

**\*\*Separate instructor and learner tutorial videos are available on the desktop of the simulated patient monitors. Please ask a VGH Sim staff member for more information\*\***

### Laerdal Manikins

#### Manikin Power & Connection to Supporting Devices

##### *Instructions for Manikin Use*

1. Plug the manikin into the wall using the cable stored on the manikin's stretcher
  - a. This will ensure that the manikin will have sufficient power throughout your session
  - b. Manikins can run on battery power alone for 4 hours maximum
2. Lift the one of manikin's arms to reveal the power panel along the side of the torso
3. Press the power button until you see a green light. If the light is yellow, press power button again, the light should turn green
  - a. A flashing green light indicates that the manikin is powering on
  - b. A solid green light means that the manikin is powered on
    - i. Some manikins (e.g. SimMan Essential) will vocalize that they have been successfully powered on by saying 'simulator started'
4. Turn on either the SimPad or the laptop that will be used as the controller device
  - a. For powering on the SimPad, hold down the power button at the top of the device until the green light at the top middle of the screen begins to flash. Once the light is solid green, it is powered on
  - b. For powering on the laptop, open it up, press the power button and input the password ('SimUser')
5. Ensure the controller device is connected to the network: 'SimNet Centre 2.4' (for everywhere in the Centre except HPS and the Wet Lab) or 'SimNet Wet Lab' (for the Wet Lab only)
  - a. To check this on a SimPad, click on the 'System Settings' icon at the bottom right of the screen. Select 'WiFi' and look for the 'Connected' label under the correct network. If the device is not connected to this network, click on it and the device should automatically connect. If the device does not connect, try to input the password: 'Simmanvan'. If this does not work, please ask a VGH SIM staff member or call us at 604-875-4623
  - b. To check this on a laptop, click on the wifi icon at the bottom right of the screen. Look for the 'Connected' label under the SimNet network. If it is not connected, click on the network and the device should automatically connect. If the device does not connect, try to input the password:

## Troubleshooting

- 'Simmanvan'. If this does not work, please ask a VGH SIM staff member or call us at 604-875-4623
- c. The HPS room has its own dedicated network. If you are having issues in this space, please contact a team member (604-875-4623)
  6. Determine which manikin you're connecting to
    - a. If you are connecting to a Resusci Anne or a SimMan ALS, check the arms for a wristband or the sole of the foot for a specific simulator number (e.g. 'Resusci Anne 2')
  7. Connect devices to the manikin
    - a. On a SimPad, click on the 'Network Settings' icon at the bottom right of the screen. Under 'Simulator', select the manikin type and number
      - i. Note: if the manikin is still powering on, it may take a few minutes for the simulator to appear as an option
    - b. On a laptop, open the 'LLEAP' software (teal icon pinned to the taskbar at the bottom of the home screen). Click on the top icon labelled 'Laerdal Instructor Learning Application', then select the manikin type and number once loaded
      - i. Note: if the manikin is still powering on, it may take a few minutes for the simulator to appear as an option
    - c. On a tablet (patient monitor), open the 'LLEAP' software (teal icon pinned to the taskbar at the bottom of the home screen). Click on the 'Patient Monitor' icon. Often the tablet will automatically connect to the manikin. To confirm that this is the correct device, see instructions below
  8. Test and confirm the connection
    - a. Once the simulator is connected, the power panel will display one solid green light and one solid blue light
    - b. Use the SimPad or laptop to play a speech sound to confirm the controller device is connected to the correct manikin
    - c. Use the SimPad or laptop to start a test simulation and change some vital signs to ensure the tablet is connected to the correct manikin

## Automatic Mode

While most simulations are performed using Manual Mode - designed to adjust vital signs on-the-fly, Automatic Mode is available if you would like to have your scenarios pre-programmed in either the SimPad Plus or a laptop. This must be pre-arranged with the VGH Sim Team, who will give you an orientation to the equipment. Please email us at [vghsim@vch.ca](mailto:vghsim@vch.ca).

