

HESS Scenario Tutorial

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.

The HESS (Healthcare Education Simulation Station)

Introduction

Where/When The HESS Is Used

- Active Learning/Simulation Style Exercises
- Classroom Visual & Active Content
- Virtual & On-Demand Educational Content



Some Things The HESS Does Very Well

- Portability to conduct active learning exercises "in situ" or in classrooms.
- Putting fake vitals on Standardized Patients.
- Adding high fidelity elements to low fidelity items.
- Creating nursing education materials integrated with online and virtual environments such as Zoom, YouTube, etc.

The HESS Simulated Device Apps

- | | |
|------------------------------|-----------------------------|
| • Pulse Ox | • Capnography |
| • Thermometer | • Fetal Monitor |
| • Digital Blood Pressure | • QBL |
| • Sphygmomanometer | • ICU Monitor |
| • Handheld Doppler | • Mid-Range Care Monitor |
| • Glucometer | • Laparoscopic Insufflation |
| • Body Sounds (Auscultation) | • Pacemaker Adjustment |
| • EKG | • Firefighter 4 Gas Meter |

The purpose of the **Scenario Tutorial** is to provide a step by step guided introduction to creating saved HESS Scenarios containing multiple sets of vitals and multiple stages. You should be familiar with the HESS concepts and terminology covered in the **Instructing With The HESS** educational guide.

Equipment needed to complete the Scenario Tutorial:

1. A HESS Instructor tablet running the HESS Instructor App.
2. Either:

- A. A 7-inch HESS Device Tablet running the Thermometer Device App
- B. A 10-inch HESS Device Tablet running the Care Monitor or ICU Monitor Device App

- Or -

- A. A 7-inch HESS Device Tablet running the Thermometer Device App
- B. A 7-inch HESS Device Tablet running the EKG Device App
- C. A 7-inch HESS Device Tablet running the Pulse Oximeter Device App
- D. A 7-inch HESS Device Tablet running the Blood Pressure Monitor Device App

If enough Device Tablets are not available, the **Scenario Tutorial** can still be a good learning exercise about Scenarios – just use whatever Device Tablets are available and run the Device Apps one at a time.

The Medical Emergency Tutorial Scenario:

The **Scenario Tutorial** uses the Medical Emergency Tutorial Scenario to illustrate the creation of Scenarios. The Medical Emergency Tutorial Scenario can also be downloaded from **www.BetterNurseEducation.com** and imported into the HESS Instructor App.

Exported Scenario files are “.txt” files and the Medical Emergency Tutorial Scenario file is named “MedicalEmergencyTutorial.txt”.

The “MedicalEmergencyTutorial.txt” file can be obtained in a number of ways including:

1. Visiting **www.BetterNurseEducation.com** using the Chrome browser on the HESS Instructor Tablet and downloading the “MedicalEmergencyTutorial.txt” to the tablet’s Internal Storage – for example into the /Download folder.
2. Downloading the “MedicalEmergencyTutorial.txt” file from **www.BetterNurseEducation.com** to a computer – then connecting the HESS Instructor Tablet to the computer with a USB cable and copying the file to the tablet’s Internal Storage - for example into the /Download folder.
3. Saving the “MedicalEmergencyTutorial.txt” file to a flash drive – then attaching the flash drive to the HESS Instructor Tablet with a suitable USB attachment cable. (Note: Some Android versions need to be the system that formats the flash drive to read it after saving the file – although many do not require this).

The sample Medical Emergency Scenario that you will build in this tutorial is a multi-stage Scenario that uses vital signs involving Pulse Oximetry, EKG, Body Temperature, Capnography, and Blood Pressure.

Sample Medical Emergency Scenario Progression:

Initial Scenario Stage:

Patient complains of chest pain. Patient appearance is pale and diaphoretic.
Monitor shows sinus rhythm with elevated ST segment.
Vital signs: BP 164/72, HR 98, RR 22, Temp 98.9, Pulse Ox 94%

Expected Learner Actions:

Oxygen applied, nitro given, aspirin given.
Morphine ordered (held at this time).
Lab work drawn.
Alert called.

Progression of Scenario:

Vital signs: BP 120/68, HR 112, RR 22, Pulse Ox 96%
Cardiac monitor shows Sinus tachycardia with elevated ST segment
Chest pain continues.

Expected Learner Actions:

Nitro repeated after 3 minutes.

Progression of Scenario:

Vital signs: BP 102/60, HR 120, RR 24, Pulse Ox 96%
Cardiac monitor unchanged except rate

Expected Learner Actions:

Nitro repeated after 3 minutes.

Progression of Scenario:

Vital signs: BP 88/64, HR 130 irregular, RR 28 Pulse Ox 95%
Cardiac monitor shows sinus tach with PVCs

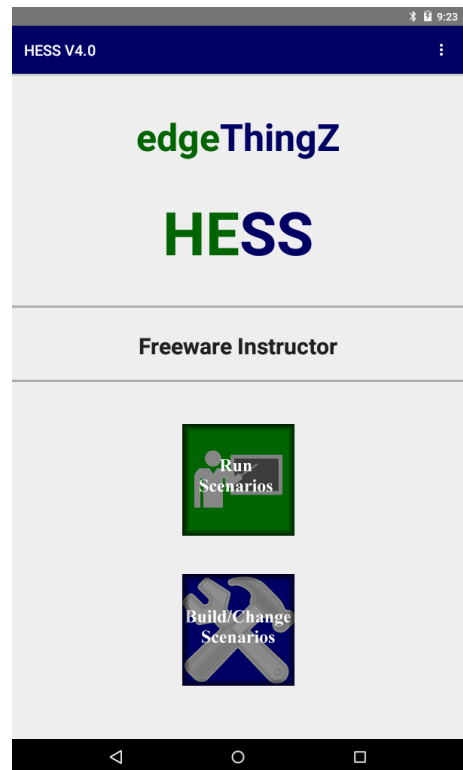
Expected Learner Actions:

Patient is transported to cath lab

When you start the HESS Instructor App you will see the HESS Start Screen (shown to the right of this text).

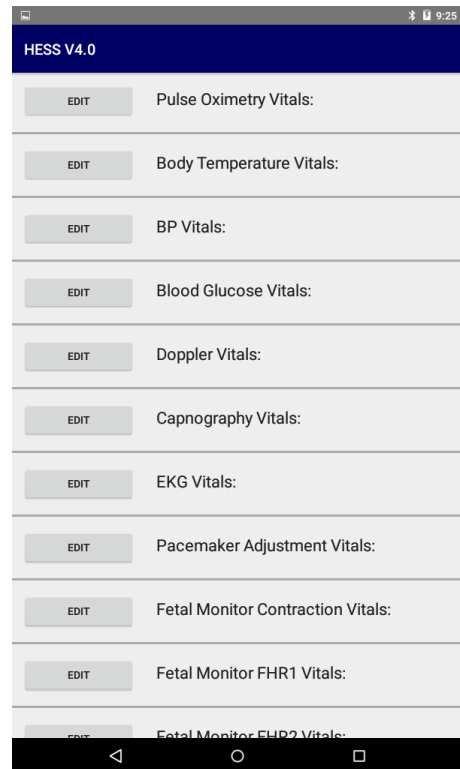
The HESS Start Screen allows you to either 1) Run Existing Scenarios or 2) to Build and Change Scenarios.

To get started building the Medical Emergency Scenario **Touch the Build/Change Scenarios** button to go into the HESS Scenario Building functions.



When you choose Build/Change Scenarios you will see the HESS Vitals Screen (shown to the right of this text).

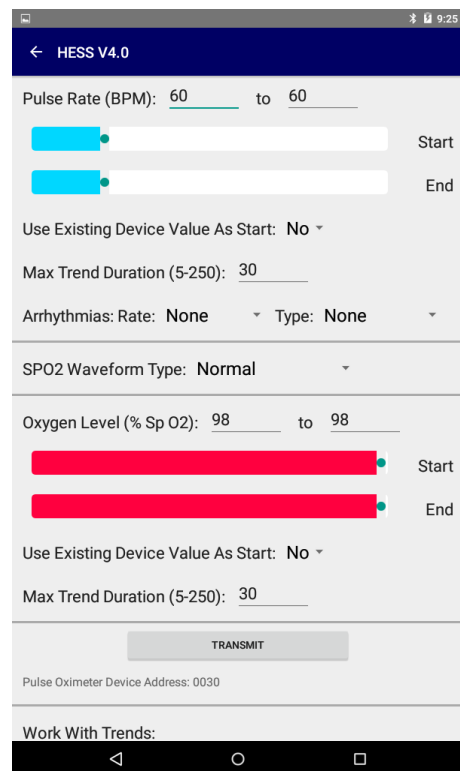
Touch the Edit button for the Pulse Oximetry set of vitals.



