

Advanced simulation in emergencies



SimMan

The advanced simulator for training in emergencies



Laerdal
helping save lives

Realistic simulation in teams



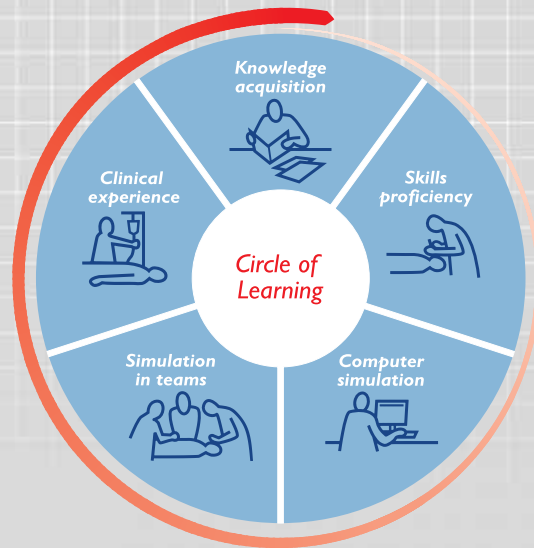
Simulation in teams

In a real emergency, a good outcome for the patient depends on the realism of the rescuer's training and effective practice in teams.

A critical part of the learning process for emergency care personnel is practicing treatment in the same way it occurs in a real emergency. A patient's condition changes over time, depending on the quality and speed of treatment, so should the simulation in practice.

Simulation training is of greatest value to help people practice working together as a team. It helps improve essential communication and coordination skills and so improves effective team treatment. Simulation in teams is therefore an invaluable step in helping save lives.

improves patient safety and outcome



helping build competence

Patient safety and outcome are critically dependent on the competence of healthcare personnel.

Building real competence is a step-by-step process.

It includes acquiring new knowledge and skills, getting used to making quick and safe decisions, training realistically in teams, and gaining clinical experience.

Maintaining and increasing competence is an ongoing process.

Laerdal has been offering learning products responding to evolving needs in emergency medicine ever since the introduction of Resusci Anne in 1960.

Today our range of life saving, cost-efficient learning products includes graphic source materials, innovative skills trainers, interactive computer simulators and advanced patient simulators.

This reflects our belief that helping build competence is a critical part of our mission of helping save lives.

SimMan - Advanced simulation in emergencies



The **Laerdal SimMan** offers educators the ability to provide realistic and challenging scenario based simulation to test learners' critical thinking and clinical decision-making skills.

With realistic anatomy, accurate clinical functionality and PC-software driven operation with integrated video-debriefing, SimMan provides numerous educational opportunities for healthcare professionals.

Some of the many benefits of using SimMan in your training program:

Educational effectiveness – provides highly realistic patient simulation for the practice of teamwork, leadership and communication skills.

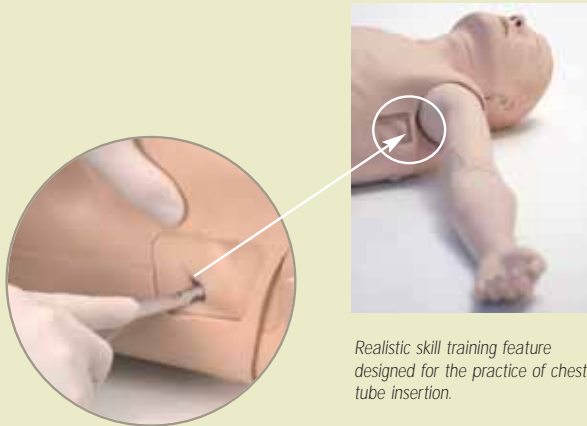
Multi function use – facilitates training for a wide range of health care professionals encompassing all areas of patient care.

Practice infrequently occurring scenarios – prepare the learners for the unusual or difficult cases they may face in real life.

