BASIC

Item No. 3002

SMART MOM Basic--Assembly and Operation Instructions

Item 8003

Thank you for purchasing Simulaids' birthing simulator, SMART MOM Basic. Simulaids appreciates your business.

INTENDED USE

The scope of this document is to familiarize the user with the basic operation and care of your SMART MOM Basic. It is our intent that you should be able to immediately start using this unit by following a few simple steps that prepare the trainer for use. You will invest less than 30 minutes in determining how the simulator functions. So go right ahead and get started!

To find more technical information such as electrical usage and default values for the various features, please refer to the Appendix.

It is recommend that you make note of, and store in a convenient location the following important information:

- **Your simulator's serial number** (Hand-written and found under the abdominal section on the torso ledge.)
- **Your Simulators' Wi-Fi number**
- **Invoice number**
- **Invoice date**
- **Company (Simulaids' distributor) associated with your purchase**

These pieces of information are required for warranty issues (more on that later). If you have questions concerning the product, do not hesitate to call your qualified distributor sales representative, or Simulaids' Customer Service Department at 800-431-4310 or email us at info@simulaids.com.

This simulator is to be used for training medical staff in the appropriate treatment modalities concerning the birthing process from the perspectives of both the status of the mother and the status of the fetus in the womb.

WARNING: SMART MOM Basic is an electrical product and must not be submersed in fluid. The simulator may be used in an outdoors environment, but should be protected from long exposures to rain and be kept out of puddles.

iPad® is a registered trademark of Apple.

Table of Contents

Glossary of Terms

Control Device – The iPad® used to operate SMART MOM BASIC

iPad®–the control device for SMART MOM Basic

On-the-fly – A term used to define the impromptu operation of the iPad® to change the patient simulator features either during a session, to go beyond or enhance a scenario, or to simply become familiar with the product.

Recording –The result of completing a Session. The recording shows up by date and time under the student's name on the app's Recording section.

Scenario – A list of chronological happenings that will change the physiological features of the simulator at a particular time. Scenarios are built on the app, line by line, until the instructor has reached a point where the objective of the scenario has been attained. Individual sections of a single scenario are sometimes known as *Vignettes*.

Session – The activity of an instructor monitoring the patient simulator during which a student or team of students assesses and treats a patient.

SMART MOM – **S**cenario-based, **M**edically **A**dvanced **R**esuscitation **T**rainer in our STAT line of patient simulators designed as a birthing simulator with ALS features.

SMART MOM Basic App – This is the programming for the patient simulator and student records. It can be obtained free from the App Store on the web.

Student List – The master file on the App that the instructor creates allowing any number of students to be used by on the iPad® for use during Sessions.

Synchronize - A method for transferring data between the iPad®® and computer.

Vignette— A small section of a scenario so that many options are available with a given scenario.

SMART MOM Basic Contents

SMART MOM BASIC arrives packaged in the wheeled carry case and includes separate legs and the main construction of the torso/head/arms assembly. There are also accessories, a laptop, a flat screen, the birthing baby and programming discs in a separate carton.

Accessory list:

Photo No.	Item No.	Description	Quantity	Photo No.	Item No.	Description	Quantity
No Photo	054	ALS Adapter kit	1	15	1039	Birthing Baby	1
2	PP0662	Gown, Hospital size Ns	3	16	1043	SMART MOM Vagina	2
3	SA1027	Half Baby	1	No Photo	PP0805	A/C—D/C converter	1
4	422	B/P cuff MANUAL	1	18	PP0725	Carry Case for SMART MOM BASIC	1
5	461	Pulse Oximeter	1		PP0567	Belly Cover SMART MOM Basic	1
6	555	SS Filing Syringe	1		1086	Belly SMART MOM Basic	1
No Photo	162	OB Methyl Cellulose 1.6 Oz.	3	21	PP6888	Lap top	1
8	1066	Umbilical Cord	2		PP0838	Flat Screen	1
No Photo	225	Blood Powder Pkg for 1 Gallon	3	29	477	Simulaids iPad®	1
No Photo	226	Coagulant Blood 4 Oz.	3	25	PP0839	Battery	1
No Photo	171	Meconium Methyl Cellulose	3		544	Battery Charger	1
No Photo	172	Brown Methyl Cellulose	3	26	PP5335	Power adapter 12v DC 60W brick	1
13	1067	Placenta	3	27	SA1001	L Arm Skin MOM	1
14	LF3644	Pump Spray Lubricant	1	28	SA1000	R Arm Skin MOM	1

Charge the Battery

The battery must be charged before using the simulator.

1. Locate the battery compartment inside the left torso at the hip joint area. Lift the torso's leg skin to view the hip joint area. The battery has a large handle of hook and loop and two wire leads extending from it.

2. Identify the battery leads exiting the left torso leg skin. There are two battery leads: one is a small, two-wire connector and one is a slightly larger, two-wire connector as shown in the photo below.

3. Identify the battery charger.

     a. Plug the black power cord into the green power brick of the charging system.
     b. Plug the small 2-wire connector on the battery to the small 2-wire connector on the charger. This is a heat sensor circuit and must be connected to prevent overheating the battery during charging.
     c. Connect the battery charger to the battery by connecting the larger 2-wire male connector into the 2-wire female connector.
     d. Allow the battery to charge for six (6) hours to have approximately three (3) hours of operation time. The battery charger has an LED red light that glows when it is charging and a green light that indicates the charge is complete.

While the batteries are charging for the simulator, follow the steps, preparing the Patient Simulator for Use, to assemble and prepare the SMART MOM BASIC for use.
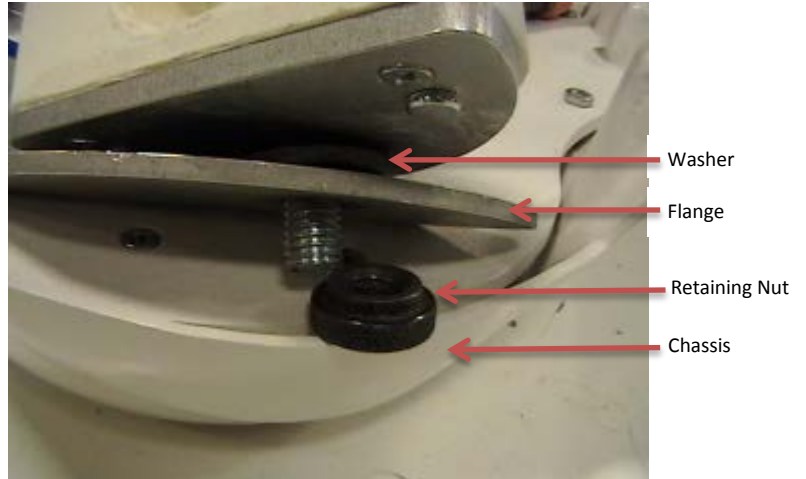
Preparing the PATIENT SIMULATOR for Use

Leg Assembly

1. Remove leg assemblies from the case, ensure to identify right and left legs
2. Lay MOM on a flat surface
3. Locate the hip flange at the base of the torso, a plate with a hole that is at an approximately 30 degree angle

Top View   Bottom View

— Washer

— Flange

— Retaining Nut

— Chassis

4. Starting with the left leg remove the retaining nut off of the bolt
5. To make the assembly easier, roll the leg skin down the leg 4 to 6 inches. You can rest the leg on your right shoulder to make attachment to the torso easier.
6. Ensure the washer is on the bolt prior to seating of hip joint on flange.
7. Line up bolt with hole on angled flange on right side, insert bolt and screw retaining nut back on to the bolt. The left leg is now mechanically attached to the torso.
8. Repeat with right leg.
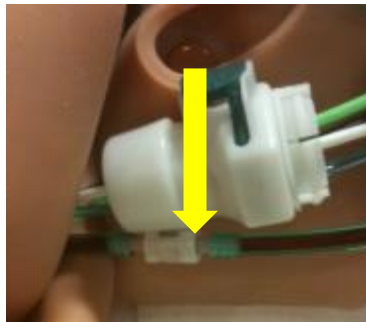9. Attach Left Leg tubing connector
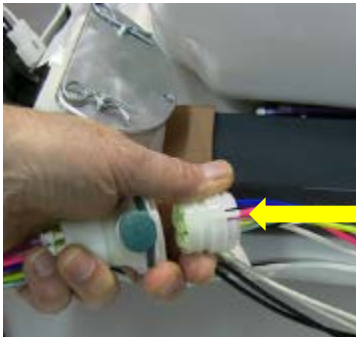
Align slot in large plug to keyway in small plug

10. Attach Right Leg tubing connector in the same manner

11. Also connect the translucent green tubing connectors that supply the blood from the leg to the torso. Push the connector together and twist it $1/8^{th}$ of a turn clockwise.

Supply Power to the SMART MOM Basic

1. Locate the battery compartment inside the left torso, hip joint area. Lift the torso's leg skin to view the area. The battery has a large handle of hook and loop and two wire leads extending from it.


Battery handle on left; Battery inside the torso on the right
Photos shown with torso skin removed for clarity

2. Attach the battery leads
   a. Connect the two-wire battery lead to the 2-wire power connector from the leg at the left hip
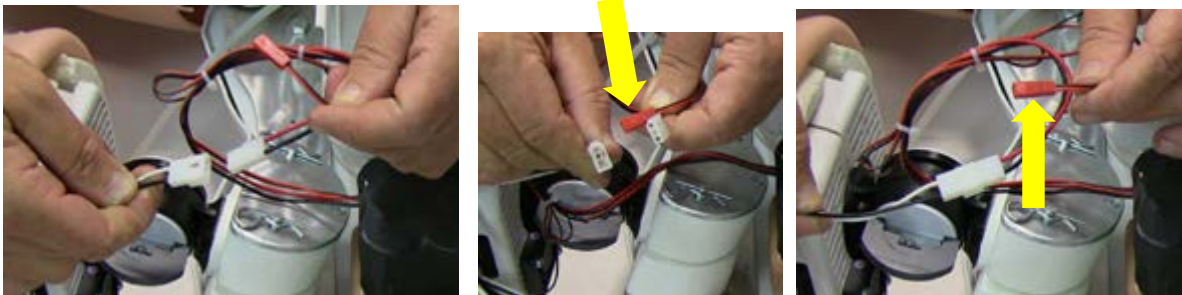
   NOTE: the remaining red connector (indicated by the yellow arrow in the photos above) from the battery does not connect to anything during MOM use. This connection is only used when charging the battery.

   b. Turn on the power switch inside the belly on the left side. Check for evidence that the simulator is working. e.g., chest rise, pulses, pupil dilation, and voice communication.
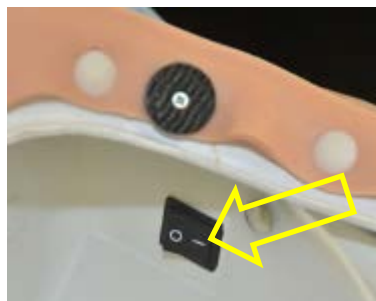
3. If you are not going to use the a/c power cord, complete the leg set up by pulling the torso's leg skin over the thighs for a smooth appearance.
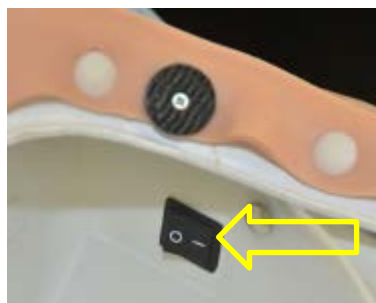
Use torso leg skin to cover thigh

4. If you are going to use the a/c power option;
    a. Connect the black power cord exiting the left thigh skin to the corresponding connector attached to the power brick.

    b. Turn on the power switch located inside the belly on the left side

Once the power source is connected and the switch is turned on, your SMART MOM Basic will be functional and will display chest rise, active pulse points, generate a signal for the MOM monitor, and emit heart and lung sounds through the appropriately located chest speakers.

Note: The battery cannot be charged while simultaneously providing power to the MOM. To charge the battery must be connected exclusively to the battery charger. However, it is a good idea to connect a

fully charged battery to the MOM simulator even when the simulator is running off of a/c power. The battery will provide back-up power in the event of a power outage.

Operating SMART MOM Basic

Preparation of fluids

Select a packet labeled with the fluid you wish to put in MOM. Follow the packet directions to mix it with distilled water. Use of distilled water will prolong the life of the tubes within the simulator because there will be no mineral build up within the simulator.

The below recipes should be used to closely match expected color discharges during MOM's use.

When creating <u>blood</u>, thin the standard mix to make lighter colored blood; to make darker blood, add more blood powder.

Meconium

This package contains 1 packet of meconium methyl cellulose. The white powder is used for making meconium amniotic fluid. In the fluid bottle, thoroughly mix up to a ½ teaspoon in 4 ounces of hot water. When the powder is completely dissolved, add another 4 ounces of water and mix thoroughly. Thickness and color of the mixture may be varied according to the amount of methyl cellulose or water used.

Ingredients: Food grade methyl cellulose, FD&C food coloring Green #1176

Brown

This package contains 1 packet of brown methyl cellulose. In the fluid bottle, thoroughly mix up to a ½ teaspoon in 4 ounces of hot water. When the powder is completely dissolved, add another 4 ounces of water and mix thoroughly. Thickness and color of the mixture may be varied according to the amount of methyl cellulose or water used.

Filling Fluids

SMART MOM Basic utilizes a simple filling mechanism consisting of a filling syringe and the ports on the simulators' right shoulder.

