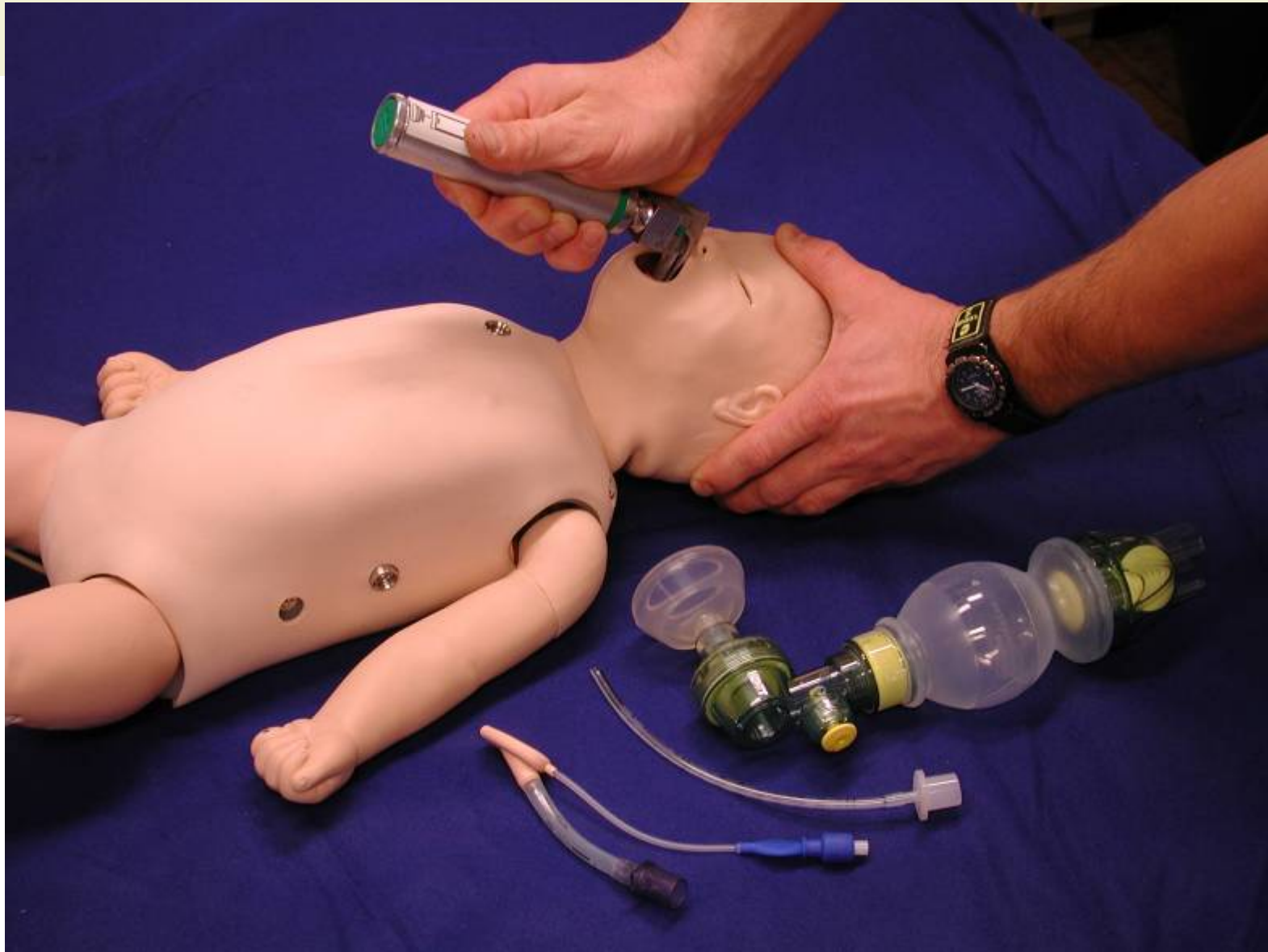


Snapshots from the development process



The SimBaby Softwares

LAERDAL



SimBaby

LAERDAL



SimBaby Pocket

LAERDAL



Debrief Viewer

LAERDAL



Scenario Editor