## Troubleshooting

### Troubleshooting

#### *Issue*

The manikin disconnected and/or turned off unexpectedly

#### *Potential Fixes*

1. Ensure the manikin is turned on (power button will be solid yellow if it's charging but powered off). If the power button is flashing red or not flashing at all, make sure that it's plugged in and make sure that the power cable is properly connected (some pieces of the power cable can sometimes disconnect if they are being extended too far)
2. Go to the 'Network Settings' icon on the SimPad and ensure you're connected to the correct manikin. If you're using a laptop, close the LLEAP software and re-open it to see which manikin is connected. Test as described in step 8 above to ensure you're now connected to the right manikin

**\*Please note that connection issues may occur if the system is left idle. When starting a new session, check the 'Network Settings' icon for the correct network and manikin. If issues persist, please ask a VGH SIM staff member, or call us at 604-875-4623\***

#### *Issue*

The manikin isn't appearing when I try to connect it to the controller device

#### *Potential Fixes*

1. If you have multiple manikin rooms, it's possible that a different controller device is connected to this manikin. Check any other controller devices and ensure they're connected to the correct manikin
  - a. If they are connected to the incorrect manikin, open up the 'Network Settings' icon on the SimPad and click on 'Simulator' to select the correct manikin. On the laptop, close down the LLEAP software and reconnect
  - b. Two controller devices cannot connect to the same manikin, so once the other controller device is disconnected, you should be able to connect the correct one
2. If issues persist, ask a VGH SIM staff member to assist, or call us at 604-875-4623

#### *Issue*

I can't find the manikin's pulses

## Troubleshooting

### *Potential Fixes*

Please reference the laminated simulator information sheet for which pulses your manikin has - this sheet should be on a lanyard around the manikin's neck. Pulses on the manikins may not be in the exact anatomical location. To find a pulse point, look for a depression in the manikin's skin around the expected pulse area. Press down on this area until you find a soft spot. Press down (not too hard) until you feel something under the skin depress easily, almost like a button. You should be able to feel a pulse in this spot. If you cannot, ask a VGH SIM staff member or call us at 604-875-4623

### *Issue*

The manikin is connected to the correct SimPad/laptop but vital sign changes aren't being reflected on the patient monitor tablet

### *Potential Fixes*

While the manikin may be connected to the correct controller device, this does not necessarily mean it is connected to the correct patient monitor tablet. To reset the patient monitor, click on the 'Main Setup' button at the bottom right of the screen, then click 'Shutdown monitor' and 'Really shutdown'. Once it has shut down, reopen the LLEAP software (teal icon). You should see a teal screen with available manikins to connect. If this is not the case, ask a VGH SIM staff member or call us at 604-875-4623

## **ShockLink**

### **Powering On & Delivering Energy**

1. Ensure your manikin is powered on and your controller device and patient monitor tablet are connected. If they are not, please follow the instructions above
2. Plug in and turn on the defibrillator. Ensure the ShockLink is plugged into the defibrillator cable via the adaptor
3. Look at the black ShockLink box
  - a. If there is a flashing blue light at the top, it is turning on
  - b. If there is a solid white light, it is on
  - c. If there is no light, unlock the white plastic cap and insert/replace the battery (AAA batteries should be included in the grey cloth ShockLink bag, may be located on the crash cart). Once you screw the white plastic cap back on, the blue light should flash, indicating that it is powering on
4. Plug the specially designed pads into the ShockLink device (if not already done)

## Troubleshooting

- a. Do not attempt to use regular patient pads on the manikins as they are not designed to be used with ShockLink or the manikins and may become a safety concern and/or cause permanent damage to the equipment
5. Use your controller device to test the connection. Run a test on-the-fly simulation by changing the rhythm and/or practicing delivering a shock to ensure that the controller device, pads, patient monitor, and defibrillator are all connected

## Using ECG Leads

ECG leads should be available with each defibrillator on the crash cart (if you are missing ECG leads, please inform a VGH SIM staff member). Leads can be used in combination with the ShockLink equipment mentioned above.

## Pacing

Pacing can be performed as normal with the defibrillator and the manikin via the ECG leads. The only difference is that the manikin-specific ShockLink pads must also be connected in order to pace. If you are having any issues with pacing, please inform a VGH SIM staff member (604-875-4623).

The default pacing threshold is 80mA. This can be edited on-the-fly through the 'Circulation' settings (red heart icon on the SimPad), or can be customized for a pre-programmed scenario.