To prevent a mess when filling fluids it is recommended to have absorbent pads under the vagina. Repeat steps 1 through 8 for each of the fluids. The reservoirs hold approximately 80 ml each. The bright red blood reservoir (port number 1) holds approximately 450 ml. To prevent fluids from pooling inside the simulator there is a safety relief valve that allows excess reservoir fluid to go directly to a vaginal port.
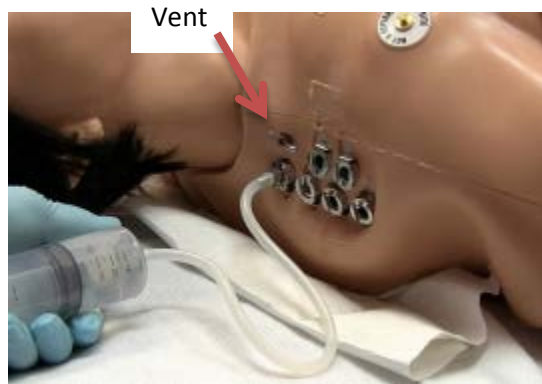
Vent

Photo shows the filling ports on the shoulder with port number labels on the torso skin and fluid bottles

Port #   Feeds this fluid reservoir

1   Bright Red Blood
2   Clotted Blood
3   Amnion
4   Dark Red Blood
5   Meconium
6   Brown Blood

Steps for filling the reservoirs:

1. Identify which port on the shoulder holds the fluid you wish to fill.
2. Fill the syringe with the appropriate fluid.
3. Connect the syringe to the port on the right shoulder by pushing the metal tubing tip into the port.
4. While filling port 1 Bright Red Blood the vent is left open until the fluid is discharged from the vagina port. Fluid filling ports 2 through 6 the vent is left closed while filling with fluid.
5. Push the fluid from the syringe into the system.
6. Stop pushing when you feel an increase in resistance on the syringe plunger.
7. Port 1, Bright Red Blood, when filled will discharge from the open vent.
8. Ports 2 through 6, when filled will result in a discharge of that fluid from the vagina port.
9. Draw the syringe plunger back slightly to create a vacuum so that the fluid pressure does not blow back fluid when you release the tubing tip from the port.
10. Push the metal tab on the port to release the tubing tip from the port.

Once you have filled the ports, use the iPad® to activate fluid. Watch the vaginal discharge tube to ensure the fluids are flowing.

NOTE: Fluid will continue to flow until the control unit is used to turn OFF the flow.

Selecting "clots" will push out some material and then automatically stop. For more clots, you must select clots on the iPad® again.

Preparing the fetus

Other than proper lubrication (using vegetable-oil-based lubricant) of the SMART MOM Basic birthing baby, and connecting the umbilical cord no other preparation is needed.

The placenta has two discs of hook material on one side. These coincide with a strip of loop material on the inside of the MOM belly compartment on the upper end. These discs are used to attach the placenta to the inside of the simulator torso.

Disc with hook material

Loop material inside Mom belly

The placenta has, on the other side of the discs, one female Luer lock mechanism (see Yellow arrow) for attaching the umbilical cord. Push the umbilical cord's male Luer lock into the placenta's female Luer lock and twist it clockwise to keep it in place. The other end of the umbilical cord attaches to the birthing baby in the same way.

The cord may be clamped and cut a number of times before it is too short to be used. You can limit the number of cords used by cutting only small portions off the end of the cord. Once cut, pull the Luer lock out of the cut piece and push it into the middle of the umbilical cord to prepare it for another birth. Re-install the Luer lock into the baby's umbilical scar to prepare for another birth. For stress conditions it may be helpful to wrap a rubber band around the extreme end of the cord to effectively hold it onto the Luer lock barb.

NOTE: At some point the umbilical cord will be too short to allow delivery of the baby. Do not throw away the cord at this time. It is possible to use the parts for training the short cord emergency procedures in your protocols, or linked together with other short cords to create a long cord for use.

Before each birthing event the baby must be covered with a generous layer of vegetable-oil-based - lubricant. **Failure to adequately lubricate the baby will result in damage to the cervix and vagina**, causing additional replacement costs.

Before installing the birthing baby into the mother's belly, generously lubricate the cervix inside and out, and the inside of the vagina. Failing to lubricate these structures can cause significant damage and can increase the cost of operation by requiring replacements.

Determine if the birth is to be vertex (cephalic) or breech (buttocks or feet) and insert the birthing baby into the white, tapered, Polyethylene (PE) birth canal.
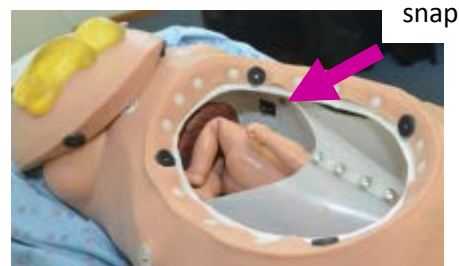
snap

The birthing canal can be removed and/or replaced by releasing the snaps on the inside of the torso (arrow) and compressing the uterus end sufficiently to slide the canal up and out of the belly opening. Reverse the procedure to install the birthing canal.

Closing up the belly

Place the eggshell cover on the mother's stomach area and secure it in place by tucking the tabs on the inferior side under the mother's pelvic structure. Slide the shell down far enough for the tabs of the shell to slide under MOM's torso opening. Depress the side tabs of the eggshell so that the tabs go under the MOM torso opening. The superior end of the shell is open to accommodate the birthing provider's arm sliding into the birthing canal. This allows the provider to push and rotate the baby as needed for the work at hand.

Egg shell cover

Tab
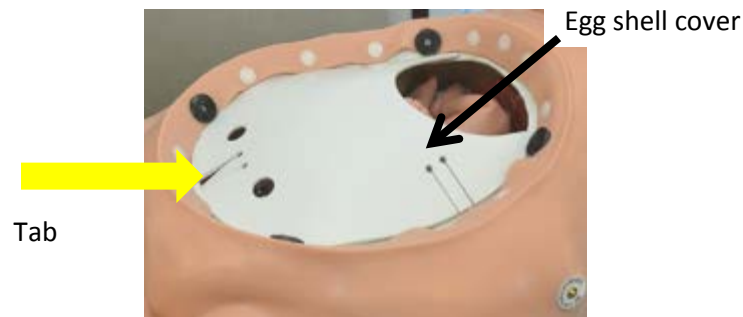
The half baby is then placed face down upon the shell in a manner consistent with what the practitioner's assessment is supposed to find during the examination.

The MOM belly is then placed over top of the half baby and secured to the MOM belly inside edge with the hook and loop circles.

This arrangement of parts will allow your practitioners to have a complete experience with the birth process without having to stop to put the birthing baby in position after the palpation exercise. If you do not want to use these parts you may eliminate the use of the half baby and/or the belly egg shell. However, if you are going to put MOM on her hands and knees for treatment of such things as shoulder dystocia, you should install the belly shell to help maintain the fetus' position inside the torso while MOM is in this position.

SMART MOM Basic Features

The iPad® controller operates with Wi-Fi technology to link up with the SMART MOM Basic to change the physiological responses represented by a number of the simulator's features. Your primary concern is to make sure the batteries are charged before starting to use the product. You will find the features noted, followed by a discussion on how to use the iPad® to control these functions. Some features, like the joint locks, are not wirelessly controlled, so you will find the locks discussed first.

Joints

The tab will rotate 360 degrees, but locks only when flipped 90 degrees

SMART MOM Basic's shoulders, hips, elbows and knees of lock in a variety of settings to assist in positioning MOM. Each joint has a mechanical flip switch that changes the joint from flexible to a locked position. You may feel the tab-control-device by depressing the skin on the lateral side of the joint you wish to lock. If the joint is loose and moving, bend the joint to the required angle and flip the tab ninety (90) degrees to the locking position. Carefully bend the joint one way or the other until the joint snaps into its locked position. You may then release the limb and the joint will stay in the locked position.

This system is designed primarily to allow you to place MOM on her hands and knees. To get her to that position, first turn her on her stomach and then work with either the shoulder end or the hip end to establish the locked position of those limbs. Once that end is stable, create the needed limb position on the other end. When the limbs are properly locked and MOM is on her hands and knees, you will find her stable enough to birth the baby. Care should be taken not to torque the body sideways. It may tip over.

To place MOM back in her supine position, reverse the above steps, taking time to flip each joint lock to the open position so that her limbs will flex and lie flat.

Head

The eyes are the primary focus of SMART MOM Basic's head. The pupils react to light and can be set using the iPad® to three sizes: normal, constricted and dilated. The eyelids are not functional, although you can close them manually to assist in checking the pupils' reactions.

NOTE: The head is not designed as a rescue breathing apparatus and that skill should not be practiced on this simulator. If rescue breaths are administered, contamination of the head results and a long process of cleaning, disinfecting and drying must be completed before using the product again. If you do not de-contaminate the product, concern for cross contamination of participants should be expected.

The airway accepts all forms of adjuncts for maintenance and is designed to operate in a manner that encourages proper BVM application.

A 7.0 or 7.5 mm endotracheal tube is the suggested size for intubation practice. The use of ET, LMA and LT devices is appropriate. Intubation successfully will demonstrate bilateral chest rise with proper ventilation techniques. Right stem intubation will result in only right side chest rise and no sounds or movement on the left side. There is no stomach to display esophageal intubation stomach distention.

The neck of SMART MOM Basic displays constantly operating bilateral carotid pulses that can be absent if the arrhythmia chosen so dictates.

Arms

Both arms offer <u>IV access</u> sites at the antecubital fosse and the dorsal aspect of the hands, and <u>blood pressure</u> ports.

Veins can be used for phlebotomy and IV therapy. The dorsal side of the hand and the antecubital fosse has veins for IV puncture. These veins are latex tubing; care should be taken by those individuals who are allergic. There is generally no danger to exposure unless the arm skins are removed in the process of replacing the veins.

NOTE: It is necessary to load the bright red blood reservoir (port #1) with at least 200 ml of fluid.

When the patient simulator is turned on, constant vein pressure will be maintained at a level that will supply a flash in the installed catheter. Allow SMART MOM Basic to run for a few minutes before attempting the first IV stick.

The blood flash in the antecubital location

CAUTION: Be sure that the SMART MOM Basic is turned off before attempting to work on vein replacement.

More detailed instructions for replacing arm skins and veins are found later in this document under Care and Maintenance.

When the practitioner has the flash in the catheter and is preparing to hook up the IV set up, the system will accept another 200 ml of titrated IV fluid. In order to continue infusing fluid after the reservoir has been filled to a maximum of 450 ml, the reservoir must be emptied by using the fill port #1 on the right shoulder to suction out a volume of the fluid with the filling syringe.

An altered <u>B/P cuff</u> is included. The projection installed on the B/P cuff fits into the corresponding port in the bicep area of the arm. The ports are located so that once the B/P cuff is attached; the gauge will sit over the artery. The port on the right arm (not shown) is on the medial aspect of the arm.

NOTE: Lightly lubricate the O-ring with the vegetable-based lubricant so that the B/P cuff projection slides more easily into the arm port.

The white B/P cuff projection is placed in the B/P port on the arm.

Once the cuff projection seats against the base of the port, hold it in place, wrap the cuff and secure it around the arm. The cuff may be inflated without loss of pressure. A radial pulse may be palpated for systolic levels. The brachial pulse is located under the bicep so that the sounds of the pulse are removed from the auscultation site at the antecubital fosse.

If you are experiencing blood pressure readings that are not where you expected them to be based upon the settings on the iPad®, calibrate the system.

> 1. apply the B/P cuff
> 2. pump the gauge to 150
> 3. tap the Calibrate button on the B/P screen

There is no indication from either the iPad® or the patient simulator that anything has occurred. However, when you auscultate a B/P, your readings should now be within 2 mmHg of the control settings.

The right index finger has a three hole plug receptacle that receives the pulse oximeter's three prongs.
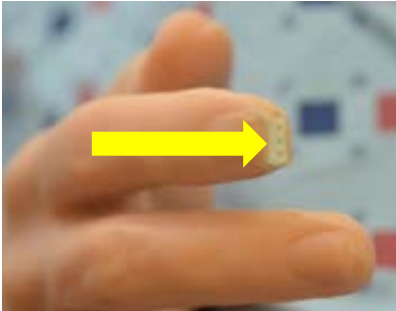
Gently slide the pulse oximeter onto the finger, guiding the prongs into the hole in the finger tip. If the pulse oximeter is on the simulator when it is turned on, the values from the simulator will be displayed. If you place the pulse oximeter on the finger after the patient simulator is turned on, you may have to send an SPO2 signal from the iPad® in order to trigger the pulse oximeter display values.

This pulse oximeter is an altered patient use device. It receives its power from the simulator, so it does not use a battery. It cannot be used on a human patient.

Legs

The left leg contains the air compressor for all pneumatic features for physiology, like pulses, tongue edema, laryngospasm and respirations. When you turn on the SMART MOM Basic, you may feel and hear the vibration of the air compressor in the leg. This is a good clue that indicates power is supplied to the simulator before you check for other active features.

Both legs have popliteal and pedal arch pulses. Both legs have locking mechanisms used for placing MOM on all fours.

The right leg contains the reservoir for bright red blood. Always have this leg attached and connected when dealing with blood supply issues, either filling or cleaning.

NOTE: Failure to have the leg's blood supply lines adequately connected may result in volumes of blood spilling and the necessary clean up associated with it.

Torso

The chest skin displays the 5-lead monitoring access sites and the defibrillation sites at the sternum and apex positions. Included with the simulator accessories are defibrillation adaptor posts that screw into the defibrillation sites. Simulaids supplies, at no charge, a defibrillation training cable that replaces hands-free-pads of the three major suppliers. It is necessary to notify your sales agent of the manufacturer of the defibrillation unit you use. Medtronic, Zoll and Philips training cables are available. If you have a different brand of defibrillator, or a higher technology pad set than just defib, contact your sales agent to find out how to have a set of hands-free-pads converted to use as a training cable. We are currently aware that Zoll has a multi-functional set that would require conversion.

