



# Mobile Training Solutions



**Laerdal**<sup>®</sup>  
*helping save lives*



Welcome to the  
2010 National SUN Meeting!

**Mobile Training Solutions**  
Tim McClelland,  
Educational Specialist

---

---

---



---

---

---

---

---



### Course Agenda

- **Welcome and Introductions**
- **Introduction to VitalSim (Define)**
- **The ALS simulator (Define)**
- **Instructor's role in simulation (Demo)**
- **Plan and Run a simulation (Do)**
- **Debrief and wrap up (Debrief)**

Consulting • Education • Support  
<http://simulation.laerdal.com>

---

---

---



---

---

---

---

---



### Course Objectives

- Identify the features and functionality of the VitalSim Platform.
- Discuss preparation requirements for a EMS simulation.
- Discuss the instructor's role in planning, facilitating, and debriefing simulations.
- Participate in the planning and management of a EMS scenario

Consulting • Education • Support  
<http://simulation.laerdal.com>

---

---

---

---

---

---

---

---

**What is VitalSim™?**

Vital Signs Simulator:

A simulator designed to control a variety of manikins and task trainers



Con rt

<http://simulation.laerdal.com>

---

---

---

---

---

---

---

---

**VitalSim™ Compatible Trainers**



MagCode Kelly  
MagCode Kit  
Nursing Anne  
Nursing Baby  
Nursing Kit  
VitalSim Task Trainers  
Nursing Kelly  
ALL Simulators

Con sort

<http://simulation.laerdal.com>

---

---

---

---

---


---

---

---

**ALS Manikin**

Features & Function



Consulting • Education • Support

<http://simulation.laerdal.com>

---

---

---

---

---

---

---

---



**Review Correct Treatment**

**Correct Treatment**

- Identify patient correct vital functions and observe vital signs
- Check patient oxygen
- Check vital signs including SpO2
- Check patient respiratory status
- Provide patient education
- Monitor for side effects
- Call for assistance when needed
- Document patient status
- Document patient education including teaching the 3 rights
- Document vital signs and SpO2
- Document patient condition including vital signs
- Document patient response to oxygen therapy
- Document patient response to education
- Document patient response to education

- Review the correct treatment guidelines – determine what behavior the learner should demonstrate during the simulation.
- Remember, any changes made to this area must also be addressed in the learning objectives and other interdependent content areas.

Consulting • Education • Support  
<http://simulation.laerdal.com>

---

---

---

---

---

---

---

---

---

---

---

---

**Review Debriefing Points**

**Debriefing/Global Reflection Overview**

Risk factors for chronic obstructive pulmonary disease (COPD):

- Exposure to tobacco smoke accounts for an estimated 80% to 90% of COPD cases.
- Passive smoking
- Occupational exposures
- Air pollution
- Genetic abnormalities

Most common cause of COPD is long-term exposure to respiratory irritation and air pollution. Smoking cessation is the single most effective intervention to prevent COPD or slow its progression. However, there is a lag time in preventing smoking cessation and reducing patients' ability to quit.

Because hypoxemia stimulates respiratory drive in the patient with severe COPD, increasing the oxygen flow to a high flow may provide relief. The patient's blood oxygen level and respiratory status should be monitored closely, including observation of carbon dioxide and CO2 retention. The nurse should closely monitor the patient's respiratory response to oxygen administration via physical assessment, pulse oximetry, and arterial blood gases.

Pharmacological therapies include bronchodilators with inhaled doses (short- and long-acting). Corticosteroids may be added to severe COPD and exacerbations. Patient education along with these pharmacological agents with smoking cessation. The patient may require oxygen therapy at home. Patients should be encouraged to receive early influenza vaccine and the pneumococcal vaccine every 5 to 7 years as per guidelines.

- Debriefing topics are usually anchored to the scenario's learning objectives and educational content.
- Instructors are encouraged to remain flexible when formulating debriefing topics. Unexpected events may occur during a case that warrants exploration during the debriefing.

Consulting • Education • Support  
<http://simulation.laerdal.com>

---

---

---

---

---

---

---

---

---

---

---

---

**Step 2  
 Instructor Role  
 Planning for a Simulation**

- Scenario Pre-view and Pre-run**
- The Instructor should preview and pre run the scenario to ensure the scenario flow is as planned.
- Equipment Check List**
- An equipment check should be preformed for availability and functionality. To ensure the learner has the necessary equipment to function in the simulation.
- Assign roles**
- Roles should be identified prior to the run of the simulation so that everyone involved knows their responsibilities and function in the simulation.