## Troubleshooting

### *Issue*

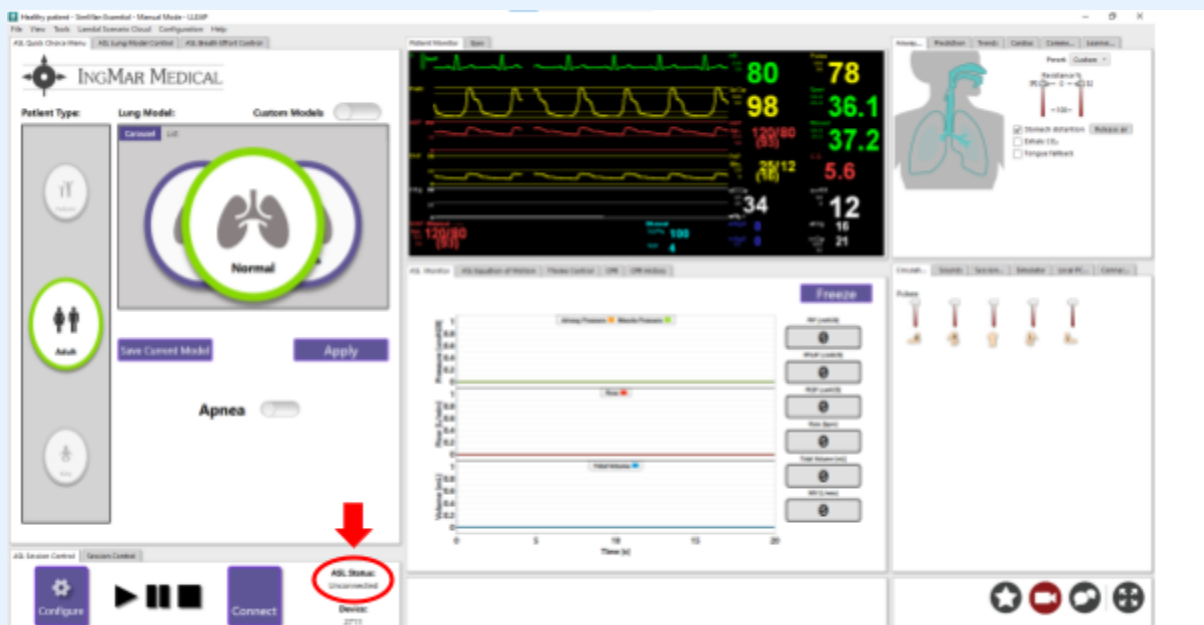
The defibrillator/patient monitor is saying there is a poor pad connection

### *Potential Fixes*

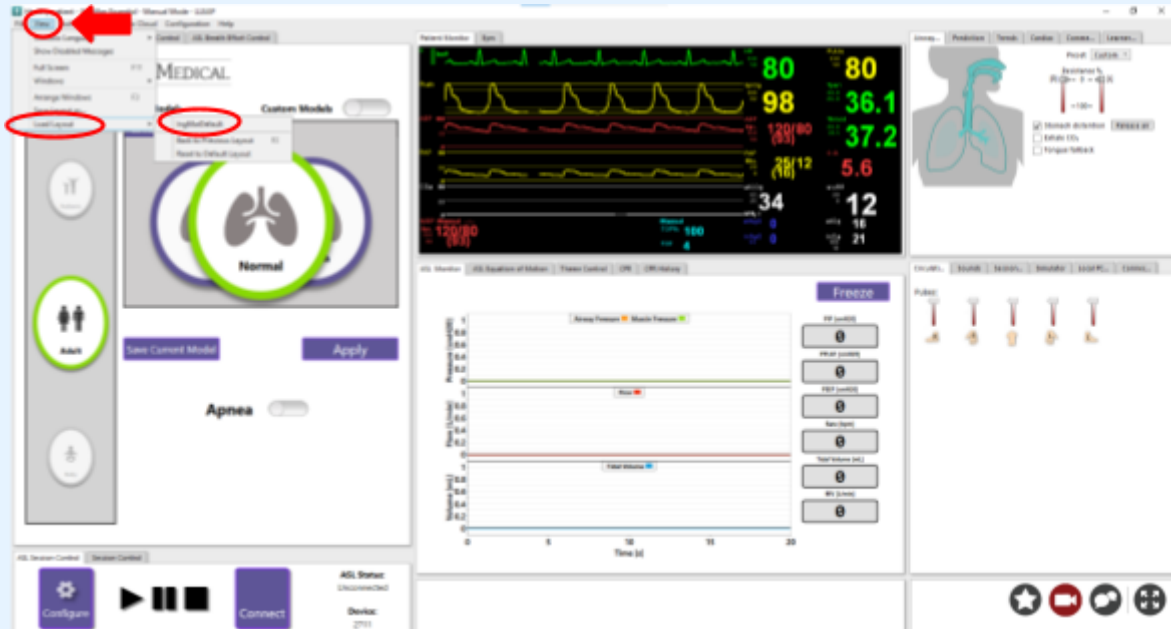
1. Make sure that the pads are on the right part of the manikin. Follow the images on the pads for correct placement. As there is a second set of pads underneath the manikin's skin that connect to the outer pads, placement is important.
2. It may be that the ShockLink batteries have died or become disconnected. Pick up the black ShockLink box and check for the white power light. If there is no light, ensure the white screw top is screwed in securely. If it's properly closed, open it up and replace the battery as described above.
3. If issues persist, contact VGH SIM staff (604-875-4623).