Zoll Training Cables (1) No. Z02
Medtronic Physio Quick Combo Training Cables (2) No. Z10
Chest Posts for Training Cables (3) No. Z08
Phillips Training Cables (4) No. Z13

Chest Post

To succeed in defibrillation, a practitioner must attach the training cable to the defib lead from his equipment and then attach the terminal ends of the training cable to the chest post adapters that are screwed into the defib sites on the simulator's chest. The instructor establishes the arrhythmia to defib either by scenario or on the fly. For instance, he may select Ventricular Fibrillation on the iPad®. Then, while watching the practitioner prepare to defib, the instructor taps the "Convert" button on the Heart Screen.

 Any protocol compliant joule setting may be used with this simulator, up to 360 joules.

The practitioner then has a ninety (90) second window of time in which to shock the patient. If that happens, the rhythm will automatically convert to the rhythm previously established under the Waiting Rhythm choice. If the practitioner fails to shock before the 90 seconds is up, the simulator will not convert and the instructor will have to tap the convert key again to give the practitioner the opportunity to succeed. It is necessary to have a Waiting Rhythm selected before the "Convert" button will be active.

The chest also has six anterior lung sound speaker locations and four heart sound speaker locations. The photo shows the locations of the speakers with dot labels; the lung speakers are shown in blue and the heart speaker locations in red. These speaker locations are the only places where physiological, non-mechanical sounds will be heard on the chest.

The speaker locations for the left lung will be found in the same relative positions as these right side ones

The lungs will produce spontaneous respirations when the MOM is turned on. If the respiratory rate is 10 or less, you may assist ventilations with a Bag Valve Mask (BVM) either by mask or endotracheal (ET) intubation by interspersing the ventilation between the spontaneous breaths.

The ventilation system is designed to teach proper ventilation technique. Squeeze the BVM slow enough to move over 600 ml of air in about 1-1/2 seconds to keep the insufflation pressure below 20 in/H2O and the chest will rise. Trying to instill rapid blasts of air will not result in chest rise.

Birthing compartment

The power switch for the simulator resides on the left interior wall of the birthing compartment. It is a toggle device and easily accessed by reaching through the belly cut-out and the eggshell cover.
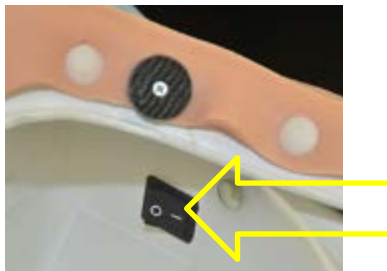
The power switch location inside MOM

The vagina/cervix replacement part is secured with two snap fasteners to the back of the simulator base and one at the top. When you need to replace this feature, disconnect the fluid line after removing the vagina a short distance out of the torso and reconnect the line when putting the new cervix/vagina in place.
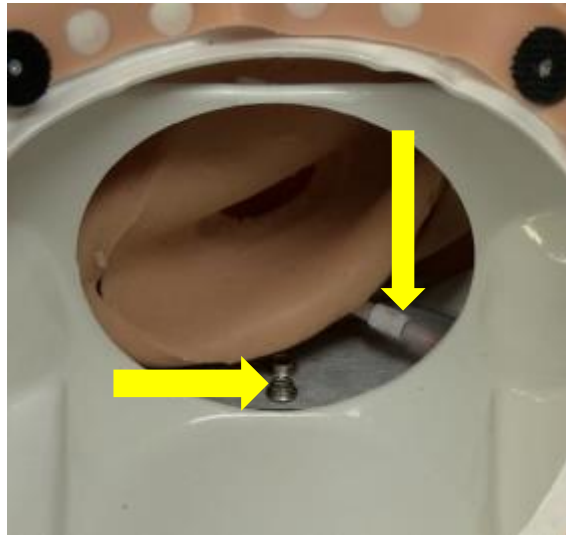
View of the vagina replacement process looking from the MOM head toward the pelvis
There is a snap in a similar location on the top of the vagina, too.

Access the fasteners between the cervix and the vagina and unsnap the fasteners, disconnect the fluid line, withdraw the old unit and put the new unit into place by reversing the procedure. Secure it with the fasteners to assure it remains in place during birthing processes. The surface areas of the cervix and the vagina must be adequately lubricated with vegetable-based-oil prior to any birthing activity, or damage to the skin will result in the way of rips in the material. Adequate lubrication will preserve the parts for hundreds of births.

The fluid functions of the MOM patient simulator vagina all exit from the same port that lies under the vaginal opening. This allows for the fluid states to be seen by the practitioner, but prevents the fluids from gathering within the simulator.
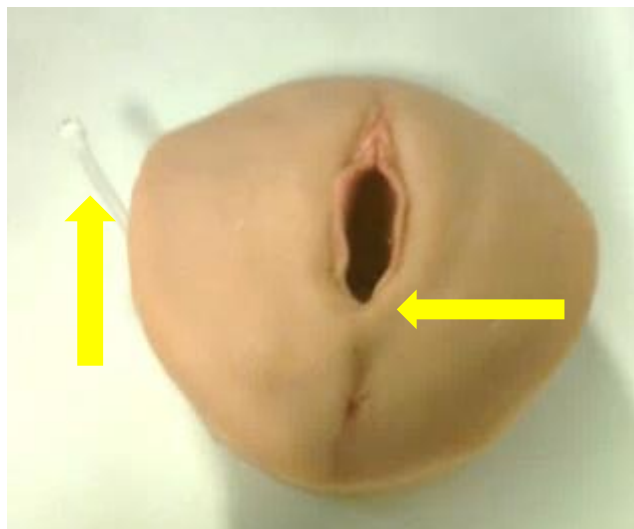
The construction of the cervix/vagina also assists in controlling the location of fluids and preventing fluids from approaching the electrical compartment inside MOM's back. In the normal course of events, the mother is likely to be positioned with her torso elevated and the vaginal opening at the end of a table. This position assists in drainage of the fluids down away from her back and into a catch bucket placed below her.

SMART MOM BASIC Control Unit

iPad® Operation

Steps:

1. Open your iPad® box and follow the set up instructions
2. Set up an iTunes® account
3. Go to the App store
4. Search for Simulaids
5. Download/install the SMART MOM Basic App on the iPad®
6. Go to the iPad® Settings screen

7. Turn off Wi-Fi; turn it back on
8. Select the Wi-Fi labeled "MOM-####" (a number suffix). Before it will open, a password pop up window will appear. Type in the password: simulation01 (all lower case) and follow the prompt. After it is connected, it will have a check mark next to the labeled Wi-Fi and the name will show up on the left column where Wi-Fi is identified.
9. Close the Settings screen.
10. Go to the SMART MOM Basic app and initialize it.

11. On the SMART MOM Basic app home screen, tap the "Patient Simulators" icon
12. If you want to name your patient simulator tap the tap the area under the "Label" column. A text box will display that when tapped will bring up a keyboard to enter a name for the patient simulator. After you type the name, tap the 'Done' button on the keyboard to save it.
13. Tap the switch for the "Control" column. Wait until it has connected.
14. Tap the switch for the "Vitals" column.
15. In the upper right corner of the iPad® screen, tap the "Continue" button.
16. Tap anywhere on that line once and wait for the blue highlight to appear on that line

iPad® Settings for International use outside of the USA

Some settings on the iPad® may cause a conflict with applications. To avoid conflicts, especially for international use outside the United States, it is necessary to keep the international settings as follows:
Go to settings on the iPad® then scroll down to general settings.
Once in the General Settings, scroll the right side down to International.
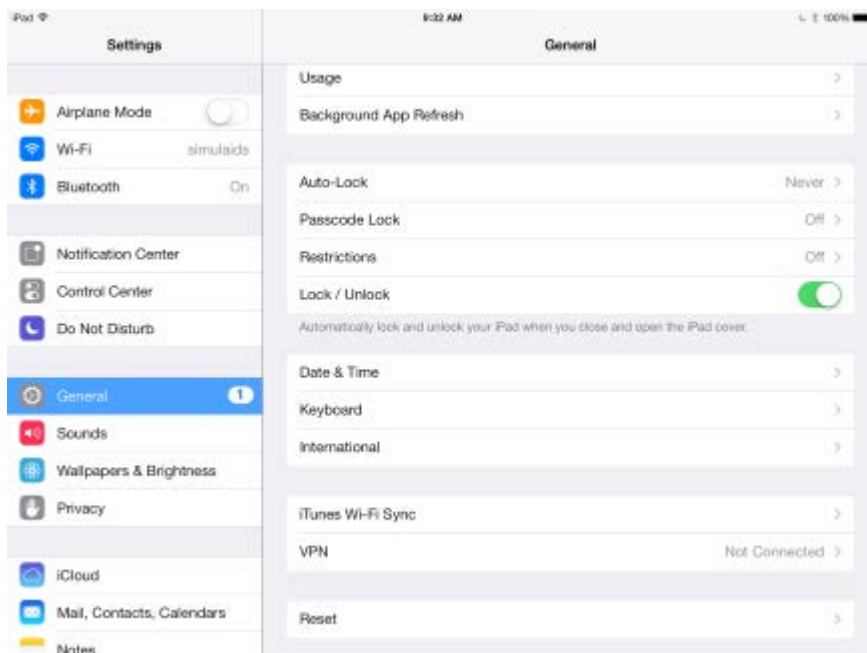
Once in International, the settings shown on screen should be set to:
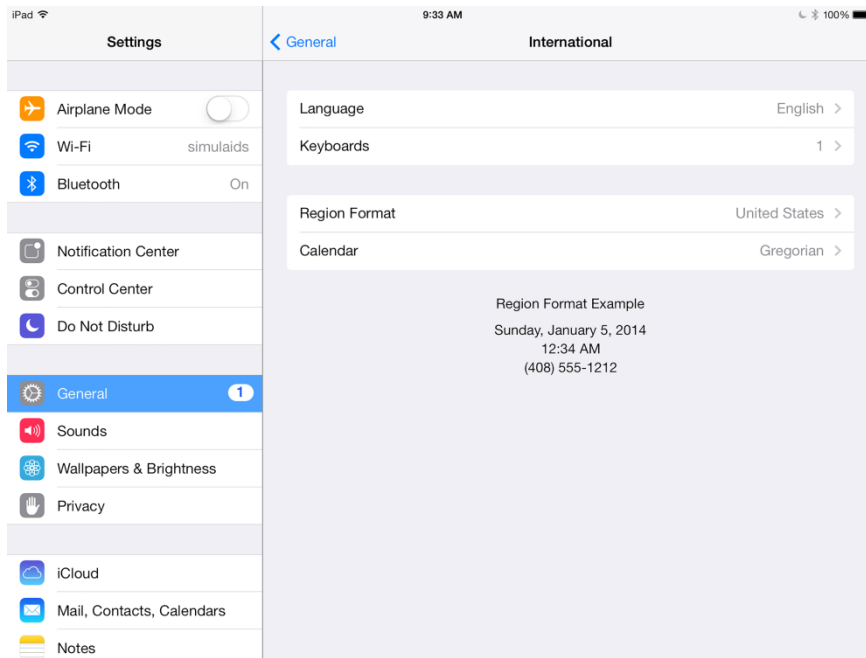
Language: English
Keyboard: 1
Region Format: United States
Calendar: Gregorian

Student

17. This will display the student screen. **It is not required to select a student name to run on the fly; it is only necessary to select a student name when running sessions and/or Recordings.** An initial run through the iPad® set up will not have any student names, but if there were any students, this is where they will display. Go to the upper right corner of the screen and tap "Continue".
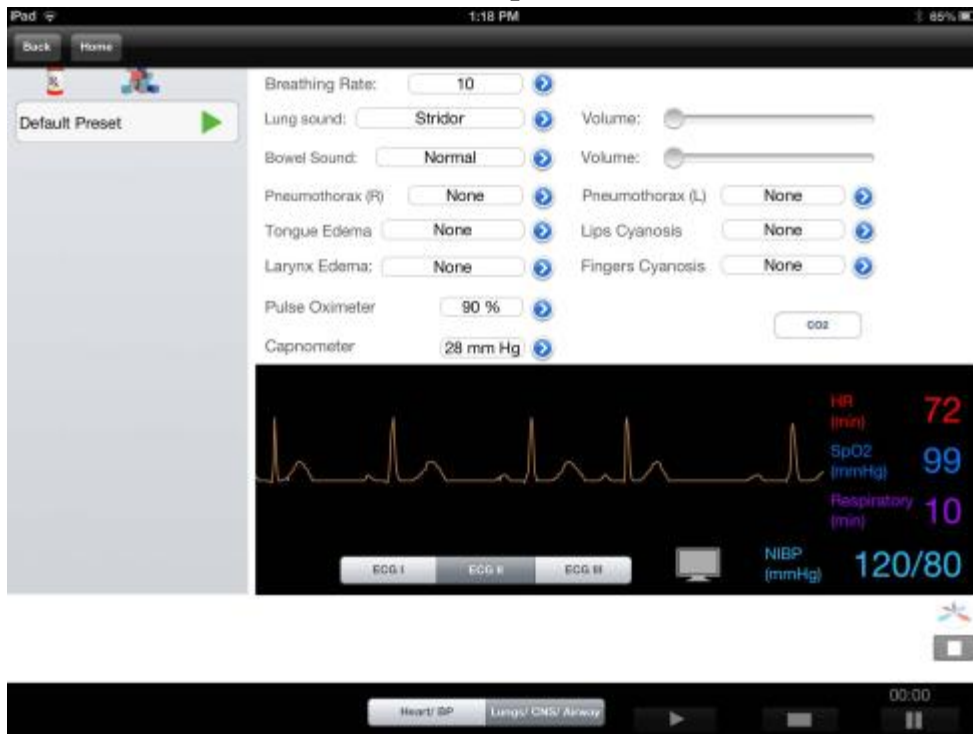
Operation Screen

This will display the features operation screen. Always tap the green preset arrow ▶ before starting any operations. This automatically syncs the patient simulator and iPad®.

