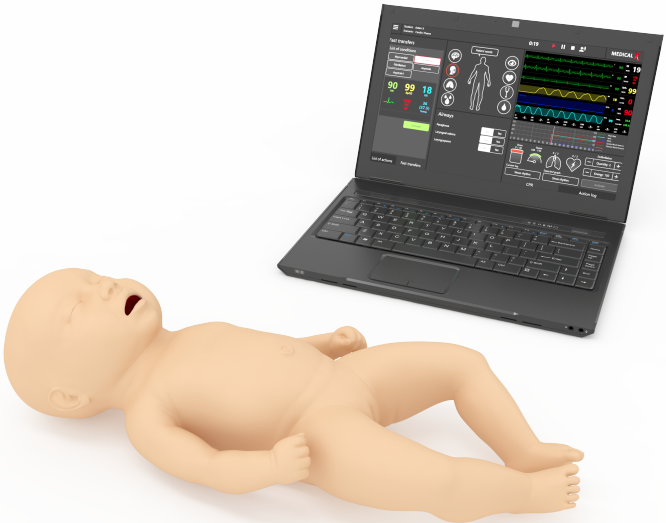
MedVision

USER MANUAL

Simulator PS.N

Newborn Patient Simulator

MIA


Fast transfers
List of conditions
Allergies
Medications
Medical history
Vital signs
Blood pressure
Pulse
Respiration
Temperature
Pulse oxygen
Blood glucose
Pain
Fluid balance

Contents

Introduction

Newborn Patient Simulator is a wireless and tetherless neonatal resuscitation simulator intended for use in advanced cardiopulmonary resuscitation training simulations. The simulator is designed for training healthcare professionals by developing reliable skills to be further applied in treatment of real patients.

The simulator allows performing **a full range of pediatric procedures** including fontanel assessment, umbilical cord care, swaddling, head control, diaper changing, 12 lead ECG, auscultation, intubation and many more.

The simulator and student actions monitoring and assessment are computer based.

The patient simulator body

The simulator is a life-size model of a real newborn human and has the following features:

- Anatomical structure:
  - true-to-life neck articulation (neck tilt, rotation, left or right — 45º, forward tilt, backward tilt)
  - realistic articulation of arms and legs in all joints
  - palpable ribs
  - palpable shoulder blades
  - palpable pelvic bones

  - palpable fontanel
  - realistic kneecaps.

- The skin of the simulator is realistic in appearance and feel.

In addition, the simulator provides **detailed action logging** covering the following features:

- convulsions imitation
- head tilt control.

Airway

The respiratory system of the simulator includes entirely independent right and left lungs. As a result of one lung ventilation, the simulator automatically produces respective breathing sounds and chest rise and fall. During spontaneous breathing, the simulator breathes with automatically controlled respiratory volume and respiratory rate maintaining eucapnia and normal oxygen saturation.

Airway (soft and inflatable tongue, cricoid, epiglottis, uvula, vocal cords, arytenoid cartilages and trachea imitation) is based on real patient anatomy and intubation experience. Ventilation of either lung automatically generates relevant breathing sounds and chest movements.

Sounds

- Auscultation, normal and abnormal, includes heart, lung and bowel sounds.
- Korotkoff sounds auscultation when measuring blood pressure.
- Vocal sounds (crying, screaming, coughing, moaning, grunts, etc.).

1 Software

The instructor software allows presetting a training scenario. All exercises are based on real clinical cases. Scenarios are based on real patients' history and case records.

1.1 Patient simulator software

The software controls **the dynamics of vital signs and functions of the simulator**. The software:

- Runs as a background process.
- Interacts with the software of the bedside monitor imitator allowing it to display: saturation, etco2, respiratory rate, blood pressure, pulse, blood, body temperature and more. The bedside monitor imitator also receives ECG data.
- The bedside monitor imitator software sends virtual drug administration data.
- Receives information from simulator sensors during chest compressions.
- Contains different clinical cases to practice various scenarios.
- Defines the virtual patient current vital sign values according to the running case.

The following vital signs are displayed according to the clinical case scenario:

- Saturation (SpO2)
- The level of etCO2 (the level of carbon dioxide released at the end of expiration)
- Respiratory rate
- Blood pressure
- Pulse
- Body temperature.

1.2 Bedside monitor imitator

The Bedside Monitor Imitator Software is installed on an individual all-in-one PC and simulates a bedside monitor displaying the vital signs of a patient. It has a bottom panel of additional functions: blood pressure, TOF, 12 lead ECG, drug administration, defibrillation, CPR monitor display. The bedside monitor imitator also displays additional patient related information (MRI, CT, case history).

Monitoring channels:

- ECG leads: I. II. III. aVR, aVL, aVF, V1, V2, V3, V4, V5, V6
- Heart Rate (HR)
- Systolic Blood Pressure

- Diastolic Blood Pressure
- Respiratory rate (RR)
- Breathing patterns (Resp)
- Oxygen saturation (SpO2)
- Body temperature
- Noninvasive blood pressure (NIBP)
- Exhaled carbon dioxide (EtCO2)
- Central venous pressure (CVP)
- Intracranial pressure (ICP)
- Pulmonary artery pressure (PAP).

Additional functions:

- Blood pressure
- TOF
- ECG leads display
- Drug administration
- Defibrillation
- Patient data
- CPR monitor.

1.3 Scenario Constructor

The Scenario Constructor software allows creating various clinical training scenarios, setting shifts and triggers between conditions using the database of events and actions, saving the script and using it with the simulator.

1.4 Debriefing

The Debriefing software allows viewing the results of completed exercises, debriefing and analyzing the results in a different room on a separate computer:

- Export of the completed session report
- Video displaying window with controls (start, stop, repeat)
- Bedside monitor parameters window
- Vital signs graph window
- CPR graph window
- Detailed CPR assessment window
- CPR assessment printout.

2 Authentication

To run an exercise:

1. Turn on the instructor laptop and Wi-Fi router.
2. Wait for the Simulation Center software to launch. If the Simulation Center did not start automatically, launch the program manually by clicking the icon on the desktop.
3. Go to the Instructor section.
4. The authentication menu will open immediately (Figure 2.1). To sign in and go to the main menu, enter your username/login in the User field, enter your password in the Password field and click on the Accept button. In the authentication menu you can change the software language. The languages available are displayed as country flag icons under the Accept button. To change the software language, click on the relevant flag icon. To close the program and return to the Simulation Center, click the Exit icon in the lower left corner of the authentication window.