The options for the Pulse Oximetry set of vitals are displayed (shown to the right of this text).

The options include a **Start** and **End** value for each of the vitals as well as some options that are specific to the particular vitals. For example, for the Pulse Rate vitals, options include an **Arrhythmia Rate** and **Type** (missed or extra beat). The SPO2 vitals offer an **SPO2 Waveform Type**.

The options also include two ways to control how the vitals will move from the Start value to the End value. First, the **Max Trend Duration** sets the number of seconds that it will take to move from Start to End. It can range from 5 seconds to 250 seconds. Second, the **Use Existing Device Value As Start** allows the Start value that is currently running on the Device App to be used instead of the value from this screen. For example, if the current value running on the Device App is 80 BPM, choosing “Yes” for Use Existing Device Value As Start will use a Start value of 80 – from the Device App’s current value - instead of 60 – and prevent an awkward instantaneous “jump” of the Pulse Rate from 80 to 60 on the Device App when vitals are transmitted.



In the tutorial Medical Emergency Scenario the initial Pulse Rate is 98 and the initial SPO2% is 94.

The Start and End values for the vitals can be set either by using the slider controls OR by touching the numbers to be set to bring up the numeric keyboard. (If you enter numbers with the numeric keyboard the sliders will change to match after one of the buttons is pressed)

Set the Start and End Pulse Rate vitals to 98 and then set the Start and End SPO2% vitals to 94.

Choose “No” for Use Existing Device Value As Start for BOTH the Pulse Rate and SPO2% vitals.

Since this is an initial stage of the Scenario, any current value on the Device App should be ignored and the Start value from this screen (98 and 94) should be used.

Typically a first stage of any Scenario will set “No” for Use Existing Device Value As Start.

The screenshot shows the 'Vitals' settings screen. At the top, there's a back arrow. Below it, 'Pulse Rate (BPM):' is set to '98' to '98'. There are two sliders for 'Start' and 'End' values, both currently at 98. Below the sliders, 'Use Existing Device Value As Start:' is set to 'No'. 'Max Trend Duration (5-250):' is set to '30'. 'Arrhythmias: Rate:' is set to 'None' and 'Type:' is set to 'None'. Below this, 'SPO2 Waveform Type:' is set to 'Normal'. Then, 'Oxygen Level (% Sp O2):' is set to '94' to '94'. There are two sliders for 'Start' and 'End' values, both currently at 94. Below the sliders, 'Use Existing Device Value As Start:' is set to 'No'. 'Max Trend Duration (5-250):' is set to '30'. At the bottom, there's a 'TRANSMIT' button and a 'Work With Trends:' section with a 'LOAD' button.

While you “could ” Transmit these vitals and options to the Device App right now, most times you will probably want to save them as a **Trend** so that they are pre-defined when running an active learning exercise.

The options screen has a section at the bottom to allow you to **Work With Trends** (you might need to slide down to see this section). You can Create, Update, Delete and Rename Trends – as well as Load Trends you have already saved.

Touch the button to CREATE/UPDATE/DELETE to save this Trend.

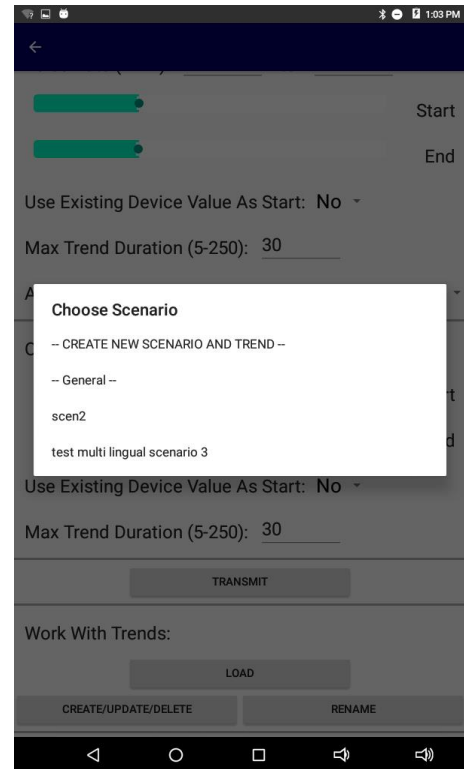
This screenshot is identical to the one above, showing the 'Vitals' settings screen. However, at the bottom, there are three additional buttons: 'CREATE/UPDATE/DELETE', 'RENAME', and 'LOAD'. The 'TRANSMIT' button is still present above the 'Work With Trends:' section.

All **Trends** are contained within a **Scenario**. When you create a Trend (by saving the vitals and options on the screen) you will need to specify which Scenario the Trend will be a part of. You have three choices:

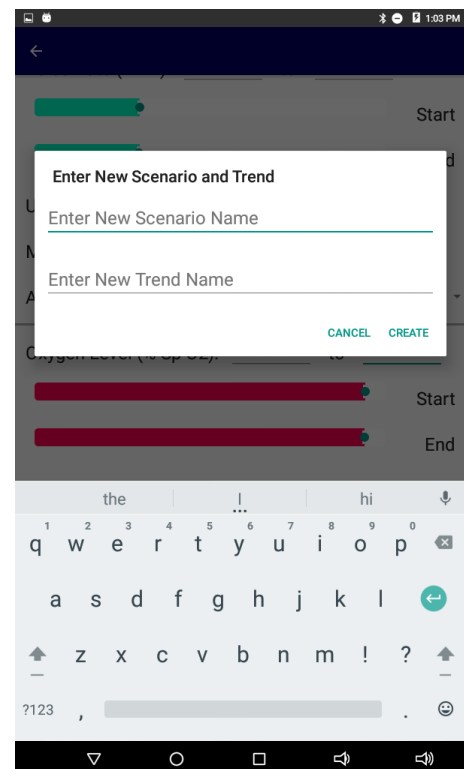
1. Create the Trend in an existing Scenario.
2. Create the Trend in the HESS General Scenario.
3. Create a new Scenario for the Trend.

Since this is the FIRST Trend in the tutorial Scenario choose CREATE NEW SCENARIO AND TREND.

(Note: The HESS General Scenario is used for Trends that will not be part of any named Scenario of your own)



For the FIRST new Trend in a new Scenario you will need to enter both a new Scenario name and a new Trend name.



For this tutorial Scenario:

Enter **“Medical Emergency”** for the new Scenario name.

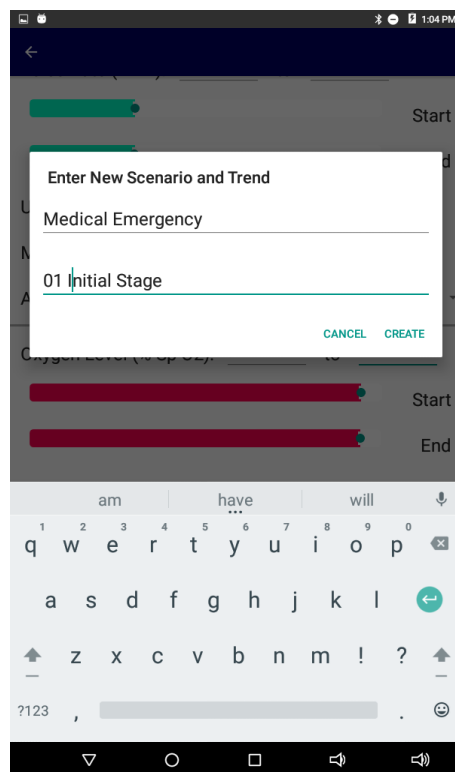
Enter **“01 Initial Stage”** for the new Trend name.

Touch Create.

(If others have run this tutorial before on this tablet or if you want the Scenario name to be your own you can add your initials to the Scenario name)

For Trend names it is usually a good idea to have a leading number - the “01” in this case - so that the Trend names will sort nicely in the Trend list later. You will see this later in the tutorial.

Finally, Trend names should usually be more descriptive than those used in this tutorial so that the instructor can identify the purpose of the Trend by name (for example perhaps “01 HR 98, SPO2 94”).



Now that the Scenario has been created more Trends can be added.

