CAE BabySIM®

Small but powerful, validated physiology

Tiny humans depend on us in big ways. That's why CAE Healthcare skipped no details when developing its smallest member of the patient simulation family. CAE BabySIM is an infant-sized, high-fidelity simulator that is powered with advanced physiology for practicing critical care and trauma care. So real, learners are immersed as they experience seesaw breathing, a palpable fontanel, cooing, and crying. BabySIM also supports intubations, chest compressions, chest tube insertions, and IO insertions to prepare learners for the most critical experiences in trauma care. In BabySIM we deliver critical features, because we know it is critical to be prepared.

CAE Healthcare

Technical Specifications

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

Optional Equipment
Tablet PC
Hands-free cable kit
Manikin tool kit
Wall Air kit

Optional Software
Infant Emergencies Learning Modules
Infant Nursing Learning Modules

Manikin
25 ¾ inches (65.4 cm)
16 ¼ lbs (7.37 kg)

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

Ambient Temperature Range
Operation: 40°F to 104°F

Humidity
0% to 90% noncondensing

Key Features

Airway
- An anatomically realistic upper airway (oropharynx, nasopharynx and larynx), representing that of a three-to six-month-old patient.
- Intubation: orotracheal, nasotracheal, detection and response to right mainstem
- ET Tube, LMA and Combitube
- Bag-valve-mask ventilation

Breathing
- Measures the presence or absence of carbon dioxide exhalation synchronized with programmed lung sounds. Lung sounds include normal, biphasic, wheeze bronchovescular, crackles, prolongation, rhonchi, stridor, wheezing
- Seesaw breathing
- Bilateral and unilateral chest rise and fall
- Spontaneous breathing
- Unilateral chest tube insertion with fluid output
- Unilateral needle decompression detected and generates changes in pulmonary mechanics and gas exchange
- Esophageal intubation is fully supported with gastric distension

Circulation
- Blood pressure measurement by auscultation and palpation
- Bilateral brachial and femoral pulses
- Automatic pulse deficit occurs with decreased systolic blood pressure
- Bilateral brachial and femoral pulses are synchronized with ECG
- Pulses are independently controllable by the instructor for presence/ absence in the case of trauma to a specific extremity

Cardiac
Accurately simulates a wide variety of hemodynamic conditions and responses
- Live defibrillation, pacing, and cardioversion
- Defibrillation and cardioversion using live defibrillators, energy is automatically quantified and logged
- Pacing (use of hands-free pads), current is automatically quantified and logged
- 3-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, and carbon dioxide return

Vascular Access
- IV access supported via left femoral catheter
- IO site on anterior tibia of right leg

Neurological
- Software driven tri-state pupils and blinking eyes
- Automatic changes in blinking based on inadequate respiratory and cardiovascular conditions
- Palpable anterior fontanel
- Bulging fontanel capability to simulate increased intracranial pressure

Urological
- Urine output with and without catheter insertion
- Instructor controlled rate and flow of urine output
- Interchangeable genitalia

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 CO_2 and O_2
- Instructor driven simulated metabolic acidosis and alkalosis

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

Trauma
- Secretions from eyes, ears and mouth

Sounds
- Crying/cooing, breath, heart and bowel sounds
- Pre-recorded sounds and an be looped for continuous replay
- Customized sounds and voices via the provided wireless microphone