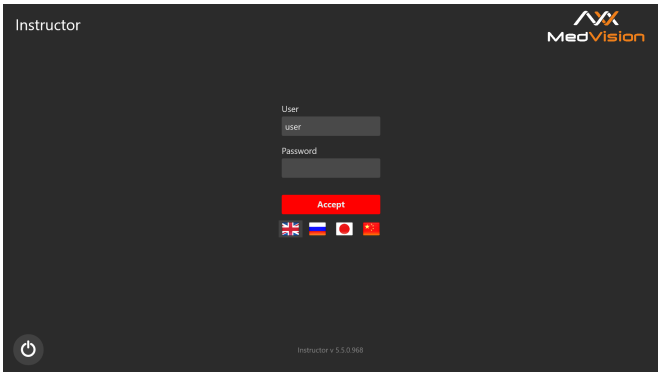


Figure 2.1 Instructor Software authentication window

3 Exercise selection and launch

3.1 Modes

Once a user logs in, the main menu opens with the following tabs available:

- Automated Scenarios
- Manual mode
- Themes
- Students
- Debriefing
- Connections
- Exit.

Figure 3.1 Main menu

There are three modes for training scenarios:

1. **Automated Scenarios.** Contains a list of all available automated scenarios (cannot be altered while running).
2. **Manual Mode.** Contains a list of all available scenarios (can be changed by the instructor).
3. **Themes.** Contains scenarios of various patient conditions on a particular medical topic. The instructor can both manually control the patient simulator and activate a certain condition of the patient while running the scenario.

To start an exercise, do the following:

1. Select a necessary mode, i.e. Automated Scenarios, Manual Mode or Themes, and click on its name in the list. After that, the selection screen will appear on the right side of the screen containing a list of all exercises available for this mode and the general information for each of the exercises.
2. Select an exercise from the list.
3. Click Start in the bottom right-hand corner of the screen.
4. In the next window, press Start (Figure 3.2) to activate the scenario or click Change Parameters (Figure 3.2) to adjust the initial settings of the selected scenario.

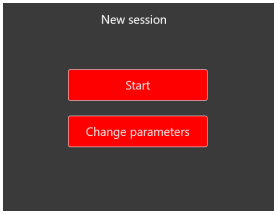


Figure 3.2 Activating an exercise and changing the initial settings

To select an exercise from the list, click on its title. The color of the section name will be highlighted in red, and its information window (Figure 3.3)/(Figure 3.4) will open in the field next to it.

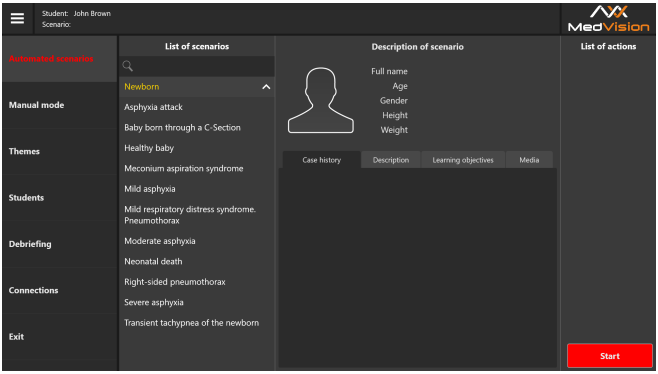


Figure 3.3 The Automated Scenarios simulation menu

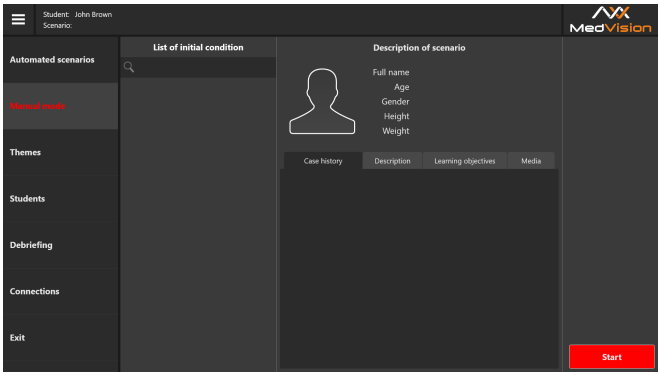


Figure 3.4 The exercise selection screen for the Manual mode

The exercise start menu for the **Automated Scenarios** and **Manual mode** sections (Figure 3.3)/(Figure 3.4) contains the main short list of actions, virtual patient data and training materials.

The patient data includes:

- Full name
- Age
- Gender
- Height
- Weight
- Images

- Lab test results
- More.

Training materials include:

1. **Case history:** the patient's disease/state records at the beginning of the scenario.
2. **Description:** description of the disease or physical state.
3. **Learning objectives:** a list of skills that the exercise helps to practice.
4. **Media:** extra training materials, including generally accepted diagnostic methods, a list of common symptoms and complications, risk factors, a prescribed treatment algorithm, X-rays and CT scans, laboratory tests, MRI, ECG, etc.

Note: An additional menu is activated after an exercise has been selected.

The exercise start menu for the Themes section (Figure 3.5) contains a list of available patient states for the exercises (themes) and initial data on the patient's vital signs for the selected physiological state.

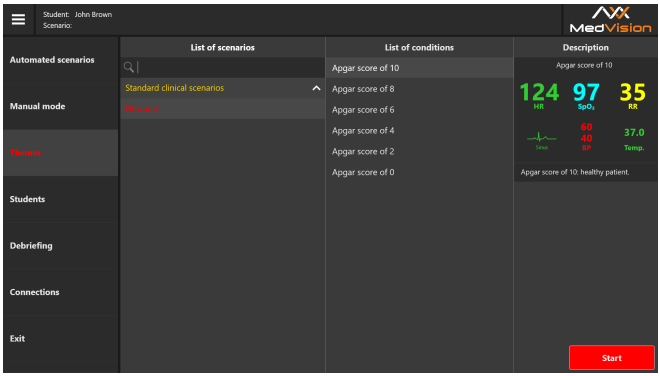


Figure 3.5 The exercise start menu for the Themes

3.2 Exercise selection and search

When you select one of the three available modes (Automated Scenarios, Manual mode, Themes), a list of all exercises (List of Scenarios) available for this section opens.

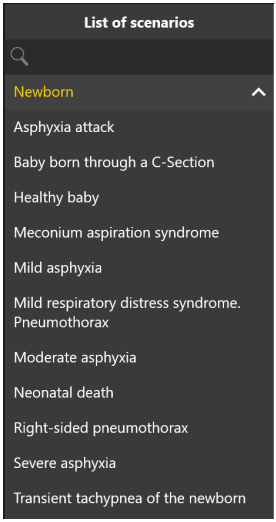


Figure 3.6 List of scenarios (example)

To select an exercise from the list, click on its name. The color of the section name will change, and its information window (Figure 3.3)/(Figure 3.4) will open in the field to the right. Use a search bar located at the top of the main list to find the required exercise. Click on the search bar and enter the name or a part of the name of the required exercise.

You can also search for exercise groups. To expand the group and open the exercise list, press the arrow next to the group name.