In the tutorial Medical Emergency scenario the second stage Pulse Rate is 112 and the SPO2% is 96.

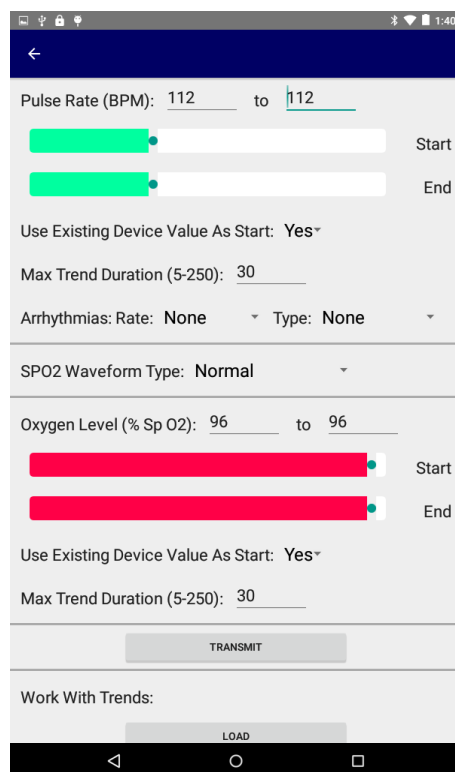
Set the Start and End Pulse Rate vitals to 112 and then set the Start and End SPO2% vitals to 96.

Choose “Yes” for Use Existing Device Value As Start for BOTH the Pulse Rate and SPO2% vitals.

Since this is **NOT** the initial stage of the Scenario, any current value on the Device App should be used and the Start value from this screen (98 and 94) should be ignored.

(Unless you intentionally WANT the vitals to jump abruptly to the Start values when transmitted.)

Typically all stages EXCEPT the first stage of any Scenario will set “Yes” for Use Existing Device Value As Start.



As before, you may need to slide down to see the **Work With Trends** options.

Touch the button to **CREATE/UPDATE/DELETE** to save this Trend.

Start

End

Use Existing Device Value As Start: Yes

Max Trend Duration (5-250): 30

Arrhythmias: Rate: None Type: None

SPO2 Waveform Type: Normal

Oxygen Level (% Sp O2): 96 to 96

Start

End

Use Existing Device Value As Start: Yes

Max Trend Duration (5-250): 30

TRANSMIT

Work With Trends:

LOAD

CREATE/UPDATE/DELETE RENAME

When you create a Trend (by saving the vitals and options on the screen) you will need to specify which Scenario the Trend will be a part of. Recall that you have three choices:

1. Create the Trend in an existing Scenario.
2. Create the Trend in the HESS General Scenario.
3. Create a new Scenario for the Trend.

Since you have previously created the “Medical Emergency” scenario, **and this is NOT the FIRST Trend in the tutorial Scenario, choose “Medical Emergency”**.

Start

End

Use Existing Device Value As Start: Yes

Max Trend Duration (5-250): 30

Choose Scenario

- CREATE NEW SCENARIO AND TREND --
- General --
- Medical Emergency
- scen2
- test multi lingual scenario 3

Max Trend Duration (5-250): 30

TRANSMIT

Work With Trends:

LOAD

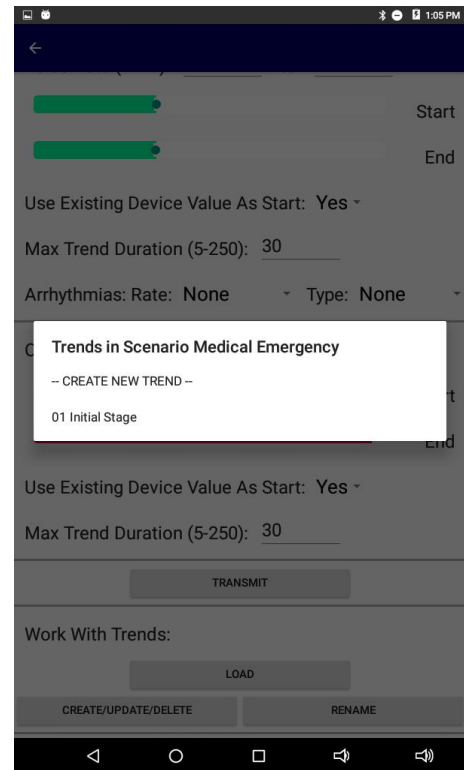
CREATE/UPDATE/DELETE RENAME

Since this is NOT the FIRST new Trend in the Scenario you will only need to create a new Trend.

You can also see the Trend you have already created on the list (which is how you could update or delete that Trend if you wanted to do that. **DON'T do that right now....**)

To create the new Trend...

Choose CREATE NEW TREND.

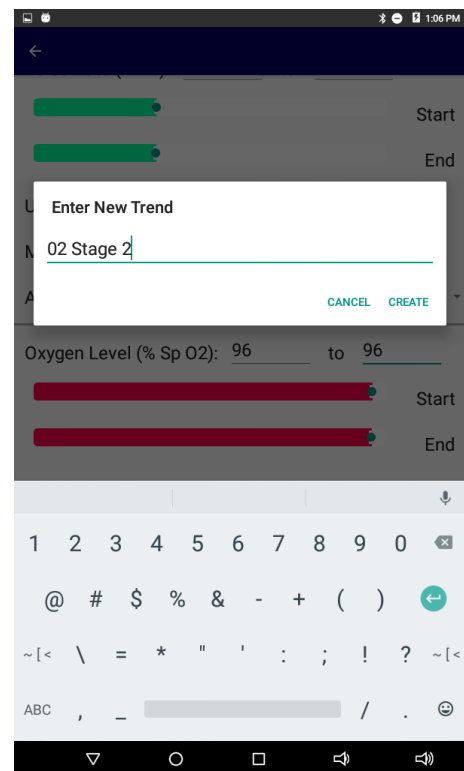


Enter "02 Stage 2" for the new Trend name.

Touch Create.

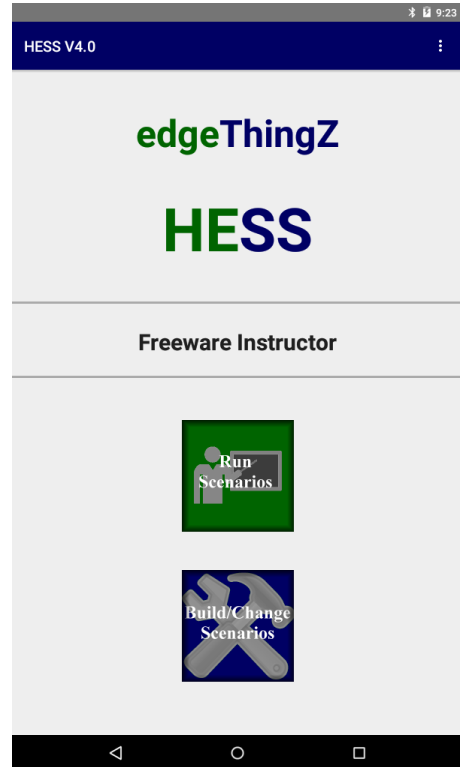
For Trend names it is usually a good idea to have a leading number - the "02" in this case - so that the Trend names will sort nicely in the Trend list later. You will see this later in the tutorial.

Finally, Trend names should usually be more descriptive than those used in this tutorial so that the instructor can identify the purpose of the Trend by name (for example perhaps "02 HR 112, SPO2 96").

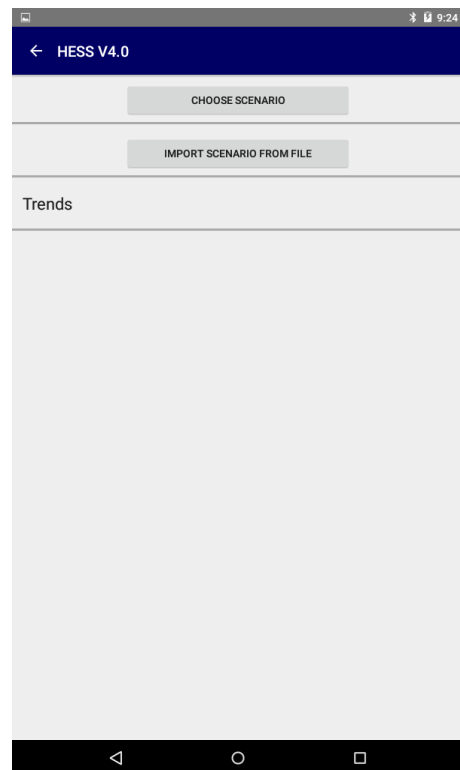


Use the Android “back” button to return to the HESS Start Screen. For this tablet the Android “back” button is the little triangle pointing to the left at the bottom of the screen.

