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Welcome!

Welcome to the AAP Simulation Program Resource and Equipment Catalog. This resource serves as a repository for equipment that the AAP Simulation Program has to offer to our customers and the functionality of the simulation lab located at headquarters in Itasca, Illinois. For additional information, please email simulation@aap.org.
Simulation Lab Features & Equipment

Laerdal Patient Monitor

Laerdal patient monitor software looks and responds like a real-world patient monitor. Features include touchscreen capability, clinical feedback for physiological parameters, multi-level alarms.

**Quantity**
- 2 patient monitors in Simulation Lab

SimScreen®

The SimScreen® uses Mirropane technology commonly known as a “two-way mirror”. The screen utilizes a highly reflective mirror which is partially reflective and partially transparent. The screen is highly reflective on one side preventing the learner from looking back at the instructor. From the instructor’s point of view, they can observe the student without any distortion.¹

**Quantity**
- 2 SimScreens

SimCapture

SimCapture allows you to effectively manage, record, and assess simulation training, both on-site and in-situ. Capture audio, video, annotations, patient monitor, and simulator data in a single web-based interface.²

SimCapture is available to record and/or broadcast events that occur in the Simulation Lab at AAP Headquarters in Itasca.
The 48" headwall simulates accurate flow rates for oxygen, air, and suction using medical grade outlets and accessory products identical to those found in any hospital's patient room. Includes a non-functional nurse call face plate.

**Quantity**
- 2 headwalls in the Simulation Lab (immovable)

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The crash cart contains equipment, supplies, and simulated medications that you would normally find in a hospital setting.

**Quantity**
- 1 crash cart

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With simple and easy-to-use features such as hands-free alarm silence, full-color display, and an integrated scale, providers can focus on the most critical aspects of their job—caring for newborns and their families.³

**Quantity**
- 1
Stryker MX Pro R3 Stretcher

A lightweight, 650 lb. capacity, easy-to-handle manual ambulance cot. 4

Quantity
- 1

High-Fidelity Simulators

Premature Anne™

Premature Anne™ is a realistically proportioned 25-week preterm manikin with the functions to practice skills within5:

Quantity
- 6

Premature Anne™ specifications include:

- Airway management
  - Suctioning
  - Intubation
  - ET/NG/OG tube insertion

- Vascular access
  - Practice umbilical vein catheterization
  - Simulation blood flashback upon cannulation of umbilical vein

- Respiration
  - Identifying cyanosis
  - Hearing heart, lunch, and vocal sounds

- Pre-ported IV sites
  - Right saphenous vein
  - Dorsum on left hand
  - Left antecubital fossa
SimNewB® is a newborn tether less simulator designed to help improve neonatal resuscitation and to meet the specific learning objectives of neonatal resuscitation protocols. SimNewB® measures 21” and weighs 3.17kg (7lbs).6

Quantity

- 11

SimNewB® specifications include:

- **Airway**
  - Anatomically accurate, realistic airway
  - Lung recruitment maneuver
  - Oral and nasal ET tube insertion
  - LMA Insertion
  - Sellick maneuver
  - Positive-pressure ventilation
  - Right mainstem intubation
  - Suctioning
  - Variable lung resistance
  - Gastric tube insertion

- **Breathing / Respirations**
  - Spontaneous breathing, with variable rate
  - Bilateral and unilateral chest rise and fall with mechanical ventilation
  - Normal and abnormal breath sounds
  - Simulated oxygen saturation
  - Breathing complications
  - Pneumothorax
  - Unilateral chest movement with mechanical ventilation
  - Unilateral breath sounds
  - Unilateral needle thoracentesis, mid-axillary

- **Cardiovascular System**
  - Extensive ECG Library with rates from 10 - 300 bpm
  - Simulated ECG monitoring via 3-lead monitor

- **Circulation**
  - Heart Sounds
  - Palpable umbilical pulse
  - Bilateral brachial pulse
  - Central cyanosis

- **Vascular Access**
  - Patent, cuttable umbilicus with venous and arterial access for bolus or infusion
  - Simulated blood flashback upon cannulation
  - Bilateral interosseous access

- **Sounds**
  - Vocal: Grunt breathing, crying, hiccups and others
  - Lung: Normal, stridor, pneumonia, and others
  - Heart: Normal, diastolic murmur, systolic murmur, and others
  - Anterior lung sounds

- **Other Features**
  - Rotating (selectable) pupils with normal, blown, and constricted pupils
  - Moving limbs: limp, tone, spontaneous & seizure
  - Laerdal Scenario Cloud to include 8th Edition NRP curricula
SimJunior® represents a 6-year-old boy that simulates a wide range of conditions from a healthy, talking child to an unresponsive, critical patient with no vital signs. SimJunior® allows learners to focus on a broad range of pediatric skills to gain exposure and practical experience of life-threatening pediatric problems.