Consulting • Education • Support  
<http://simulation.laerdal.com>

---

---

---

---

---

---

---

---

---

---


---

---

**Scenario Preview and Prerun**

Practicing with the scenario prior to actual teaching is recommended.

- select the scenario using the remote.
- practice logging events using the remote.



Consulting • Support

<http://simulation.laerdal.com>

---

---

---

---

---

---

---

---

**Prepare the Environment and Simulator**

- Assemble Equipment and Medications.
  - ECG monitor.
  - Stethoscope and BP cuff.
  - Crash cart./ EMS Bag
  - Medications.
- Prepare the Environment.
  - Ambulance / Bed room / Living room
  - Sounds (phones ringing, ambulance sirens)
  - People (assistants, physician, and technicians).
- Prepare the Simulator.
  - Dressed appropriately.
  - Moulage as needed (blood, vomit, etc.).
  - Props (pill bottles, inhaler, etc.).

Consulting • Education • Support

<http://simulation.laerdal.com>

---

---

---

---

---

---

---

---

**Prepare the Learners**

- Learners are more likely to succeed when they know what is expected of them.
  - Examine the simulator prior to the simulation. Review features and capabilities (voice, pulse points, drug administration, etc.)
  - Permit the learners to acclimate to the new learning environment.
  - Review learning objectives.
  - Report to Student
  - Discuss roles.

**NON** Chronic Obstructive Pulmonary Disease - Oxygen Therapy

Virtual Body

Introduction to Learning Objectives

**Report to Student**

Time: 15:00 a.m.

Scenario: A 67-year-old male admitted directly from Primary Care for investigation of chronic obstructive pulmonary disease (COPD). He has been admitted to the urgent care and the hospital. He is confused because it appears someone else, his wife is very similar to the one. Physical changes have been noticed:

Clinical signs (non-specific) include:

- Rapid and irregular
- Crackles throughout of pharynx and neck to base
- Barrel chest
- Barrel chest

**Additional Information: Medical History**

Patient data: Male - Age 67 years, Height 174 cm, Weight 80 kg, BMI 26.7

DOB: 1953-01-01

MRN: 12345678

Prior medical history: Patient has a 20-year history of smoking 2 packs a day. He has suffered a stroke (stroke) 10 years ago and has been on medication for it. During the last year he has had two more strokes.

Recent medical history: Patient has a complaint of increasing fatigue with activity and weight loss over the last 100 days. He has been on oxygen therapy for 10 days.

Consulting • Education • Support

<http://simulation.laerdal.com>

---

---

---

---


---

---

---

---

**Step 3**  
**Instructor Role**  
**Planning for a Simulation**



- Welcome and brief the learners.
- Set expectations
- Permit learners to ask questions
- Direct the simulation
- Take notes in preparation for debriefing
- Conclude the simulation
- Transition to debriefing
- Plan opportunities for additional repetitive, deliberate practice.

Wake Forest Fire & Franklin Co EMS, Southeastern Emergency Equipment, Wake Forest, NC.

Consulting • Education • Support  
<http://simulation.laerdal.com>

---

---

---

---

---

---

---

---

---

---

**Instructor's Role in facilitating**

- **Some behavioral guidelines for facilitating a EMS simulation**
  - **Welcome the learners and communicate your expectations about their clinical performance, affective behavior and professionalism.** For example:
    - "Welcome – You are about to participate in a simulated patient case. The patient has a chief complaint – I expect you to assess the patient and manage her or him to the best of your ability. Treat the simulated patient as an actual human patient. This case lasts approximately 15 minutes. We'll debrief as a team following the case."
  - **Emphasize the simulator's features.** For example:
    - "I expect that you will ask the patient questions and actually assess their vital signs – please do not ask me for this information."
  - **Permit the learners to ask questions prior to the simulation.**

Consulting • Education • Support  
<http://simulation.laerdal.com>

---

---

---

---

---

---

---

---

---

---

**Instructor's Role in facilitating**

- **The instructor may begin the case when the learners are ready. The instructor is positioned with good visualization and observes the learners performance and registers events using the Vitalsim remote.**
- **The instructor must decide under what conditions they would interrupt the simulation.** For example:
  - Safety-related violations that may injure a learner warrant intervention while a learner's deviation from the learning objectives is an opportunity for all parties to learn and may not warrant interruption. Typically, when in a testing situation, the instruction would not offer cues and advice to the learner. When teaching, it is not uncommon to pause a simulation to offer assistance to the learner.

