



SimMan[®] Programming for Beginners

Pre-Conference Workshop



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Agenda

- Review Windows; minimize and resize windows
- Review the Scenario Planning Worksheet
- Review the Scenario Editor
- Program a 3 Frame Scenario
- Program the Events Menu
- Validate the Scenario

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Learning Objectives

Upon completion of this exercise the participant should be able to:

- Minimize and Resize Windows
- Complete the Scenario Planning Worksheet
- Using the learning materials as a reference:
 - * Open the Scenario Editor
 - * Name and Save Scenario
 - * Customize Patient Description Window
 - * Customize the Patient Monitor
 - * Edit Events Menus
 - * Create and Connect Frames
- Create a 3 frame scenario
- Using the Scenario Validation Checklist, validate the scenario

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Developing New Scenarios

Step 1 - Complete the Scenario Planning Worksheet:

- ❑ Determine prerequisite knowledge.
- ❑ Design learning objectives.
- ❑ Specify proposed correct treatment outline **(Events)**.
- ❑ Describe the patient.
- ❑ Determine parameters to be displayed on the Patient Monitor.
- ❑ Determine equipment needs
- ❑ Flowchart the scenario progression.
- ❑ Specify parameters for **Physiologic Trend(s)** (optional).
- ❑ Create an Event Handler.

The image shows a 'Scenario Planning Worksheet' form. It includes sections for 'Scenario', 'Learning Objectives', 'Patient Description', and 'Equipment Needs'. The form is a grid-like structure with various input fields and checkboxes. A 'Laerdal' logo is visible in the bottom right corner of the form.

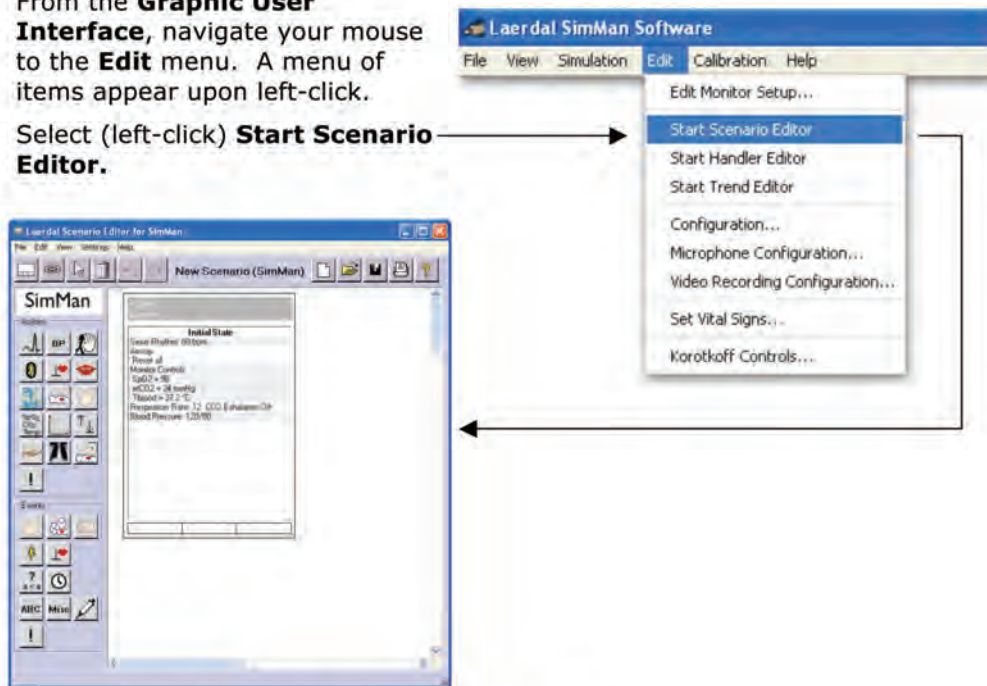
Notes:

Developing New Scenarios

Step 2 – Open the Scenario Editor:

The Scenario Editor is a graphical editing tool that allows you to create, edit and save scenarios.

- From the **Graphic User Interface**, navigate your mouse to the **Edit** menu. A menu of items appear upon left-click.
- Select (left-click) **Start Scenario Editor**.



