



CAE HPS

Modeled patient
physiology you
can count on

A simulator that breathes — for anesthesia, respiratory and critical care

Built for anesthesia, respiratory, and critical care, the HPS has true oxygen and CO₂ gas exchange and the most advanced, modeled physiology available today.

The HPS connects to patient monitors and supports mechanical ventilation to deliver more realism for immersive learning. And, if you need a broad range of features without the anesthesia capability CAE Healthcare offers the Health Science HPS, which accommodates nursing, respiratory therapy, and emergency medicine. Each HPS model is packaged with 50 Simulated Clinical Experiences so you can spend less time writing scenarios and more time integrating simulation into your curriculum.

Find out how CAE HPS can redefine your expectations at caehealthcare.com

Your worldwide training partner of choice



Technical Specifications

HPS-010 Anesthesia Standard Equipment

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

HPS mannequin
Muse software
Computer and control rack
Full function monitor interface
Enhanced drug recognition system
Instructor's desktop
6 patients
50 Simulated Clinical Experiences
4 SCE development licenses
Pharmacology Editor
Pharmacology Library
Onsite Installation
Electronic user guide
CAE Assurance with Free Training for Life

Optional HPS-010 Equipment

Anesthesia delivery system
Gas accessory kit
Monitor Interface kit
In room air compressor
Hands free cable kit
Moulage kit
TouchPro Patient Monitor
PediaSIM HPS Plug and Play

HPS-020 Health Sciences Standard Equipment

The HPS-020 comes with a Health Sciences capable mannequin 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 mannequin
Muse software
Computer and control rack
TouchPro patient monitor
Instructor's desktop
6 patients
50 Simulated Clinical Experiences
4 SCE development licenses
Pharmacology Library
Onsite Installation
Electronic user guide
CAE Assurance plan with Free Training for Life

Optional HPS-020 Equipment

Enhanced Drug Recognition System
Instructor's laptop
Pericardiocentesis
Diagnostic Peritoneal Lavage
Pharmacology Editor
In room air compressor
Hands free cable kit
Moulage kit
PediaSIM HPS Plug and Play Mannequin

Manikin

HPS Adult: 5-foot-11, 75 lbs
PediaSIM HPS: 48 inches, 38 pound

Electrical

Input: 100-220V, 50/60Hz, 2.3A

Ambient Temperature Range

Operation: 41°F to 104°F

Humidity

0% to 90% noncondensing

Lab Rack

42.5"H x 27"W x 28"D

Umbilical Assembly

12' long

Key Features

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
- Expired carbon dioxide automatically based on patient condition and interventions
- Thumb twitch with standard Peripheral Nerve Stimulator based on neuromuscular agent response

Neurological

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

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 cricothyrotomy
- Needle cricothyrotomy
- Variable airway resistance and compliance
- Bilateral and unilateral bronchial occlusion
- Supports real capnography

Breathing

- Bilateral and unilateral chest rise and fall
- Measures the 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

Articulation

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



Circulation

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

Urological

- Urine output
- Urinary catheterization
- Interchangeable 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

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

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

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

Trauma

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

Sounds

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