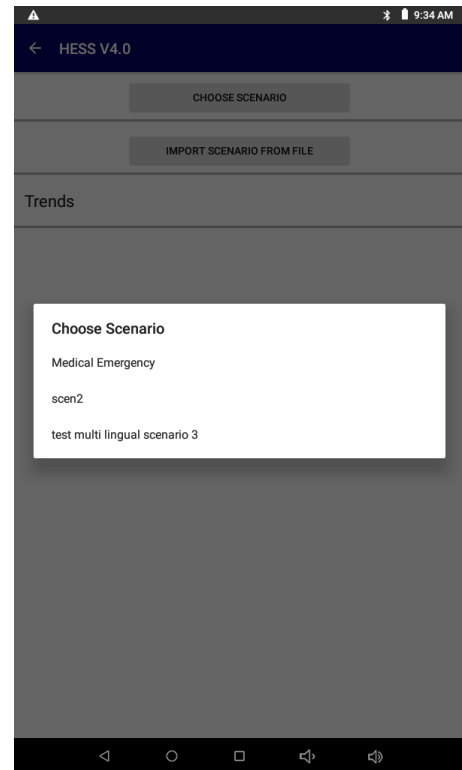
Touch the Run Scenarios button.



Touch Choose Scenario.

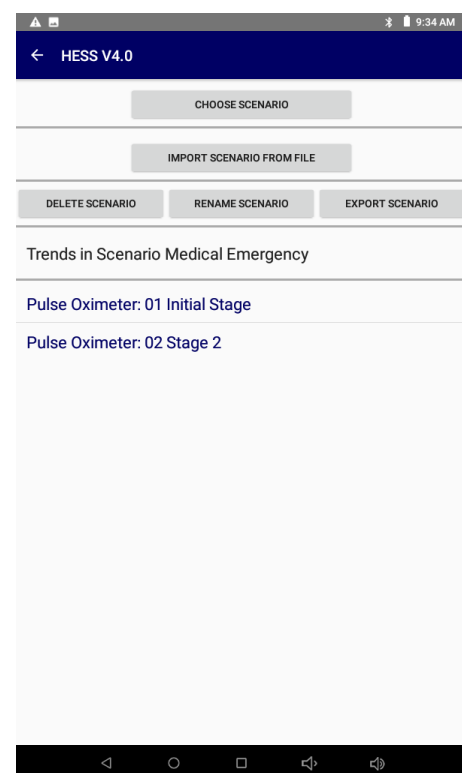


Choose “Medical Emergency”.



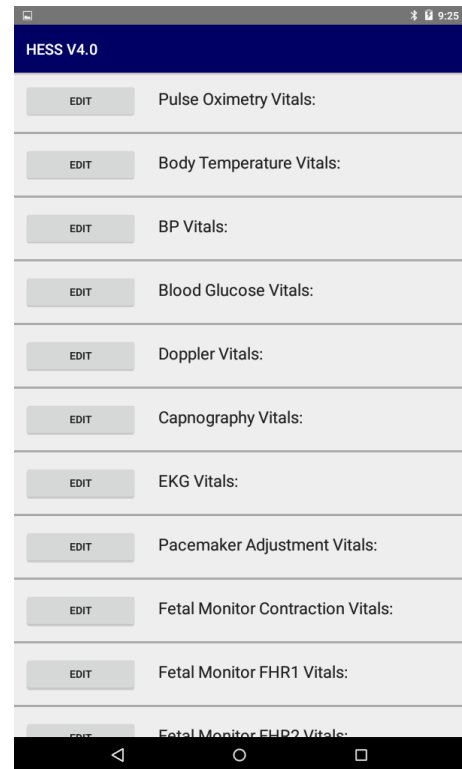
You can see how the Trends you have created are lining up within the Scenario. They are grouped by the Trend type – in this case they are Pulse Oximeter Trends.

And within the Pulse Oximeter grouping they are sorted alphabetically by Trend name. Notice how the leading numbers “01” and “02” help with the sorting. This way the Trends will match the progression of the Scenario stages for each set of vitals.



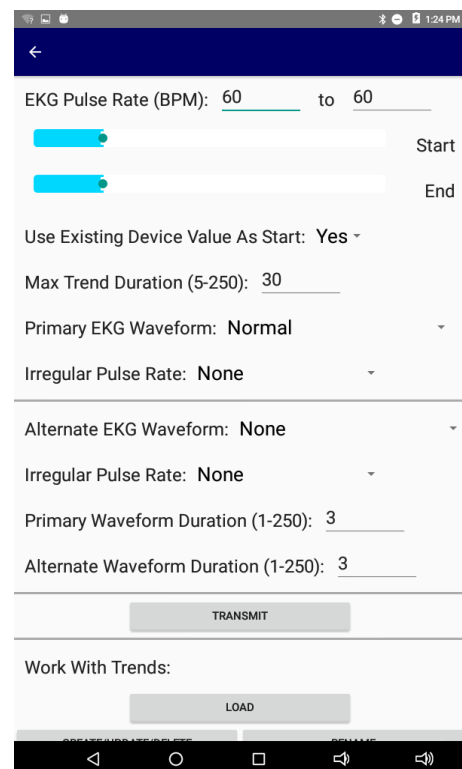
Use the Android “back” button to return to the HESS Start Screen and then choose **Build/Change Scenarios** to get to the HESS Vitals Screen. For this tablet the Android “back” button is the little triangle pointing to the left at the bottom of the screen.

Touch the **Edit** button for the EKG set of vitals.



The options for the EKG set of vitals are displayed.

In addition to the Pulse Rate vital, options include **EKG Primary and Alternate Waveforms, Irregular Pulse Rate** options, and **ways to control how often the Primary and Alternate Waveforms alternate**.



In the tutorial Medical Emergency Scenario the initial Pulse Rate is 98 and the waveform is a sinus rhythm with an elevated ST segment.

Set the Start and End Pulse Rate vitals to 98.

Set the Primary EKG Waveform to “Myocardial Infarction”.

Choose “No” for Use Existing Device Value As Start for the Pulse Rate.

Since this is an initial stage of the Scenario (EKG in this case vs. Pulse Oximetry before), any current value on the Device App should be ignored and the Start value from this screen (98) should be used.

Typically a first stage of any Scenario will set “No” for Use Existing Device Value As Start.

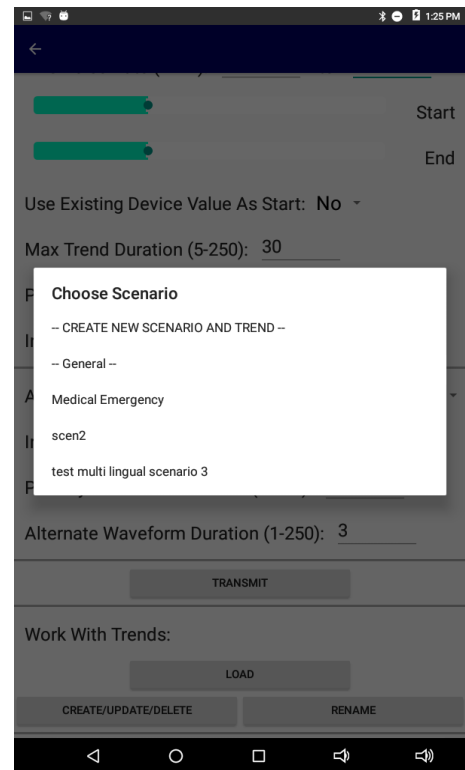
As before, you may need to slide down to see the **Work With Trends** options.

Touch the button to CREATE/UPDATE/DELETE to save this Trend.

This screenshot shows the EKG configuration interface. At the top, the EKG Pulse Rate (BPM) is set from 98 to 98, with corresponding sliders for Start and End values. Below this, the 'Use Existing Device Value As Start' is set to 'No'. The 'Max Trend Duration (5-250)' is set to 30. The 'Primary EKG Waveform' is set to 'Myocardial Infarction', and the 'Irregular Pulse Rate' is set to 'None'. A section for 'Alternate EKG Waveform' also shows 'None' for the waveform and 'None' for the irregular pulse rate. The 'Primary Waveform Duration (1-250)' and 'Alternate Waveform Duration (1-250)' are both set to 3. A 'TRANSMIT' button is visible. At the bottom, under 'Work With Trends:', there is a 'LOAD' button.