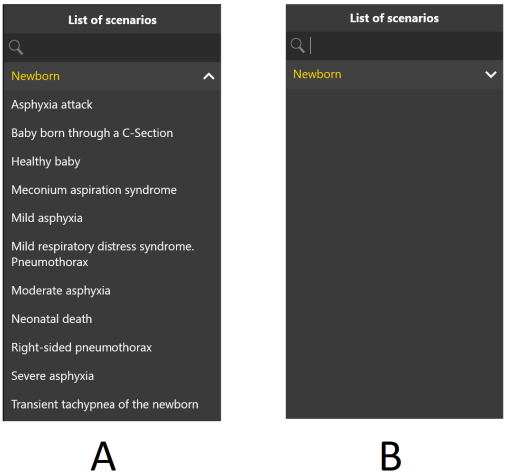


Figure 3.7 Example of a expanded (A) and closed (B) group of scenarios

4 Exercise menu

4.1 Automated scenarios. List of actions

The main distinctive feature of the **Automatic Scenarios** section is a pre-installed, invariable sequence of actions and the virtual patient's vital signs.

Figure 4.1 The Automated Scenarios simulation menu

A list of the patient's conditions and basic actions to be performed to successfully complete the exercise is located on the left side of the screen.

There is certain timing for the actions indicated next to the patient's state definition. An action or a specific sequence of actions must be completed in the specified time range.

If the action or the sequence of actions is not completed within a

specified period of time, they are considered to be failed and, depending on the course of the exercise, this can also mean the fatal outcome of the virtual patient and the end of the exercise.

Transitions between patient states are indicated by a strikethrough text and arrow. If there is more than one possible states, the transition between them is determined by the performance or non-performance of actions required for the state.

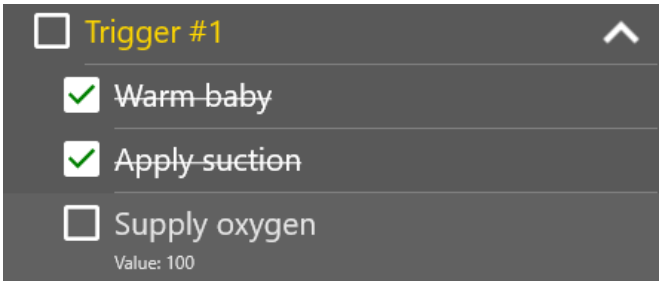


Figure 4.2 Marked actions

Certain actions marked by icon in the general list must be **manually marked by the user** (Figure 4.2). Such actions include elements of teamwork (calling for help) and patient body manipulation and also actions that are not registered automatically.

To mark an action as completed, click on the box next to it . A successfully completed action will be marked with a tick (Figure 4.2).

Note: Manual marking of actions is mandatory for them to be seen by the program and having the exercise successfully completed.

4.2 Patient states. Manual mode and Themes

The main distinctive feature of the **Manual mode** and **Themes** sections is the absence of a pre-installed, invariable sequence of actions and the virtual patient's vital signs. An exercise is managed and controlled by the instructor.

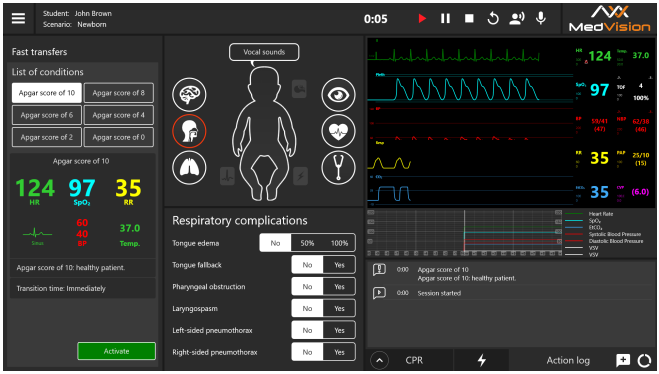


Figure 4.3 The Manual mode and Themes exercise menu

The Manual mode and Themes exercise menus contain the Initial State section. The section includes a brief description of the patient's case history at the beginning of the exercise and the vital signs. This section remains unchanged and serves as a source of information.

4.3 Patient state settings

Control bar

Exercise controls (from left to right: exercise time, play, pause, stop, the current scenario restart, microphone for communication with the student and speaker (to listen to the surroundings)).

Figure 4.4 The launched exercise control bar

The exercise currently active indicator (Start Exercise, Pause Exercise) will be red, while an inactive indicator will be white.

Vital signs control menu

To set a parameter, select its value/type from the drop-down menu or set the parameter using a slider on the scale. Open the required parameter menu by clicking the icon of the relevant system and follow the instructions on the screen.

General setting are detailed below:

- Switch on/off the parameter
- Select the parameter type
- Switch on the simultaneous change of parameters
- Select the parameter performance rate
- Open the dropdown list
- Open an extra menu
- Set the value by moving a slider.

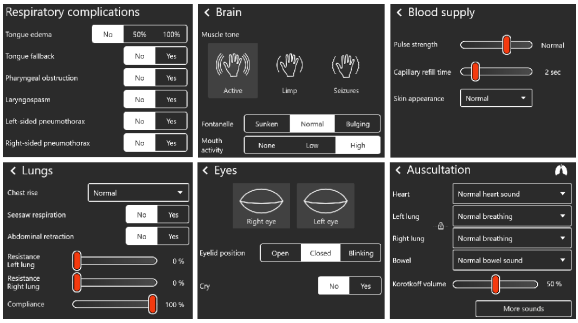


Figure 4.5 The patient's vital signs
and condition settings

In the Auscultation tab, select More Sounds. A new window will open (Figure 4.6), select a necessary parameter and set the value by moving the slider.

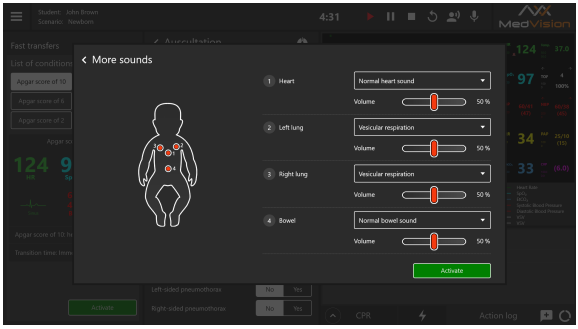


Figure 4.6 The More Sounds window

The bedside monitor (on the instructor's laptop) is used to display vital signs. The data displayed in the software repeats the data of the bedside monitor.

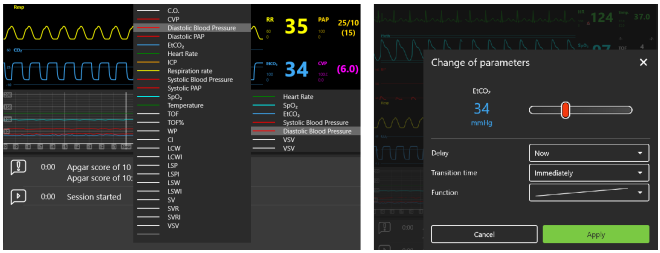


Figure 4.7 Programming of vital signs and prediction graphs

As opposed to Automated Scenarios, while running an exercise from Manual mode and Themes, the instructor sets the patient's vital signs values. You can change the values using the bedside monitor settings menu (Figure 4.13). To make changes, select the desired scale, click on the scale, make the required changes in the pop-up window and press Apply. To save and activate the changes made, use Activate.

