



**Laerdal**<sup>®</sup>

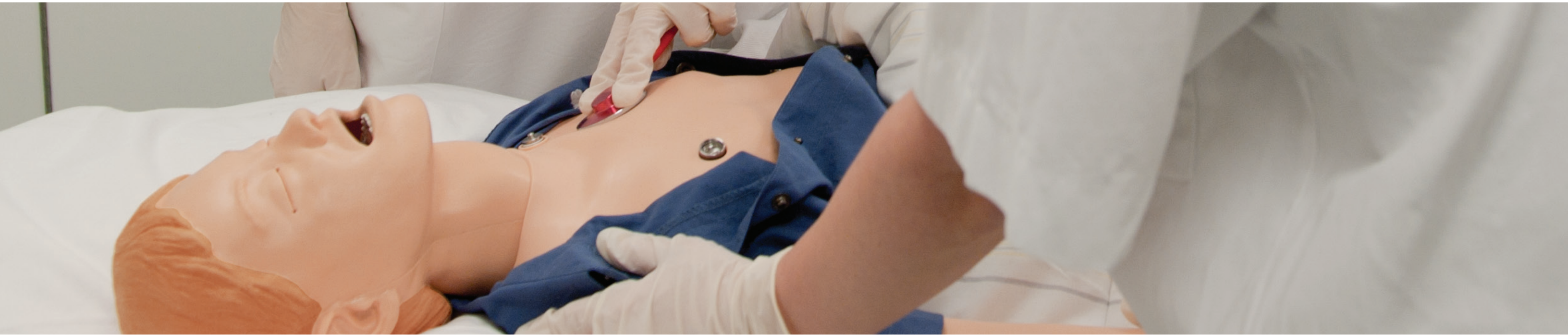
helping save lives



Improving pediatric outcomes

**SimJunior**<sup>™</sup>

*Laerdal Pediatric Simulation Solutions*



## Why simulation matters

Caring for pediatric patients is unique. Children's conditions can turn quickly; clinical decision making times are critical. Fast, accurate and coordinated team responses are essential if successful outcomes are to be achieved. How can pediatric health providers prepare for the complex and diverse clinical situations facing them?

As simulation becomes increasingly integrated into healthcare education as a core component of patient safety practice, new solutions are needed to prepare clinical staff for the challenges they face. SimJunior has been designed to meet these needs.

## Building self-confidence

Providing medical care to a child tests your skills and abilities. Children are different from adults.

- Their physiology is different
- They communicate differently
- The medical treatment they require is often unique to their age

In general terms, the average medical professional experiences far fewer children than adults resulting in many feeling inadequately prepared when treating pediatric patients.

Simulation training with SimJunior will help to bridge the gap in experiential learning, building confidence and better preparing health providers for the challenges in pediatric care.

## Partnering to improve pediatric outcomes

Building on our strategic alliance, Laerdal Medical and the American Academy of Pediatrics (AAP) have partnered to develop the SimJunior Pediatric Simulator and associated courseware. This collaboration will allow for new opportunities to integrate the latest technologies into your pediatric training programs.

Pairing SimJunior and courseware developed and validated by the AAP allows learners to master the skills needed to care for pediatric patients and ultimately improve patient outcomes.

American Academy of Pediatrics



DEDICATED TO THE HEALTH OF ALL CHILDREN™



Healthcare

EMS

Military

Professional Education

# Realistic training to achieve real results

With its easy-to-use and versatile platform, SimJunior is available in Standard and Advanced versions to enable instructors to scale their training to meet individual needs.

## Easy-to-use Software

Proven software that allows flexible management of all patient parameters. Using the scenario editor, instructors can create basic to advanced scenarios. The use of *Trends and Handlers* enable multiple physiological changes in the simulation.

## Versatile and Reliable

SimJunior allows learners to focus a broad range of pediatric skills in order to gain exposure and practical experience to life threatening pediatric problems. The interactive manikin gives immediate feedback to interventions allowing learners to think critically and adjust their care plan accordingly.

## Immediate Debriefing

Automatic debriefing based on the event log synchronized with video pictures provides immediate, detailed feedback on performance and optimizes the simulation as an educational tool (Video with Advanced version only).

