# HESS Glucometer Smart Cable Healthcare Education Simulation Station

Revised 7/1/2025

www.BetterNurseEducation.com

# **PLEASE READ**

## **DISCLAIMER**

The information in the HESS is not intended or implied to be a substitute for professional medical expertise, advice, diagnosis or treatment.

There is no representation and no responsibility for the accuracy of information contained within the HESS.

The HESS is only intended to be used as an instructional aide by qualified medical educational professionals.

### **HESS Glucometer Smart Cable**

The HESS Glucometer Smart Cable was created to allow a real Blood Glucose Strip to be attached to an Android tablet running the Glucometer App.

To use the Glucometer Smart Cable, the Settings of the Glucometer App must have the "Enable Smart Cable" option set to "Yes".



Smart Glucometer Strip components



Abbott Freestyle Precision Neo blood glucose test strips

To attach the Glucometer Smart Cable, insert the USB plug of the Glucometer Smart Cable into a suitable USB Adapter cable - which should be plugged into the USB port of the tablet running the Glucometer App. Such a USB Adapter cable allows attachments with full sized USB plugs to be used with tablets — which usually have smaller "mini-USB" or "micro-USB" ports.

If the Glucometer App is running you will need to provide Permission in a popup window to use the attached Glucometer Smart Cable.

Once the Glucometer Smart Cable is attached and communicating properly - the text in the blue toolbar at the top of the Glucometer App will be green rather than white. This green text is the "Smart Cable Indicator" that confirms the Glucometer Smart Cable is working.

This text should stay green for the duration of the learning exercise. The text may briefly turn blue when a Bluetooth transmission is received – or even briefly turn white – but it should quickly return to green to indicate proper communication with the Glucometer Smart Cable.

If the text remains white or blue for more than a second, the Glucometer Smart Cable is not communicating properly and should be reset using one of the following steps (AND any vitals should then be re-transmitted to the Glucometer App):

- a. Try detaching and then reattaching the USB cable as in the initial installation.
- b. Try closing and restarting the Glucometer App and reattaching the USB cable.
- c. In very rare cases, try powering off the Android tablet and then restarting it.

#### **HESS Glucometer Smart Cable**

The HESS Glucometer Smart Cable requires the learner to:

- a) insert a real Blood Glucose Strip into the Smart Cable slot
- b) place a drop of suitable liquid on the end of the Blood Glucose Strip
- c) wait for the liquid to "wick" up the Blood Glucose Strip

before being able to view the Blood Glucose Level on the Glucometer App.

**Note:** The Abbott Freestyle Precision Neo blood glucose test strips must be inserted into the socket such that the electrical contacts on the strip make proper contact with the electrical contacts in the socket. If the Abbott Freestyle Precision Neo blood glucose test strip is inserted upside down, the Glucometer Smart Cable will not work correctly.

#### About The Genuine HESS Glucometer Smart Cable

The genuine HESS Glucometer Smart Cable was built using an Arduino board with a Blood Glucose Strip socket that meets the requirements of Abbott Freestyle Precision Neo blood glucose test strips.

When the Abbott Freestyle Precision Neo blood glucose test strip is inserted into the socket, a drop of liquid containing "sugar" can be placed on the tip of the strip. The liquid will "wick" up the strip and cause a small electrical current to flow within the strip. This current will cause the Glucometer Smart Cable to communicate with the Glucometer App that the Blood Glucose Level should be displayed on the screen. This is very similar to the way a real glucometer works.

The liquid can be "sugar water", possibly saliva – or even real blood – as long as there is some level of "glucose" in the liquid.

#### **Other Glucometer Smart Cables**

Specifications for building "non-HESS" (3<sup>rd</sup> Party) Glucometer Smart Cables are available at **www.BetterNurseEducation.com** . 3<sup>rd</sup> Party Glucometer Smart Cables may have different requirements for blood glucose strips, liquid content, etc. Use of 3<sup>rd</sup> Party Glucometer Smart Cables requires the entry of an appropriate Smart Cable Vendor ID and Smart Cable Product ID in the Glucometer App Settings.