Patient state prediction graphs

The graphs are located under the bedside monitor menu and display the patient's predicted physiological states.

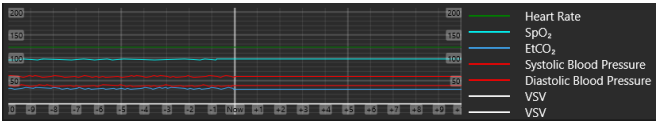


Figure 4.8 The patient vital signs prediction graphs

The patient state prediction graphs are generated and vary depending on the student's actions. Using this scale, the instructor can foresee the effect of the student's actions. The software initially sets the following parameters by default:

- HR
- Respiratory rate
- EtCO2
- Systolic Blood Pressure
- Diastolic Blood Pressure
- VSV
- Body temperature.

The program also allows selecting additional parameters to be displayed as graphs. To add or change the vital signs, click on the empty line (marked grey) or one of the lines with parameters and select the desired parameter from the list opened (Figure 4.7). In total, from 3 to 7 parameters can be displayed simultaneously.

Action log

The actions performed by the student are recorded in the action log. To open the action log, click the Action Log tab in the bottom right corner.

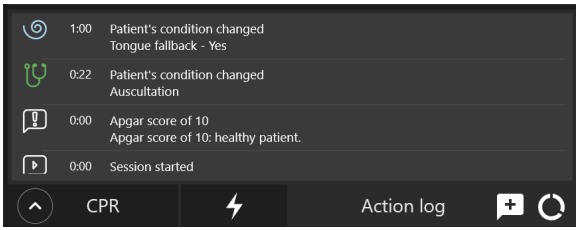


Figure 4.9 Exercise Action Log

The instructor can add notes to the Action Log by selecting them from a ready-made list or by typing in personal notes (Figure 4.11).

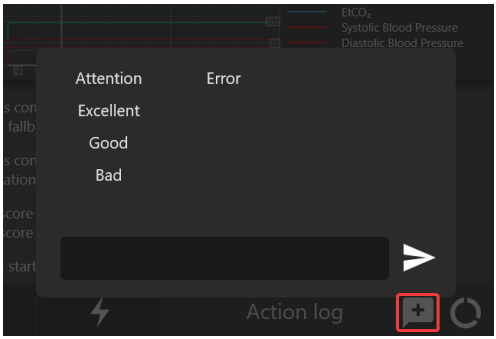


Figure 4.10 Adding notes and comments to the Action Log

CPR assessment bar

Graphical and statistical presentation of CPR parameters and data. The right side of the screen contains the parameters necessary to perform a single CPR cycle: the number of chest compressions and their frequency, depth and the number of bag-valve-mask (BVM) ventilations (Figure 4.11).

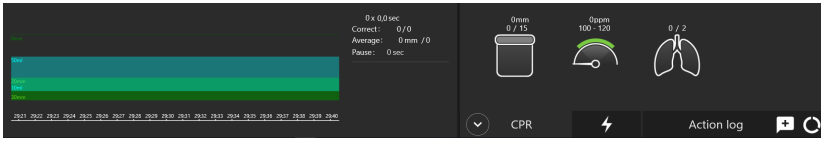


Figure 4.11 CPR assessment bar. On the left: timeline. On the right: assessment indicators

Figure 4.12 CPR with BVM ventilation and chest compressions

On the left there is a graph showing the performance data of the current CPR cycle, as well as statistical (numeric) data of all the cycles performed. The CPR performance graph can be moved along the timeline. To do this, click on the CPR graph and, holding down, move the graph along the timeline. When using exercises from the Manual mode and Themes sections, the instructor determines and sets the CPR sequence.

4.4 Bedside monitor settings

While running an exercise from the **Automated Scenarios** section, the instructor determines the type of the bedside monitor and sets its displayed parameters; the parameter values can be set for the **Manual mode** and **Themes** sections as well. To open the bedside monitor settings menu, tap any of the bedside monitor graphs and hold or hover the cursor over it and click the middle button (or the wheel) of the mouse.

The bedside monitor setup menu allows choosing preset graphs to operate in the following sections:

- **Anesthesiology**
- **Reanimatology**
- **Neonatology**
- **Transportation**
- **Cardiosurgery**

- **Custom (customization and parameter selection)**
- **Default.**

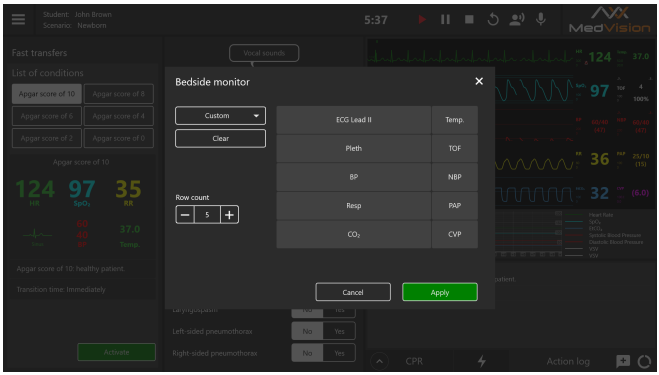


Figure 4.13 Bedside monitor settings menu

Use the following algorithm to select the monitor type (Anesthesiology, Reanimatology, Neonatology, Transport, Cardiosurgery, Custom and Default):

1. To open the bedside monitor settings menu, tap any of the bedside monitor graphs and hold (use the touchscreen of the laptop) or hover the cursor over it and click the middle button (or the wheel) of the mouse.
2. Click the arrow icon  , to open the drop-down list of the bedside monitor types available.
3. Click on the name of a desired monitor type.

4. The selected monitor configuration will be displayed in the box at the top.

Note: Recommended types of displayed parameters are preset for all menus except for Custom. Do the following steps to set the displayed parameters:

1. Select any of the parameters displayed to the right of the monitor type selection menu.
2. Click on the name of the selected parameter.
3. Find a new parameter in the list (Figure 4.14)/(Figure 4.15).
4. Click on the name of the new parameter.
5. The selected parameter will be displayed in the box instead of the previous one.

Press **Accept** to confirm the changes and close the settings menu or press **Cancel** to discard the changes and close the settings menu.

