test strip contact end (contact blocks facing up) into test port. Meter will turn on. Obtain a blood sample by performing a finger-stick (**See D**).
4. Touch and hold the test end **(tip)** of the test strip to the drop of blood until after the meter "beeps". Do not press the tip against the skin or place the blood on top of the strip tip. Blood will automatically be drawn into the test strip. The timer will then begin counting down.
5. If unable to obtain blood from a finger-stick, venous blood from an IV site may be used. Be aware that venous blood glucose may be as much as 25% higher than capillary blood glucose.
6. After you test the strip release button will flash. Hold the meter over a waste can with the strip side pointing down. Press strip release button to discard strip. Meter will turn off. Result will store in memory with day, date, and time.

C. Performing a Finger-stick

1. Select a puncture site:
    a) The sides of a fingertip are preferred. There are fewer nerve endings and the skin is less callused.
    b) Other sites on the fingertip.
2. Wipe the area with an Alcohol wipe and allow the fingertip to dry thoroughly.
3. Prepare the Automatic Lancing Device.

4. Remove the protective cap from the lancet by twisting (do not pull). ***Do Not*** use the lancet if the protective cap has been previously removed.

5. Position the Automatic Lancing Device:

    a) Place the device on finger with the lancet opening resting against the selected puncture site.

    b) For a shallow puncture, place the device so that the ribs on each side of the lancet run across the finger.

    c) For a deeper puncture, place the device so that the ribs on each side of the lancet run in the same direction as the finger.

NOTE: This technique is usually used for individuals with thicker than average skin, for callused skin, or if the blood flow is difficult.

WARNING: The Automatic Lancing Device should be used with caution on small children (under 55 pounds). For these children, the device should be used only in the shallow orientation, and should be pressed against the finger or heel with light pressure when performing the puncture.

6. With the device correctly positioned on the finger, push the release button, without moving either the device or finger. Remember, the harder you press the deeper the puncture.

7. Wait a few seconds and then gently stroke the hand from the palm to the distal end of the tested finger to encourage blood flow through the puncture, forming a large drop of blood on the fingertip. Avoid squeezing around the puncture site.

8. Touch the tip of the test strip to the drop of blood.

9. Wipe the puncture site with clean gauze, and apply direct pressure until bleeding stops.

10. Remove the used lancet and dispose of it in the needle box as soon as possible.

D. Test Results

1. Normal test values are 80-100 mg/dL.

2. If the display shows “LO”, the blood glucose level may be below 20 mg/dL.

3. If the display shows “HI”, the blood glucose level may be above 600 mg/dL.

4. When test results are questionable or inconsistent:

    a) Be sure the drop of sample completely filled the tip of the test strip.

    b) Confirm that the test strips are within the expiration date by checking the expiration date on the test strip bottle or box.

c) Do not use test strips after 6 months (180 days) of first opening the bottle.

d) If doubt persists, perform a control test as described in **section E.**

E. Control Test

A control test will be performed each Saturday following the prescribed procedure that follows. This test should be documented in the truck/equipment log on the apparatus.

1. Gather the testing supplies: Glucometer, test strips, and a bottle of Control Solution.
2. Insert a test strip into the test slot of the meter as described in **B-3.**
3. Check the Control Solution:
   a) If the solution is cold, do not use until the solution has warmed to room temperature.
   b) Use before the unopened expiration date shown on the bottle OR within six months of the first opening expiration date.
   c) To maintain a first opening expiration date, write the date on a piece of tape and place on the bottle when it is first opened.
4. Gently rock the control bottle before opening to ensure the control solution is mixed well. Squeeze a small drop of control solution on a clean nonabsorbent surface. **DO NOT APPLY CONTROL SOLUTION TO THE TEST STRIP DIRECTLY FROM THE BOTTLE.**
5. Touch the **tip** of the test strip to the drop of control solution. The control solution is automatically pulled into the strip through the tip. Hold until the meter beeps.
6. When the control test result is displayed, compare it to the specific range printed on the test strip bottle label.
7. If the meter displays "LO" or the test result is not within the range listed on the Control Range Card, there may be a problem with the Test Strip, Meter, or your testing procedure. Contact EMS R&D for a replacement.

F. Cleaning of Glucometer

1. The display window can be cleaned with moistened gauze using fresh water.
2. For blood contact on the meter, use mild detergent moistened gauze.
3. For heavy blood contamination, contact EMS R&D for replacement.