You will hear a series of bells indicating the simulator and the iPad® are connected.

Running the Patient Simulator, SMART MOM Basic

1. Go to the app and initialize it.

2. On the SMART STAT app home screen, tap the "Patient Simulators" icon
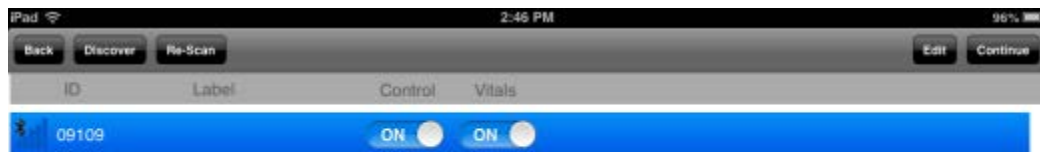
3. If you want to name your patient simulator go to the line representing the patient simulator (shown by the icon on the left column with a number), tap the area under the "Label" column. A text box will display that when tapped will bring up a keyboard to enter a name for the patient simulator. After you type the name, tap the 'Done' button on the keyboard to save it.
4. Tap the switch for the "Control" column. Wait until it has initialized.

5. Tap the switch for the "Vitals" column.
6. Tap anywhere on that line once and wait for the blue highlight to appear on that line.
7. In the upper right corner of the iPad® screen, tap the "Continue" button.

Student Screen

8. This will display the student screen. **It is not required to select a student name to run on the fly**; **it is only necessary to select a student name when running sessions and/or recording.** An initial run through the iPad® set up will not have any names here; if there were any students on your list, they will show up here. Go to the upper right corner of the screen and tap "Continue".
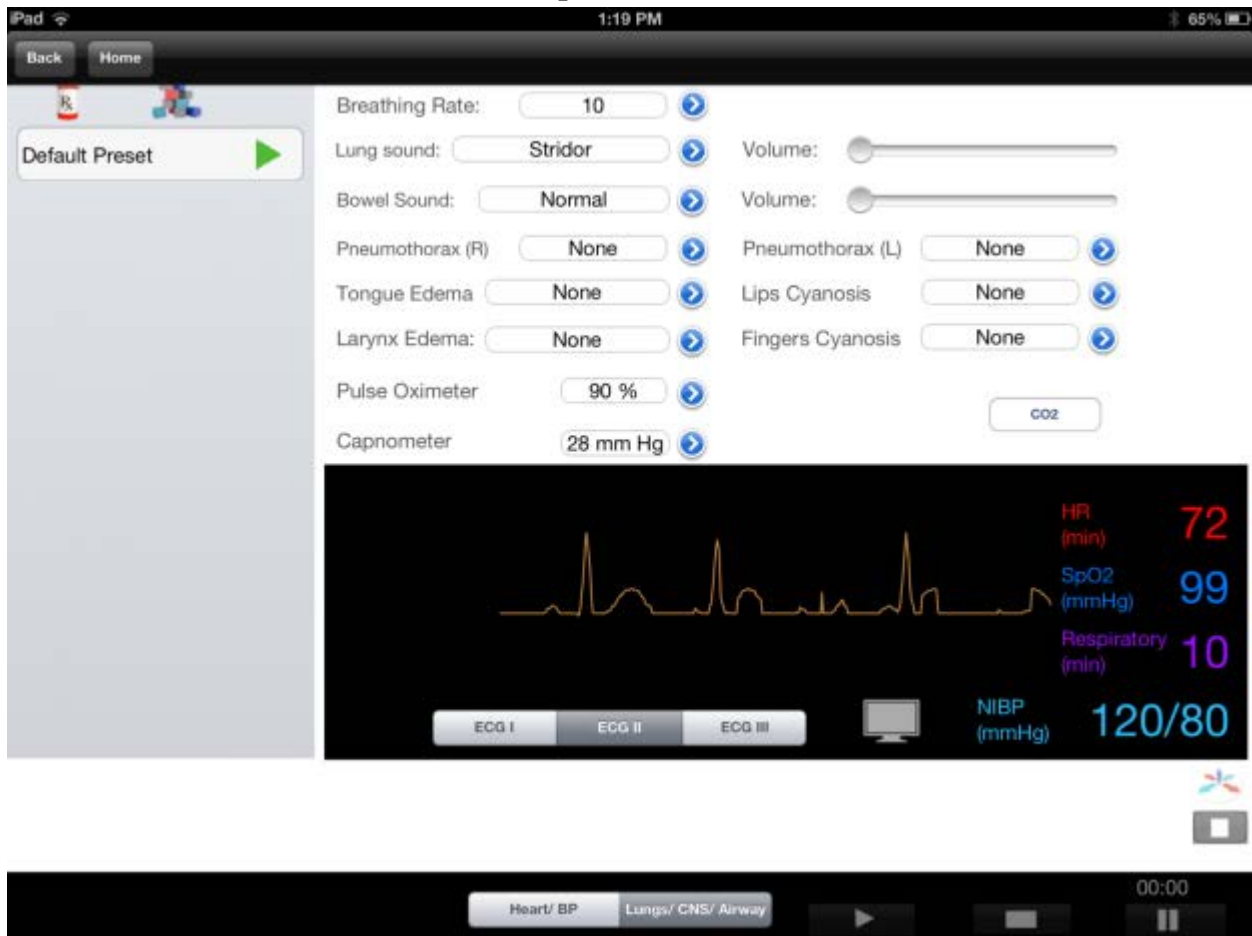
Operation Screen

This will display the features operation screen. Always tap the green preset arrow ▶ before starting any operations. This automatically syncs the patient simulator to the iPad®.

You will hear a series of bells indicating the patient simulator and the iPad® are connected.

PRESETS:

Presets allow you to create a set of feature lists that will put the simulator back into any given set of presets with the tap of one button. Presets are especially useful when working with scenarios that put the simulator in all kinds of conditions.

Open the Preset icon   and view the list of features.
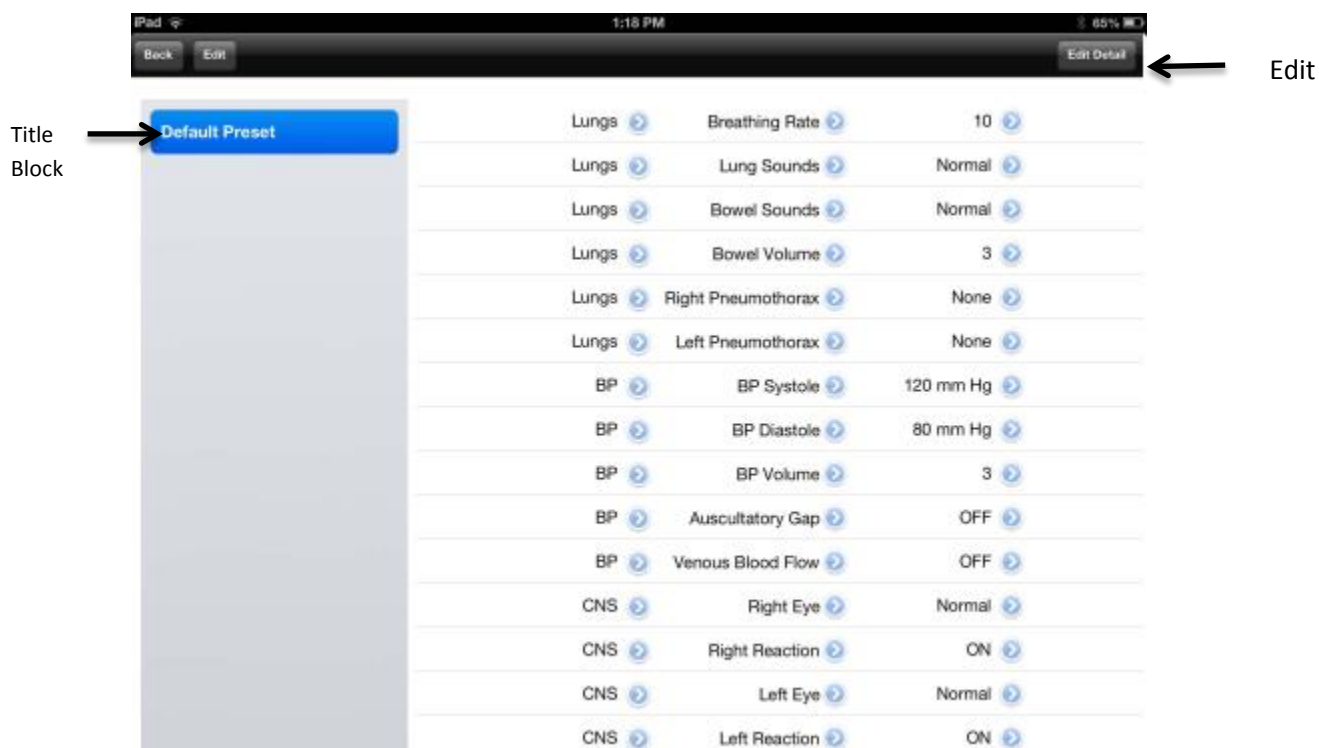
1. Selecting one of the options by tapping the title block displays a screen with all of the features listed in one place. The screen above shows the highlighted title block, Default Preset. Scroll down this list to see all the features listed.
2. To change/edit features listed in a Default Setting, tap the edit detail in the upper right hand corner of the screen.
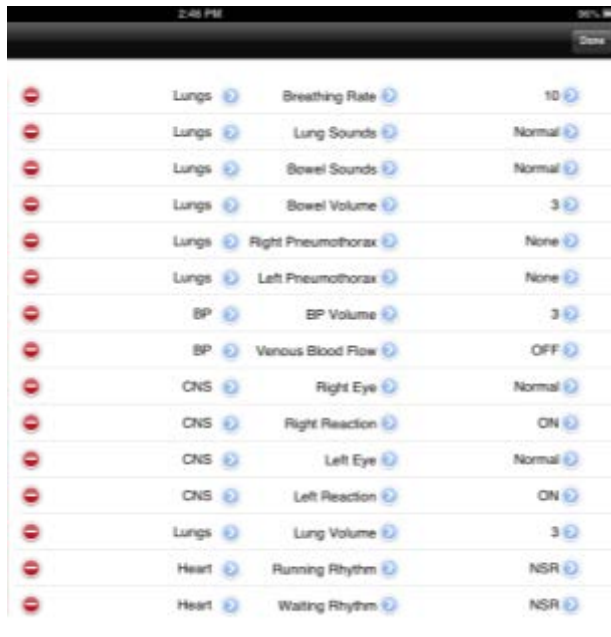
3. Tap any of the line items that you want to change and you will be given the red dot icons ⊖.
   Selecting any of the features by tapping on a line will result in a highlighted blue line through that
   selection.
4. Go to the right column and tap the little blue arrow icon ⊙ to access the various choices you have for
   that item. The program list is complete; it is recommended that you do not delete any lines.
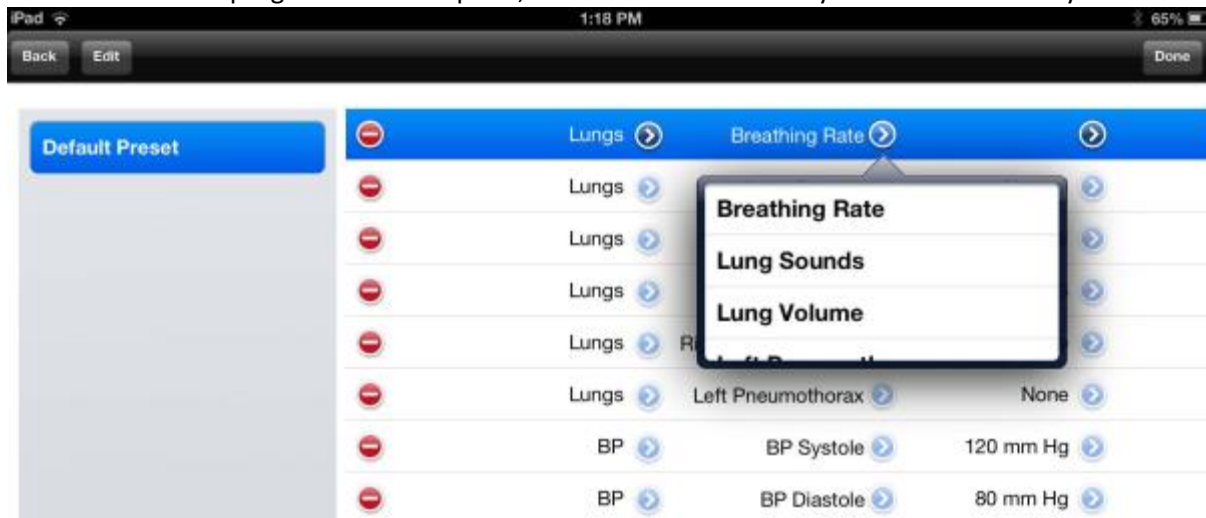
5. Select the rate to default to by tapping the selection. Then tap the 'Done' button in the upper right
   corner.
6. When you are done changing the defaults to your preferences, simply press the 'Done' button and
   they will be available to you with a single tap on the Default Preset on the control screen.

