Vigilance II Monitor and Advanced Technology Swan-Ganz Catheter Simulation

Instructors Guide for v1.0

October 2011
Welcome to the Edwards Lifesciences Vigilance II Monitor and Advanced Technology Swan-Ganz Catheter Simulation

The Vigilance II monitor and advanced technology Swan-Ganz catheter simulation integrates the Vigilance II monitor with the Laerdal SimMan platform for simulation training. The program includes one preprogrammed patient scenario. This toolkit includes all the direction an instructor needs to proctor the Vigilance II monitor Swan-Ganz advance simulation to healthcare providers.

Contents

Overview of the Vigilance II Monitor and Advanced Technology Swan-Ganz Catheter Simulation .................. 2
Installation............................................................................................................................................................. 4
    System Requirements.................................................................................................................................. 4
    Recommended Software............................................................................................................................. 4
    Optional Hardware....................................................................................................................................... 4
Installation Steps .................................................................................................................................................. 5
Displays and Equations........................................................................................................................................ 7
Instructors Guide for Operating Vigilance II Monitor Simulation ............................................................................. 8
    Simulation Scenario................................................................................................................................... 8
    Starting the Scenario................................................................................................................................. 8
    Starting Vital Signs and Parameter Values ............................................................................................... 9
Instructors Guide for Operating the Laerdal SimMan with Vigilance II Monitor Simulation................................. 10
    Medications ............................................................................................................................................... 10
        Selecting Medications During a Scenario .............................................................................................. 10
        Drug Interactions............................................................................................................................... 11
    Miscellaneous........................................................................................................................................... 13
        Selecting Decompensation ON/OFF ................................................................................................. 13
        Selecting Labs or X-ray During a Scenario .......................................................................................... 14
    ABC ............................................................................................................................................................ 15
        Heart Rhythm ................................................................................................................................... 15
        Selecting Fluid Challenge .................................................................................................................. 16
        Selecting PEEP During a Scenario ...................................................................................................... 16
Instructors Guide for Operating the Vigilance II Monitor Façade ........................................................................ 17
    Turn Monitor On or Off .............................................................................................................................. 17
    Initial Screen ............................................................................................................................................ 18
    Changing Display Options ....................................................................................................................... 18
    End Points of Simulation Scenario ......................................................................................................... 21
    Scenario Debriefing................................................................................................................................... 21
Other Important Features................................................................................................................................... 22
Instructor Monitor Configuration .................................................................................................................... 26
Overview of the Vigilance II Monitor and Advanced Technology Swan-Ganz Catheter Simulation

Advanced Technology Swan-Ganz Catheter

In addition to providing most of the same functionality as the standard Swan-Ganz catheter, the advanced technology Swan-Ganz catheter provides the ability to continuously monitor the patient’s balance between oxygen delivery and consumption as well as the ability to help investigate the root cause of an imbalance through analysis of the components of stroke volume (preload, afterload, and contractility). Through early identification of imbalances and root cause analysis, patients can be treated most appropriately and interventions assessed, thus potentially avoiding tissue hypoxia, organ dysfunction and crisis interventions.

Right Heart Pressures

- Right atrial pressure (RAP)
- Pulmonary artery pressures
- Pulmonary artery systolic (PAS)
- Pulmonary artery diastolic (PAD)
- Pulmonary artery mean (PAM)
- Pulmonary artery occlusion pressure (PAOP)

Thermodilution Cardiac Output

- CO-Set iced, closed bolus injectate system
- CO-Set room temperature, closed bolus injectate system

Pulmonary Artery Blood Sampling for Laboratory Analysis

- Mixed venous blood oxygen saturation (SvO₂)
  - SvO₂ – mixed venous oxygen saturation is continuously measured through fiberoptic reflectance technology and is a global indicator of the balance between oxygen delivery and consumption
Swan-Ganz Catheters – Advanced and Standard Technology

SvO₂
Continuous mixed venous oxygen saturation measured through fiberoptic technology.