Anatomically realistic – enables a wide range of emergency medical interventions to be practiced



bringing simulation to life...



Realistic skill training feature designed for the practice of chest tube insertion.



SimMan features include:

- Full scale patient simulator which allows you to perform relevant ALS skills and scenarios.
- Interactive manikin which gives you immediate feedback to interventions.
- Patented airway system allows accurate simulation of all relevant difficult airway management scenarios.
- Bronchial tree is anatomically accurate in size, colour and texture and features the accurate anatomical landmarks necessary to facilitate realistic fiberoptic bronchoscopy.
- Needle and Surgical Cricothyrotomy.
- Spontaneous breathing.
- Adjustable lung resistance.
- Realistic practise of chest tube insertion.
- Physiological correct carotid, femoral, brachial and radial pulses.
- Pre-programmed library of heart-lung, bowel and vocal sounds with adjustable sound volume.
- Blood pressure may be taken automatically, palpated or auscultated; Krotkoff sounds are synchronised with pulse.
- IV training arm allows practice of peripheral intravenous therapy.
- Realistic male/female genitalia facilitate urologic procedures.

For a complete list of features, please read back page or visit www.laerdal.com

Portable and Flexible

The Laerdal SimMan System is portable and flexible, which allows use in various simulation settings. SimMan can be used in the field for realistic EMS and military scenarios. SimMan can also be transported from the field to the ED or OR in order to simulate the transfer of care from prehospital to hospital clinical settings. Minimal connections, plus laptop and PDA controls allow for quick and easy set-ups and transfer. By using the portability kit all functions are present whilst in the field and the SimMan System allows for long duration training scenarios.

Robust and Reliable

A robust design and durable parts allows SimMan to withstand the rigors of extensive field based simulations, while meeting the advanced clinical training demands of pre-hospital, military and hospital providers. By using the optional wounds, trauma and bleeding control systems, SimMan can effectively imitate the wounds trainees are likely to experience in these environments.



SimMan Integrated Video Debriefing System

The new SimMan software comes with the world's first Integrated Video Debriefing System. By simply using the included video web-camera with the control computer, the SimMan software will automatically record video and audio and synchronize these with SimMan's log of events. This provides a quick and easy solution to debriefing, by allowing immediate review of the student's performance after a scenario or by saving the recording to review at a later time. The video can be viewed on the control computer screen or through an external data projection unit.

The SimMan Integrated Video Debriefing System also greatly reduces the costs of setup of your facility by removing the need for expensive video infrastructure. The simplicity of the system now means that ward based scenarios and in-field scenario's may also benefit from immediate debriefing, whilst the scenario is still fresh in the students mind.

SimMan software

The new SimMan software is based on market-proven software that communicates with the manikin for the registering of events during the simulation. The user interface is easy to use and control. It enables adjustment and management of all patient parameters during both simple and comprehensive pre-programmed training scenarios.

An improved scenario editor program allows the educator to build advanced scenarios, allowing multiple alternatives and predefined changes to the vital signs to be included and saved. By using Handlers and Trends the educator can introduce multiple physiological and pharmacological changes into the simulation



PDA

The PDA is easy to operate and gives the instructor wireless control of the SimMan systems functionality.



Simulated Patient Monitor

SimMan has a simulated patient monitor. This touch screen monitor provides concise clinical feedback of physiological parameters. The 17" color LCD screen is highly configurable and provides multiple simulated parameters each presenting multi level alarms. Snap shots of 12 lead ECG's and patient X-rays are also available to enhance the learning experience.



The monitor may be configured to display the desired parameters and curves, to most conveniently meet your needs and learning objectives. The user may also configure and save up to 5 different monitor configurations. The curves in the different configurations can be edited to meet your real environment and give the simulated monitor a clinical appearance.

211-00050 SimMan Manikin

Includes: Manikin, BP cuff, SpO₂ probe, Air/CO₂ tube, Operating software, Directions for Use.