TO CREATE A NEW SET OF DEFAULTS:

1. Start by tapping the PRESET ⬭ icon on the home screen,
2. Tap the 'Edit' button on the upper LEFT sided of the screen

3. Tap the green + circle icon ⊕ to name your preset.
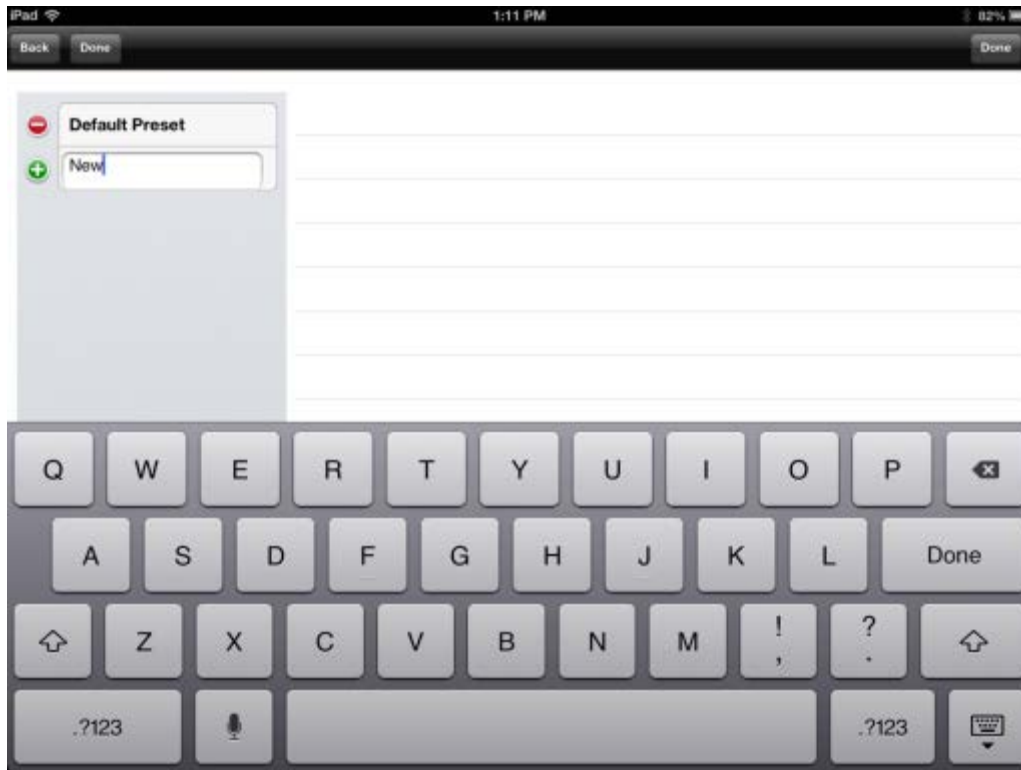
4. Press 'Done' on the left side.
5. Select the new Preset List and tap the Edit Detail button on the upper right corner.
6. Continue to build your preset list as you did in the above Preset steps 1 through 6.
7. When the Preset list is finished, tap the 'Done' button. It will be saved and available on the control screens for immediate use.
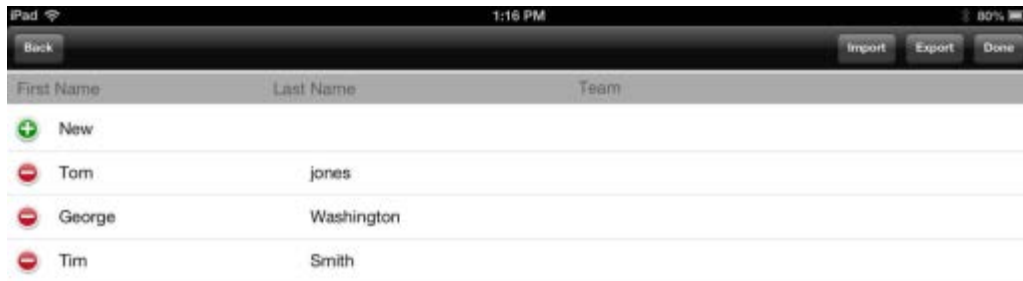
Consider custom presets as scenarios that will be used over and over again. It is easier to use a custom preset to reset your SMART MOM Basic rather than depending on a scenario.

STUDENT LIST:

1. To create a list of students, go to the SMART MOM Basic app home screen.

2. Tap the Student icon

3. Tap the 'Edit' button on the right upper corner of the screen once.

4. Tap the green + circle ⊕ and enter a name and/or a team name.
5. Tap 'Done'.
6. To enter another name, repeat steps 3 through 5 for each additional name to be entered.

NOTE: If you have a large number of students to enter, you may import them via the Import button after you have used the File Sharing page of the iTunes store to place them on the iPad® during sync. The program will accept excel formatted lists with the same column fields shown on the app page.

SKILLS:
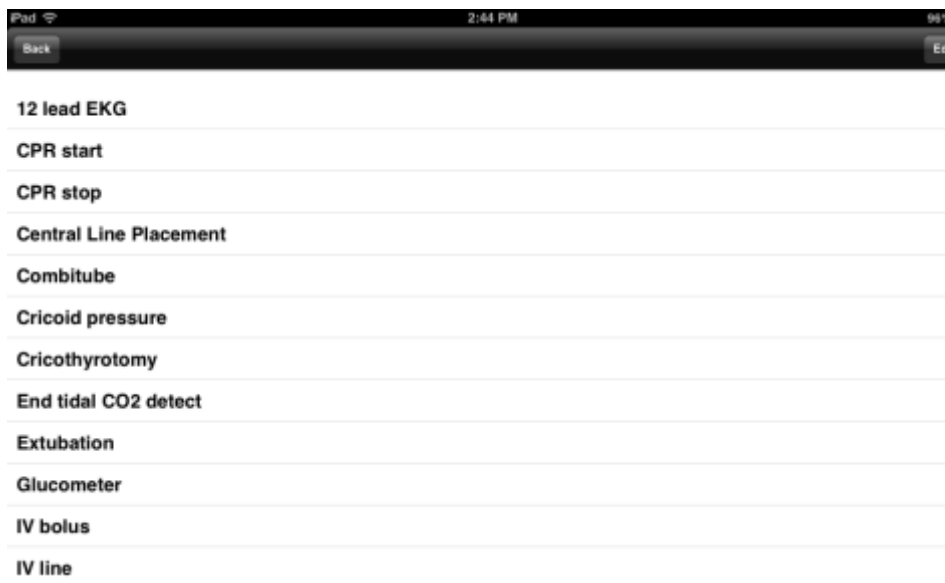
1. To create or edit a skills check list, go to the home screen and tap the Skills icon.
2. Select a current skill by tapping it to highlight the skill.
3. In the upper right corner of the screen tap the "Edit" button.
4. You will be given the choice of editing any of the items or adding a new one. To add a new skill tap the green + circle ⊕ and fill in the blank. Add as many skills as you want to have available for any of your session recordings.
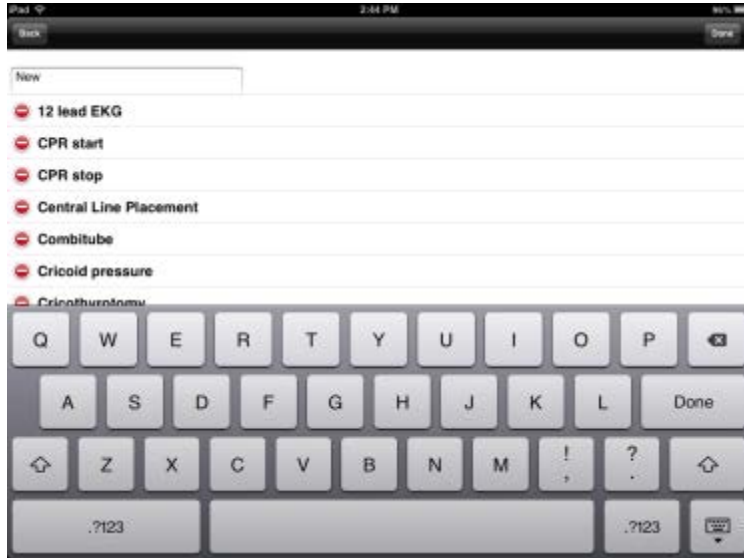
5. When you are finished, tap the 'Done' button in the upper left corner of the screen.

Each scenario has a place for the selected skills. The skills will appear alphabetically; to see the entire list scroll down.

MEDICATION LIST:

1. To create or edit Medications, go to the home screen and tap the Medication   icon.
2. Follow create/edit 'Skills' steps 1 through 4 to create/edit Medications. Scroll down the page to see the entire list of available medications.
3. When you are finished adding medications to the list, hit the back button in the upper left corner to return to the home screen.
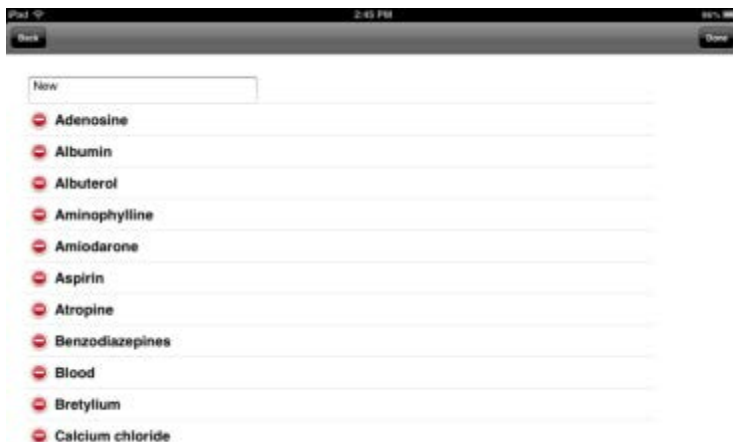
SCENARIOS:
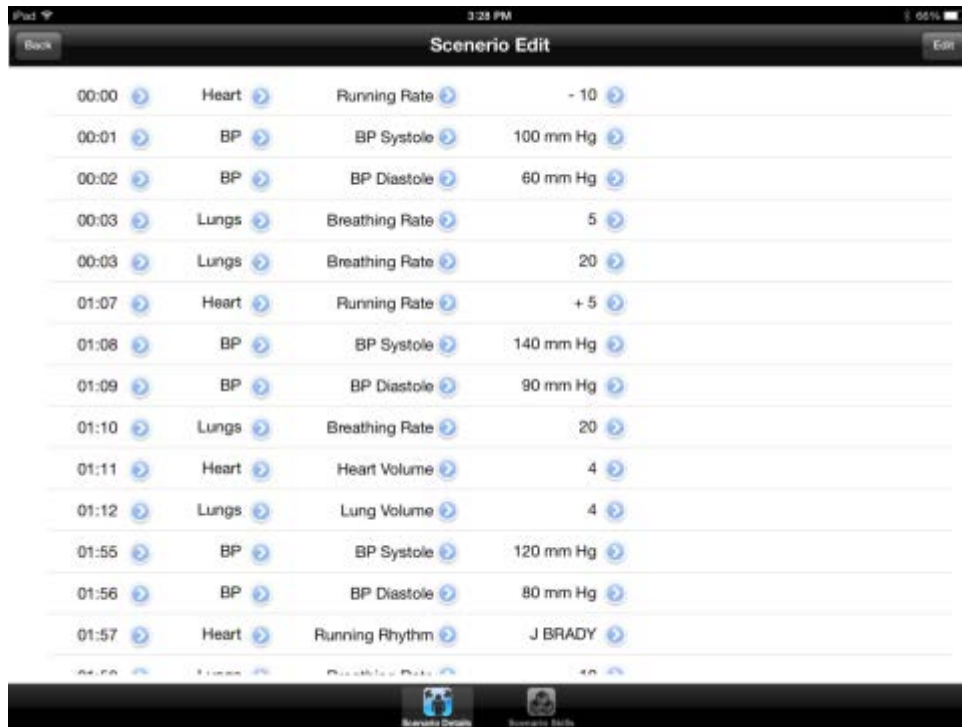
The Scenarios icon displays the included scenarios and gives you the ability to create your own. Tap the

Scenario icon [icon] to begin.

1. Tap any of the lines with scenario names to highlight that line.

2. On the right, tap the blue circle arrow to view the various line items associated with the scenario
3. In the upper right corner, tap Edit
4. Select a line to edit by highlighting it

Back   **Scenerio Edit**   **Done**

| ⊖ | 00:00 ⟩ | Heart ⟩ | Running Rate ⟩ | - 10 ⟩ |
⊖	00:01 ⟩	BP ⟩	BP Systole ⟩	
⊖	00:02 ⟩	BP ⟩	BP Diastole ⟩	
⊖	00:03 ⟩	Lungs ⟩	Breathing Rate ⟩	
⊖	00:03 ⟩	Lungs ⟩	Breathing Rate ⟩	
⊖	01:07 ⟩	Heart ⟩	Running Rate ⟩	+ 5 ⟩

- 10
- 5
+ 5

5. Tap any individual item with an arrow on that highlighted line
6. The individual item can then be changed with the drop down list or pinwheel selection process.

A list of scenarios will appear, along with a green + circle ⊕ button. From this screen you can delete, add or edit existing scenarios.

1. Delete a scenario: tap the red – circle ⊖ and choose delete on the far right side.

1. Add a scenario: tap the green + circle ⊕ to start with adding a name.
2. Tap the blank box, type the name and tap the keyboard 'Done' key to save it.
3. Tap the blue arrow circle ⟩ on the right side of that line to bring up the scenario
4. Tap the 'Edit' button to begin building your scenario.
   a. Select the time you want it to start; generally 00:00 (minutes/seconds)
   b. Use the drop down lists to create your scenario features' operations.
   c. Create a time line of when you want certain features to be active by tapping the individual arrow buttons for each. Then tap the 'Done' button.
   d. To put another line on the scenario, tap the Edit button again and enter your next line.
   e. Tap 'Done' and then 'Edit' to continue building and complete your scenario.
   f. When you back out of the screen, your scenario is saved.