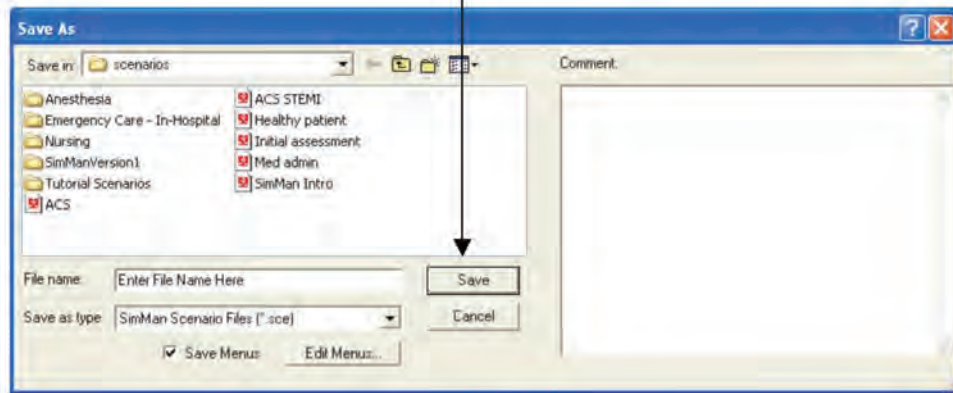
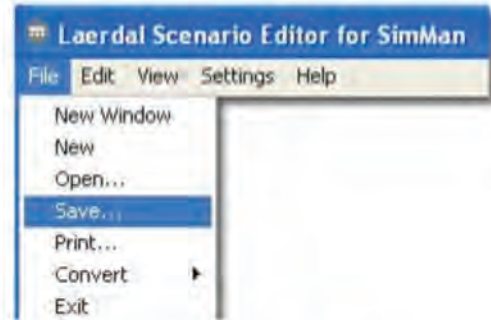
- The **Scenario Editor** opens in a new window.
- Turn page for directions on naming and saving files.

Notes:

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Step 3 – Name and Save Scenario:

- ❑ From the **Scenario Editor**, navigate your mouse to the **File** menu. A menu of items appears upon left-click.
- ❑ Select (left-click) **Save.** →
- ❑ In the File Name box, enter a name for the scenario file.
- ❑ Click **Save.** →



Notes:

- ❑ Consider developing a file naming protocol for your organization. File names may be customized to indicate the course number, scenario name, complexity, or version.
- ❑ An example of a useful file name is: Nur1101 Asthma Assessment Ver1.
- ❑ Comments about the scenario may be entered in the Comment box. Comments may include learning objectives, equipment requirements, or other useful information.

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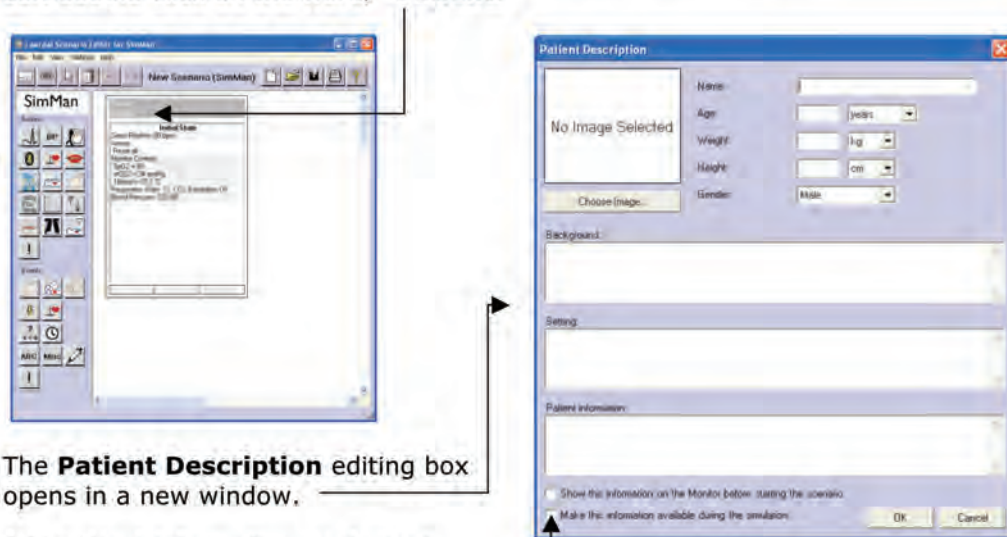
Step 4 – Customize Patient Description Window (optional):

The SimMan / SimBaby software includes a feature that permits the instructor to display patient information on the **Patient Monitor** at the beginning of the scenario.