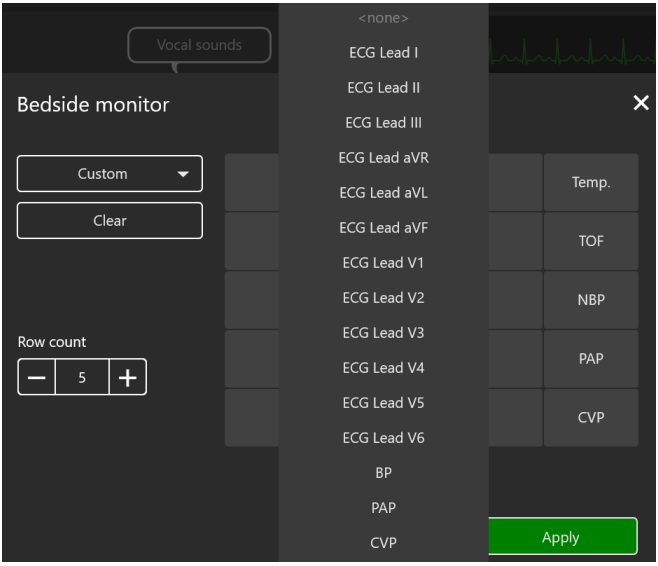


Figure 4.14 Bedside monitor graphs menu

To discard the changes made without closing the settings menu, press the **Clear** button located under the name of the selected monitor type. To increase the number of displayed parameters, use the **Row count** menu. Press **«+»** to increase or **«–»** to reduce the number of rows.

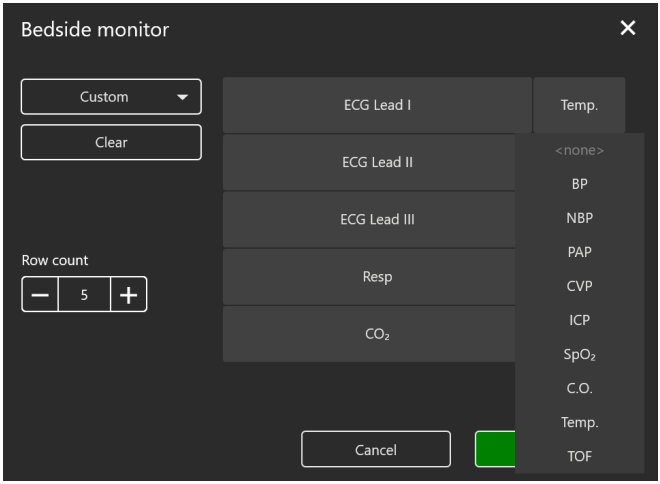


Figure 4.15 Bedside monitor settings menu

4.5 ECG rhythm editing

When running exercises from the **Automated Scenarios**, **Manual mode** and **Themes**, you can edit the ECG rhythm. To open the rhythm settings menu, left-click the ECG icon (Figure 4.16). In the pop-up window (Figure 4.17), there is a graph of the current ECG rhythm, and the selected ECG lead (to change the lead (Figure 4.18), click on the arrow icon and select the desired ECG lead in the drop-down list).

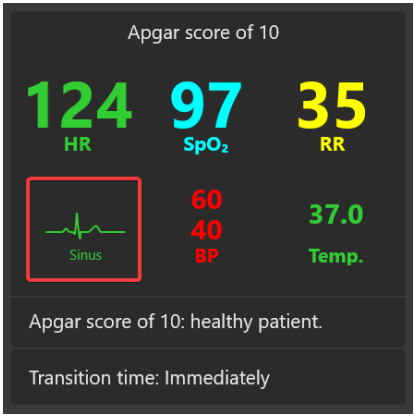


Figure 4.16 ECG graph

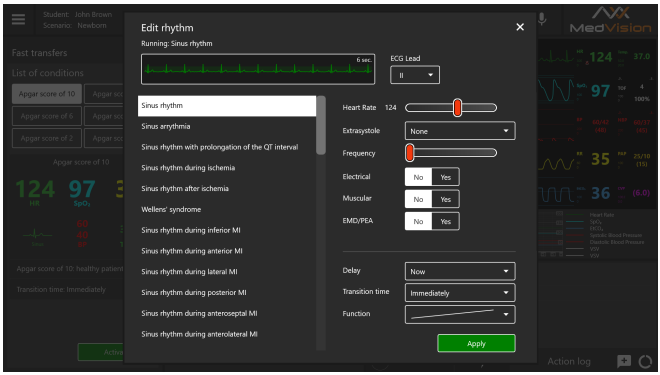


Figure 4.17 Rhythm editing menu

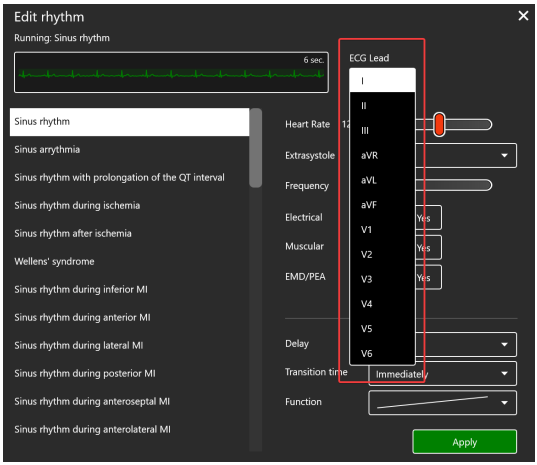


Figure 4.18 ECG rhythm editing menu. ECG lead

The left side of the menu window contains a list of available ECG rhythm types (Figure 4.19):

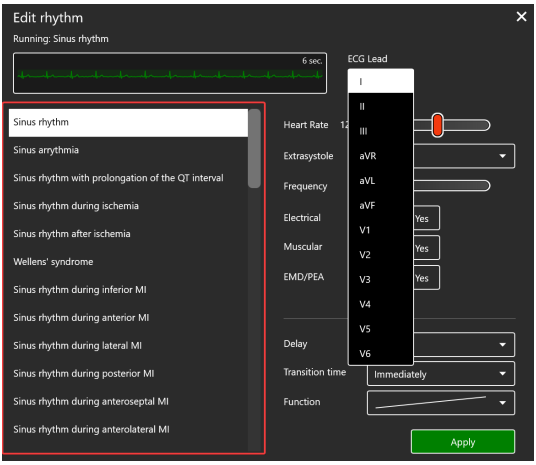


Figure 4.19 List of ECG rhythms available

To change the current rhythm type, click the name of the desired rhythm from the list and press **Apply**. There are other parameters for settings on the right side of the menu window (Figure 4.20). In the lower part of the window there are settings allowing changing the current rhythm. In the upper part of the window there are parameters of the selected rhythm type. To change these parameters, select the desired mode or adjust the parameter value using the slider and click on the **Apply** button.

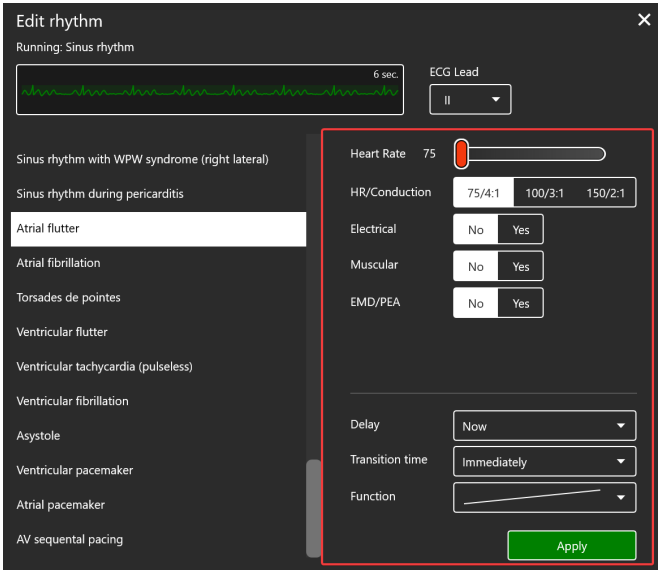


Figure 4.20 Rhythm editing menu. Parameters and settings

4.6 CPR activation

To initialize the CPR, open the ECG rhythm editing menu window by single-clicking the ECG graph, select the **Asystole**, **Ventricular Fibrillation** or **Ventricular Tachycardia** rhythm types from the list (Figure 4.20) of rhythm types and press **Apply**. Then proceed with the CPR (see CPR Data Bar and (Figure 4.11)).