In the upper left corner of the screen, tap back until you reach the screen you need to continue your work on the iPad®.

If you enter the Scenario screen and wish to edit an existing scenario, tap the blue arrow circle ⟩ on the right side of the line you want to change and edit as explained in, A through F.
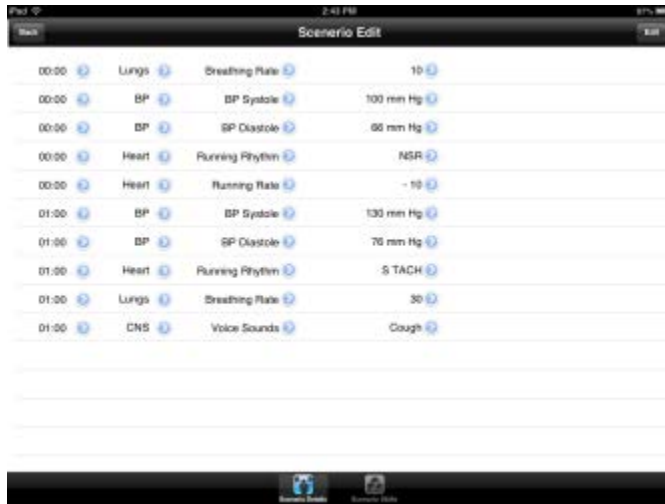
At the bottom of the edit scenarios screen and above this text line are the two icons shown in the black line.

When you are done editing the scenario details (left icon) you may tap the Scenario Skills button to add a set of skills the student is expected to perform during the scenario.

The screen opens to the lists of Skills and Medications that you built or modified in those icon's pages. You may select any of the items on the right column and add them to the list on the left. The items you place on the left side will be associated with that particular scenario. This list shows up when you run a scenario so that you may check off the items the practitioner does during a Session.
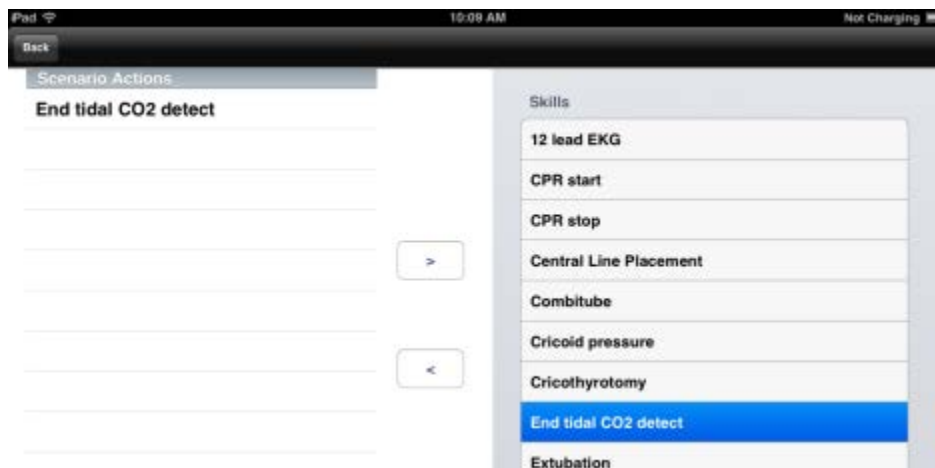
a. Tap a skill to highlight it and then tap the left arrow to place the skill set on the scenario file.

b. After all of the skills have been entered for a specific scenario, tap the back button at the top.

When you play the scenario, these skill sets will display in the left column on the control screen and can be checked off as the student performs the skills.

c. To add a skill that is not on the scenario list, back out to the home screen and go to the Skills section to add the additional skill sets. When you return to the scenario actions screen, the added skills will be available.
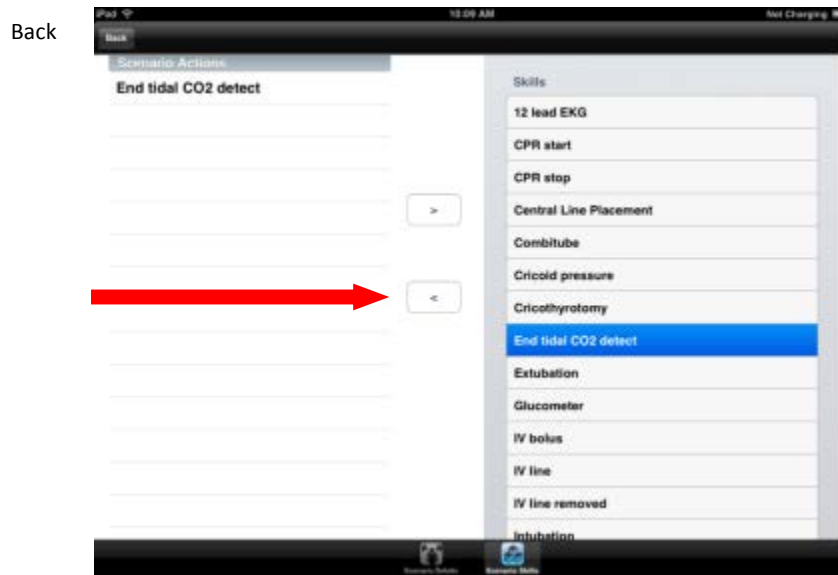
d. Eliminate skill sets from the list by highlighting the skill on the left column and tapping the right arrow to put it back in the database column on the right side. Back out of the screen to save it.

Running Sessions, Recording a Scenario

A session is a timed and logged series of events based upon how the instructor challenges the student(s) and how the student(s) responds to the challenges.

1. To start a recording session, connect to a patient simulator from the Home screen
2. Tap the Patient Simulator icon
3. Turn on the Control button
4. Turn on the Vitals button to send signals to the monitor screen
5. Select the line to highlight it blue.
6. Tap Continue once (wait for it) in the upper right corner.
7. This displays the Student screen.
8. Tap Continue to connect the patient simulator to the iPad®.
9. Tap the Home in the upper left hand corner
10. Tap the Scenario icon
11. Select a scenario
12. Tap Continue
13. Select the patient simulator you connected to in step 1.
14. Tap Continue
15. Select Student/Team
16. Tap Continue
17. Tap the default preset green arrow
18. Start scenario

Scenario select

Scenario stop

Countdown Clock

Scenario Name   Stop   Pause

Clock
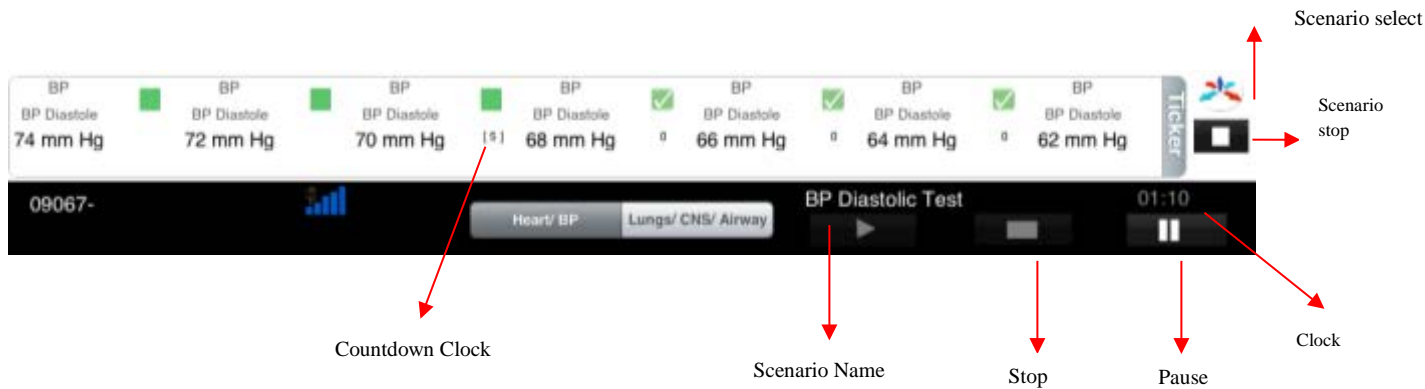
To insert a scenario into a recording session, tap the Home button in the upper left of the screen.

The control screen is displayed and the scenario is outlined in the Ticker strip at the bottom of the screen. Within the ticker strip, and at each feature change, is a countdown clock in parenthesis [-5]. Observe these clocks to know when the next change will occur according to the scenario programming. (By unchecking a feature that has not played will cause it to be skipped.)
Below the ticker strip are the play, pause and stop buttons. Pause the session and the elapsed time clock will continue to run, but the log clock stops until you resume by tapping the pause icon again. If you stop a session recording by tapping the white rectangle, all features and session recordings stop.

Scenario Select

Scenario Stop

Stop   Pause
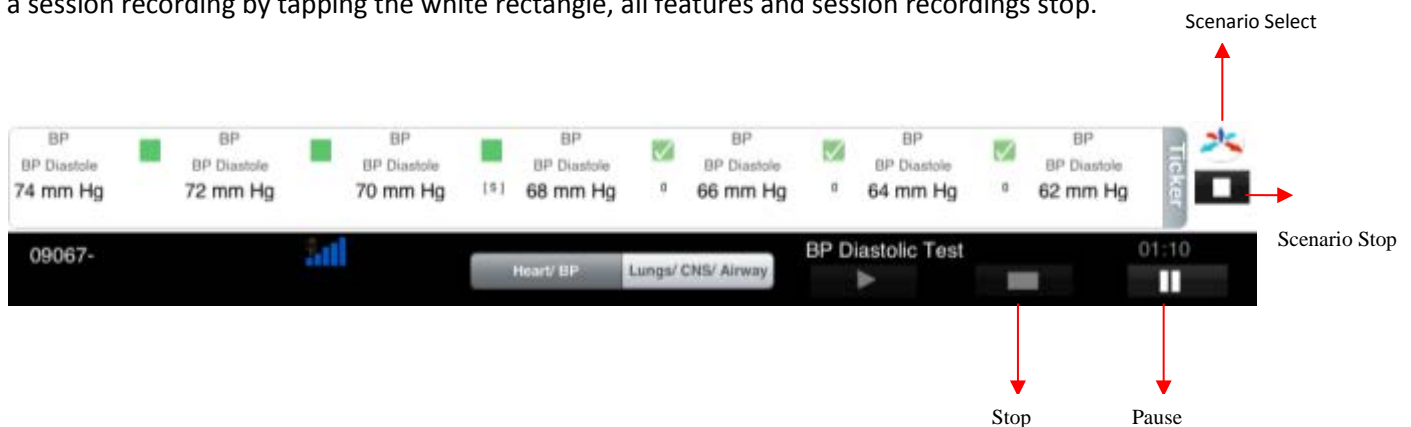
At the bottom of the control screens are two icons on the margin above the elapsed time clock. These represent the scenario selections and the scenario stop button. When you are recording a session, you can switch scenarios, as in the instance of first starting a presentation scenario, then changing to a deterioration scenario. Do this by tapping the stop icon and then tapping the scenario icon to start a new scenario. You can stop a scenario and start another scenario as many times as you want during a recorded session. Tapping the stop button below the ticker line stops all recordings and ends the session.

VIEWING, PRINTING AND SAVING RECORDINGS:

Go to the home screen and find the session recordings by tapping the Recordings icon .

Once you have completed a session recording, you will find it on this screen. This feature allows you to view, print or export session recordings.

1. From the home screen tap the Recordings icon.
2. Locate and select the student name on the Students drop down menu, and select student's session from the Sessions drop down menu.
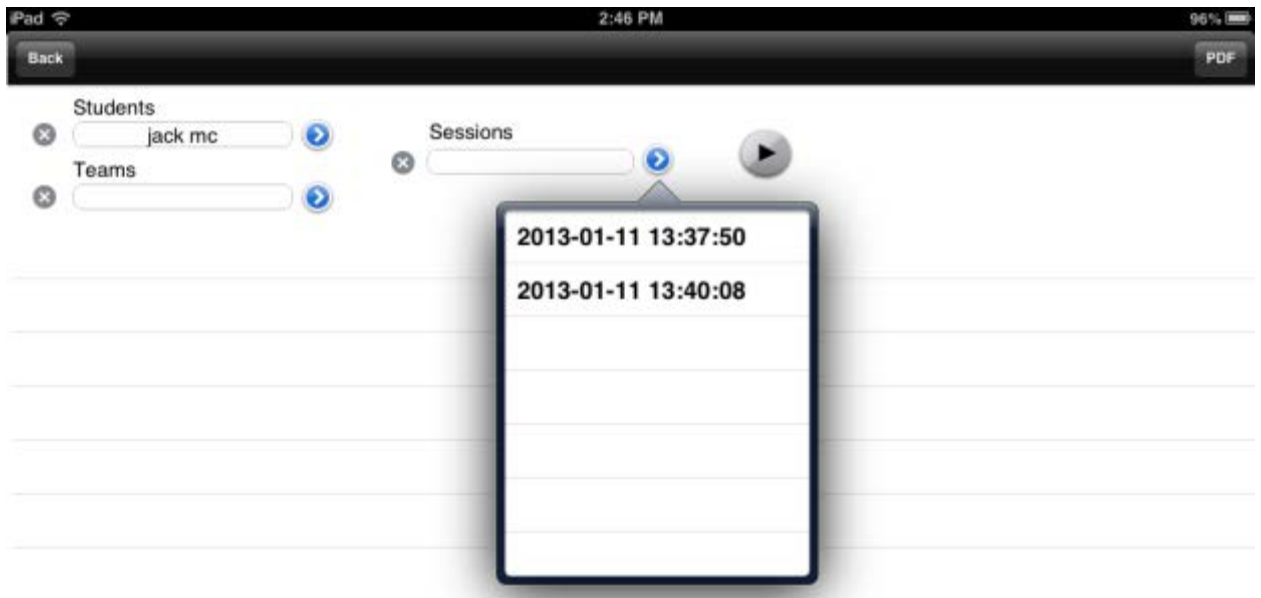
3. Tapping the arrow icon will cause the session recording to list by line in chronological order. To see another recording by the same student, tap the Sessions drop down list and select it and tap the arrow again.
4. When you have selected the session that you want to print, tap the PDF button in the upper right corner of the screen. This places the file in a location to transfer it to iTunes® for the next time you sync your iPad®. Put as many session recordings as needed in this file for transfer to iTunes®. Once the recordings are in PDF form, they can be printed and/or emailed.

