



CAE PediaSIM

An advanced
pediatric simulator
for emergency care

A proven patient simulator for effective training

PediaSIM provides advanced pediatric simulation training so healthcare providers can improve team performance and communication in pediatric critical care. PediaSIM represents a six-year old patient with a comprehensive set of clinical features for trauma, nursing, and emergency response. Learners can practice and achieve mastery in a range of pediatric critical interventions, including needle cricothyrotomy, chest tube insertion and airway management.

For more information on CAE PediaSIM visit caehealthcare.com

Your worldwide
training partner
of choice



Technical Specifications

Standard Equipment

- PediaSIM manikin
- Instructor's workstation
- Müse software
- 2 patients
- 6 Simulated Clinical Experiences (SCEs)
- Power and Communications Unit
- 4 SCE development licenses
- TouchPro wireless patient monitor
- Portable air compressor
- Electronic user guide
- CAE Assurance value plan with customer and technical support, Training for Life™ and option to renew

PediaSIM HPS Option



The PediaSIM HPS includes all of the same features of the standard PediaSIM with the added ability to support anesthesia and respiratory care. PediaSIM supports the use of anesthesia and medical gases for medical training.

Standard PediaSIM HPS Equipment

- PediaSIM HPS manikin
- Instructor's desktop workstation
- Control rack
- Müse software
- 2 patients
- 13 Simulated Clinical Experiences (SCEs)
- Pharmacology Editor
- Drug recognition kit
- Full-function monitor interface

Optional Equipment

- Tablet PC (PECS only)
- Hands-free cable kit
- Manikin carrying case
- Adult Plug and Play

Manikin

- 48 inches (122 cm), 38 pounds (17.24 kg)

Electrical

- Input: 100-240V, 50/60Hz, 2.3A

Ambient Temperature Range

- Operation: 41°F to 104°F

Humidity

- 0% to 90% noncondensing

Key Features

Neurological

- Tri-state pupils and blinking eyes
- Automatic changes in blinking based on inadequate respiratory and cardiovascular conditions

Airway

- Upper airway designed from CT scan data of a real human patient
- Articulating mandible
- Difficult airway features include tongue swelling with variation of swollen and semi-swollen, pharyngeal obstruction, laryngospasm, and bronchial occlusion
- Intubation: orotracheal and nasotracheal, with the detection of right mainstem intubation
- Accommodates gastric distention with esophageal intubation
- ET Tube, combitube, LMA and other airway adjunct placement
- Bag-valve-mask ventilation
- Various emergency airway procedures include needle cricothyrotomy, transtracheal jet ventilation, retrograde wire techniques, and cricothyrotomy

Breathing

- Spontaneous breathing
- Bilateral and unilateral chest rise and fall
- Measures the presence or absence of carbon dioxide exhalation
- Bilateral chest tube insertion with fluid output
- Bilateral needle decompression
- Breath sounds are independently controlled and include normal, crackles, diminished, wheezing

Cardiac

- Defibrillation and cardioversion using live defibrillators, energy is automatically quantified and logged
- Pacing (use of hands-free pads), current is automatically quantified and logged
- 5-lead dynamic ECG display
- Cardiac sounds include:
 - Normal
 - S3, S4, S3 and S4
 - Early Systolic Murmur, Mid Systolic Murmur, Late Systolic Murmur, Pan Systolic Murmur, Late Diastolic Murmur

CPR

- Correct hand placement, depth, and rate of compressions are reflected in physiological feedback rather than virtual target on instructor's workstation
- Adequate chest compressions result in simulated circulation, cardiac output, central and peripheral blood pressures, carbon dioxide return

Trauma

- Secretions from eyes, ears and mouth

Urological

- Urine output
- Urinary catheterization with instructor controlled flow rate
- Interchangeable genitalia

Circulation

- Blood pressure measurement by auscultation and palpation
- Bilateral carotid, brachial, radial, femoral, popliteal, and dorsalis pedis pulses
- Pulse deficit automatically occurs if the systolic arterial blood pressure falls below certain thresholds
- Hemodynamic response to arrhythmias is physiologically accurate
- Hemodynamic monitoring feature provides the capability to measure and monitor the following:
 - Arterial blood pressure
 - Left ventricular pressure
 - Central venous pressure
 - Right atrial pressure
 - Right ventricular pressure
 - Pulmonary artery pressure
 - Pulmonary artery occlusion (wedge) pressure
 - Thermodilution cardiac output

Metabolic System

- Metabolic features are physiologically modeled within the software and the results are made available on the instructor workstation
- ABG data displayed corresponds accurately and dynamically to the alveolar concentration of CO₂ and O₂
- Instructor driven simulated metabolic acidosis and alkalosis

Vascular Access

- IV insertion supported in right arm including cephalic, basilic, and antibrachial veins
- IO site access on anterior tibia of right leg
- Right jugular IV line supports infusions

Pharmacology System

- Pharmacology system models automatically calculate the pharmacokinetics and pharmacodynamics for 56 intravenous and inhaled medications
- All patient responses to drugs are automatic, dose dependent and follow appropriate time course

Sounds

- Breath, cardiac, bowel and vocal sounds include:
 - Pre-recorded sounds and voices
 - Customized sounds and voices via the provided wireless microphone

Articulation

- Range of motion in the wrists, elbows, knees and ankles