



# CAE Human Patient Simulator

## Respiratory and Critical Care Simulator

Practice respiratory and critical care training with the CAE Human Patient Simulator (HPS). Known for its realism, CAE HPS responds to real anesthetic gases, oxygen therapy and medications.



Available in two configurations (adult and pediatric), CAE HPS delivers simulation so real that its lungs can consume oxygen and produce carbon dioxide. Other key features include:

- Eyes, ears and mouth secretions to detect trauma
- Range of motion in the wrists, elbows, knees and ankles
- Ability to interface with real clinical monitors and ventilators
- Left-arm blood-pressure management by auscultation and palpation

This high-fidelity simulator can also flow trigger or pressure trigger a ventilator to cycle and may be configured to display respiratory distress or agitation toward the ventilator.

## Broaden the scope; cut out costs

Teach nursing, respiratory therapy and emergency medicine with a CAE HPS designed specifically for health sciences. Streamlined for cost savings, this medical manikin offers targeted capabilities without the anesthesia delivery system or the gas accessory kit.

- 50 simulated clinical experiences (SCEs)
- 6 patient profiles
- 4 SCE development licenses



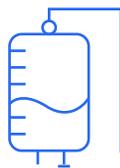
## Anesthetic care in any situation

Knowing how to administer anesthesia in various settings is critical. CAE HPS helps prepare health professionals for various encounters.



### Abnormal breathing

Increase life-saving measures by using the realistic airway system to practice bag-valve-mask ventilation and intubation.



### Fluid deprivation

Practice IV cannulation with flashback supported in the simulator's right arm, including the brachial, cephalic, basilic and antecubital veins.



### Unconsciousness

Learn correct CPR hand placement, depth and rate of compressions with physiological feedback.

## Learn More About CAE HPS

Call us at +1.941.377.5562 or email [SRQAccountmanagers@cae.com](mailto:SRQAccountmanagers@cae.com)

[caehealthcare.com](http://caehealthcare.com)

# CAE Human Patient Simulator

## Technical Specifications

### Manikin

**Dimensions:** 71" H (180.34 cm)  
**Approximate Weight:** 75 lbs. (34 kg)

### Electrical

**Input:** 100–220V, 50/60Hz, 2.3A

### Ambient Temperature Range Operation

41°F to 104°F

### HPS-010 Anesthesia Standard Equipment

The HPS-010 includes an anesthesia-capable manikin that is compatible with the optional anesthesia delivery system and gas accessory kit. Users can purchase the anesthesia delivery system initially or at a later date.

HPS manikin	50 simulated clinical experiences
Muse software	4 SCE development licenses
Computer and control rack	Pharmacology Editor
Full-function monitor interface	Pharmacology Library
Enhanced drug recognition system	Onsite installation
Instructor's desktop	Electronic user guide
6 patient profiles	CAE Assurance warranty plan with free Training for Life™

### HPS 010 Anesthesia Optional Equipment

Anesthesia delivery system	Hands-free cable kit
Gas accessory kit	Moulage kit
Monitor interface kit	TouchPro patient monitor
In-room air compressor	

### HPS-020 Health Sciences Standard Equipment

The HPS-020 comes with a health sciences capable manikin that is designed for nursing, respiratory therapy and emergency medicine. Please note that this model does not support the anesthesia delivery system or the gas accessory kit.

HPS manikin	50 simulated clinical experiences
Muse software	4 SCE development licenses
Computer and control rack	Pharmacology Library
TouchPro patient monitor	Onsite installation
Instructor's desktop	Electronic user guide
6 patient profiles	CAE Assurance warranty plan with free Training for Life™

### HPS-020 Health Sciences Optional Equipment

Enhanced drug recognition system	Pharmacology editor
Instructor's laptop	In-room air compressor
Pericardiocentesis	Hands-free cable kit
Diagnostic peritoneal lavage	Moulage kit

## Key Features & Benefits

### Airway

Head tilt/chin lift
Tongue swelling, pharyngeal obstruction, laryngospasm and bronchospasm
Intubation: orotracheal, nasotracheal, ET tubes, retrograde, fiber optic, right mainstem
Gastric distention with esophageal intubation
Supports ET tube and other airway adjunct placement
Bag-valve-mask ventilation
Surgical/needle cricothyrotomy
Variable airway resistance and compliance
Bilateral and unilateral bronchial occlusion
Supports real capnography

### Anesthesia and Scavenging

Ability to administer anesthetic agents and medical gases
Lungs consume oxygen and produce carbon dioxide
Uptake and distribution of nitrous oxide and volatile anesthetics
Direct gas exchange within the lungs
Mechanical ventilation fully supported with automatic responses to CPAP, PSV, PEEP, SIMV, assist control modes and weaning protocols

Simulator will flow trigger or pressure trigger a ventilator to cycle
Simulator can be configured to fight the ventilator
Expires carbon dioxide automatically based on patient condition and interventions
Thumb twitch with standard peripheral nerve stimulator based on neuromuscular agent response

### Articulation

Range of motion in the wrists, elbows, knees and ankles
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### Breathing

Bilateral and unilateral chest rise and fall
Presence or absence of carbon dioxide exhalation
Spontaneous breathing
Bilateral chest tube insertion with fluid output and automatic resolution of physiology
Bilateral needle decompression with automatic resolution of physiology
Variable lung and chest compliance
Pulse oximetry correlates dynamically to ventilation, oxygenation and perfusion

### 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
12-lead dynamic ECG display
Simulated introduction and progressive insertion of pulmonary artery catheter displayed on patient monitor with appropriate waveforms

### Circulation

Blood pressure measurement (left arm) by auscultation and palpation
Bilateral carotid, brachial, radial, femoral, popliteal, and dorsalis pedis pulses

### 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

### Enhanced Drug Recognition System

Features barcode technology and extensive drug library
Standard syringes with barcoded labels including drug name and concentration
Barcode technology automatically identifies the drug, concentration and dose, requiring no interaction from the instructor

### Neurological

Reactive pupils and blinking eyes
Automatic changes based on inadequate respiratory and cardiovascular conditions
Convulsions

### Pharmacology System

Pharmacology system models automatically calculate the pharmacokinetics and pharmacodynamics for more than 50 intravenous and inhaled medications
All patient responses to drugs are automatic, dose-dependent and follow appropriate time course

### Sounds

Pre-recorded sounds and voices
Customized sounds and voices via the provided wireless microphone

### Trauma

Diagnostic peritoneal lavage with fluid return
Pericardiocentesis with fluid withdrawal linked to physiology
Eyes, ears and mouth secretions

### Urological

Urine output
Urinary catheterization without fluids
Interchangeable male and female genitalia

### Vascular Access

IV cannulation with flashback supported in right arm including the brachial, cephalic, basilic, and antecubital veins
Right deltoid intramuscular injection site available
Right jugular and left femoral IV lines support infusions

Reduce medical errors. Improve performance. Enhance patient care.