This screenshot is identical to the one above, showing the same EKG configuration settings. However, at the bottom of the screen, below the 'Work With Trends:' section, there are two additional buttons: 'CREATE/UPDATE/DELETE' and 'RENAME'.

Since you have previously created the “Medical Emergency” scenario, **and this is NOT the FIRST Trend in the tutorial Scenario, choose “Medical Emergency”**.

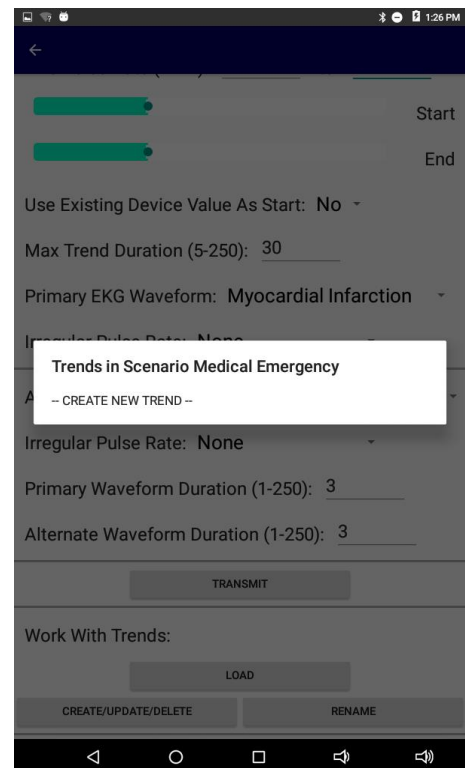


Since this is NOT the FIRST new Trend in the Scenario you will only need to create a new Trend.

This is the first EKG Trend in the Scenario, so no other Trends are listed here.

To create the new Trend...

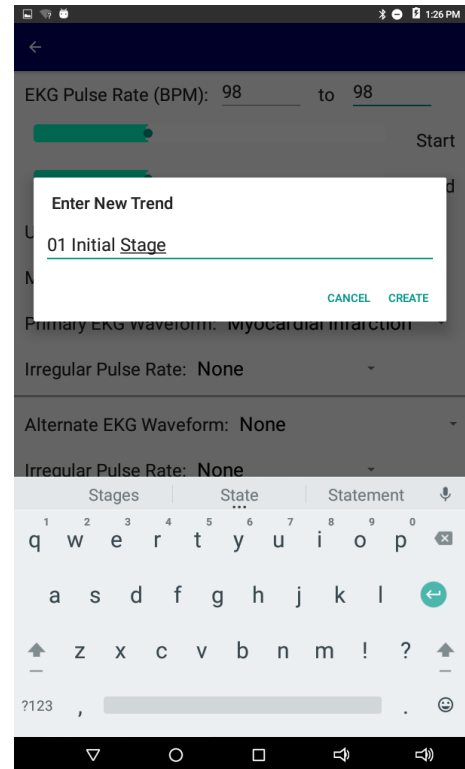
Choose CREATE NEW TREND.



**Enter “01 Initial Stage” for the new Trend name.
Touch Create.**

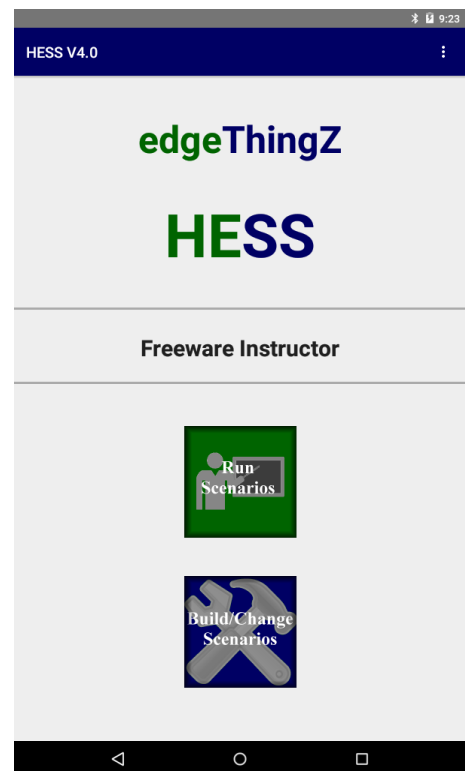
For Trend names it is usually a good idea to have a leading number - the “01” in this case - so that the Trend names will sort nicely in the Trend list later. You will see this later in the tutorial.

Finally, Trend names should usually be more descriptive than those used in this tutorial so that the instructor can identify the purpose of the Trend by name (for example perhaps “01 HR 98 MI”).

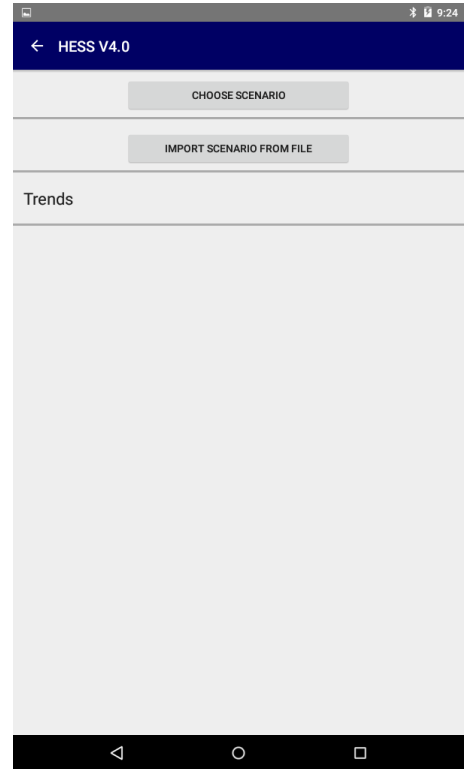


Use the Android “back” button to return to the HESS Start Screen. For this tablet the Android “back” button is the little triangle pointing to the left at the bottom of the screen.

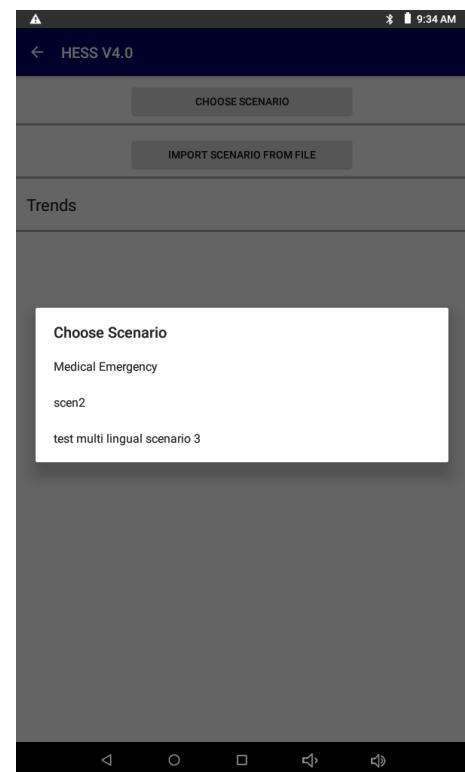
Touch the Run Scenarios button.



Touch Choose Scenario.

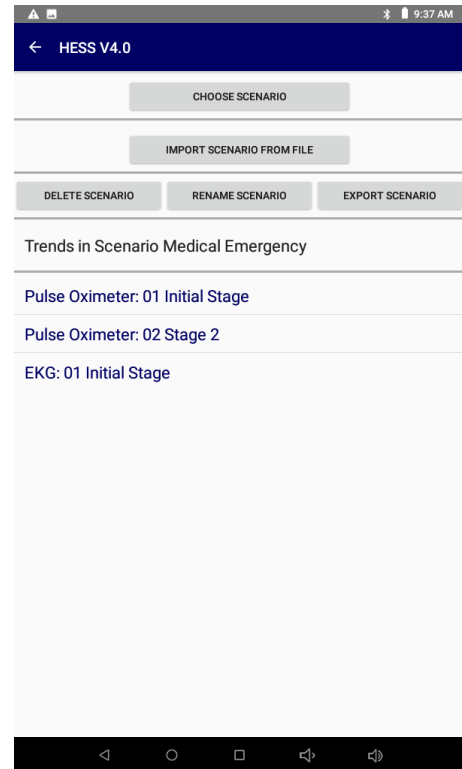


Choose “Medical Emergency”.