### Breathing

- Simulated spontaneous breathing
- Observable chest rise
- Variable respiratory rates
- Multiple upper airway sounds synchronized with breathing
- Detect and quantify the volume of mechanical ventilations (including no ventilations)
- Bag Valve Mask capable
- Normal and abnormal breath sounds
- Oxygen saturation and waveform (Advanced version)
- Breathing complication
  - Bilateral chest movement with spontaneous breathing
  - Unilateral chest rise with right mainstem intubation
  - Unilateral and bilateral breath sounds
- Left and right lungs can be either closed or opened to allow ventilations

### Sounds

- Heart
- Lung
- Bowel
- Patient voice
  - Pre-recorded sounds
  - Wireless microphone

### Airway

The SimJunior airway is anatomically modeled as far as the trachea.

- Realistic airway with landmarks
- Oral and nasal intubation
- LMA or ET insertion
- Tongue edema
- NG tube
- Cricoid cartilage
- Head tilt and jaw thrust (no sensor)

### Vascular Access

- IV access (right arm and hand)
- Intraosseous access (right tibia)

### Chest Compressions

- Compliant with 2010 AHA and ERC Guidelines
- CPR compressions generate palpable pulses, blood pressure waveform, and ECG artifacts
- Detection and logging of a series of compressions in the data log

### Cardiac

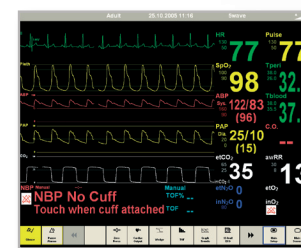
- Defibrillation and cardioversion
- Pacing
- Extensive ECG library
- Multiple heart sounds synchronized with ECG
- ECG rhythm monitoring (3 leads)
- 12 lead ECG display (Advanced version)

### Circulation

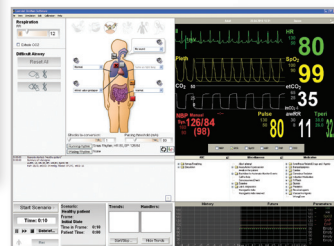
- Blood pressure measured manually by auscultation of Korotkoff sounds
- Bilateral carotid and unilateral brachial and radial (left side) pulses synchronized with ECG
- Pulse strength variable with BP
- Pulse palpation is detected and logged

### Other Features

- Interchangeable pupils - normal, dilated, and constricted
- Convulsions



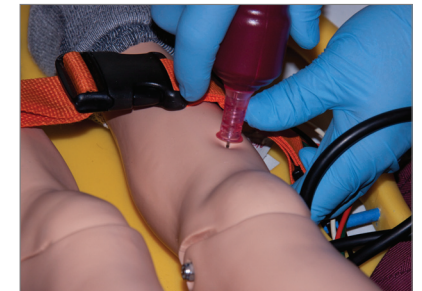
Patient Monitor



SimJunior Graphic User Interface



Interchangeable pupils simulate different levels of consciousness



Tibial IO Insertion



Automatic tongue edema



Convulsions

### Advanced Version

#### Software Features:

- Easy-to-operate software
- Manual control over all parameters
- Scenarios with Trends and Handlers can be preprogrammed by the user

#### Debriefing Viewer:

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

#### Patient Monitor:

- Highly configurable
- Touch screen operation
- Simulates several parameters including:
  - Heart rate, ECG, SPO2, NIBP, ETCO2
- X-ray display
- 12 lead ECG display
- Custom video and image display

## OPTIONS

SimJunior Standard\* 232-000XX

SimJunior Advanced\* with Complete Peripheral Kit 233-000XX

\* XX – denotes language version.  
SimJunior is available in ethnic skin tones (B - Brown, T - Tan).

### SimJunior Standard includes:

- Manikin
- VitalSim Control Unit with Remote Control and Operating Software
- Blood Pressure Cuff
- Set of Consumables
- Directions for Use
- Carry Case

### SimJunior Advanced with Complete Peripheral Kit includes:

- Manikin
- VitalSim Control Unit with Remote Control and Operating Software
- Laptop PC
- Touch Screen Monitor
- USB Webcam
- Blood Pressure Cuff
- Set of Consumables
- SimJunior Advanced Software and License
- Directions for Use
- Carry Case
- Includes a relevant set of scenarios available on SimStore
- [www.mysimcenter.com](http://www.mysimcenter.com)