4.7 Defibrillation

When running an exercise in **Manual mode** and **Themes**, in the lower right corner, in addition to the **CPR** and **Action Log** tabs, there is the **Cardiac Control** tab, indicated by the icon . Using this tab, you can set the current and expected rhythms. To do this, click on the window with the name of the current/expected rhythm, the rhythm editing menu will open, select the desired rhythm type from the list in the left part of the window and press **Apply**. Below, in the Cardiac Control tab, the **defibrillation parameters** (Figure 4.21) (quantity, energy and current parameters of the defibrillator discharges) are indicated. To adjust these parameters, click the «–» and «+» icons. If defibrillation is performed correctly, the current rhythm will shift to the rhythm indicated as an expected one.

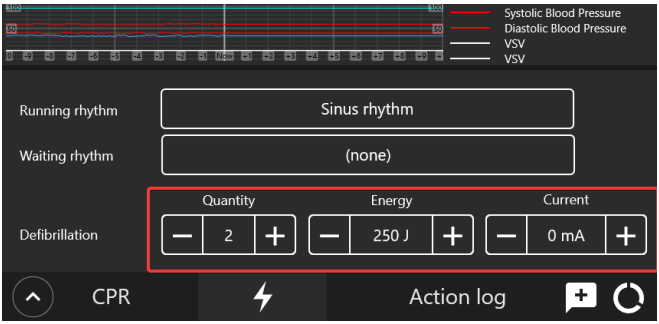


Figure 4.21 Cardiac Control tab

4.8 List of auscultation sounds

The total list of the **heart sounds** (Figure 4.22)/(Figure 4.23) available for selection and setting in the patient menu while running an exercise from the Manual mode and Themes sections and when creating or editing training scenarios:

Figure 4.22 Auscultation icon

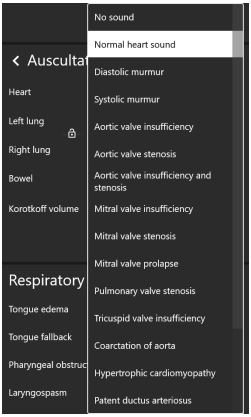


Figure 4.23 List of auscultation sounds

The total list of the **lung anterior and posterior sounds** (Figure 4.24) available for selection and setting in the patient menu while running an exercise from the Manual mode and Themes sections and when creating or editing training scenarios:

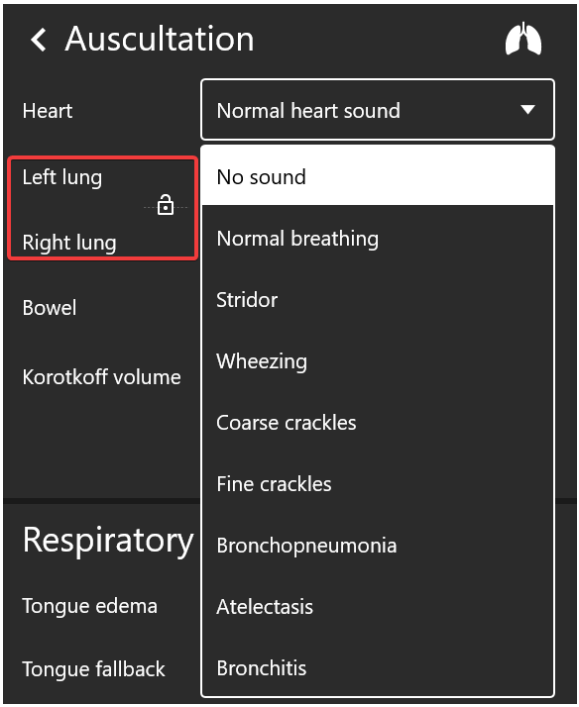


Figure 4.24 List of lung anterior and posterior sounds

The total list of the **bowel sounds** available for selection and setting in the patient menu while running an exercise from the Manual mode and Themes sections, and when creating or editing training scenarios:

- Normal bowel sound
- Hyperactive sounds
- Hypoactive sounds
- Tympanitis
- Diarrhea
- Constipation
- Paralytic ileus
- Fibrinous peritonitis
- Renal artery stenosis
- Abdominal aortic aneurysm.

Note: To select and adjust volume, use the More Sounds tab (Figure 4.6).

The total list of the **vocal sounds** (Figure 4.25)/(Figure 4.26) available for selection and setting in the patient menu while running an exercise from Manual mode and Themes and when creating or editing training scenarios:

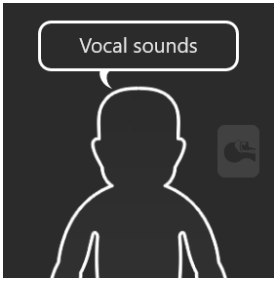


Figure 4.25 Vocal sounds icon

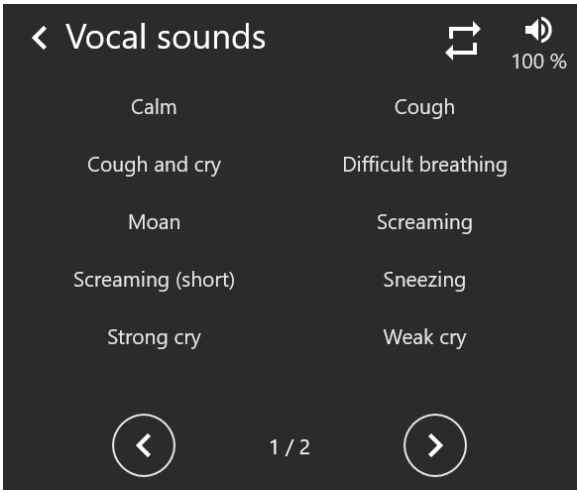


Figure 4.26 List of vocal sounds

Calm
Cough and cry
Moan
Screaming (short)
Strong cry
Cough
Difficult breathing
Screaming
Sneezing
Weak cry
Hiccup
Vomiting.

5 Exercise finish

To complete an exercise, press the Stop button on the control bar. After that, the exercise completion menu with the following available functions will open (Figure 5.1):

- **Go to Debriefing** — complete the exercise and go to the exercise debriefing window (see Section 11 Debriefing).
- **Restart** — restart the exercise.
- **Finish** — complete the exercise and go back to the main menu.