CCO
Continuous cardiac output, measured through advanced thermodilution technology, is a key component of oxygen delivery.

RVEF
Right ventricular ejection fraction is also continuously measured through advanced thermodilution technology and algorithm analysis. Indicates right ventricular function and filling which can be used to help assess right heart contractility.

RVEDV
Right ventricular end diastolic volume is continuously calculated by dividing stroke volume (mL/beat) by RVEF (%) giving a key indicator of preload.

SVR and SVRI
Continuous systemic vascular resistance can be calculated when the Vigilance monitor obtains continuous MAP and CVP from the bedside physiologic monitor.

Applications of Advanced Technology Swan-Ganz Catheters

- Continuous assessment of right heart pressures (RAP, PAD, PAS, and PAOP)
- Continuous assessment of oxygen delivery and consumption (SvO₂)
- Continuous assessment of cardiac output (CCO) a primary component of DO₂
- Continuous assessment of preload through RVEDV, PAD, PAOP
- Continuous assessment of afterload through SVR, SVRI
- Continuous assessment of contractility through RVEF, SVI, and calculation of RVSWI
- Intermittent calculation of oxygen delivery (DO₂) and consumption (VO₂)

The objective of the Vigilance II monitor and advanced technology Swan-Ganz catheter simulation is to utilize the hemodynamic data from the advanced technology catheter in conjunction with the Vigilance II Monitor and the patient bedside monitor in order to optimally manage critically ill patients at risk for decompensation. Therapeutic options include fluid resuscitation, blood products, vasopressors, vasodilators, inotropes, and diuretic administration. Scenarios can be run with or without the EDV and RVEF values revealed to the participants. To illustrate teaching points and the utility of EDV and RVEF monitoring, you may want to unmask these values at key discussion points during the scenario.

There are initial laboratory values to review, but once the scenario has started, there are no additional laboratory values, diagnostic studies, or interventional procedures available. Participants are encouraged to manage their patient until satisfied with the available hemodynamic data.
Installation

System Requirements

- Processor: Minimum Pentium M 1.8 GHz or better
- Hard drive: 60 GB minimum
- RAM: 512 MB minimum
- System: Windows XP and Windows 7
- CD-ROM drive

Recommended Software

- Laerdal SimMan with software version 3.5

Optional Hardware

- Additional monitor to display simulation monitor
Installation Steps

1. Remove all previously loaded Vigileo, Vigilance II, and EV1000 programs as well as the previously loaded SimSuite monitor interface.

2. Close all open applications.

3. Insert the installation disk in the CD drive. The installation will begin automatically after the disk is inserted.

4. Follow the steps on the installer using the 'Next' and 'Back' buttons.

5. Click the 'Close' button when the setup wizard has completed the installation.
6. Multiple installers will launch automatically. Continue to use the ‘Next’ and ‘Back’ buttons to complete the installation process.

7. Restart the computer.

8. Open the ‘Edwards Lifesciences Scenarios’ shortcut on your desktop.

9. Right click on the ‘Edwards Lifesciences’ folder and select ‘Copy’.

10. Start SimMan.

11. Select ‘File’ from the list of menus as the top of the SimMan window.

12. Select ‘Start Scenario’.

13. Right click in the new window and select ‘Paste’. If asked if you want to merge and/or copy any files, select ‘Yes’.
Displays and Equations

In order for each of the parameters to change in synch with each other from a physiologic perspective values are based upon well established equations. The following are parameters, the equations that affect the values, and how they are displayed on the Vigilance II monitor simulation.

**Cardiac Output or Cardiac Index (CO/CI)**
Cardiac output or cardiac index values displayed on the Vigilance II monitor simulation are double the value on the instructors screen of the SimMan program. This was to allow the simulation of high output or hypderdynamic states. Cardiac index is calculated by CO/BSA, with BSA calculated using the Dubios scale.