210-090xx Peripherals Kit Complete

Includes: Simulated patient monitor, USB web-camera, USB hub, PDA as remote control, Link Box and laptop.

210-091xx Peripherals Kit Standard

Includes: Simulated patient monitor, USB web-camera, USB hub, PDA as remote control and Link Box.

*xx = language version

Optional accessory:

210-01050	Compressor 230-240 V
210-01150	Compressor 110 V
381220	Regulator Unit
381850	Portability Kit
381655	Transportation Case SimMan
381602	Transportation Case Compressor
245-18050	Transportation Case Simulator Peripherals

Airway Features

- Multiple airway skills:
 - Bag/valve mask ventilation
 - Oropharyngeal and nasopharyngeal airway placement
 - Combitube placement
 - LMA placement
 - Endotracheal tube intubation
 - Retrograde intubation
 - Fiberoptic intubation
 - Light Wand intubation
 - Transtracheal jet ventilation
 - Needle cricothyrotomy
 - Surgical cricothyrotomy
 - Fiberoptic bronchoscopy
- Exhaled CO₂ Flow
- Spontaneous respiration and variable respiratory rate
- Trismus, tongue edema, pharyngeal obstruction and laryngospasm
- Decreased cervical range of motion
- Decreased lung compliance
- Pneumothorax decompression at 3 sites and chest tube insertion
- Stomach decompression

Circulatory Skills and IV Drug Administration

- IV training arm with replaceable skin and veins
- Sites for subcutaneous and intramuscular injections

Pulses

- Carotid, femoral, brachial and radial pulses
- Pulses synchronized with ECG or compressions
- Pulse strength dependent on BP selected and pulse sites

Cardiac Functions

- Extensive ECG library with rate from 20-200
- Compression artifacts on ECG during CPR

- Defibrillation/Cardiac monitoring - 3 lead (4 connectors) ECG monitoring or via the defib paddles
- External Pacing – with variable pacing threshold

CPR

- ABC check
- Ventilation
- Chest compression
- ECG and heart rate can be displayed on the simulated monitor

Blood Pressure

- Can be taken automatically, auscultated or palpated
- Blood pressure arm with Korotkoff sounds synchronized with pulse for auscultation and palpation
- Easily varied BP: Systolic and diastolic can be set independently

Genitalia for Urinary Catheterization

- Male or female genitalia can be added to the simulator for urinary catheterization procedures

Sounds

- Simulator "speaking" through instructor microphone
- Heart sounds synchronized with ECG
- Independent left and right lung sounds
- Bowel sounds
- Vocal sounds, pre- or user-programmed
- Independent volume adjustment

Software operation

- Easy to operate
- Manual control over all parameters
- Scenario operation including Trend and Handlers preprogrammed by user

Video debriefing

- Web-camera recording
- Review event log together with synchronized recording of patient monitor and in-room video
- Stand alone debrief viewer for off site review

Simulated patient monitor

- Highly configurable
- Simulate several parameters including ECG (2 traces), SpO₂, CO₂, ABP, CVP, PAP, PCWP, NIBP, TOF, Cardiac output and other
- Viewable X-rays and snap shoot of 12 lead ECG
- Touch screen operation
- Multi level alarm

Remote control

- PDA as remote communicates through software via Bluetooth
- Easy-to-use software similar to PC user interface

Recommended Laptop Specification

Type:	Dell Latitude D600 or similar
Processor:	Pentium M, 1.8GHz
HDD:	60 GB
RAM:	512 MB min.
System:	Win XP Pro
Screen:	Dual screen with 1280 x 1024
Mouse:	2 button scroll wheel mouse
Other:	CD-RW RS-232 (serial port) Microphone input Headphone output 2-4 USB ports Internal Bluetooth Built-in Ethernet LAN

Optional Module Set Available

- Trauma Module Set
- Nursing Wound Set
- Bleeding Control Module Set

For more product information, please visit www.laerdal.com



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