The **Patient Description** window may display a patient image and personalized information such as age, weight, height, and gender. Other information such as the scenario background, setting, and patient information may be customized as desired.

Information entered into the **Patient Information** box (bottom of window) is also recorded in the **Event Log**.

- While in the **Scenario Editor**, navigate to the **Initial State Frame**.
- Left double-click on the word, "**Patient.**"



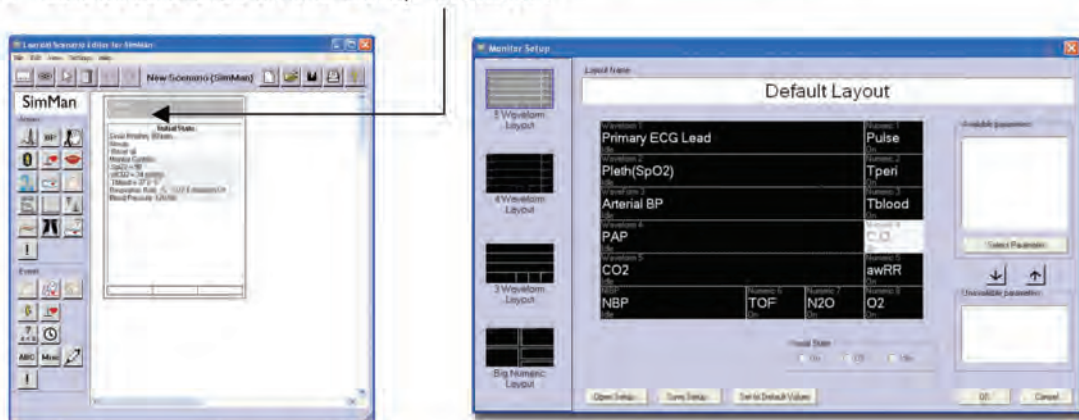
- The **Patient Description** editing box opens in a new window.
- Add patient information as desired.
- Select the boxes on the bottom left of the **Patient Description** box if you choose to make the patient information available during the simulation.
- When complete, select **OK**.

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Step 5 – Customize the Patient Monitor (Optional):

The software enables the instructor to customize the **Patient Monitor** to resemble any number of commercial monitor displays.

- While in the **Scenario Editor**, navigate to the Initial State Frame.
- Left double-click on the word, **“Monitor.”**



- The **Monitor Setup** editing box opens in a new window. ———
- Select the layout – perform a single left-click on the desired layout (far left column). Note the display change as you click on each layout.
- Select waveform parameters (optional) – left-click on the desired parameter box (Primary ECG Lead, Pulse, etc.). Note the list of parameters as they appear in the **Available Parameters** box (far right).
- Choose desired parameter and left-click on **Select Parameter**. Note the parameter change in the waveform layout.
- When complete, select **OK**.

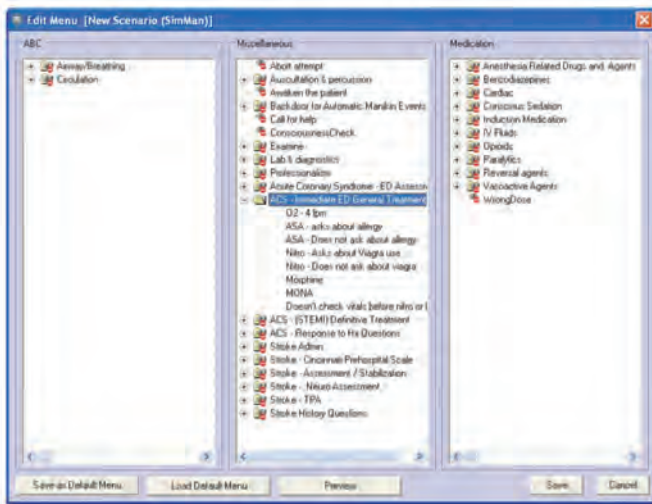
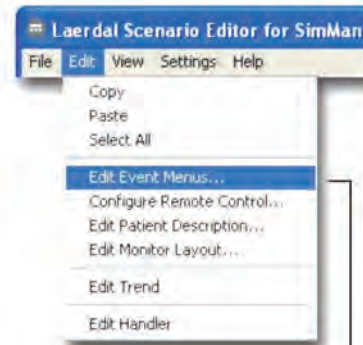
Notes:

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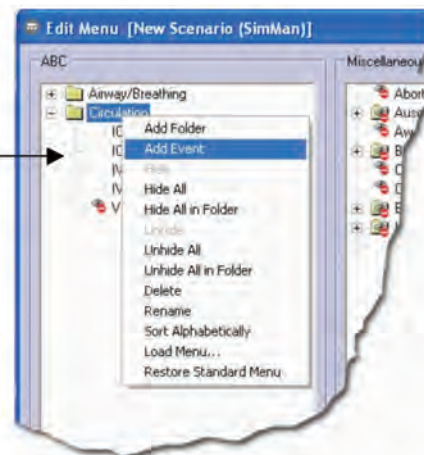
Step 6 – Edit Event Menus:

The term “**Event**” is used to describe a behavior demonstrated by the learner. For example, insertion of a peripheral IV is an event. The instructor may customize the default Event Menu by adding events that support their program goals.

- From the **Scenario Editor**, navigate your mouse to the **Edit** menu. A menu of items appears upon left-click.
- Select (left-click) **Edit Event Menus...**
- The **Edit Menu** opens in a new window.



- Right-click on a folder or free space to reveal options.
- Select (single left-click) **Add Event** to create a new event.
- Type the title of the event. Events are obtained from the **Scenario Planning Checklist**.
- When finished entering events, click **Save as Default Menu**.
- Click **OK** when asked, "Are you sure you want to replace the current default menu for all new scenarios and handlers?"
- Then click **Save**.



Developing New Scenarios

Step 7 – Create and Connect Frames

Scenarios consist of one or more **Frames** that contain **Actions** and **Events**. Actions provide direction to the simulator. The simulator's vital signs and physical findings may change as the scenario is advanced to additional frames. Scenarios operate in a single Frame at a time. The scenario advances to other Frames as **Events** specified in the **Event Output Fields** are triggered.

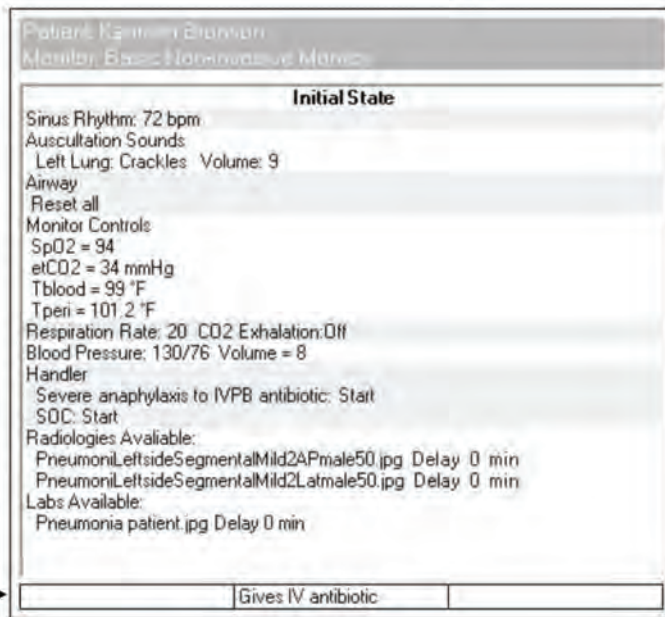
The Frame's large upper field, known as the **Actions Field**, contains the name of the Frame. With the exception of the **Initial State Frame**, Frame names may be edited.

Action Field.

Actions set the simulator's vital signs, vocal sounds, physiological responses, and display of data on the patient monitor.

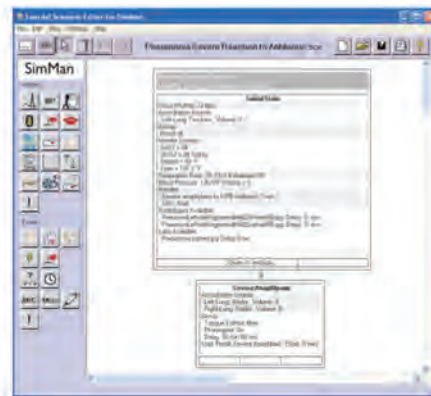
Event Output Field.