**Stroke Volume or Stroke Volume Index (SV/SVI)**
Stroke volume or stroke volume index on the Vigilance II monitor simulation are calculated by dividing the CO or CI displayed on the Vigilance II monitor by the heart rate displayed next to the ECG (CO/HR or CI/HR).

**Right Ventricular End Diastolic Volume or Right Ventricular End Diastolic Volume Index (RVEDV/RVEDVI)**
RVEDV or RVEDVI is calculated and displayed on the Vigilance II monitor simulator by dividing Stroke Volume or Stroke Volume Index by Right Ventricular Ejection Fraction (SV/RVEF or SVI/RVEF). Therefore, REVEDV or RVEDVI value can be affected by changes in CO, HR, and RVEF.

**Systemic Vascular Resistance (SVR/SVRI)**
Systemic vascular resistance or systemic vascular resistance index is calculated and displayed on the Vigilance II monitor simulation based upon the standard equation SVR = MAP-CVP/CO x80 or SVRI = MAP-CVP/CI x 80.
Instructors Guide for Operating the Vigilance II Monitor Simulation

Simulation Scenario

1. Vigilance II Monitor On The Fly.

Starting the Scenario

1. Click ‘Start Scenario’.
2. Select ‘Edwards Lifesciences’.

Important Note:

The very first time that a scenario is run, the Vigilance II monitor simulator will not populate with values until the ‘Decompensation On’ is selected from the miscellaneous menu at the start of the case. It is advised to leave this trend on until the values populate on the Vigilance II simulator. Once the monitor is populated with values, the instructor may select ‘Decompensation Off’ (if desired). Once the monitor has populated, this issue will not present itself again, unless the instructor exits completely out of SimMan.
Starting Vital Signs and Parameter Values

<table>
<thead>
<tr>
<th>STARTING VITAL SIGNS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>HR</td>
<td>100</td>
</tr>
<tr>
<td>SBP</td>
<td>110</td>
</tr>
<tr>
<td>DBP</td>
<td>70</td>
</tr>
<tr>
<td>CVP</td>
<td>4</td>
</tr>
<tr>
<td>CO</td>
<td>3.5</td>
</tr>
<tr>
<td>EF</td>
<td>48</td>
</tr>
<tr>
<td>SvO₂</td>
<td>57</td>
</tr>
<tr>
<td>HGB</td>
<td>6.4</td>
</tr>
<tr>
<td>Temperature</td>
<td>37</td>
</tr>
<tr>
<td>RR</td>
<td>16</td>
</tr>
<tr>
<td>SpO₂</td>
<td>98</td>
</tr>
<tr>
<td>PAS/PAD</td>
<td>23/8</td>
</tr>
<tr>
<td>PAS/PAD</td>
<td>23/8</td>
</tr>
</tbody>
</table>
Instructors Guide for Operating the Laerdal SimMan with Vigilance II Simulator

Medications

Selecting Medication During a Scenario

- Select the desired medication from the list of interventions in the medication event menu
- Selecting the same medication more than once simulates giving multiple doses of fluid or upward titration of a medication
- In order to stop a medication, choose the medication listed under ‘Decrease or Discontinue Medications’ on the medication event menu
- If an intervention is selected more than once, interventions listed under ‘Decrease or Stop Medications’ allow the downward titration of the medication
- Intervention peak effect occurs in 1 minute after being selected
- **Avoid selecting multiple interventions in rapid succession.** Rapid selection of interventions may not trigger the intended effect in the simulation scenario although it may appear as if it was selected. Wait approximately 3 seconds between selecting multiple interventions
Drug Interactions

### Crystalloid
- **500 ML**: -5, -10
- **1000 ML**: -5, -5
- **Colloid**: -5, -5
- **PRBC**: -5, -5
- **FFP**: -5, -5

### Simon Parameter
- **HR**: -5
- **SBP**: 4
- **DBP**: 2
- **PAS/PAD**: 1/1
- **WEDGE**: 1
- **CVP**: 1
- **CO (factored)**: 0.2
- **EF**: etN2O
- **SvO2**: 2
- **HGB**: etAGT