You can see how the Trends you have created are lining up within the Scenario. They are grouped by the Trend type – in this case they are Pulse Oximeter and EKG Trends.

And within the each grouping they are sorted alphabetically by Trend name. Notice how the leading numbers “01” and “02” help with the sorting. This way the Trends will match the progression of the Scenario stages for each set of vitals.



Creating The Rest Of The Medical Emergency Scenario.....

Now that you know how to create Trends and save them in Scenarios, all you need are the vitals from the active learning exercise that you want to conduct. (You don't need all the pictures at this point....)

In the Medical Emergency scenario, create the Stage 2 EKG Trend and the Initial Stage Body Temperature Trend.

EKG Stage 2:

From the HESS Vitals Page: In the EKG vitals set - **Touch Edit**

Starting Pulse Rate: **112**

Ending Pulse Rate: **112**

Use Existing Device Value As Start: **Yes**

Primary EKG Waveform: **Myocardial Infarction**

In the Work With Trends section - **Touch CREATE/UPDATE/DELETE**

Choose "Medical Emergency" as the Scenario

Choose CREATE NEW TREND

Enter "02 Stage 2" for the new Trend name.

Touch Create

Body Temperature Initial Stage:

From the HESS Vitals Page: In the Body Temperature vitals set - **Touch Edit**

Starting Body Temperature: **98.9**

Ending Body Temperature: **98.9**

Use Existing Device Value As Start: **No (remember this is an initial stage Trend)**

In the Work With Trends section - **Touch CREATE/UPDATE/DELETE**

Choose "Medical Emergency" as the Scenario

Choose CREATE NEW TREND

Enter "01 Initial Stage" for the new Trend name.

Touch Create

(This is the only Trend needed for the Body Temperature vitals – since the Body Temperature does not change during the Scenario)

Review the Scenario:

From the HESS Start Screen
Touch the Run Scenarios button
Touch Choose Scenario
Choose “Medical Emergency”

Does your Scenario look like this?

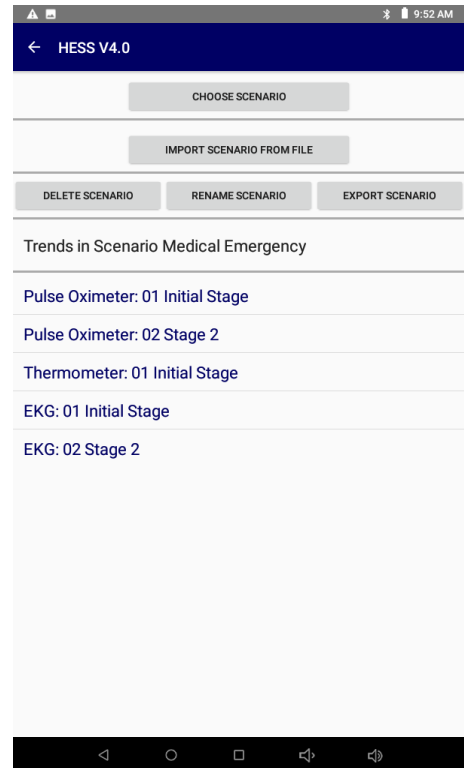
If it does, try it out right now just to see!

To run this Scenario you will need either:

1. A 7-inch HESS Device Tablet running the Thermometer Device App
2. A 10-inch HESS Device Tablet running the Care Monitor or ICU Monitor Device App

- Or -

1. A 7-inch HESS Device Tablet running the Thermometer Device App
2. A 7-inch HESS Device Tablet running the EKG Device App
3. A 7-inch HESS Device Tablet running the Pulse Oximeter Device App
4. A 7-inch HESS Device Tablet running the Blood Pressure Monitor Device App



You can run the Scenario by touching each Trend from this screen. When you touch a Trend, the vitals you saved will come up. You can then **Transmit** them to the Device Apps. After a transmission, you can use the Android back button to return to this list of Trends to be able to choose the next Trend you want to transmit.

Once you have transmitted each trend from a particular stage (e.g. Initial Stage, Stage 2, etc.) the Device Apps will have all the vitals they need to run that active learning exercise stage.

Go ahead! Transmit the Initial Stage vitals to the Device Apps.

Some reminders from the “Instructing With The HESS” educational guide:

1. Make sure the transmission address matches the Device App address.
2. Watch for the Device App title text to briefly turn blue to indicate the transmission was received.
3. The “learner” (which is YOU right now...) has to touch the button in the Device App to see the vitals since they do not appear automatically upon transmission.

Once the Device Apps display the vitals, use the Scenario Trend List screen to transmit the Stage 2 vitals and watch the vitals change for the Pulse Rate and the SPO2. The vitals should reach their target values (End values) in 30 seconds as the Trends specified.

A Note about the Multiple Pulse Rates:

In the Scenario you are running, there are multiple Pulse Rates – for the EKG vitals, for the Pulse Oximeter vitals and for the Blood Pressure vitals.

If you are using the separate Device Apps and you transmit the vitals to each device at approximately the same time – with the same Trend Duration (30 seconds in this case), then the Pulse Rates will be reasonably close on the different devices – even as they change. You can also (probably a good idea for this Scenario) “Hide” the Pulse Rate using the Settings in the Blood Pressure Monitor Device App – since Pulse Rate is displayed in the other Device Apps.

If you are using the Care Monitor app, then there are multiple Pulse Rates received by the same Device App – from the Pulse Oximeter, EKG and Blood Pressure vitals. So what happens? First, the Blood Pressure Pulse Rate is ignored even if it is received. For the other two, the EKG Pulse Rate will take precedence over the Pulse Oximeter Pulse Rate if both have received. If only one Pulse Rate (EKG or Pulse Oximeter) has been received, then that Pulse Rate will display. Only the EKG Pulse Rate will cause a waveform to appear.

If you are using the ICU Monitor app, then there are multiple Pulse Rates received by the same Device App – from the Pulse Oximeter, EKG and Blood Pressure vitals. The “ranking order” on the ICU Monitor is 1) EKG Pulse Rate, 2) Pulse Oximeter Pulse Rate 3) Blood Pressure Pulse Rate.

Overriding Trend Vitals:

If circumstances dictate, you can change the vitals in a Trend before transmission. Learner activity may cause a Stage to proceed in an unexpected way requiring the instructor to override the planned Stage vitals.

To override the vitals in a Trend, simply choose the Trend from the Scenario Trend List as you normally would, but before touching Transmit, change the vitals to the new values. Then transmit the changed vitals.

An override does not change the saved Trend. It only changes the vitals transmitted at the time of the override.

Try an interesting override case:

From the HESS Start Screen
Touch the Run Scenarios button
Touch Choose Scenario
Choose “Medical Emergency”
Touch “EKG: 01 Initial Stage”

Change the End Pulse Rate to 108

Change the Max Trend Duration to 120

When you are ready to watch what happens on the EKG Device App or Care Monitor, **Transmit**.

You may have to press the button on the Device App to see the transmitted vitals.

You should see the Pulse Rate begin to change **WITHIN** this trend – not having to wait for the next Stage transmission to start the vitals changing.

Within 120 seconds the Pulse Rate should reach the target End Pulse Rate of 108 BPM.

Now you can go back to the Scenario Trend List and choose the **“EKG: 02 Stage 2”** Trend and **Transmit**. The Pulse Rate will finish the rise to the new target End Pulse Rate of 112.

EKG Pulse Rate (BPM): 98 to 108

Start

End

Use Existing Device Value As Start: No

Max Trend Duration (5-250): 120

Primary EKG Waveform: Myocardial Infarction

Irregular Pulse Rate: None

Alternate EKG Waveform: None

Irregular Pulse Rate: None

Primary EKG Waveform: 3

Alternate EKG Waveform: 3

TRANSMIT

Two things have happened here.

First, the override allowed you to quickly change the vitals transmitted for only this transmission.

Second, you caused the vitals to change automatically in a timed progression – rather than needing a new transmission to cause the vitals to change. By setting a target End Pulse Rate of 108, the Pulse Rate began to change automatically over the 120 second Trend Duration that you set. Then the next transmission set a new target End Pulse Rate and the rate went to 112 as before.

So there are two ways to make vitals change: 1) Automatic Timed changes – using the Start and End vitals with the Trend Duration time period and 2) Instructor Initiated changes using a new transmission with new vitals – controlled by the instructor when desired.