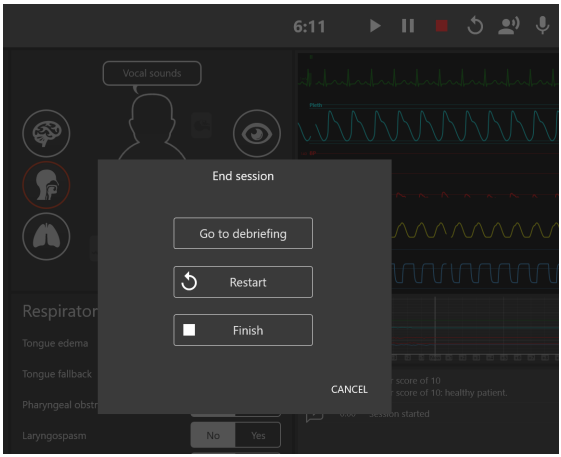


Figure 5.1 Exercise completion menu

6 Students and groups

The **Students** section is divided into two parts: **List of Groups** and **List of Students**.

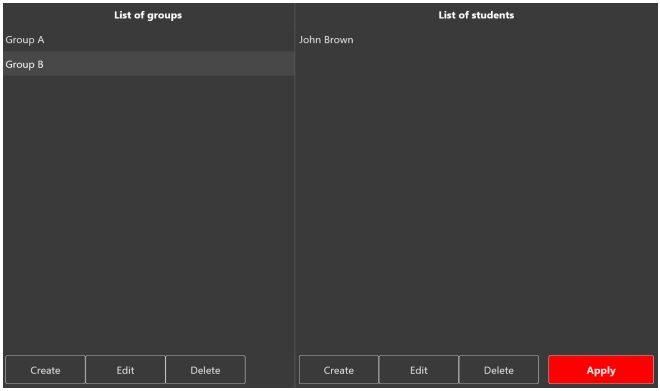


Figure 6.1 The Students menu

6.1 Student account creation and settings

In the **List of Students** field you can select, create, edit and delete student accounts.

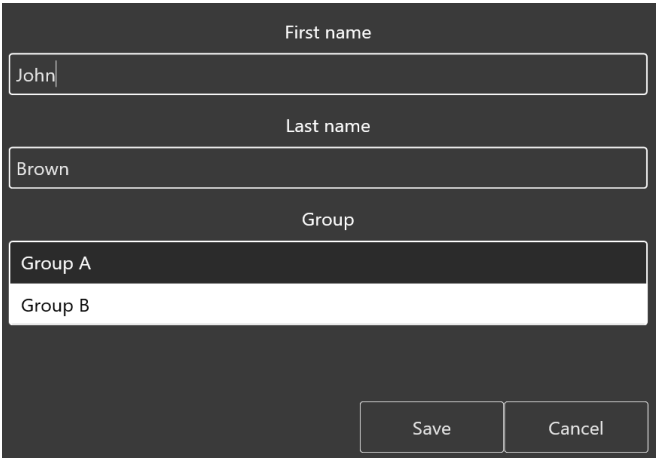


Figure 6.2 Student account settings menu

- To **create** a new student account, press **Create**, enter the first and last names of the student, select the desired group and press **Save**.
- To **select** a student account, select a group from the list on the left by left-clicking its name. After that, a list of all students added to this group should appear on the right. Select the desired student from the list and press **Apply**. The name of the selected student will be displayed in the upper left corner in the **Student** field.
- To **edit** the student's account information, select it from the list by clicking the name of the student and pressing **Edit**. In the new window, change the first and last names of the student; select the desired group and press **Save**.

- To **delete** a student account, select it from the list by clicking the first and last names, press the **Delete** button and confirm your action.

6.2 Study group creation and settings

In the **List of Groups** field, you can select, create, edit and delete study groups.

Figure 6.3 Study group settings menu

- To **create a new group**, press **Create**, enter the name of a new group and press **Save**.
- To **rename a group**, select it from the list and press **Edit**. In the new window, change the group name, press **Save**.
- To **delete a group**, select it from the list, press **Delete** and confirm your action.

7 Debriefing

You can view the results and details of a completed (or interrupted) exercise in the **Debriefing** section.

In the opened menu (Figure 7.1), a list of all completed exercises will be shown. Select the required debriefing file and press **Start** to open the statistics for the selected exercise (debriefing) (Figure 7.2).

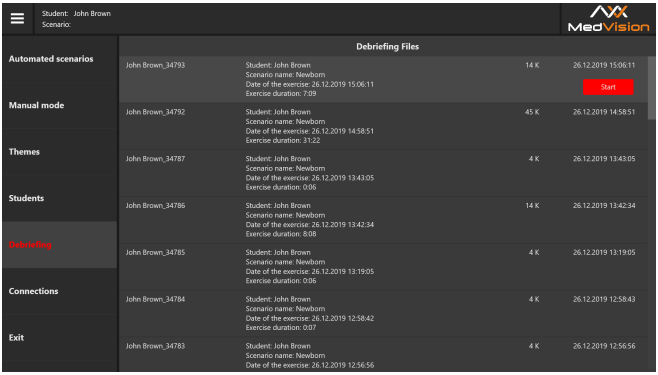


Figure 7.1 Debriefing menu

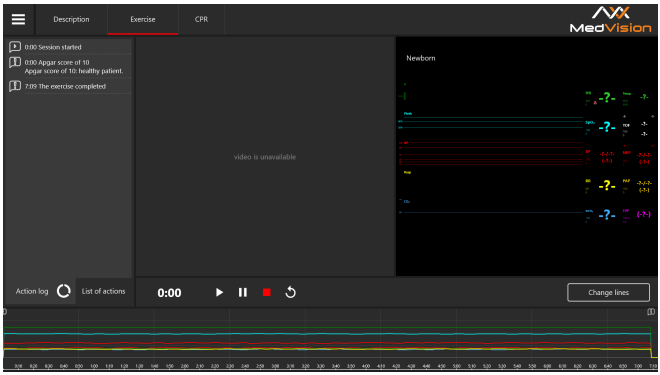


Figure 7.2 Debriefing menu. The Exercise tab

The Debriefing window has three tabs:

- **Description** (student name, scenario name, date and duration of an exercise)
- **Exercise**
- **CPR**.

7.1 Debriefing menu. The Exercise tab

The **Exercise** (Figure 7.2) tab contains a video of the exercise*. Press **Start** to start playing the video of the exercise and **Pause** — to pause it. To rewind the video of the exercise, left-click the state prediction graph or the timeline at the bottom of the screen.

***Note:** The exercise video will be available only if an external USB video camera has been connected. You can check the camera

connection status in **Connections** (Figure 7.5).

The **scale of graphs** is designed in two modes. The first one is the **prediction scale graph**, which shows how the selected indicators of the patient's physiological states changed during the exercise. The second one is the **CPR performance graph**, which displays all completed CPR sessions and their graphical evaluations. To switch between them, use the **Change lines** button (in the lower right corner of the screen). When using the CPR performance graph, you can **zoom the scale out** using the slider next to **Zoom**.