### SIMMAN Parameter
- **HR**: -5
- **SBP**: 4
- **DBP**: 2
- **PAS/PAD**: 1/1
- **WEDGE**: 1
- **CVP**: 1
- **CO (factored)**: 0.2
- **EF**: etN2O
- **SvO2**: 2
- **HGB**: etAGT

### Normalized

#### NOREPINEPHRINE
- **HR**: 2
- **SBP**: 10
- **DBP**: 7
- **PAS/PAD**: 1/1
- **WEDGE**: 1
- **CVP**: 1
- **CO (factored)**: -0.2
- **EF**: etN2O
- **SvO2**: 2
- **HGB**: etAGT

#### VASOPRESSIN
- **HR**: 2
- **SBP**: 10
- **DBP**: 7
- **PAS/PAD**: 1/1
- **WEDGE**: 1
- **CVP**: 1
- **CO (factored)**: 0.2
- **EF**: etN2O
- **SvO2**: 2
- **HGB**: etAGT

#### PHENYLEPHRINE
- **HR**: 2
- **SBP**: 10
- **DBP**: 7
- **PAS/PAD**: 1/1
- **WEDGE**: 1
- **CVP**: 1
- **CO (factored)**: 0.2
- **EF**: etN2O
- **SvO2**: 2
- **HGB**: etAGT

### Furosemide
- **HR**: 6
- **SBP**: -8
- **DBP**: -4
- **PAS/PAD**: 1
- **WEDGE**: -2
- **CVP**: -2
- **CO (factored)**: -0.2
- **EF**: etN2O
- **SvO2**: -5
- **HGB**: etAGT