Retrieving PDF files from iTunes®:

1. Synchronize the iPad® to your computer by connecting the charging cable to the iPad® and the USB port on the computer. (You also can refer to your iPad® user guide.)
2. Open the iTunes® on your computer.
3. Watch in the upper right corner of the tools line as the iPad® icon appears next to the iTunes® button.

4. Click on the iPad® icon on the left side of the button. If you click on the up arrow icon, you will not go to the correct location.
5. On the bottom right of the screen tap the Sync button.

6. At the top of the screen you'll see the progress of the sync process. Wait for it to complete.
7. Under the Apple® bar, on the line that identifies your iPad®, find the Apps button and tap that.
8. Move to the far right of the screen and drag the slider down to view the bottom of the page.

9. Find the SMART STAT Apps icon (Star of Life) and tap it once.
10. On the lines in the right column you will find all of the files that you have exported from the iPad® app, including PDF student recordings, scenarios and other lists.
11. You can print, save, copy, paste or discard any of the files after saving the files on a computer by using the "Save to…" button on the bottom of the iTunes® Documents column.

A sample of a pdf file generated on iPad® SMART STAT

EXPORTING

Exporting from Manikin Data Editor (MDE), included with SMART STAT's that were supplied with Pocket PC, purchased prior to March 1, 2013.
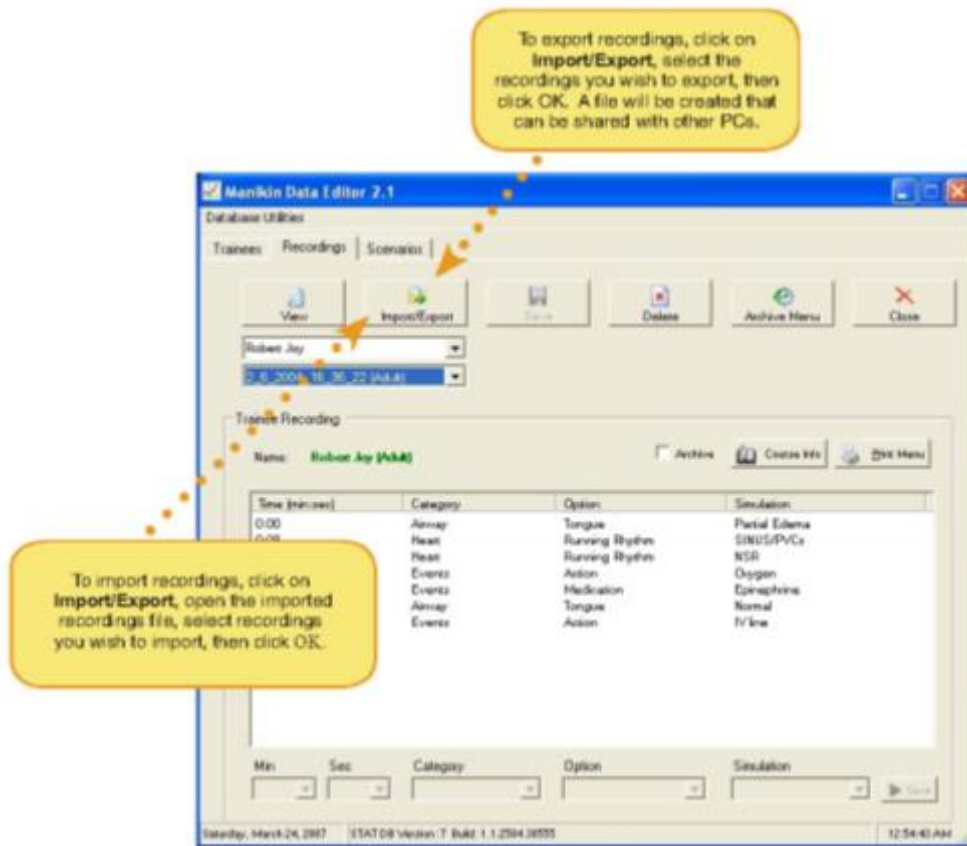
To import and/or export files using your iPad®, refer to your iPad® user guide.

SCENARIO OPERATION

Scenario Editing

SMART MOM comes with 10 specific OB scenarios consisting of 39 vignettes to take you through the most important birthing presentations. You may change any of the features at will and save that particular version by any name you wish so that you can recall both the original and the custom scenario at any time.

Editing is done in essentially the same way as you build a scenario, line by line using the "Edit" button at the top of the page of the app.

Birthing Operations

On the Birthing screen you will find the features associated with that portion of the SMART MOM Basic. For instance, if you select Blood, you are given the choices of *Bright red, Dark red* or *Brown*. Once you tap that choice the simulator starts flowing blood to the vaginal fluid port. When you first use the fluid commands you should stand facing the vaginal fluid port so that you can see the volume of fluid being dispensed. You must go back to the command and select *None* in order to stop the pump from pushing fluid.

You may set the duration and the strength of the contractions by making those selections on the fly from the Birthing screen. The same patterns will result with each contraction. These feature changes will occur on the next instance of a contraction signal and remain until you change them again.

Then you select the Contractions Frequency box. The drop down list offers the rates at which they will occur. Your choices run from one in 5 minutes to one in 1-1/2 minutes. Once you select a rate, the MOM starts sending contraction signals to the Fetal Heart Rate monitor lower screen. For example, If you select the 3-minute rate, the first contraction occurs immediately and the next is three minutes later and continues the rate until you change it.

Since you are in the birthing mode when you set up contractions, the birthing provider should be told beforehand how quickly the baby will be delivered and a communication drill should be set up to allow them to know at what stage the baby is according to the scenario you are running. They may also get cues from the FHR monitor screen.

Another feature to address is the rotation of the fetus while in the womb. In the SMART MOM Basic there is nothing to restrict how far the baby rotates going down the birth canal. It may be twisted by the birthing provider at any time during the birth. If the provider rotates the baby so that the hips are aligned perpendicular to the spine, the baby will exit the vagina with the shoulders lined up appropriately. You should rotate the baby before the descent starts to ensure that the rotation is not complicated by contact with the cervix. If the baby and the cervix were properly lubricated, there should be no issue. You will preserve the longevity of the cervix/vagina by rotating the baby before the descent starts.

When initiating shoulder dystocia, the birth provider simply retracts the birthing baby to initiate the turtle sign when the baby's head crowns. Simply pushing the baby when appropriate will eliminate the turtle sign and allow the baby to be delivered.

These instructions are covered in how to operate the SMART MOM Basic patient simulator with the iPad®. Take some time to become familiar with what is on each screen and how the various features are changed.

The below screen capture shows how the MOM monitor and FHR monitor reside on one screen.
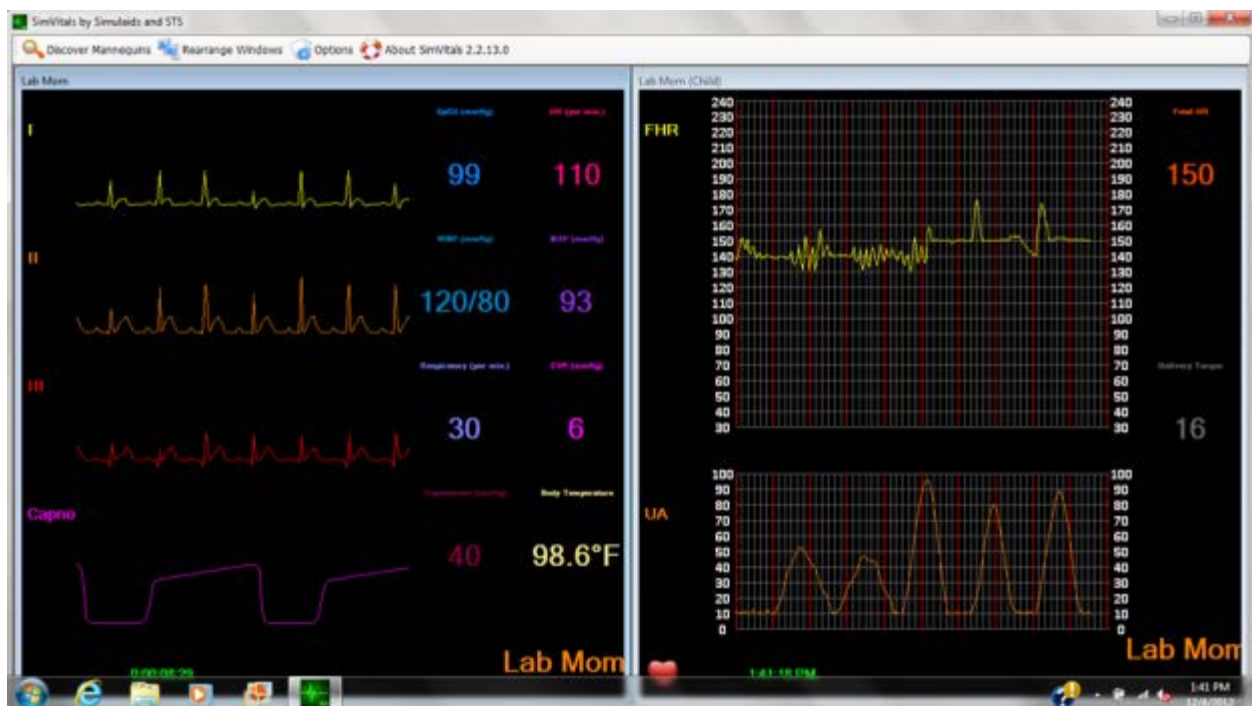
On the MOM side (left above) note the digital values and the ECG lead graphs and the capnography graph. On the FHR monitor (right side above) you can see the variability of the FHR, accelerations (accels) and a prolonged deceleration (decel) on the top. When you are running on the fly, you may insert these at any time. Contractions of varying frequency, strength and duration show up on the Uterine Activity(UA) graph on the bottom.

During normal use, the laptop screen can be used for the MOM monitor and the flat screen set up for use of the FHR monitor to see all the detail of the FHR changes.

Using the Scenario programming feature, you may create unique FHR strips. It is generally best to make a tracing or use a patient tracing of the way you want your MOM tracings to look. This will give you the actual times of the UA and FHR changes that you set up in your Scenario. Map them out and use this map (sample strip) for clues used in entering the feature changes.

BUILD A SCENARIO

Go to the Scenario screen and initialize a new scenario name. You may name it what you like, but Contraction Test may be used.

When you are creating a strip for the FHR monitor, you will be selecting a series of choices for each contraction (Ctx) on the Birthing screen. For each one start with the Duration time and the Strength choice, then select the Frequency: Start Ctx. This is not the same as running on the fly and choosing one every five minutes. You actually build each contraction by identifying its duration and strength, then assigning the time for the contraction to start by tapping the Start Ctx item. This must happen for every contraction on your strip. Determine when the next contraction is going to occur and start another contraction at that time. Selecting the Start Ctx button will create a contraction with the information that precedes Start Ctx. So, if you are not getting a contraction tracing that looks like what you want, go back and look at when you initiated the Ctx. Make sure the Start Ctx is after the strength and duration parameters.

EXAMPLE

- Give a Ctx duration and strength characteristics and then Start a Ctx at 0:15.
- Start another contraction three minutes later, at 3:15. This establishes the frequency of the contractions. Give it duration and strength characteristics from the drop down lists with times of 3:13 and 3:14.
- Start another Ctx three minutes later at 6:15, and so on, throughout the length of your vignette.

Make sure that the duration of a contraction is not going to interfere with the start of another contraction. For instance, if you are having Ctx with duration of 120 seconds, you may not start another contraction until at least two minutes and one second later than the start of that contraction.

After you have completed the contraction formatting, start to insert the necessary FHR monitor items.

Start with the time line at zero minutes: zero seconds and establish the FHR base line value, such as 140 or 145 bpm, since you want the fetal heart rate to be monitored from the beginning of the Presentation. Next, chose the variability setting. Continue with your build adding appropriate accelerations and decelerations and prolonged decelerations as shown on your sample strip discussed above.

When you have completed your scenario, return to the home screen and it will be saved for you to use. When you run the scenario, compare the tracing you get on MOM's monitor with the tracing you used

to map it. If there are discrepancies that you need to fix, go back to the Scenario icon, tap it, find the errant scenario, and edit it until it creates the strip you need.

Refer to the scenarios in the Appendix for visual aids to building a scenario.

SIMVITALS HOSPITAL MONITOR/FETAL HEART RATE MONITOR

~~This~~ The SimVitals program is initialized by double clicking on the green icon on the laptop desktop screen. Tap the Windows™ button on your keyboard to find the SimVitals icon on your monitor screen. The program was installed at the factory and connects automatically to the SMART MOM Basic wireless signals when she is powered on. If you haven't turned MOM on yet, now would be a good time to do so.

Each laptop included with SMART MOM Basic utilizes an on-board Wi-Fi device. Boot the computer and allow time for all the programs to initialize in the startup process. The Wi-Fi should be functional at this time. Look in the lower right corner of the laptop monitor screen to see the multiple bars you are familiar with for identifying signal strength. Right click the icon and open the Sharing center.