LAERDAL



Handler Editors

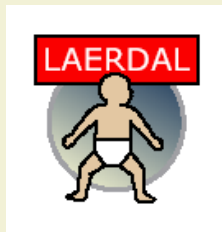
LAERDAL



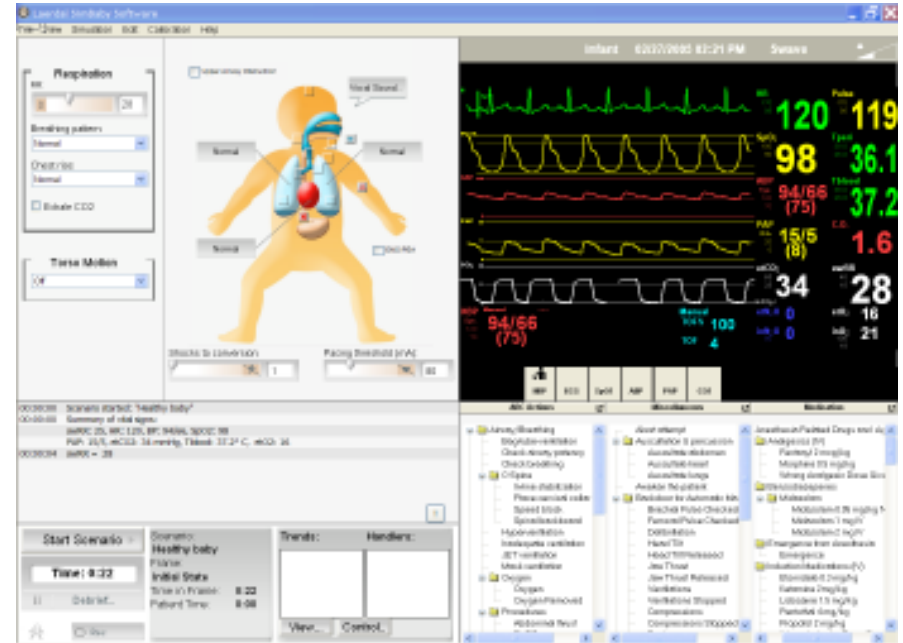
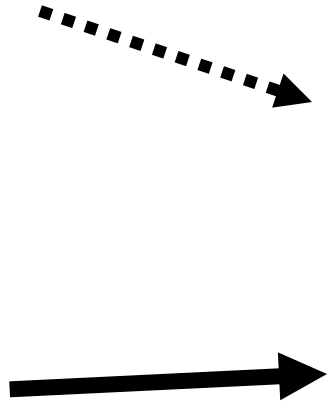
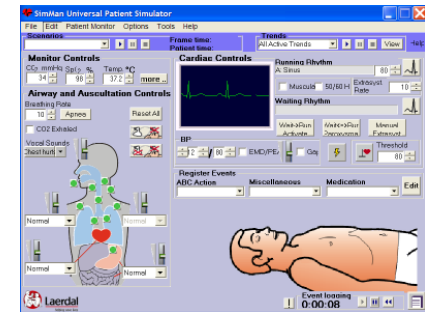
Trend Editor