### IF Normal
- **EDV**
- **IF Normal**
- **EDV**
- **FFP**

### SUPEESE
<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>SIMMAN PARAMETER</th>
<th>IF EVD</th>
<th>IF NORMAL EDV</th>
<th>IF EVD</th>
<th>IF NORMAL EDV</th>
<th>IF EVD</th>
<th>IF NORMAL EDV</th>
</tr>
</thead>
<tbody>
<tr>
<td>HR</td>
<td>HR</td>
<td>10</td>
<td>5</td>
<td>7</td>
<td>3</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>SBP</td>
<td>SBP</td>
<td>-10</td>
<td>-10</td>
<td>-10</td>
<td>-10</td>
<td>-10</td>
<td>-10</td>
</tr>
<tr>
<td>DBP</td>
<td>DBP</td>
<td>-7</td>
<td>-7</td>
<td>-7</td>
<td>-7</td>
<td>-7</td>
<td>-7</td>
</tr>
<tr>
<td>PAS/PAD</td>
<td>PAS/PAD</td>
<td>-2/-2</td>
<td>-2/-2</td>
<td>-2/-2</td>
<td>-2/-2</td>
<td>-2/-2</td>
<td>-2/-2</td>
</tr>
<tr>
<td>WEDGE</td>
<td>WEDGE</td>
<td>-2</td>
<td>-2</td>
<td>-2</td>
<td>-2</td>
<td>-2</td>
<td>-2</td>
</tr>
<tr>
<td>CVP</td>
<td>CVP</td>
<td>-2</td>
<td>-2</td>
<td>-2</td>
<td>-2</td>
<td>-2</td>
<td>-2</td>
</tr>
<tr>
<td>CO (factored)</td>
<td>CO (factored)</td>
<td>-0.1</td>
<td>0.1</td>
<td>-0.1</td>
<td>0.1</td>
<td>-0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>EF</td>
<td>etN₂O</td>
<td>-1</td>
<td>1</td>
<td>-1</td>
<td>1</td>
<td>-1</td>
<td>0</td>
</tr>
<tr>
<td>SvO₂</td>
<td>ICP</td>
<td>-3</td>
<td>2</td>
<td>-3</td>
<td>2</td>
<td>-3</td>
<td>2</td>
</tr>
<tr>
<td>HGB</td>
<td>etAGT</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>SIMMAN PARAMETER</th>
<th>IF EVD</th>
<th>IF NORMAL EDV</th>
<th>IF EVD</th>
<th>IF NORMAL EDV</th>
<th>IF EVD</th>
<th>IF NORMAL EDV</th>
</tr>
</thead>
<tbody>
<tr>
<td>HR</td>
<td>HR</td>
<td>10</td>
<td>5</td>
<td>12</td>
<td>7</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>SBP</td>
<td>SBP</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>-5</td>
<td>0</td>
</tr>
<tr>
<td>DBP</td>
<td>DBP</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>-3</td>
<td>0</td>
</tr>
<tr>
<td>PAS/PAD</td>
<td>PAS/PAD</td>
<td>-2/-2</td>
<td>-2/-2</td>
<td>-2/-2</td>
<td>-2/-2</td>
<td>-2/-2</td>
<td>-2/-2</td>
</tr>
<tr>
<td>WEDGE</td>
<td>WEDGE</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>-1</td>
<td>0</td>
</tr>
<tr>
<td>CVP</td>
<td>CVP</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>-1</td>
<td>0</td>
</tr>
<tr>
<td>CO (factored)</td>
<td>CO (factored)</td>
<td>0.1</td>
<td>0.2</td>
<td>0.2</td>
<td>0.3</td>
<td>0.2</td>
<td>0.3</td>
</tr>
<tr>
<td>EF</td>
<td>etN₂O</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>SvO₂</td>
<td>ICP</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>HGB</td>
<td>etAGT</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RHYTHM CHANGES</th>
<th>AFIB</th>
<th>SR</th>
</tr>
</thead>
<tbody>
<tr>
<td>HR</td>
<td>100-120</td>
<td>90</td>
</tr>
<tr>
<td>CO (factored)</td>
<td>-0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>SvO₂</td>
<td>-10</td>
<td>10</td>
</tr>
<tr>
<td>SpO₂</td>
<td>-2</td>
<td>2</td>
</tr>
<tr>
<td>RR</td>
<td>2</td>
<td>-2</td>
</tr>
<tr>
<td>RVVF</td>
<td>-10</td>
<td>10</td>
</tr>
<tr>
<td>SBP</td>
<td>-8</td>
<td>8</td>
</tr>
<tr>
<td>DBP</td>
<td>-5</td>
<td>5</td>
</tr>
</tbody>
</table>
Selecting Decompensation ON/OFF

‘Decompensation ON’ sets the simulators parameters to decompensate 2 minutes after an intervention has had its full affect. ‘Decompensation OFF’ sets the simulators parameters to maintain at the level achieved after an intervention has had its full affect.
Selecting Labs or X-ray During a Scenario

- Labs can be displayed on the patient monitor by selecting ‘Labs’ under the ‘Diagnostics’ folder from the ‘Miscellaneous’ event menu.
- A chest x-ray can be displayed on the patient monitor by selecting ‘CXR’ under the ‘Diagnostics’ folder from the ‘Miscellaneous’ event menu.

