

Using The HESS Laparoscopic Insufflation App

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.

About The HESS Laparoscopic Insufflation App

The HESS Laparoscopic Insufflation App was created to let healthcare professionals conduct learning exercises that involve a simulated Laparoscopic Insufflation unit in a safe and “low stakes” environment.

The Laparoscopic Insufflation can be used to simulate Laparoscopic Insufflation vitals on both Manikins and Standardized Patients (actors) in a learning exercise.



Tablets Suitable To Run The HESS Laparoscopic Insufflation App

The HESS Laparoscopic Insufflation App can run on Android tablets with Version 8 or above of the Android operating system and with a screen size of at least 10 inches.

Android tablets with screen sizes smaller than 10 inches may not display the Laparoscopic Insufflation App screen elements correctly.

The Laparoscopic Insufflation App can be run on larger screen sizes if the educational exercise dictates using a larger tablet – such as displaying the Laparoscopic Insufflation App screen on a monitor or projector.

HESS Vitals Accepted By The HESS Laparoscopic Insufflation App

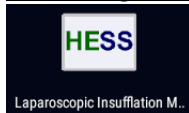
The HESS Laparoscopic Insufflation App will recognize and use the following vitals transmitted from the HESS Instructor tablet.

1. Laparoscopic Insufflation Vitals

The Laparoscopic Insufflation Vitals that the Laparoscopic Insufflation App recognizes and uses are the Gas Volume (l), the Gas Flow Rate (l/min), the Gas Pressure (mmHG) and the Tank Level.

Using The HESS Laparoscopic Insufflation App

1. Starting the Laparoscopic Insufflation App



The HESS Laparoscopic Insufflation App can be started by touching the HESS Laparoscopic Insufflation App icon on the Android tablet.

2. Starting the Laparoscopic Insufflation Vitals Display



AFTER the Laparoscopic Insufflation Vitals have been transmitted successfully from the HESS Instructor App, the “power” button can be used to “Start/Stop” the Laparoscopic Insufflation Vitals – or to then “toggle” the Gas Flow and Pressure Vitals on or off.

3. Setting the Desired Gas Pressure

The “desired” Gas Pressure (mmHG) indicator can be raised or lowered 1 mmHG at a time by the learner using the + and – buttons above the “Adjust Pressure” heading. The “desired” Gas Pressure will not change the “actual” Gas Pressure value – which is transmitted from the HESS Instructor tablet.

4. Setting the Desired Gas Flow

The “desired” Gas Flow (l/min) indicator can be raised or lowered by the learner 0.1 l/min at a time using the + and – buttons above the “Adjust Gasflow” heading. The “desired” Gas Flow will not change the “actual” Gas Flow value – which is transmitted from the HESS Instructor tablet.

HESS Laparoscopic Insufflation App Settings

The HESS Laparoscopic Insufflation App has the following Settings available via the Android “3 dots menu” in the upper right corner of the Laparoscopic Insufflation App screen:

1. Gas Flow Low And High Alarms

Sets values, that if the Gas Flow (l/min) falls below or rises above, will trigger the Laparoscopic Insufflation App to sound an audible alarm.

2. Gas Volume Low And High Alarms

Sets values, that if the Gas Volume (l) falls below or rises above, will trigger the Laparoscopic Insufflation App to sound an audible alarm.

3. Tank Level Low And High Alarms

Sets values, that if the Tank Level falls below or rises above, will trigger the Laparoscopic Insufflation App to sound an audible alarm.

4. Gas Pressure Low And High Alarms

Sets values, that if the Gas Pressure (mmHG) falls below or rises above, will trigger the Laparoscopic Insufflation App to sound an audible alarm.

5. Flip Display

Flips the Laparoscopic Insufflation App screen to enable easier access to tablet ports – such as the charging port or the audio jack – during use.

6. Device Address

The Laparoscopic Insufflation App receiving address for the Vitals – which must match the transmission address for the Vitals in the HESS Instructor App. Device Addresses are 4 characters made up of the characters 0-9 and A-F. **DO NOT USE** “0000” or “FFFF” as Device Addresses. “0000” and “FFFF” have special uses within the HESS. Using these special Device Addresses can cause unpredictable results.

HESS Laparoscopic Insufflation App Usage Notes

1. Bluetooth Reset Button



If, after numerous attempts, the Laparoscopic Insufflation App is still not receiving Vitals transmissions – even though the Instructor transmission and the Device receiving addresses match – the “Bluetooth Reset” button in the upper right corner of the screen can be used to reset the Android tablet’s Bluetooth functions. This often will resolve Bluetooth oriented issues without having to stop or disrupt the app.

2. When Done, “Power Off” Tablets – Don’t Just “Suspend” Them

The Android tablets should be completely “powered off” when stored or the battery will drain to 0% charge. Completely drained batteries can then take 20-30 minutes of charging just to get the tablet to power up for usage. Even if the tablet screen is dark it can be misleading because the tablet may only be “suspended”. Pressing the power button for ½ second will indicate if the tablet is completely powered off – by either “unsuspending” the tablet screen if the tablet is only “suspended” – or remaining dark if the tablet is completely powered off.