Manikin Update

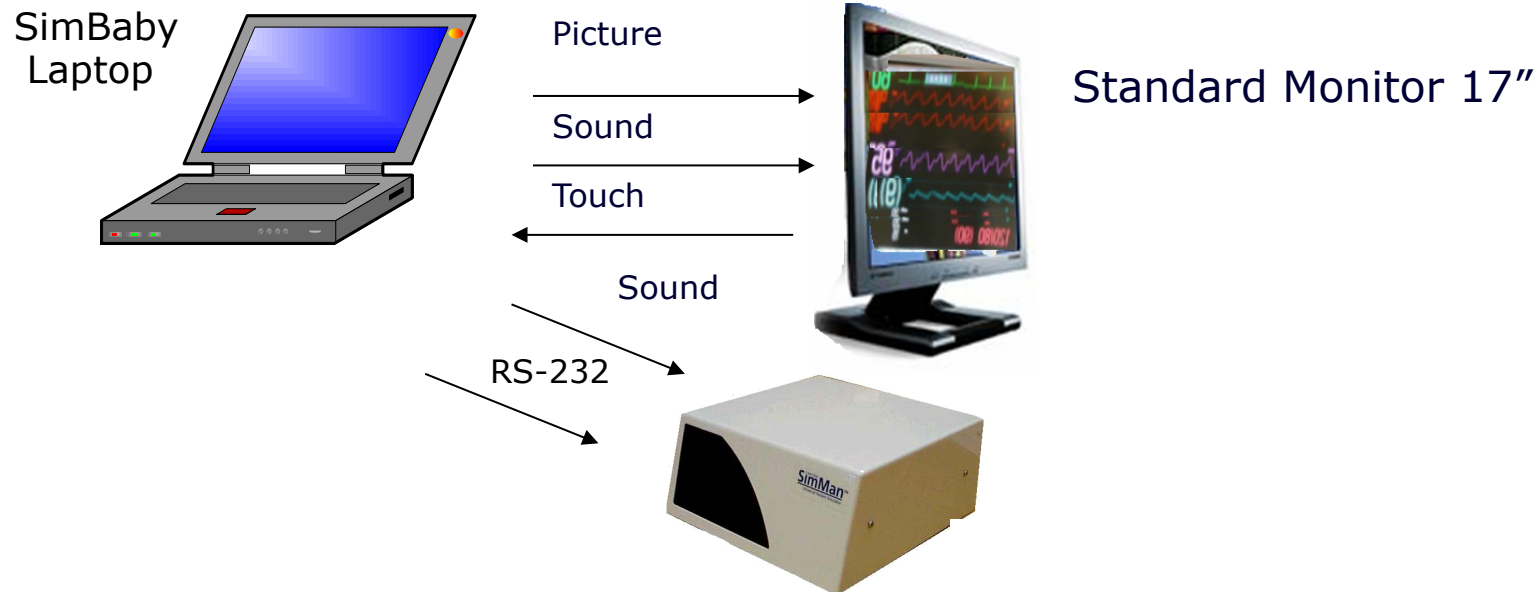


SimBaby Application



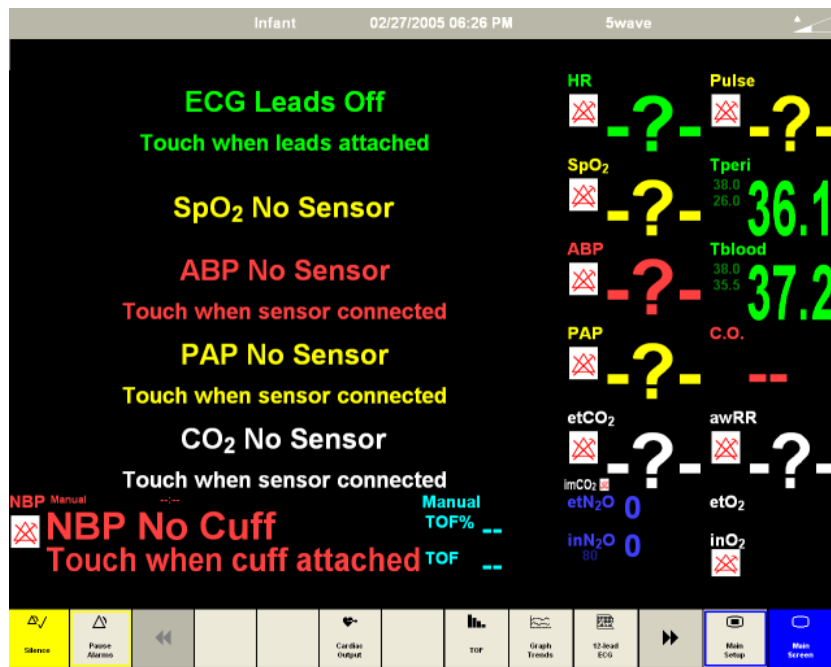
- Based on MicroSim software platform
- Large degree of compatibility with SimMan
- Integrated Patient monitor
- Integrated video for debriefing

Integrated Patient monitor – second screen on PC



- Extended Desktop. Uses second screen.
- USB touch input.
- Monitor sounds on right channel