<table>
<thead>
<tr>
<th>CHEMISTRY</th>
<th>PATIENT VALUES</th>
<th>REF. VALUES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium</td>
<td>143</td>
<td>135 – 145 mmol/L</td>
</tr>
<tr>
<td>Potassium</td>
<td>4.3</td>
<td>3.5 – 5.0 mmol/L</td>
</tr>
<tr>
<td>Chloride</td>
<td>99</td>
<td>98 – 108 mmol/L</td>
</tr>
<tr>
<td>CO₂</td>
<td>22</td>
<td>21 – 30 mmol/L</td>
</tr>
<tr>
<td>Glucose</td>
<td>85</td>
<td>70 – 140 mmol/L</td>
</tr>
<tr>
<td>BUN</td>
<td>19</td>
<td>7 – 20 mg/dL</td>
</tr>
<tr>
<td>Creatinine</td>
<td>1.0</td>
<td>0.5 – 1.1 mg/dL</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COAGULATION</th>
<th>PATIENT VALUES</th>
<th>REF. VALUES</th>
</tr>
</thead>
<tbody>
<tr>
<td>INR</td>
<td>1</td>
<td>0.9 – 1.1</td>
</tr>
<tr>
<td>PTT</td>
<td>29</td>
<td>26.4 – 35.5 sec</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CBC</th>
<th>PATIENT VALUES</th>
<th>REF. VALUES</th>
</tr>
</thead>
<tbody>
<tr>
<td>HBG</td>
<td>6.4</td>
<td>12.0 – 17.3 g/dL</td>
</tr>
<tr>
<td>HCT</td>
<td>19</td>
<td>35 – 49%</td>
</tr>
<tr>
<td>PLT</td>
<td>160</td>
<td>150 – 450 thousand/mm</td>
</tr>
<tr>
<td>WBC</td>
<td>10</td>
<td>3.2 – 12 thousand/mm</td>
</tr>
</tbody>
</table>
Heart Rhythm

The rhythm of the ECG can be changed to include sinus, sinus with occasionally arrhythmias, sinus with frequent arrhythmias and atrial fibrillation. The “Yellow Heart” icon will appear when atrial fibrillation is selected indicating that SVV should not be used to evaluate fluid responsiveness.
Selecting Fluid Challenge During a Scenario

Select the desired result from the list of interventions under the “Fluid Challenge” folder from the miscellaneous event menu. Options for fluid challenge include:
- Positive response
- Negative response

<table>
<thead>
<tr>
<th>Fluid Challenge</th>
<th>Positive Response</th>
<th>-10</th>
<th>8</th>
<th>4</th>
<th>2</th>
<th>-6</th>
<th>4</th>
<th>0.8</th>
<th>0</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative Response</td>
<td>-5</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>-3</td>
<td>2</td>
<td>0.2</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

Selecting PEEP During a Scenario

Effects of PEEP on hemodynamics can be simulated by selecting “Increase PEEP 2.5 cm” or “Decrease PEEP 2.5 cm” found in the “PEEP” folder under the ABC event menu.

<table>
<thead>
<tr>
<th>PEEP 2.5 cm H₂O</th>
<th>SVV &gt;15</th>
<th>0</th>
<th>-5</th>
<th>-5</th>
<th>1</th>
<th>2</th>
<th>-3</th>
<th>-0.3</th>
<th>0</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>SVV &lt;15</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
</tbody>
</table>
Instructors Guide for Operating the Vigilance II Monitor Façade

The Vigilance II monitor façade simulates the actual Vigilance II monitor and is integrated with Laerdal SimMan scenario programming. The façade replicates what the participant might commonly see displayed while using the Vigilance II monitor in actual patient care. The façade does not contain all of the customization functionality of the actual Vigilance II monitor.

Turn Monitor On or Off

• Press the ‘On/Off’ button to turn the façade monitor on or off. A chime will sound when the monitor is turned on. The monitor can be turned on and off during a simulation scenario without losing data.
Initial Screen

Changing Display Options

- The façade display can be customized by pressing on parameter boxes

CCO and CCI are now reversed.

EDV and EDVI are now reversed.
By clicking on a box, the configuration can be changed or the parameter can be hidden entirely.