**Quantity**
- 4

**SimJunior® specifications include:**

- **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)

- **Breathing**
  - Simulated spontaneous breathing
  - Observable chest rise
  - Variable respiratory rates
  - Multiple upper airway sounds synchronized with breathing
  - Detect mechanical ventilations (including no ventilations)
  - Bag Valve Mask capable
  - Normal and abnormal breath sounds
  - Oxygen saturation and waveform
  - R & L lungs can be closed or opened for ventilations
  - Bilateral chest movement w. spontaneous breathing
  - Unilateral chest rise with R mainstem intubation
  - Unilateral and bilateral breath sounds

- **Cardiac**
  - Defibrillation and cardioversion
  - Pacing
  - Extensive ECG library
  - Multiple heart sounds synchronized with ECG
  - ECG rhythm monitoring (3 leads)
  - 12 lead ECG display (Optional Patient Monitor)

- **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

- **Vascular Access**
  - IV access (right arm and hand)
  - Intraosseous access (right tibia)

- **Chest Compressions**
  - Compliant with 2015 AHA and ERC Guidelines
  - CPR compressions generate palpable carotid pulses, blood pressure waveform, and ECG artifacts
  - Detection and logging of a series of compressions in the data log

- **Sounds & Other Features**
  - Heart, Lung, Bowel, Patient voice
  - Interchangeable pupils (normal, dilated, constricted)
  - Convulsions
Laerdal® Neonate Intubation Trainer

Laerdal® Neonatal Intubation Trainer allows teaching of intubation skills on the newborn baby. Robust and realistic, this model allows students to undertake training that is directly transferable to the clinical setting.⁸

- Realistic anatomy of a newborn baby
- Intubation (oral and nasal)
- Bag-Valve-Mask ventilation
- Correct tube placement can be checked by practical inflation test

Quantity
- 10

Laerdal® Infant Airway Management Trainer

The Laerdal® Infant Airway Management Trainer provides the realistic anatomy of a 3-month-old infant for teaching and practicing basic and advanced airway management skills.⁹

- Realistic anatomy of the tongue, oropharynx, epiglottis, larynx, vocal cords, and trachea
- Bag-Valve Mask ventilation
- Sellick Maneuver
- Intubation (oral and nasal)
- Laryngeal Mask Airway (LMA)
- Realistic tissue simulation
- Correct tube placement can be checked by practical inflation test
- Simulated stomach inflation

Quantity
- 3
The Laerdal Airway Management Trainer realistically simulates an adult airway, and the lifelike upper torso and head can be used to demonstrate and practice intubation, ventilation, and suction techniques. In addition, it can be used to demonstrate upper airway bronchoscopy and bronchoscopy guided endotracheal intubation.10

Quantity
• 1

Features include:

- Bag-valve ventilation
  Provides visual inspection of lung expansion
  Provides auscultation of breath sounds
  Sellick Maneuver (Cricoid pressure)
  Laryngospasm

- Intubation
  Tracheal (oral and nasal)
  Pharyngeal (oral and nasal)
  Esophageal
  Bronchial
  LMA insertion
  Endotracheal intubation
  Placement of supraglottic airways
  Correct tube placement
  Feedback for excessive laryngoscope pressure
  Bronchoscopic evaluation of tip position

- Suctioning and Clearing
  Oral cavity
  Oro- or nasopharynx
  Oro- or nasotracheal, via endotracheal tube
  Gastric drainage

NeoNatalie™ is an inflatable simulator designed to teach basic neonatal resuscitation skills. Developed to meet the key requirements for teaching the initial steps of resuscitation in the first ten minutes of a newborn’s life, NeoNatalie is an effective, cost-efficient tool.11

Quantity
• 3 light skin tone, 7 dark skin tone
NeoNatalie Live is smart skills trainer designed to build competency and confidence of health workers in providing newborn resuscitation. Through realistic patient cases with immediate, objective performance feedback, health workers can develop and maintain their skills in newborn ventilation.