Remember that if the Automatic Timed changes are used, that the EKG vitals, Pulse Oximeter vitals and Blood Pressure vitals (unless you “Hide” the Blood Pressure Pulse Rate in the Device App Settings) would need to have the same Start and End Pulse Rates – and their respective Stages would need to be transmitted to the respective Device Apps at approximately the same time. This is not the case if you are using the Care Monitor since the EKG Pulse Rate would take precedence over the Pulse Oximetry Pulse Rate and the Blood Pressure Pulse Rate is ignored.

Updating a Trend:

In the previous example, an override was made within the vitals screen accessed from the Scenario Trend List. You might have noticed that there was only a Transmit button on this screen and no other buttons.

To permanently update a Trend, you would use the normal vitals screen accessed with the **Edit** button from the HESS Vitals Screen. First Load the Trend you want to update, then make your changes and then update the Trend.

For example, to permanently update the EKG Initial Stage Trend:

In the **Work With Trends** section:

Touch LOAD

Touch Choose Scenario

Choose “Medical Emergency”

Touch “EKG: 01 Initial Stage”

Change the End Pulse Rate to 108

Change the Max Trend Duration to 120

Touch CREATE/UPDATE/DELETE

Choose “Medical Emergency”

Touch “EKG: 01 Initial Stage”

Touch Update

Exporting The Medical Emergency Scenario:

HESS Scenarios can be Exported to external files to enable Scenario backup and Scenario sharing.

Export the Medical Emergency Scenario:

From the HESS Start Screen

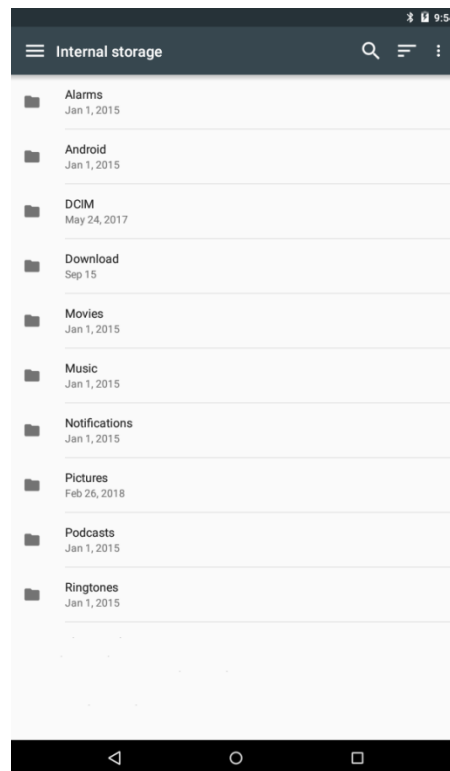
Touch the Run Scenarios button

Touch Choose Scenario

Choose “Medical Emergency”

Touch “Export Scenario”

The tablet will show an Android Storage Navigation Screen for you to use to select the location where the exported Scenario file will be created. You can navigate to a folder within the tablet’s Internal Storage area – such as /Download – or you can attach a flash drive to the tablet and save the exported Scenario file directly on an external flash drive.



Once you choose the desired location for the exported file **Touch Select** and the Scenario will be Exported.

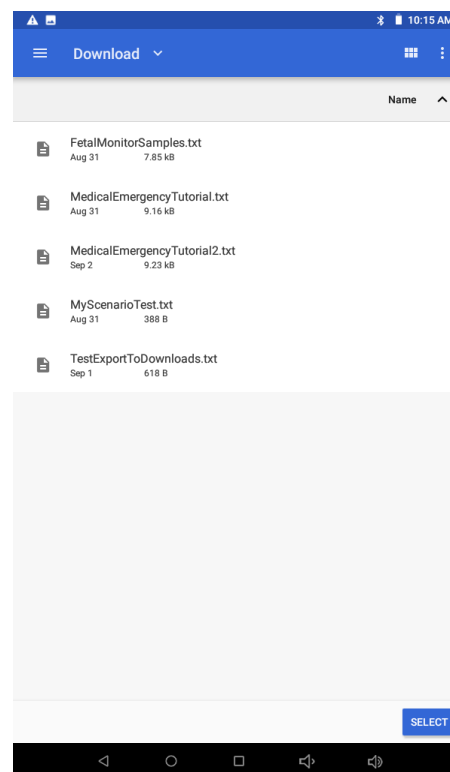
(**Note:** Different versions of Android may have slightly different methods to Save the file within the Storage Navigation Screen)

Exported Scenario files are “.txt” files and the Medical Emergency Scenario file will be named **“MedicalEmergency.txt”**.

IMPORTANT:

You should store Scenarios someplace **other than on the tablet itself** so that if the tablet fails you have a separate backup of all your Scenarios that you can easily Import to the HESS on a replacement tablet.

Flash drives can be connected to the tablet to use as a separate storage location or the tablet can be connected to a computer to allow you to move the exported files from the tablet to a computer, etc.



If you are comfortable with all you have learned in this tutorial thus far, then you are probably DONE!

The appendix that follows simply lists all the additional trends that can be created in the areas of Pulse Oximetry, Blood Pressure, Capnography and EKG vitals to complete the full scenario described at the beginning of the tutorial.

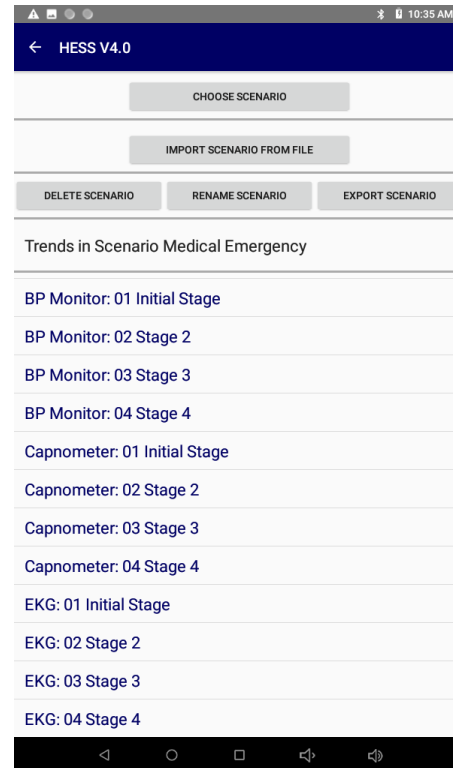
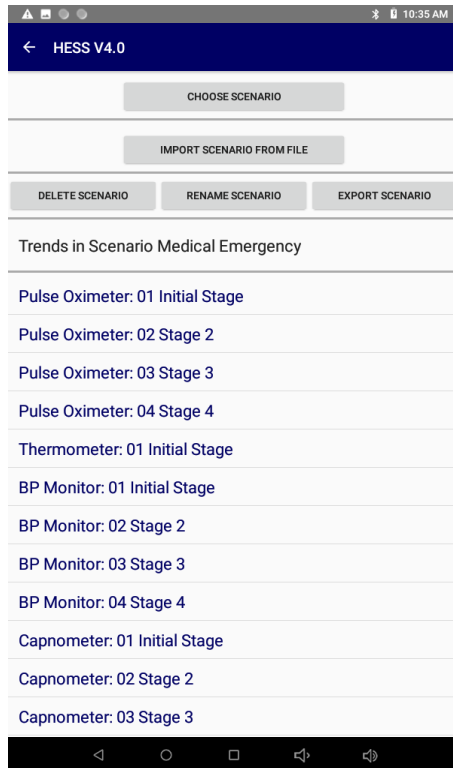
It is a recommended exercise that you can practice, but no new concepts or techniques are introduced within the additional Trends. If you complete the creation of the remaining Trends you will get a look at the options of the various vitals not covered thus far such as Blood Pressure and Capnography.

Thank you for completing the HESS Scenario Tutorial!

Appendix

The following Trends are the remaining Trends that need to be created to complete the tutorial Medical Emergency Scenario. Any values not specified in the following lists can be left as the default values.

The final Scenario Trend List should look like this (the right image is the scrolled down view):



Pulse Oximeter Stage 3:

From the HESS Vitals Page: In the Pulse Oximetry vitals set - **Touch Edit**

Starting Pulse Rate: **120**

Ending Pulse Rate: **120**

Use Existing Device Value As Start: **Yes (for Pulse Rate)**

SPO2 Waveform Type: **Normal**

Starting SPO2%: **96**

Ending SPO2%: **96**

Use Existing Device Value As Start: **Yes (for SPO2%)**

In the Work With Trends section - **Touch CREATE/UPDATE/DELETE**

Choose “Medical Emergency” as the Scenario

Choose CREATE NEW TREND

Enter “03 Stage 3” for the new Trend name.