By right clicking on the parameter box, other available parameters can be selected that are not currently in use. In this case, CCO and SVR are available for use.
Clicking the split screen button hides the STAT boxes, so that only the graph is displayed.
End Points of Simulation Scenario

- The objective of the scenario is to resuscitate the simulated patient with a combination of multiple interventions. A predefined end point for the scenarios has not been stipulated. Participants may continue to treat the patient until satisfied with the results.
- General resuscitation goals:
  - ScvO₂ 60-80%
  - RVEDVI 60-100 ml/m²
  - RVEF 40-60%

Scenario Debriefing

- Scenario debriefing allows the instructor and participants to review what occurred during the simulation scenario. Debriefing details can be saved for later review.
  
  1. Click ‘Debrief’.
  2. Select ‘Yes’ on Do you really want to go to debriefing?
  3. Adjust ‘Level of Detail’ to display the amount of detail desired for your debriefing session.
Other Important Features

- To find out more information about the patient, find the Edwards Lifesciences icon located on the bottom right menu bar
The menu that pops up allows you the option of viewing your patient information in a separate window, in real time, or the ability to view your patient's BSA.
To hide the small parameters on the actual monitor, uncheck ‘Show small parameters’ on the user menu.

The user can select indexed values of the parameters currently displayed on the monitor by clicking the parameter box on the monitor, OR selecting it from the user menu.
- From this menu you may also choose to run the scenario with an unbranded monitor.

Note, when CO and EDV are not in use, the STAT Boxes that they populate will remain black.
Instructor Monitor Configuration

In order to configure the default screens for your instructors:

Click on ‘Edit’ on the top menu.
Select ‘Edit Monitor Setup’.

a. Select ‘5 Waveform Layout’, and then setup the monitor according to these instructions.

1. Click on the ‘Waveform 2’ box: select ‘Arterial BP’ on the available parameters box to the right. Then click ‘Select Parameter.’

2. Click on the ‘Waveform 3’ box: select ‘PAP’ on the available parameters box to the right. Then click ‘Select Parameter.’

3. Click on the ‘Waveform 4’ box: select ‘CVP’ on the available parameters box to the right. Then click ‘Select Parameter.’

4. Click on the ‘Waveform 5’ box: select ‘Pleth (SpO2)’ on the available parameters box on the right. Then click ‘Select Parameter.’

5. Click on the ‘Numeric 6’ box: select ‘ICP’ on the available parameters box on the right. Then click ‘Select Parameter.’

6. Click on the ‘Numeric 7’ box: select ‘N2O’ on the available parameters box on the right. Then click ‘Select Parameter.’

7. Click on the ‘Numeric 8’ box: select ‘AGT’ on the available parameters box on the right. Then click ‘Select Parameter.’

8. Click on the ‘Numeric 5’ box: select ‘awRR’ on the available parameters box on the right. Then click ‘Select Parameter.’

9. Click on the ‘Numeric 4’ box: select ‘NONE’ on the available parameters box on the right. Then click ‘Select Parameter.’

10. Click on the ‘Numeric 3’ box: select ‘Pulse’ on the available parameters box on the right. Then click ‘Select Parameter.’

11. Click on the ‘Numeric 2’ box: select ‘Tblood’ on the available parameters box on the right. Then click ‘Select Parameter.’

12. Click on the ‘Numeric 1’ box: select ‘C.O.’ on the available parameters box on the right. Then click ‘Select Parameter.’

13. Rename layout name at the top to whatever you want.

14. Click on the ‘Save Setup’ box. The image below will pop-up.

Click on ‘Save’.
To make this the default monitor:

15. Go to edit on your top menu bar.

16. Select ‘Configuration’.

17. Select ‘Patient Monitor’.

Click on instructor’s monitor setup
click on drop down arrow
select desired setup
click ‘OK’.

18. A message will appear, select ‘Yes’.
19. Changes will take effect next time the scenario is started.

![Configuration dialog box]

20. The instructor monitor will now appear as below.

![Instructor Monitor]

21. The instructor monitor and patient monitor should not look the same. If they do…

22. Click on ‘View’ located on the top menu bar.

23. If there is a √ in front of “instructor’s monitor = patient monitor”, uncheck it.