#### Powering On & Connecting

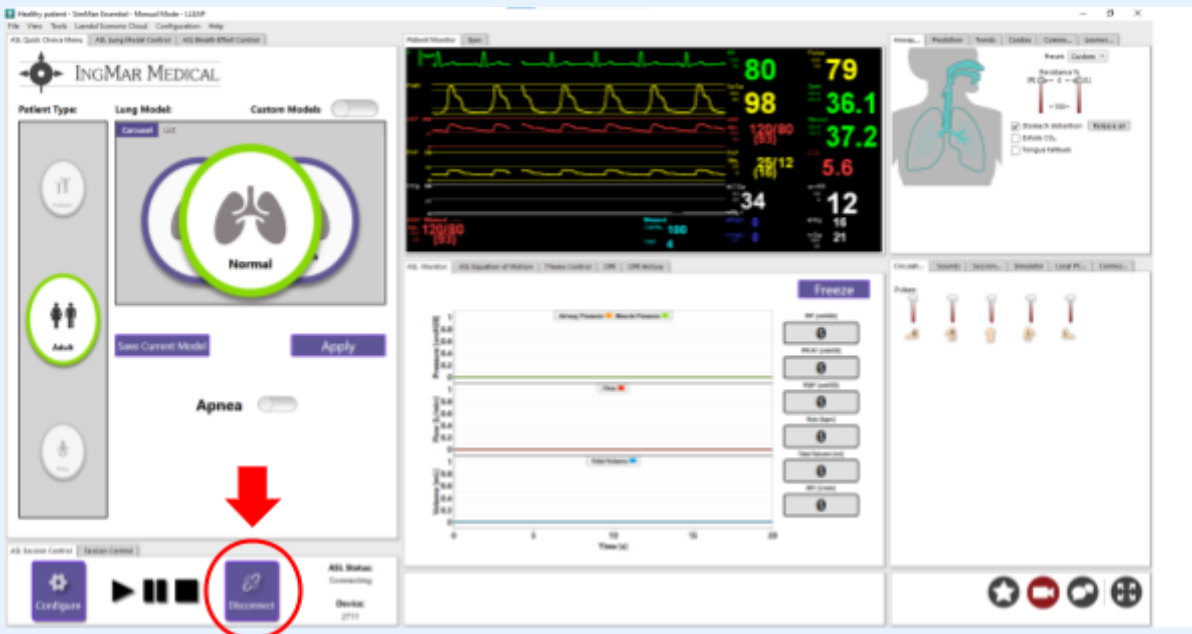
1. Turn on the [compatible manikin](#) (see instructions [above](#))
2. Once manikin is fully powered on, flip the green power switch at the back of the ASL 5000 to the 'On' position (the light will turn on and you will hear the machine starting up)
3. Open the controlling laptop in the HPS control room (room 247A), open the LLEAP software and click on the top icon labelled 'Laerdal Instructor Learning Application', then select the compatible manikin
4. When the LLEAP software opens, you should see the ASL 5000 control panel on the left of the screen and the controls for the rest of the manikin features to the right
5. At the bottom of the ASL 5000 control panel, see if the ASL 5000 is connected