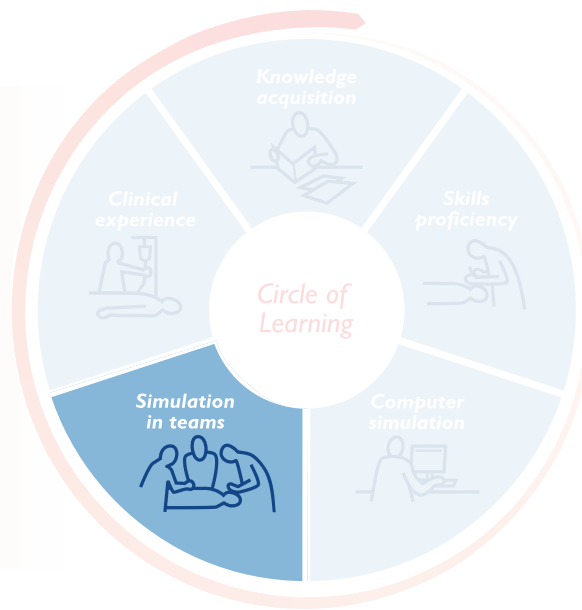
### Optional Accessories:

- Hard-sided Transportation Case for Peripherals
- Advanced Video System
- Pediatric Trauma Modules
- Defibrillator Connection Accessories
- Regulator Unit

## The complete solution

There is so much more to simulation than the patient simulator itself. That is why when we create a complete solution, we give just as much attention to the scenarios you will want to run and the ongoing educational and technical services you will require, so that you get the most out of your simulation programs now and for many years to come.

- Patient Simulators from Laerdal
- Laerdal Courseware
- Laerdal Services



## Our complete line of Patient Simulators

The complete portfolio of Laerdal patient simulators offers quality training solutions for neonatal, infant, pediatric and adult patient care. If you would like to find out how other healthcare organizations are incorporating our products into their training programs, please visit the User Story section on our website.



## Save time with Courseware

Laerdal has partnered with the American Academy of Pediatrics (AAP) and the National League for Nursing (NLN) to develop scenarios for use with SimJunior that will complement many of the core elements of pediatric training programs.

### Scenarios Include:



- SVT /Arrhythmia
- Seizure
- Multiple Trauma
- Ingestion
- Asthma
- Anaphylactic Shock



- Asthma
- Allergic Reaction
- Vomiting/Diarrhea
- Seizure
- Head Injury
- Sickle Cell

SimCenter offers easy access to validated content from worldwide simulation experts—so you can take advantage of their experience and get the most from every learning opportunity. This is delivered in a fully integrated system that includes:



SimStore  
SimDeveloper  
SimManager  
SimView

SimJunior Advanced includes a relevant set of scenarios which can be downloaded on SimStore. Visit [www.mysimcenter.com](http://www.mysimcenter.com) to learn how to fully optimize your learning experience.



## Laerdal Services... supporting you all the way

The Laerdal Services portfolio offers **comprehensive Educational Services** to support your implementation goals, and **extensive Technical offerings** to meet your simulator servicing needs. From simulator installation, routine preventive maintenance, product orientation and operation through to helping you realize your learning objectives and incorporating scenarios, Laerdal Services are available to help make your simulation-based training program a success!

Please contact your local Laerdal representative for full details about the following services:

### Educational Services\*

#### Introduction Course

On completion of this two-day course, participants will be able to prepare, operate the simulator's user interface, program and run scenarios using an instructional design process.

#### Update Course

Ideal for refresher training and updating your simulation skills.

#### Continuous Education Courses

We also offer scenario programming courses and custom courses to help you build competency and proficiency with your simulator(s).

### Technical Services\*

#### Installation

A stress free set-up of the simulator combined with basic operator training at your facility.

#### Preventive Maintenance Programs

The simplest way to control costs with planned services so that corrective repairs can be avoided when your training programs can least afford them.

#### Extended Warranties

A valuable agreement option that serves to reduce or eliminate unexpected repair expenses. They can be purchased in single-year increments.

#### ValuePlus Service Programs

For the ultimate in product services, we have created the ValuePlus Service program to provide comprehensive product protection and generous savings to suit flexible budgets and needs.

\*Services available may differ between countries

# A Legacy of Learning

Laerdal has been at the cutting edge of innovative healthcare training since the launch of Resusci Anne in 1960.

Today, this extensive experience comes to the fore with the addition of SimJunior into our comprehensive range of patient simulators. Through the creation of high quality simulation solutions, we are committed to increasing the potential and scope of this most valued training methodology in support of our long held mission - *helping save lives.*

[www.laerdal.com](http://www.laerdal.com)



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