Consulting • Education • Support  
<http://simulation.laerdal.com>

---

---

---

---

---


---

---

---

---

---

**SUN** user NETWORK 

### Instructor's Role in Debriefing

- **Effective Debriefing should be learner-centric and conducted within a safe environment.**
- **An accurate log should be created and used for in the debriefing process.**
- **Video, audio, VitalSim log, checklists and any other standardize method of recording data for debrief should aid in effective debriefing.**
- **Precise Debriefing points are derived through setting appropriate session or course objectives**

Consulting • Education • Support  
<http://simulation.laerdal.com>

---

---

---


---

---

---

---

---

**SUN** user NETWORK 

### Instructor's Role in Debriefing

- **Keep the debriefing on track with the learning objectives.**
- **The objectives of the simulation should be clearly defined and understood by the learned whenever they are given prior to a simulation.**
- **Allowing the debriefing to steer outside the lane of the simulation's learning objectives, could lead to isolated issues that may causes a negative impact on the debriefing.**
- **Remember the quality of your debrief is directly related to and influenced by the quality of your pre- brief.**

Consulting • Education • Support  
<http://simulation.laerdal.com>

---

---

---


---

---

---

---

---

**SUN** user NETWORK 

### Start the Scenario Planning

- **Target group**
- **Learning Objective**
- **Proposed correct treatment**
- **Programming the VitalSim**

Consulting • Education • Support  
<http://simulation.laerdal.com>

---

---

---

---

---

---

---

---

**Let's Practice**

- **Central Simulation, need volunteers**
  - Primary Instructor (work with students)
  - Secondary Instructor/Tech (work with computer)
  - Primary Student Nurse
  - Secondary Student Nurse
  - Crowd: Observers
- **Divide into 5-7 groups and replicate same central simulation**
  - Laerdal Representative at each table
  - Prep/Run session ~10-15 min
- **Debrief as a group to share learning/discovery**
- **Return to groups & explore NLN scenarios from "big blue box"**

Consulting • Education • Support  
<http://simulation.laerdal.com>

---

---

---

---

---

---

---

---

**Debrief and Wrap up**

Consulting • Education • Support  
<http://simulation.laerdal.com>

---

---

---

---


---

---

---

---

**Questions or Comments**



Consulting • Education • Support  
<http://simulation.laerdal.com>

---

---

---

---

---

---

---

---

**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

Consulting • Education • Support  
<http://simulation.laerdal.com>

---

---

---

---

---

---

---

---

**What Else Does Laerdal Have to Offer..**

**Introductory Courses**



**Teaching Scenarios**



**Custom Education**



**Courseware**



Consulting • Education • Support  
<http://simulation.laerdal.com>

---

---

---

---

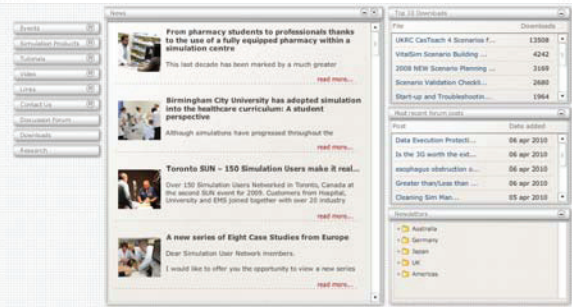
---

---

---

---

**SUN Simulation User Network**  
<http://simulation.laerdal.com>



http://simulation.laerdal.com

---

---

---

---

---

---

---

---

**Laerdal Services**

**Sales and Support**  
[customerservice@laerdal.com](mailto:customerservice@laerdal.com)

Monday - Friday, 8:00am - 8:00pm EST  
Saturday & Sunday, 10am - 6pm EST

877-LAERDAL (523-7325)  
Fax: 1-800-227-1143

Consulting • Education • Support  
<http://simulation.laerdal.com>

---

---

---

---

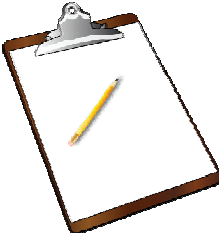
---

---

---

---

Please give us feedback...



Consulting • Education • Support  
<http://simulation.laerdal.com>

---

---

---

---

---

---

---

---