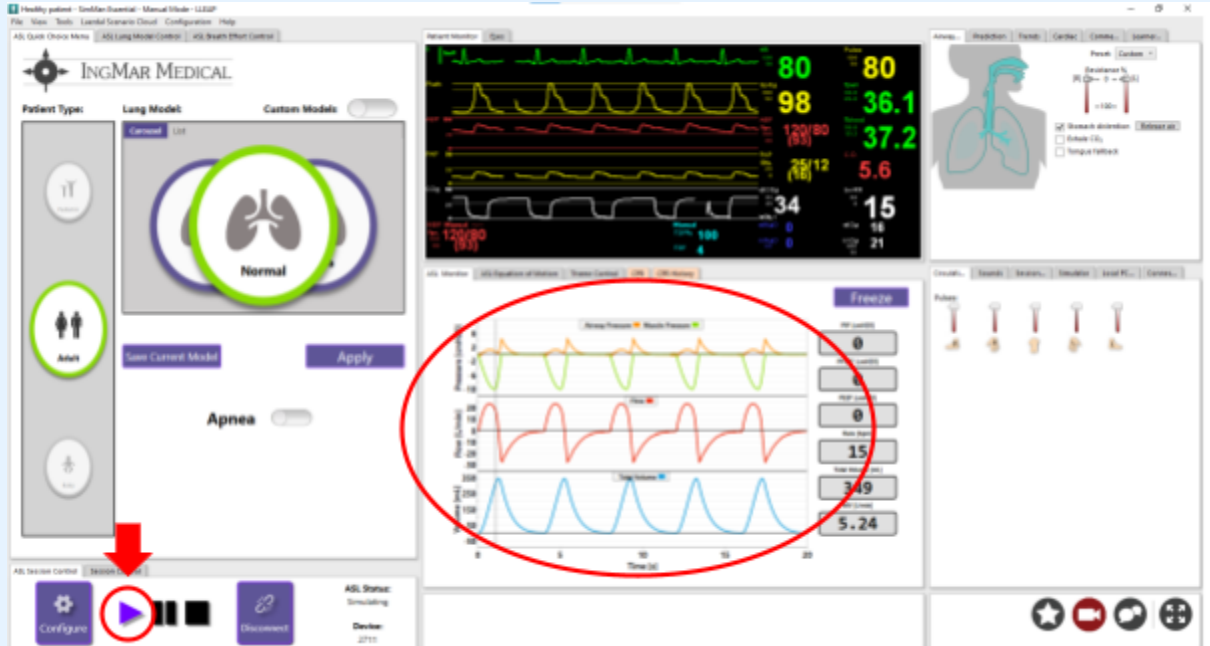
- a. If the status at the bottom says 'Connected', move to step f. If the status says 'Unconnected', move to step e.



- b. If the ASL 5000 window to the left of the screen in the above image is not appearing, click on the 'View' tab at the top left of the screen then hover over 'Load Layout'
- c. Select 'IngMar Default'
- d. If you are still experiencing issues, contact VGHSIM staff (604-875-4623).



- e. Click on the 'Connect' button at the bottom left of the ASL 5000 panel. Once clicked the 'ASL Status' should move from 'Connecting' to 'Connected'



- f. Once connected, press the 'Play' icon. The ASL 5000 is ready to use once the 'ASL Status' reads 'Simulating' and the graphs in the bottom middle screen start to appear
6. To display vitals in the HPS room, right click on the LLEAP software icon at the bottom of the screen and open a secondary window. When the new LLEAP window opens, select 'Patient Monitor'.
7. Drag the patient monitor tab to the 'Display Arm' screen to display in the HPS room

### Compatible Equipment

The ASL 5000 connects to the manikins via a puck that can optionally be added to some manikins. At VGH SIM, the SimMan Essential and one of the SimMan ALS contain the puck that allows it to connect to the ASL 5000. While the ASL 5000 can be used without a simulator, one is recommended. Please contact the VGH SIM team ([vghsim@vch.ca](mailto:vghsim@vch.ca)) if you have any questions.