Patient Monitor

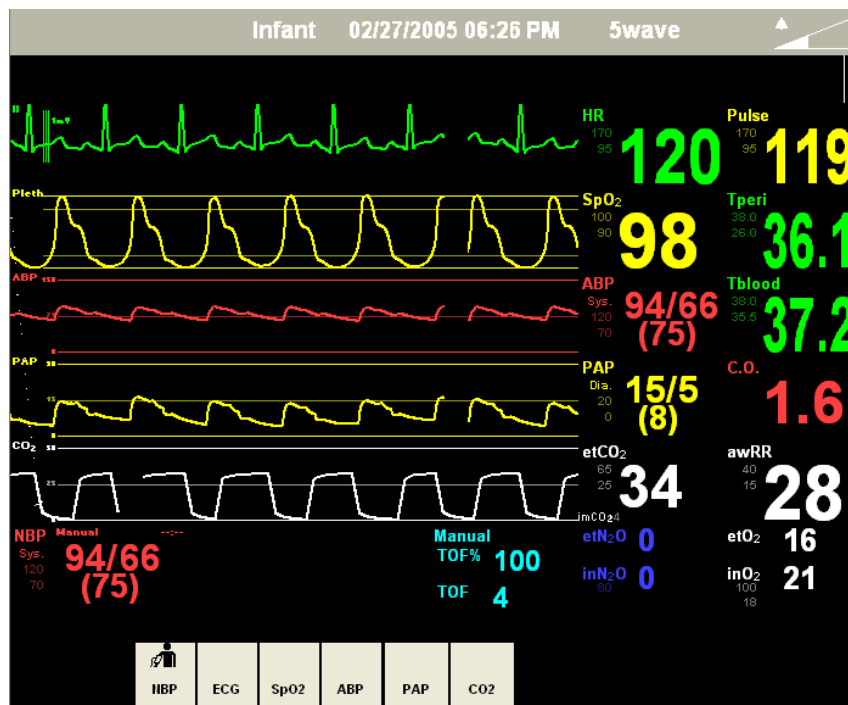


The simulated patient monitor emulates a Philips IntelliVue patient monitor.

Students can:

- adjust scales
- set alarm levels
- adjust sound volumes
- select parameters
- move parameters around
- view trends

GUI Monitor

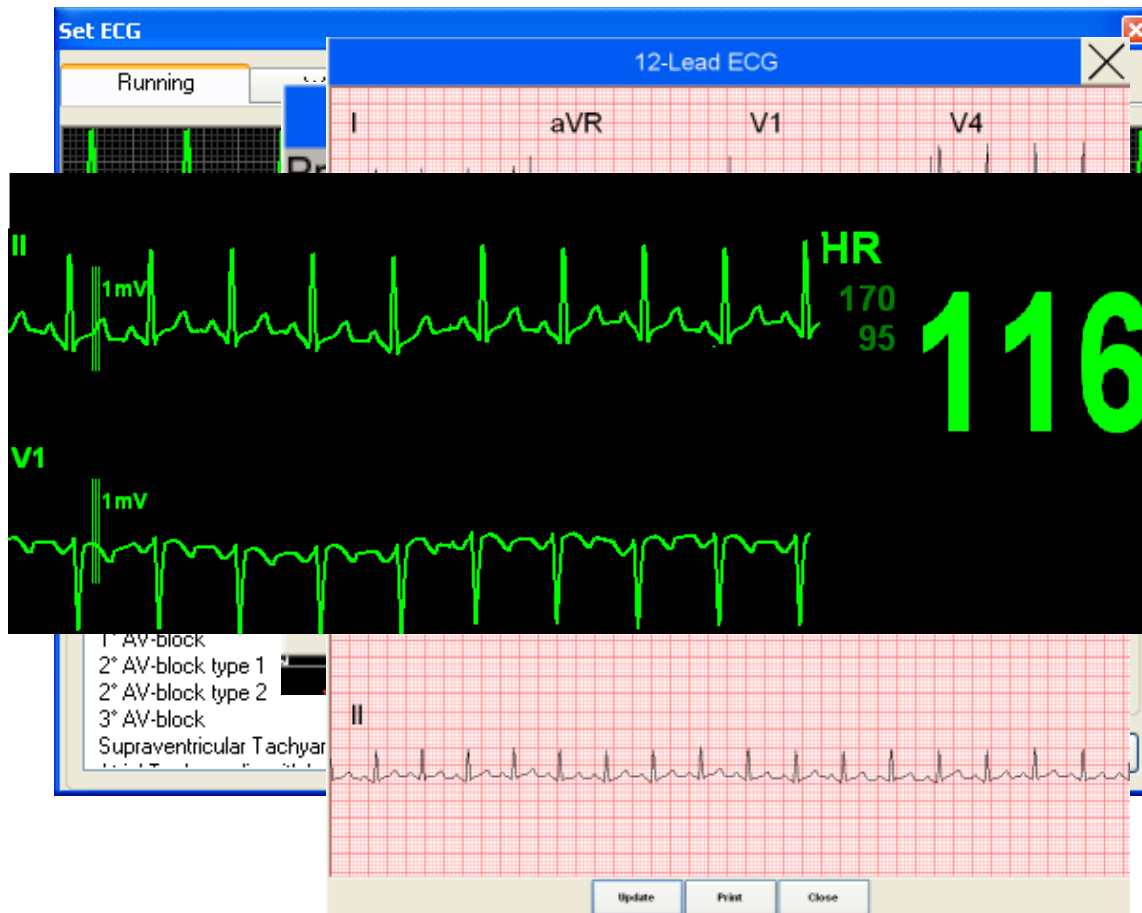


The GUI has the same layout as the students monitor, but may have different content.