Events contained here are known as Event Triggers.



Add Frames:

- ❑ Single left-click the **Create Frames** button located in the top-left of the Scenario Editor then
- ❑ Single left-click on a blank area of Scenario.
- ❑ Repeat until the desired amount of frames are contained in the scenario.



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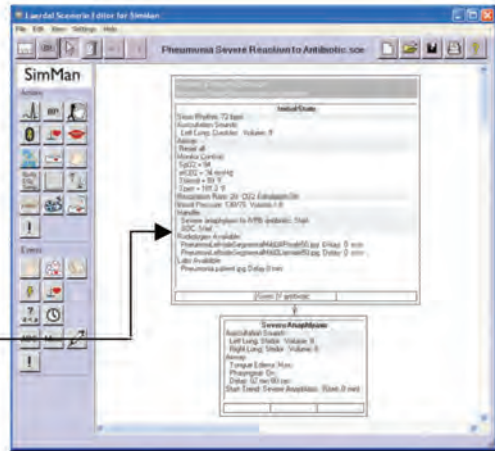
Add Actions to Frames:

- Single left-click on the desired Action. Choose Action from the appropriate list of Action Icons located in the left screen.



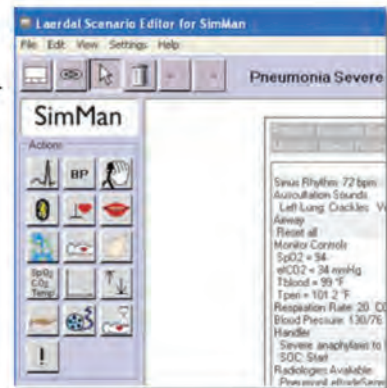
- Single left-click in the Action Field of the Frame to place the selected Action.

Reminder: Actions include vital signs, physical findings, trends and event handlers

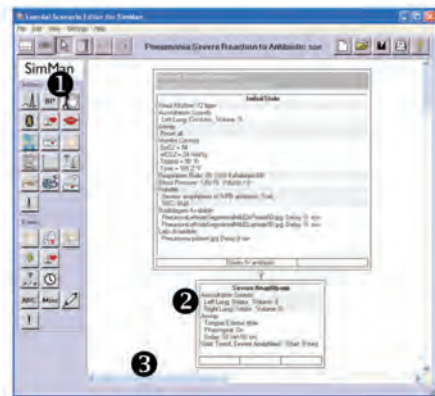


Connect Frames:

- **1** Single left-click the **Connect Frame** button this changes the pointing cursor to a connecting cursor.



- **2** Left-click the cursor over the desired **Event Output** Field.
- **3** Keep left-mouse button depressed while dragging the cursor to the desired **Frame**. Note the edge of the destination Frame turn dark blue as the Frames are connected.
- Release the mouse button to complete connection of the **Frame**.

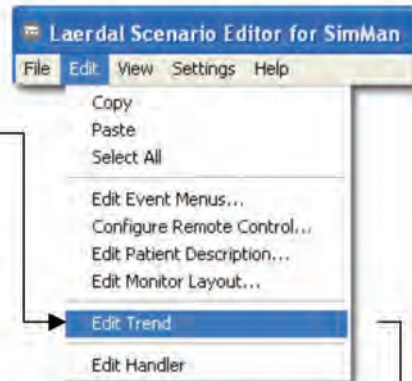


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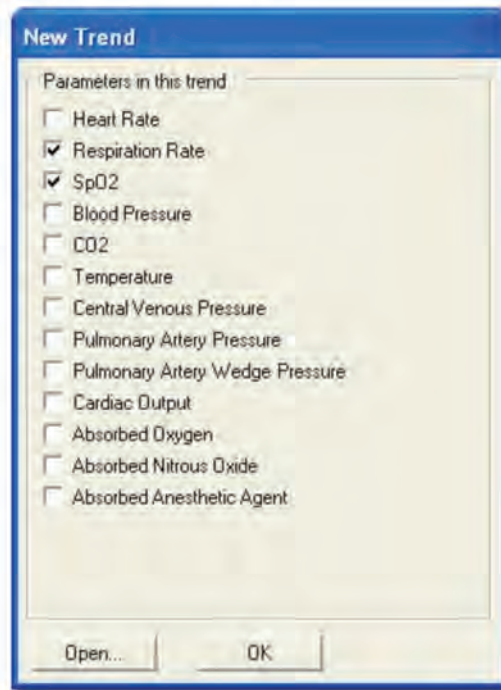
Step 8 – Create / Edit Trends:

Trends permit physiologic changes over time. SimMan and SimBaby may physiologically model a number of factors including heart rate, respiration rate, SpO2, blood pressure, CO2, and other invasive measurements. Multiple factors may be included in a single **Trend**.

- From the **Scenario Editor**, navigate your mouse to the **Edit** menu. A menu of items appears upon left-click.
- Select (left-click) **Edit Trend**.
- The **New Trend** box opens in a new window.
- To create a new **Trend**, select the desired parameters by placing a checkmark in front of the option(s) and click OK.
- To open and edit an existing **Trend**, select Open.
- After selecting a new or existing **Trend**, the **Trend Editor** opens in a new window (see next page).
- Turn page for directions on editing **Trends**.



Notes:



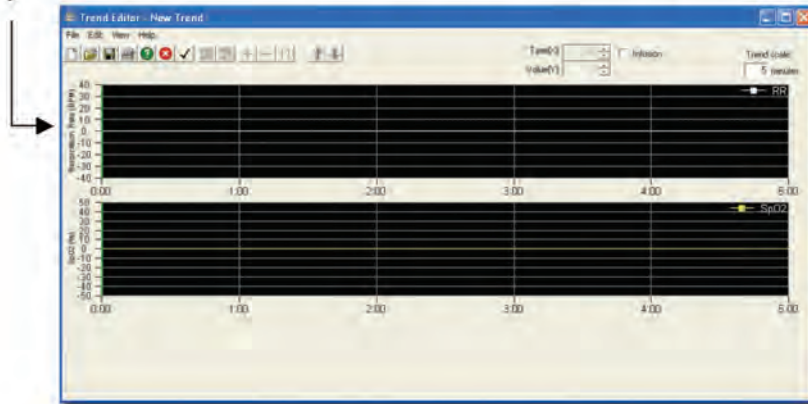
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Step 8 – Create / Edit Trends continued

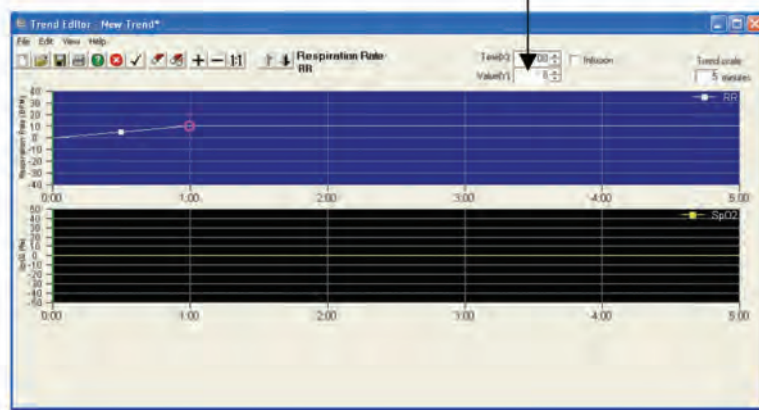
The **Trend Editor** opens with all values being relative to the patient's physiologic state prior to starting the **Trend**. The bold horizontal line, currently valued at zero (0) deviations from the baseline parameter, may be increased or decreased to raise or lower the patient parameter.

To increase / decrease a value:

- Navigate cursor to bold horizontal line. Note cursor as it changes to a crosshair sign +



- Left-click (and hold) cursor on bold horizontal line. Note cursor as it changes to a finger.
- While holding left mouse, drag the line to desired position. The line may be dragged in any position. Release left mouse to set the **Trend Point**.
- After setting the **Trend Point**, note the **Trend Value** in the top right of screen.
- Repeat above steps for other parameters.
- When complete, select File\Save.