Touch Create

Pulse Oximeter Stage 4:

From the HESS Vitals Page: In the Pulse Oximetry vitals set - **Touch Edit**

Starting Pulse Rate: **130**

Ending Pulse Rate: **130**

Use Existing Device Value As Start: **Yes (for Pulse Rate)**

SPO2 Waveform Type: **Normal**

Starting SPO2%: **95**

Ending SPO2%: **95**

Use Existing Device Value As Start: **Yes (for SPO2%)**

In the Work With Trends section - **Touch CREATE/UPDATE/DELETE**

Choose “Medical Emergency” as the Scenario

Choose CREATE NEW TREND

Enter “04 Stage 4” for the new Trend name.

Touch Create

EKG Stage 3:

From the HESS Vitals Page: In the EKG vitals set - **Touch Edit**
Starting Pulse Rate: **120**
Ending Pulse Rate: **120**
Use Existing Device Value As Start: **Yes**
Primary EKG Waveform: **Myocardial Infarction**
In the Work With Trends section - **Touch CREATE/UPDATE/DELETE**
Choose “Medical Emergency” as the Scenario
Choose CREATE NEW TREND
Enter “03 Stage 3” for the new Trend name.
Touch Create

EKG Stage 4:

From the HESS Vitals Page: In the EKG vitals set - **Touch Edit**
Starting Pulse Rate: **130**
Ending Pulse Rate: **130**
Use Existing Device Value As Start: **Yes**
Primary EKG Waveform: **Normal**
Primary Irregular Pulse Rate: **Within 25 Percent**
Alternate EKG Waveform: **PVC (Single)**
Alternate Irregular Pulse Rate: **Within 25 Percent**
Primary Waveform Duration: **4**
Alternate Waveform Duration: **1**
In the Work With Trends section - **Touch CREATE/UPDATE/DELETE**
Choose “Medical Emergency” as the Scenario
Choose CREATE NEW TREND
Enter “04 Stage 4” for the new Trend name.
Touch Create

Blood Pressure Initial Stage:

From the HESS Vitals Page: In the Blood Pressure vitals set - **Touch Edit**

Starting BP Systolic: **164**

Ending BP Systolic: **164**

Use Existing Device Value As Start: **No (for BP Systolic)**

Starting BP Diastolic: **72**

Ending BP Diastolic: **72**

Use Existing Device Value As Start: **No (for BP Diastolic)**

Starting BP Pulse Rate: **98**

Ending BP Pulse Rate: **98**

Use Existing Device Value As Start: **No (for BP Pulse Rate)**

ABP Waveform Type: **Normal**

In the Work With Trends section - **Touch CREATE/UPDATE/DELETE**

Choose “Medical Emergency” as the Scenario

Choose CREATE NEW TREND

Enter “01 Initial Stage” for the new Trend name.

Touch Create

Blood Pressure Stage 2:

From the HESS Vitals Page: In the Blood Pressure vitals set - **Touch Edit**

Starting BP Systolic: **120**

Ending BP Systolic: **120**

Use Existing Device Value As Start: **Yes (for BP Systolic)**

Starting BP Diastolic: **68**

Ending BP Diastolic: **68**

Use Existing Device Value As Start: **Yes (for BP Diastolic)**

Starting BP Pulse Rate: **112**

Ending BP Pulse Rate: **112**

Use Existing Device Value As Start: **Yes (for BP Pulse Rate)**

ABP Waveform Type: **Normal**

In the Work With Trends section - **Touch CREATE/UPDATE/DELETE**

Choose “Medical Emergency” as the Scenario

Choose CREATE NEW TREND

Enter “02 Stage 2” for the new Trend name.

Touch Create

Blood Pressure Stage 3:

From the HESS Vitals Page: In the Blood Pressure vitals set - **Touch Edit**

Starting BP Systolic: **102**

Ending BP Systolic: **102**

Use Existing Device Value As Start: **Yes (for BP Systolic)**

Starting BP Diastolic: **60**

Ending BP Diastolic: **60**

Use Existing Device Value As Start: **Yes (for BP Diastolic)**

Starting BP Pulse Rate: **120**

Ending BP Pulse Rate: **120**

Use Existing Device Value As Start: **Yes (for BP Pulse Rate)**

ABP Waveform Type: **Normal**

In the Work With Trends section - **Touch CREATE/UPDATE/DELETE**

Choose “Medical Emergency” as the Scenario

Choose CREATE NEW TREND

Enter “03 Stage 3” for the new Trend name.

Touch Create

Blood Pressure Stage 4:

From the HESS Vitals Page: In the Blood Pressure vitals set - **Touch Edit**

Starting BP Systolic: **88**

Ending BP Systolic: **88**

Use Existing Device Value As Start: **Yes (for BP Systolic)**

Starting BP Diastolic: **64**

Ending BP Diastolic: **64**

Use Existing Device Value As Start: **Yes (for BP Diastolic)**

Starting BP Pulse Rate: **130**

Ending BP Pulse Rate: **130**

Use Existing Device Value As Start: **Yes (for BP Pulse Rate)**

ABP Waveform Type: **Normal**

In the Work With Trends section - **Touch CREATE/UPDATE/DELETE**

Choose “Medical Emergency” as the Scenario

Choose CREATE NEW TREND

Enter “04 Stage 4” for the new Trend name.

Touch Create

Capnography Initial Stage:

From the HESS Vitals Page: In the Capnography vitals set - **Touch Edit**

Starting Respiration Rate: **22**

Ending Respiration Rate: **22**

Use Existing Device Value As Start: **No (for Respiration Rate)**

Respiration Waveform Type: **Normal**

Starting ET CO2 Level: **39**

Ending ET CO2 Level: **39**

Use Existing Device Value As Start: **No (for ET CO2 Level)**

Capnogram Waveform Type: **Normal**

In the Work With Trends section - **Touch CREATE/UPDATE/DELETE**

Choose “Medical Emergency” as the Scenario

Choose CREATE NEW TREND

Enter “01 Initial Stage” for the new Trend name.

Touch Create

Capnography Stage 2:

From the HESS Vitals Page: In the Capnography vitals set - **Touch Edit**

Starting Respiration Rate: **22**

Ending Respiration Rate: **22**

Use Existing Device Value As Start: **Yes (for Respiration Rate)**

Respiration Waveform Type: **Normal**

Starting ET CO2 Level: **39**

Ending ET CO2 Level: **39**

Use Existing Device Value As Start: **Yes (for ET CO2 Level)**

Capnogram Waveform Type: **Normal**

In the Work With Trends section - **Touch CREATE/UPDATE/DELETE**

Choose “Medical Emergency” as the Scenario

Choose CREATE NEW TREND

Enter “02 Stage 2” for the new Trend name.

Touch Create

Capnography Stage 3:

From the HESS Vitals Page: In the Capnography vitals set - **Touch Edit**

Starting Respiration Rate: **24**

Ending Respiration Rate: **24**

Use Existing Device Value As Start: **Yes (for Respiration Rate)**

Respiration Waveform Type: **Normal**

Starting ET CO2 Level: **39**

Ending ET CO2 Level: **39**

Use Existing Device Value As Start: **Yes (for ET CO2 Level)**

Capnogram Waveform Type: **Normal**

In the Work With Trends section - **Touch CREATE/UPDATE/DELETE**

Choose “Medical Emergency” as the Scenario

Choose CREATE NEW TREND

Enter “03 Stage 3” for the new Trend name.

Touch Create

Capnography Stage 4:

From the HESS Vitals Page: In the Capnography vitals set - **Touch Edit**

Starting Respiration Rate: **28**

Ending Respiration Rate: **28**

Use Existing Device Value As Start: **Yes (for Respiration Rate)**

Respiration Waveform Type: **Normal**

Starting ET CO2 Level: **39**

Ending ET CO2 Level: **39**

Use Existing Device Value As Start: **Yes (for ET CO2 Level)**

Capnogram Waveform Type: **Normal**

In the Work With Trends section - **Touch CREATE/UPDATE/DELETE**

Choose “Medical Emergency” as the Scenario

Choose CREATE NEW TREND

Enter “04 Stage 4” for the new Trend name.

Touch Create