NOTE: Be sure your Wi-Fi signal is connected to the Simulaids' MOM router, rather than one you recognize as being generated by your agency.

When you start up the SimVitals program, it automatically recognizes your MOM and the Wi-Fi signal generated from her internal router. You may have to initialize starting the "finding simulators" action again if it doesn't find them on the first pass. It usually only takes twice, at the most, to hook up.

Once the program is displaying the MOM feature settings, it will run continuously until either the program is shut down or the simulator power fails, resulting in a loss of signal from the simulator to the laptop.

You are supplied with a laptop and a flat screen monitor. The Laptop was set up at the factory to use an extended screen option. When the flat screen monitor is hooked up to the laptop, the SimVitals software shows on the split screen so that MOM's monitor is on the left side and the FHR/UA monitor is on the right.

If you use a different laptop, you must set up the laptop to utilize Windows extended screen options for this to occur.

You may have to position the program screen so that the MOM vitals are showing on the laptop monitor and the FHR screen shows up on the flat screen. Then stretch the MOM side to the left and the FHR side

44

to the right. Then adjust the middle ends of the screens to match the remaining side of the width of the screens. This will grow them into a scale that you can recognize and view for determining rates, durations and frequencies on the FHR side.

CARE AND CLEANING

Battery Charging

1. Access the left hip joint by displacing the torso leg skin.
2. Disconnect the two-wire, white power connector from the battery to the left leg.
3. Locate the two-wire, red connector attached to the battery

See section of these instructions for more detail

4. Attach the battery connector leads to the battery charger leads.

General surfaces

The skins of SMART MOM Basic are resistant to grime, dirt, and stains. Most of the general cleaning should be done with a damp cloth and water soluble cleaning agents.

To prevent fluid from entering the head cavity through the eye sockets do not spray the head surface. Spray the cleaning agent onto the cloth and wipe the face. The airway should be swabbed occasionally with a dry 4X4 gauze bandage to eliminate lubrication build up. How often this is done *is* subject to how much lubrication is used during intubation practice. If the buildup starts to be noticeable, swab the airway passages.

Exterior parts, like the cervix/vagina should be cleaned to remove excessive buildup of lubrication.

The Birthing baby should also be swabbed down occasionally to keep it sanitary.

Blood Tubing

The most critical part of maintenance on SMART MOM Basic revolves around the fluid lines serving the vagina and the IV access areas. Leaving the lines full of fluids that contain either blood will eventually clog the lines and prevent further use. To prevent causing clogs in the interior lines that support fluid features, each reservoir must be flushed with water after each day's use. Finishing the flushing with distilled water will assist in keeping unwanted mineral build up.

Filling the reservoirs constantly while using the iPad® to initialize the pump to push fluids out of the vagina will assist in flushing these lines.

The IV lines should be drained from the IV locations in the hands to ensure that the blood is thoroughly flushed from those smaller tubing lines. Access the vein lines in the hands by lowering the hand skins far enough to handle the vein tubing. Disconnect the tubing from both ends. Install long pieces of vein tubing that will reach to a bucket on the floor. Fill the main blood reservoir with distilled water again and use the iPad® to push fluid through the system until both the IV lines and the vaginal system of bright red blood returns clear water.

If you wish to remove the arm skins to check for leaks in the vein tubing, slide the arm skins down off the arms.

NOTE: The right hand skin has attached to it the pulse oximeter electrical connector. Do not remove the right hand skin from the hand. Slide the right hand skin down only far enough to access the vein tubing.

For both arms, it is also necessary to remove the arm stocking from over the vein tubing sites in order to access the vein tubing.

Birthing Compartment

The interior of the SMART MOM Basic needs little attention. Wiping the interior down after a series of birthing events will assist in keeping it clean. If excess lubrication spills into the chamber, wipe it up to prevent the liquid from moving to other locations.

The Off/On switch may be wiped clean, but do not use fluid to clean it.

WARRANTY: Simulaids warrants this product to be free from defects in materials and/or workmanship for a period of **one** year from the date of purchase, as evidenced by the date on the invoice of the product shipment to the end user. This warranty expressly does not cover abuse, accidental or purposeful damage, or any form of modification to the product. Only products manufactured at the Simulaids plant in Saugerties, NY receive this limited warranty status. All other products, including certain electrical components sold through Simulaids, but manufactured elsewhere, are subject to the warranties supplied by the vendor (product manufacturer). These warranties may differ from the Simulaids' warranty.

RETURN POLICY: Simulaids reserves the right to either repair or replace affected parts or the entire unit, at their sole discretion, after investigating and reviewing the actual product and the damage. In most instances, a digital photo of the product in question showing the damage and sent to info@simulaids.com will help qualify a product for return to the factory. At no time will any product be accepted without proper return authorization issued by Simulaids. Please contact our Customer Service Department to arrange a return and obtain a RA number. Freight and Shipping charges are the sole responsibility of the end user. No product will be received with shipping charges due. The serial number of the simulator and the invoice number from the agency through whom the product was purchased must be provided for warranty repairs. No return authorization number will be provided without this information. Should you have any questions or wish further information on any product we manufacture, call or write our Customer Service Department. The hand written serial number of SMART MOM BASIC can be found under the abdominal section on the torso ledge.

EXTENDED WARRANTY PROGRAM: You should also be aware that there is an extended warranty program available to you to purchase within the first two (2) months of your purchase of SMART MOM Basic. You may obtain more information about this option through your sales representative.

Trouble shooting SMART MOM BASIC

	TROUBLE SHOOTING	
Focus of issue	**First action**	**Follow up action**
Simulator not powering up		
On AC power-	Check Power supply connections. Make sure outlet has power.	
		If trouble continues after verifying connections call Simulaids
On Battery Power-	Connect battery to charger: If green light on battery charged, check connections. If red light on charger, charge battery until light turns green, then check connections.	
		If trouble continues after verifying battery and connections, call Simulaids.
Trouble connecting iPad with simulator		
	Check to ensure Simulator is turned on. Power switch is inside mother unit, remove stomach cover and plate, switch on upper left side of space.	
	Check for wifi signal after power is on for a few minutes. Use iPad in "Settings" to see if wifi for simulator is listed. If listed, select for wifi	restart Simulator, turn off then back on to get wifi. After attempt at reboot: If not listed call Simulaids
	Clear any apps running or versions of Smart Stat Mom running on iPad by double tapping home button and clear any instances of app running	
	Start up application for Smart Stat Mom application	
		If Smart Stat Mom App not loaded on iPad, load from AppStore
		If still not able to link with wifi using App call Simulaids

	TROUBLE SHOOTING	
Focus of issue	**First action**	**Follow up action**
A feature or several features not working	Make a detailed list of what aspect of feature is not working as well as if changing conditions impacted the feature. Do this for each of the features in question.	Call Simulaids
Laptop not linking up to show vitals and fetal monitor.	Check to ensure Simulator is turned on. Power switch is inside mother unit, remove stomach cover and plate, switch on upper left side of space. Check for wifi signal after power is on for a few minutes. Check for wifi signal for wireless connection for simulator. If listed, select wifi. Make sure iPad is connected to simulator. Make sure that SimVitals is running. Once iPad linke with wifi, link laptop internet to simulator wifi If laptop still not picking up simulator- "No manikin found", initialize "find manikin" button upper left corner.	If wfi not listed call simulaids If wifi not listed call simulaids If SimVitals not running start Simvitals on iPad If still not linking, try to reboot. If after reboot still no connection to wifi call Simulaids

SMART MOM Basic Simulator Technical Specifications

Mains Supply:

Model	Input Voltage	Frequency	Power
3002	240VAC	50/60 Hz	50W

Defibrillator Energy:

Max. Energy Delivered	360 Joules
Min. Time Between Discharges	10 seconds
Max. No. of 360J Discharges	15 in a five minute period

Electrostatic Discharge:

In the event of an electrostatic discharge, the simulator may change physio states. User intervention may be required to bring it back to normal operation. User intervention may include re-transmitting selections from the iPad®, or cycling power off and on.

Current Draw:

The SMART MOM Basic product, when connected to A/C electrical supplies, draws approximately 4.2 A.

The battery, when placed on charge, will draw approximately 2.0 A from the A/C electrical supply.

<u>Appendix</u>

Lungs Screen Simulation Choices

Breathing Rate	Lung Sounds	Lungs Volume
Apnea	Normal *	1
5	Crackles minor edema	2
10 *	Crackles moderate edema	3 *
20	Stridor	4
30	Rhonchi scattered	5
	Rhonchi bases	
	Wheeze upper	
	Wheeze bases	

* Start-Up Default

BP Screen Simulation Choices

BP Systole and Diastole	BP Volume	Auscultatory Gap	Venous Blood Flow	Feet Swelling	Temperature Fahrenheit	Temperature Celsius	BP Cal 150
0 – 300 mmHg	1	On	On	None	88-105 by .2	31 – 41.5 by .1	Calibrate BP feature by tapping Cal button when BP gauge is set to 150mmHg
(In increments of 2	2	Off *	Off *	Moderate			
	3 *			Severe			
Default is 120/80)	4						

Eye Screen Simulation Choices

Right Eye Pupil	Right Eye Reaction	Left Eye Pupil	Left Eye Reaction	Blink
Normal *	On *	Normal *	On *	Blinking*
Dilated	Off	Dilated	Off	Closed
Constricted		Constricted		Open

* Start-Up Default

Airway Screen Simulation Choices

Tongue	Larynx	Pulse Oximeter	Capnometry
Normal *	Normal *	99% *	0 mm Hg
Partial edema	Partial edema	98%	4 mm Hg
Complete edema	Complete edema	97%	8 mm Hg
		96%	12 mm Hg
		95%	16 mm Hg
		94%	20 mm Hg
		93%	24 mm Hg
		90%	28 mm Hg
		85%	32 mm Hg
		80%	36 mm Hg
		75%	38 mm Hg
		70%	39 mm Hg
		60%	40 mm Hg *
		50%	41 mm Hg
		40%	42 mm Hg
		30%	44 mm Hg
		20%	46 mm Hg
		10%	50 mm Hg
		0	54 mm Hg
			58 mm Hg

* Start-Up Default

Fetus Screen Simulation Choices

FHR	Variability	Acceleration	Variable/prolonged Decel	Early/Late Deceleration
60 to 200 by 5	Absent*	Accel 10 bpm, 10 Secs	Variable Decel mild	Late Decel, Subtle
*140	Minimal	Accel 15 bpm, 15 Secs	Variable Decel Moderate	Late Decel, Moderate
	Moderate	Accel 20 bpm, 20 Secs	Variable Decel Severe	Late Decel, Deep
	Marked	Accel 30 bpm, 40 Secs	Prolonged Decel	Early Decel
		Accel 30 bpm, 60 Secs		
		Accel 30 bpm, 90 Secs		
		Prolonged Accel		

* Start-Up Default

Events Screen Choices

Action	Medication	
Announce Event Manager	Acetominaphen	Narcan
Assess Patient Head to Toe	Ancef (Cefazolin)	Nifedipine
Begin CPR	Benadryl	Nitroglycerine
Call Adult Cardiac Arrest	Bictra	Nubian
Call for Help	Blood/Blood	Oxytocin
Call for OR Open	Calcium Gluconate	Penicillin G
Check Deep Tendon Reflexes	Ephedrine	Prostaglandin E2
Fundal Massage	Epinephrine	Stadol
IV Bolus	Erythromycin	Terbutaline
IV Start	Fentanyl	Vancomycin
Notify Provider	Hamabate	
Obtain/Open Postpartum	Heparin Drip	
Oxygen Removed	Hydralazine	
Oxygen—Snug Rebreather	Ibuprofen (Motrin)	
Place Foley Catheter	Insulin	
Reassure Patient	Labetalol	
Reposition MOM	Lactated Ringer's	
Stand on Foot Stool	Magnesium Sulfate	
Supra Pubic Pressure	Methergine	
Vaginal Exam	Misoprostol	
Vital Signs Checked	Morphine	

Heart Screen Simulation Choices

Running and Waiting Rhythms	Default ECG Rate	ECG Rate Change	PVC	PEA	Pacing Capture	Convert	Heart Sounds	Heart Volume
1st	66	- 10	On	On	Ignore	Enabled	Normal *	1
2nd I	40 – 52	- 5	Off *	Off *	40 mA	Disabled *	Systolic murmur	2
2nd II 3:1	26	+ 5			50 mA		Diastolic murmur	3 *
2nd II 4:1	19	+ 10			60 mA		Friction rub	4
3rd	37	(Rate change not applicable			70 mA	Select waiting rhythm then tap convert. When simulator is defibrillated, waiting rhythm becomes running rhythm.		5
AFIB	120 – 160	To ASYS, VF			80 mA *			
AFLTR	150	or VT poly)			90 mA			
ASYS	0				100 mA			
J BRADY	42				110 mA			
NSR *	72				120 mA			
S BRADY	40				130 mA			
S TACH	120				140 mA			
SVT	210							
VF	> 200							
VT fast	185							
VT poly	> 200							
VT slow	140							

* Start-Up Default

Uterus Screen Simulation Choices

Ctx Frequency	Duration	Strength	Resting Tone	Meconium	Amnion	Clots	Blood
*none	40 Secs	Mild	Soft	On	On	Small	Bright Red
5 minutes	60 Secs	Moderate	Firm	*Off	*Off	Large	Dark Red
3 minutes	80 Secs	Strong					Brown
2-1/2 minutes	90 Secs	Pushing					*None
2 minutes	100 Secs						
1-1/2 minutes	120 Secs						
Start Ctx							

* Start-Up Default

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