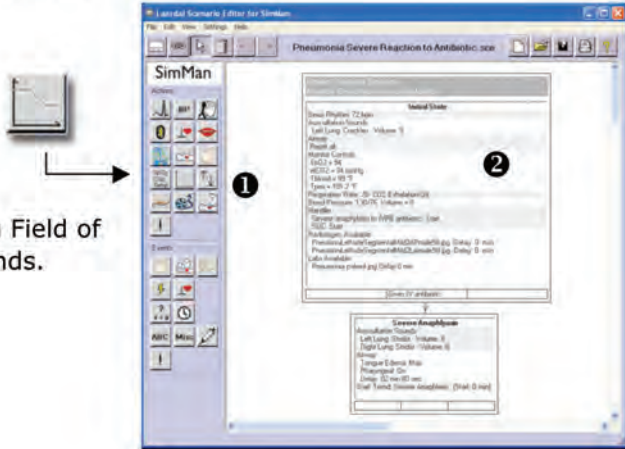


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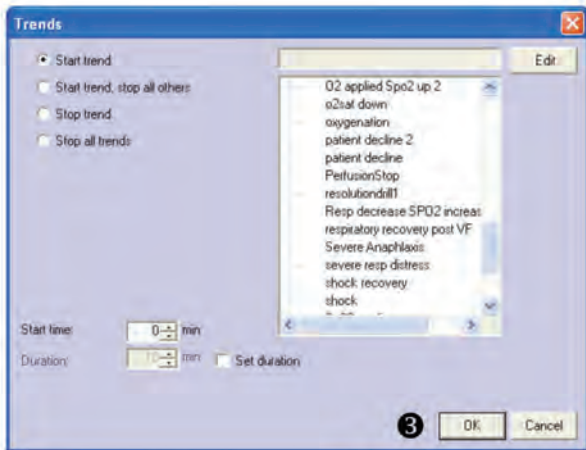
Step 8 – Create / Edit Trends continued

To insert trend into a frame:

- ① Single left-click on the Trend Button from the list of Action Icons located in the left screen.
- ② Single left-click in the Action Field of the Frame to open menu of Trends.



- ③ Select the appropriate Trend and click OK – this will insert the Trend into the Frame.



Developing New Scenarios

Step 9 – Create an Event Handler:

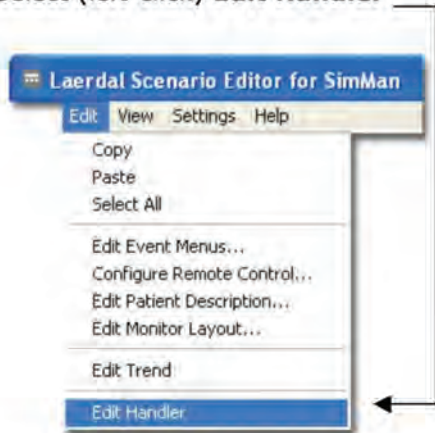
Event Handlers enable Events to be linked to Actions, including:

- ✓ Vocal sounds.
- ✓ Changes in vital signs and physiologic **Trends**.
- ✓ Comments (inserted in debrief log).
- ✓ Display of images (X-rays, charts, etc.) on patient monitor.

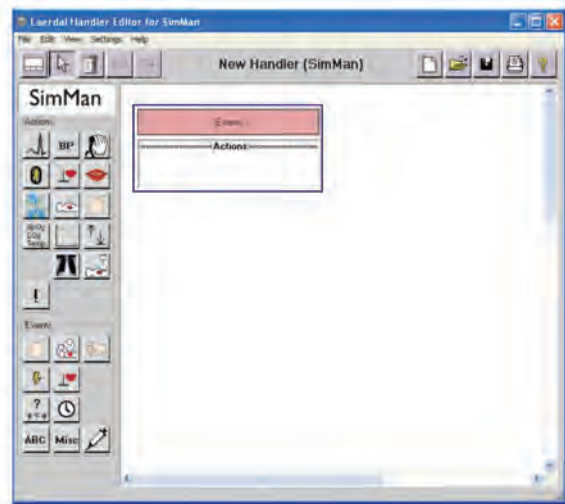
The Handler may be used as a template for processes or events that occur frequently (history taking, medication administration, airway management, etc.). Unlike **Events** that are contained in **Frames**, **Events** within a **Handler** may be triggered at any time regardless of when the event occurs during the simulation.