Features include:

- Four different patient cases with varying initial heart rate and lung compliance
- Objective feedback on ventilation quality in terms of pressure, rate, continuity, and airway patency
- Detection of head tilt for open or closed airways
- Visible chest rise
- Realistic heart rate affected by ventilation performance
- Varying lung compliance — can simulate water-filled lungs
- Crying sound for successful resuscitation
- Umbilical cord with connector to simulate cord-cutting
- Measures bag-mask ventilation performance

Quantity
- 2

Premature Anne™ Task Trainer

An anatomically correct manikin of a baby born at 25 weeks.

Features include:

- **Airway**
  - Anatomically accurate, realistic airway
  - ET tube insertion
  - Sellick Manoeuvre
  - Positive Pressure Ventilation
  - Right mainstem intubation
  - Suctioning
  - OG/NG tube insertion

- **Vascular Access**
  - Patent, cuttable umbilicus with venous and arterial access for bolus or infusion
  - Simulated blood flashback
  - Peripheral IV access (dry ports only)

- **Breathing**
  - Bilateral and unilateral chest rise and fall with mechanical ventilation
  - Unilateral chest movement (R mainstem intubation) with mechanical ventilation

- **Cardiac**
  - Realistic compressions

- **Sounds**
  - Auscultation of lung sounds during ventilation

Quantity
- 9
Newborn Anne™ accurately represents a full term (40 week), 50th percentile newborn female, measuring 21 inches and weighing 7lbs.

**Features include:**

- Realistic airway designed for training the use of Positive-Pressure Airway devices, and the placement of ET Tubes and LMA’s.
- Realistic chest rise with manual ventilations
- Functionality to relieve a tension pneumothorax via needle decompression.
- An umbilicus with a manually generated pulse can be assessed, cut and catheterized for IV access.
- IO access in left and right lower leg, tibial tuberosity, and medial malleolus

**Quantity**

- 11

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**LittleJunior**

The Little Junior manikin meets your need for a low-cost, lifelike child CPR trainer and is the perfect supplement to the Resusci® Junior manikin.

**Quantity**

- 8
Other Equipment

**Neopuff**

T-piece resuscitator designed by Fisher & Paykel Healthcare to deliver controlled, consistent, and precise pressures – independent of operator experience. It can provide assisted respiratory breaths to neonates and infants (up to 10 kg) in the delivery room or neonatal intensive care unit (NICU).

**Quantity**
- 10

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**Automated External Defibrillator (AED) - Trainer**

AED trainer which simulates the HeartStart® FR2 AED in appearance, operation, and voice prompts.

**Quantity**
- 11 (various manufacture)

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**EZ-IO Intraosseous Vascular Access System**

Arrow EZ-IO® System is indicated anytime vascular access is difficult to obtain in emergent, urgent, or medically necessary cases for up to 24 hours and provides peripheral venous access with central venous catheter performance.

**Quantity**
- 9 (6 EZ-IO 3G, 3 EZ-IO)
**Pediatric Backboard**

Pediatric immobilization device perfect for children 25in to 54in that weigh 10 to 85 lbs.

**Quantity**
- 1

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**Kendrick Extrication Device (KED)**

Kendrick extrication device (KED) is a device used in extrication of victims of traffic collisions from motor vehicles. Commonly carried on ambulances, a KED is typically used by an emergency medical technician, paramedic, or another first responder. It was originally designed for extrication of race car drivers.¹⁹

**Quantity**
- 1

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**Pediatric Immobilization Board**

This equipment is capable of immobilizing infants and children with spinal injuries, or in need of restraint.

**Quantity**
- 2 (1 small, 1 large on backboard)
Studies show that the conventional 2-year BLS training cycle is not optimal for achieving the mastery learning of high-quality CPR skills needed to save more lives. Skills decay in as few as 3 months after training is completed. RQI provides a high-reliability platform for simulation-based mastery learning, implemented through low-dose, high-frequency quality improvement sessions that measure and verify competence.20

Quantity

- 1 Adult/Child Cart
- 1 Neonatal Resuscitation Program Cart

VR Headsets

Experience total immersion with 3D positional audio, hand tracking and haptic feedback, working together to make virtual worlds feel real. 21

Quantity

- 1 Meta Quest 2 Headset and Controllers
- 1 Meta Quest 2 Headset and Controllers (**only to be used for Health Scholars VR program**)

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™
Citations

1) https://www.simscreen.com/
19) http://www.kendrickemssplints.com/
21) https://www.meta.com/quest/