### Troubleshooting

#### Issue

The manikin doesn't appear as an available option on the laptop when I try to connect



## Troubleshooting

### *Potential Fixes*

The connection of the Laerdal manikin to the IngMar ASL 5000 is finicky. Ensure that all equipment has been turned on in the order described above. Sometimes the system will not communicate if the ASL 5000 is powered on before the manikin has fully booted up. If this is the case, power everything down and restart in the correct order. If issues persist, contact VGH SIM staff (604-875-4623).

### *Issue*

The ASL 5000 control panel isn't appearing on the LLEAP software despite the equipment being connected

### *Potential Fixes*

The LLEAP software may have reverted to the non-ASL 5000 view. To fix this, please review step 5 b through d. If issues persist, a full system reboot may be required. Contact VGH SIM staff (604-875-4623) for assistance.

## Little Anne QCPR

### Instructions for Use & Connecting

1. Set up Little Anne on a CPR board and take a mental note of the number of the doll on the bottom of the torso (e.g., Little Anne 3)
2. Open the Laerdal QCPR app
  - a. If the device is not logged in, you can click on 'I'm a Learner' and use the app as a guest
3. Perform 1 compression on the manikin(s) you want to connect to this device
  - a. You will hear a short beep, indicating the doll has turned on
  - b. We suggest 1-2 dolls per device, depending on screen size
4. Once done, click 'I have turned on my manikin' on the app
5. The doll's name(s) and number(s) should appear. Click on as many dolls as you would like to connect. Once done, click on 'Continue'
6. Customize if you would like the software to anticipate breaths, or compressions only, set a timer, etc.
  - a. The timer will only start to count down after you click 'Start session' on the app

## Troubleshooting

### Troubleshooting

#### *Issue*

The Little Anne is not appearing as a connection option on the app, even after I performed a chest compression

#### *Potential Fix*

If you did not hear a short beep after the chest compression, try again with a deeper compression. If issues persist, it's likely that the doll's batteries have died. Please contact a VGH SIM staff member (604-875-4623) for assistance

#### *Issue*

I'm not seeing any chest rise when I try to practice airway skills on the Little Anne doll

#### *Potential Fix*

The Little Annes do not have an airway and are not intubatable. For practice of airway/intubation skills, the Airway Management Trainer or the Deluxe Difficult Airway Trainer would be best. If you are looking to add a task trainer to your booking (including on the day of), please contact a VGH SIM staff member (604-875-4623)

## **Apollos**

*\*The Apollo manikins and software are old and delicate. If your booking has an Apollo setup, the VGH SIM Team will have the manikins ready for your session. If this is not the case, please locate a staff member or call us at 604-875-4623.\**

*Please note the Apollo manikins have been phased out and replaced with the SimMan ALS and SimMan Essential.*

## **General Tips**

1. Do not unplug the Apollo manikin
  - a. This will disconnect it from the laptop and the system will have to be restarted
2. Do not connect the Apollo laptop to the internet
  - a. The laptop is designed to be connected to the manikin via a specialized network that is created by the manikin

## Troubleshooting

- b. Connecting it to another source can permanently disrupt the connection between the manikin and the laptop
3. Do not perform forceful compressions on the Apollo's chest
  - a. All of the electronics are located in the Apollo's chest and forceful compressions may damage them
  - b. VGH SIM has Little Annes available if compressions are a learning objective. Please contact the VGH SIM Team (604-875-4623) for more information

## Pre-Programmed Scenarios

If you use some of Muse's pre-programmed scenarios, find the "+ Add Scenario" button at the top right of the screen. Double click and open the "Scenarios" window. This will display all of the pre-programmed simulations, and can be searched using the search bar in the lower right corner.

## Troubleshooting

### *Issue*

When I try to open the muse software application, it is all white with no options to select.

### *Potential Fix*

This is a connection issue that can happen if the computer has defaulted to connecting to the wifi. Please contact a VGH SIM Team member or call us at 604-875-4623

### *Issue*

The NIBP (Non Invasive Blood Pressure) is not updating when I change the values

### *Potential Fix*

If the NIBP is not set to cycle every minute, the updated values will not appear until the blood pressure is manually cycled, or the set time passes. Ensure the NIBP cycling is set to your preference (contact a VGH SIM Team member if you would like it changed). There will still be a brief lag in having blood pressure values updated as the timer completes its cycles.