To create a new Handler:

- From the **Scenario Editor**, navigate your mouse to the **Edit** menu. A menu of items appears upon left-click.
- Select (left-click) **Edit Handler**



- The **Handler Editor** opens in a new window.
- Turn page for directions on editing **Handlers**.



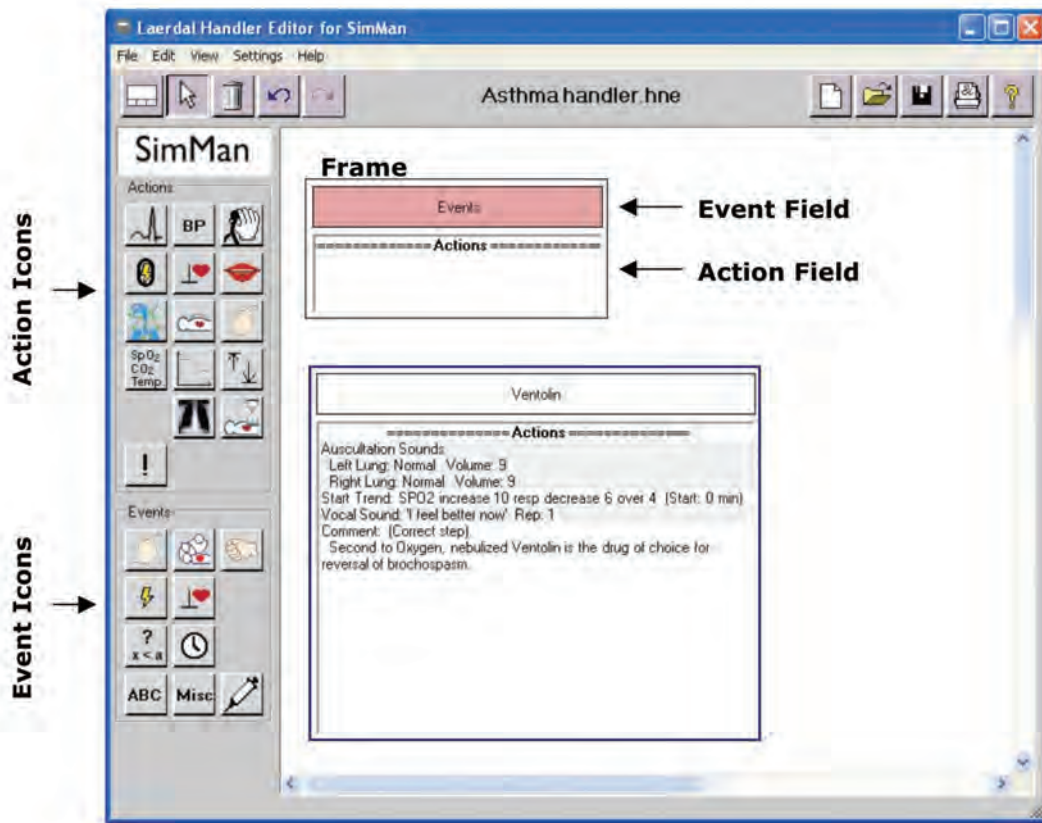
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Step 9 – Create an Event Handler *continued*

Editing the Handler:

- ❑ Left-click on the desired **Event**. Choose **Events** from the appropriate **Event Icon** located in the left-lower screen.
- ❑ Left-click in the **Event Field** of the **Frame** to place the selected **Event**.
- ❑ Choose the **Action(s)** that the **Event** will cause by left-clicking on the desired **Action** from the appropriate **Action icon**.
- ❑ Left-click inside the **Action Field** to place the desired **Action**.
- ❑ Repeat as desired. Additional **Frames** may be added as necessary.
- ❑ When complete, select File\Save then Exit from the **Handler Editor**.

Note: Roll cursor over an icon for a description of the **Action** or **Event**.



Next Steps

- Practice....
- Set realistic goals
- Develop an action plan
- Faculty enrichment/Continuing Education/Staff Development
- Budget for formal training
 - Time: Hands-on time with Simulator
 - Financially: Custom training with Simulation Experts
- Networking
- Set time lines and realistic goals

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