7.2 Debriefing menu. The CPR tab

The **CPR** (Figure 7.3) contains detailed statistical information about the performed CPR actions, their quantity and quality. In the left side of the window, there is a field of score, which includes both the total score for the exercise performed and its individual elements.

The tab contains several fields:

- **Overall Score.** Consists of scores for good-quality compressions, adequate ventilation and proper-rate defibrillation.
- **General info.** Data on the number of CPR cycles, total operating time and assessment time.
- **Ventilation.** Statistics on the performed ventilation and its performance quality score (the score is repeated in the Overall Score field).

- **Defibrillation.** Statistics on the performed defibrillation and its performance quality score (the score is repeated in the Overall Score field).

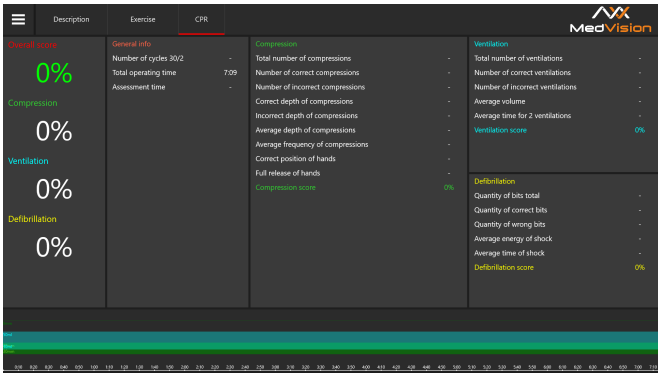


Figure 7.3 Debriefing menu. The CPR tab

To print the **CPR performance report**, click the icon (Figure 7.4) in the upper left corner and select **Print** in the drop-down list.

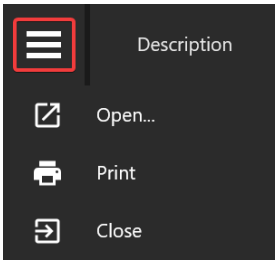


Figure 7.4 Additional functions

7.3 Connections

The Connections menu shows all available and active connections of the system components. Active connections are marked green, disabled connections are marked red.

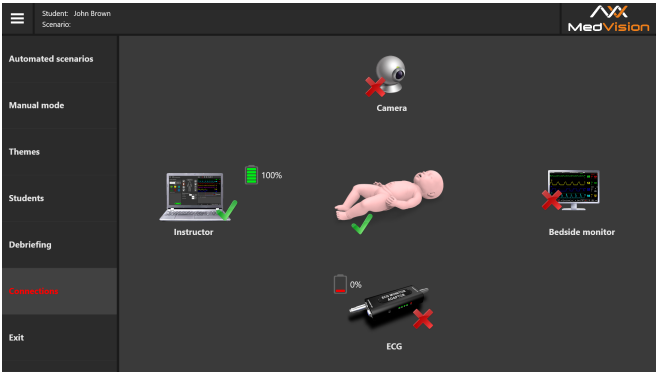


Figure 7.5 The Connections tab in the Instructor Software

8 Malfunctions

PROBLEM	CAUSE	SOLUTION
No positive reaction during mechanical ventilation with BVM	Air leakage during ventilation	Make sure the mask creates a seal on the face of the simulator
The instructor laptop does not connect to the simulator	1. The laptop is not connected to the simulator Wi-Fi. 2. The laptop is connected to another Wi-Fi	Go to the list of Wi-Fi networks and select the simulator network
All-in-one PC (bedside monitor imitator) does not connect to the system within 5 minutes	Automated Wi-Fi connection has failed	1. Go to **Parameters->Network and Internet** and check Wi-Fi connection and IP. To configure IP, go to **Network and Sharing Center->Change adapter settings**. Find the desired Wi-Fi network in the general list and select ”Properties”. In the window that opens, select the line **IP version 4 (TCP/IPv4)** and double-click on it. In the new menu, check the box **Get IP address**. 2. Turn off firewall of the all-in-one PC and instructor laptop and restart them

Connection between system elements is lost (all-in-one PC, simulator, smartscope, ECG and DFB adapters) during simulation	1. The simulation equipment was installed in the area not covered by the wireless network provided by the included router. 2. Another software on the user laptop may interfere with the operation of the Instructor software and/or the patient's bedside monitor. 3. Interference with other Wi-Fi networks	1. Place all elements close to each other. 2. Stop unnecessary software from the user laptop. 3. Disable other Wi-Fi networks
Graphics in the Instructor software are delayed during CPR performance	1. System failure. 2. Low battery	1. Reboot the system (laptop, simulator, bedside monitor). 2. Check the battery level in the Connections menu. If the battery level is lower than 15%, use the charger
ECG graphs are not displayed on the monitor of real medical equipment	1. ECG unit is not connected to the system. 2. Cable failure. 3. System failure	1. Check the ECG unit connection in the Connections section. 2. Reboot the system (laptop, simulator, all-in-one PC)

Unexpected system failure	Data loss or general system failure	Reboot the system (laptop, simulator, bedside monitor). Contact our customer service center

9 Safety precautions

Before starting a session, carefully inspect the simulator and the power cable for tears, cracks, burned or scorched areas, etc. If any damage is found, wait until the failure is fixed.

In case of burning smell, smoke or sparks, immediately stop using the simulator and inform the person responsible for safe operation.

YOU MUST NOT:

- Spill liquids on the simulator or submerge it in water.
- Install the simulator on a wet surface.
- Dismantle the simulator.
- Leave the simulator switched on if unused.

Warning: The environment in the room where the simulator is located must not cause any condensation on electronic and mechanical components of the product.

Make sure simulator cables are not located in the walking area and do not cause any danger when being moved during and after sessions.

10 Cleaning and maintenance

– To clean the simulator body, use a light soap solution or mild domestic cleaners.

– Use wet wipes to gently remove dirt.

– Do not allow liquid inside the simulator. Clean the monitor screen as you regularly would.

– Do not forget to perform regular dry and wet cleaning of the facility housing the simulator.

– If heating radiators are on in the facility, make sure the simulator’s body is not in its proximity.

– If you are not planning to use simulator for some time, turn off its power source.

11 Information to be presented to the Service Centre

In case of any other malfunction, please contact our Service Centre.

Please attach the following information to the letter:

1. The simulator full model name and serial number.
2. Problem description.
3. Error message screenshot.
4. Detailed description of the actions leading to the problem.
5. A **dxdiag.txt** file from the PC where the software error occurred. To create such a file, simultaneously press **Windows** and **R** and type **dxdiag** in the pop-up window. After that click on **Save All Information** in the pop-up window.

Serial number: _____

Administrator password: _____

Warning: Keep the password in a safe place.
To restore or change the password, request the Service Centre for a new password.

Acknowledgement table

I have read and understood the manual:

Date	Name	Signature	Stamp