You can also manually update the NIBP reading by clicking the 'Manual NIBP' button at the bottom of the TouchPro screen.

## Troubleshooting

### Issue

I would like the screen to look more like an ICU/OR monitor interface

### Potential Fix

From the TouchPro vitals display, select the settings button at the bottom right corner of the screen. Under the “Layouts” heading, select the option that best suits your needs. This will populate the appropriate waveforms that the facilitator can adjust using the Muse/VIVO software.

## Nursing Anne Simulations with Fluids

*If you would like to practice injecting/flushing with real fluids, please contact the VGH SIM Team to have an orientation for the following items prior to your event.*

### General Tips

1. Ensure the port you’re filling fluids into is securely attached to an internal reservoir before beginning to push fluids
2. Ensure you’re aware of the capacity of the attached reservoir before beginning to fill it
3. Only flush water through the reservoirs
  - a. Do not use food colouring as it may stain
  - b. Do not use any fluids other than water as they may develop crystals and damage the tubing or reservoirs
4. Carefully empty the reservoirs to avoid spillage into the manikin’s abdomen and leave them to air dry after use
5. Let a VGH SIM Team member know when you’re finished for the day so we can clean and store the equipment for a following use (604-875-4623)

## Monitor by Laerdal

### Instructions for Setup & Use

1. Ensure both iPads are sufficiently charged or plugged in
2. Open the Tru Monitor app on the instructor device (handheld iPad) and select ‘Instructor’
3. Click ‘Start Session’ at the bottom of the window
4. Open the Tru Monitor app on the student device (iPad in case with handle) and select ‘Student’
5. Click on name of the instructor device’s session once it appears

## Troubleshooting

- a. Now that the student device has joined, the instructor device can control the student device
- b. While in the 'Scenario' tab, you can customize the student device 'skin' (e.g., Simulated Zoll R)
6. Use the instructor device to click on the 'Monitor' tab to start selecting vital sign values
  - a. You can select which values are observable on the monitor and change values at any time. Ensure to click the 'Update' to push the changes to the learner-facing iPad. If there are outdated values on the learner device, the 'Update' button will be highlighted in green
  - b. Change values, waveforms and set delays on changes - dependent on what fits your scenario
  - c. Use the buttons along the bottom of the screen (CPR, PEA, Investigations, Sounds, Alarms) for more customization options

## Troubleshooting

### *Issue*

My session is being run in a separate room and/or the session from my instructor iPad isn't appearing on the student device

### *Potential Fixes*

If the instructor and student devices are close by but not communicating with each other, try restarting both devices and retry the instructions above. If issues persist, contact a VGHSIM staff member (604-875-4623).

If the instructor device is further away from the student device, they can be connected via a session code (this requires both devices to be connected to wifi). On the instructor device, rather than clicking 'Start Session' in the 'Local Connection' tab, click on 'Remote Connection' tab. The device will display a session code to be entered on the student device.

Some how-to videos provided by Laerdal:

<https://laerdal.com/ca/support/how-to-videos/trumonitor-how-to-videos/>

## Troubleshooting

### Harvey the Cardiopulmonary Patient Simulator

#### Instructions for Setup & Use

1. Remove the white protective sheet and plug in the cords at the bottom of the trainer.
2. Turn the power switch on the box at the bottom of the trainer to the 'On' position. This will cause the lights on the box to turn green.
3. Get the 'Heartman' infrared headphones and turn on as many as you'd like to use
  - a. To turn them on, turn the dial on the side of the box all the way to 'ON'
4. Place the connected black stethoscope on the auscultation point
  - a. Listen for heart sounds through infrared headphones

#### Troubleshooting

*\*Please note that Harvey the Cardiopulmonary Patient Simulator is an older version of the trainer from 1996. Some of the new features available on recent models may not be available.\**

##### *Issue*

I can't hear anything or I hear strong static when I put in the earbuds of the infrared headphones.

##### *Potential Fixes*

Ensure that both the Harvey and the headphones are powered on and that the black stethoscope is placed on the auscultation point. If still not working, try replacing the batteries in the infrared headphones. If issues persist, contact a VGH SIM staff member (604-875-4623).