- It is intended to **read** parameters and **set** parameters.
- It always show the current **setting**, not always the current **state**.
- Click on a parameter and you get a settings menu.
 - Create a single parameter trends.
- Mouse over a parameter, allows setting with mouse wheel.

ECG

Click on the ECG waveform on the GUI monitor to activate the ECG settings dialog.



- All ECGs are simulated in 12 leads
- Displayed lead can be selected on the patient monitor
- 12 Lead ECG can be show on patient monitor
- Patient monitor can display two ECG leads

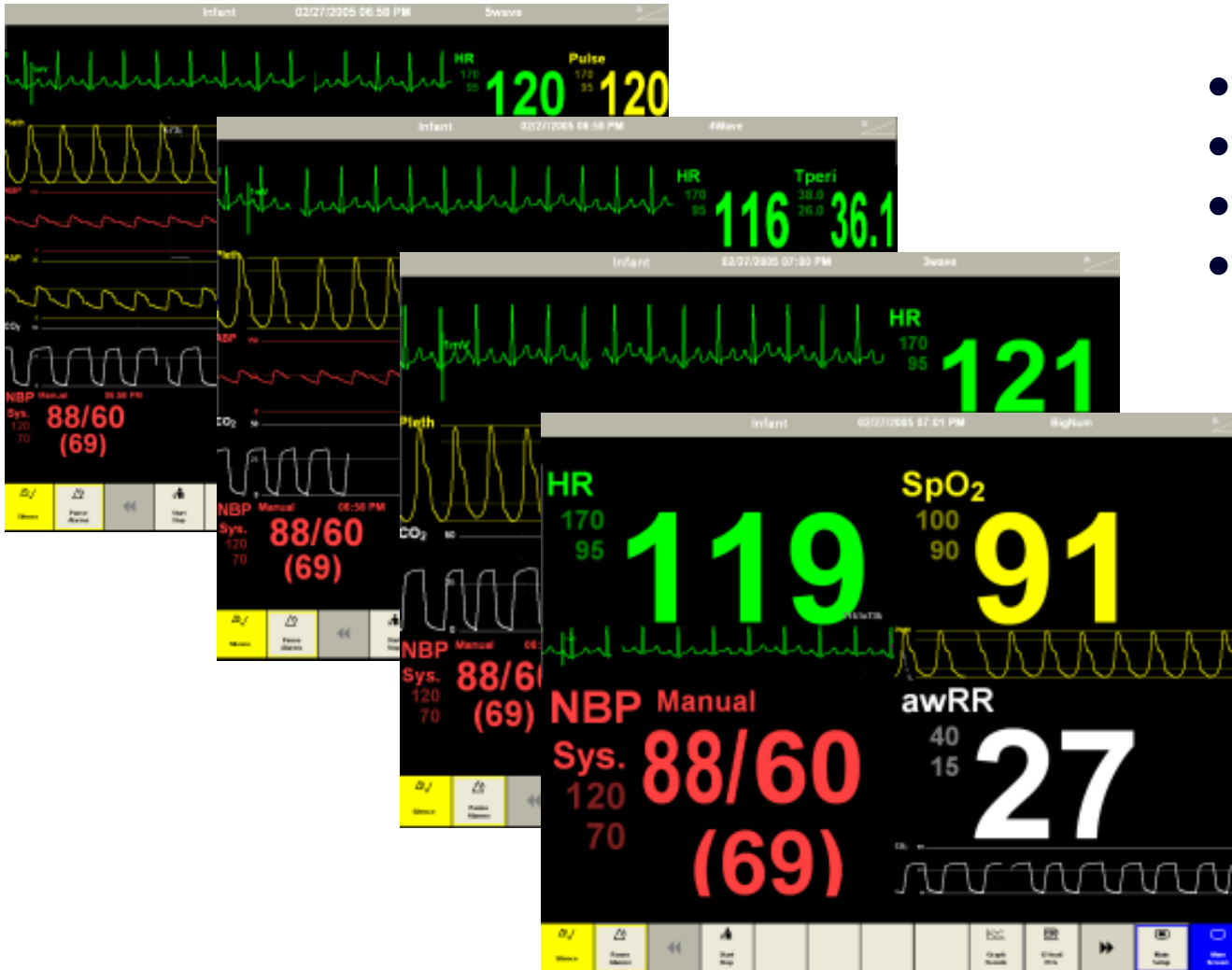


12-lead
ECG



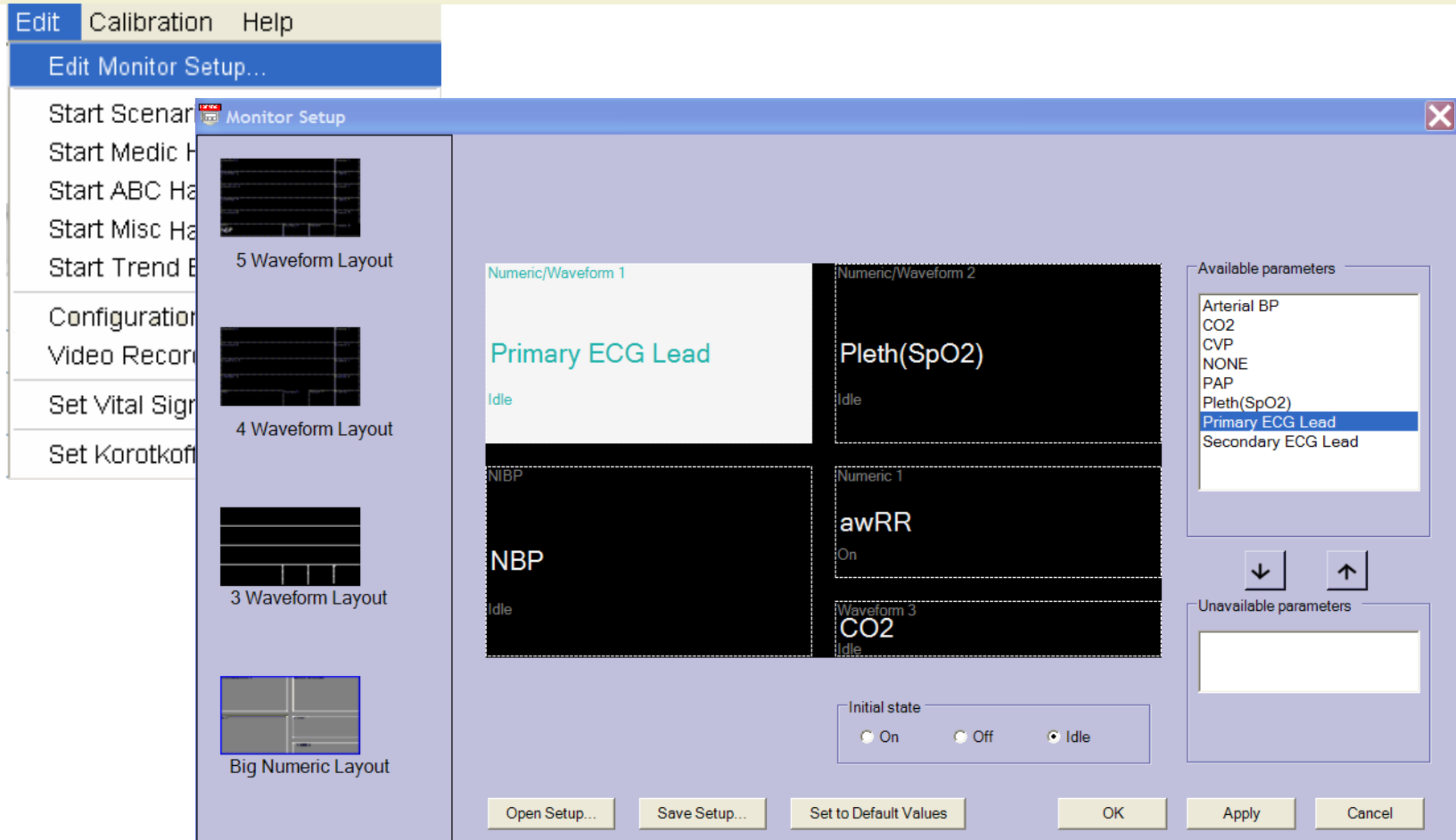
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Monitor Setup - 4 Layouts



- 5 wave
- 4 wave
- 3 wave
- Big Num

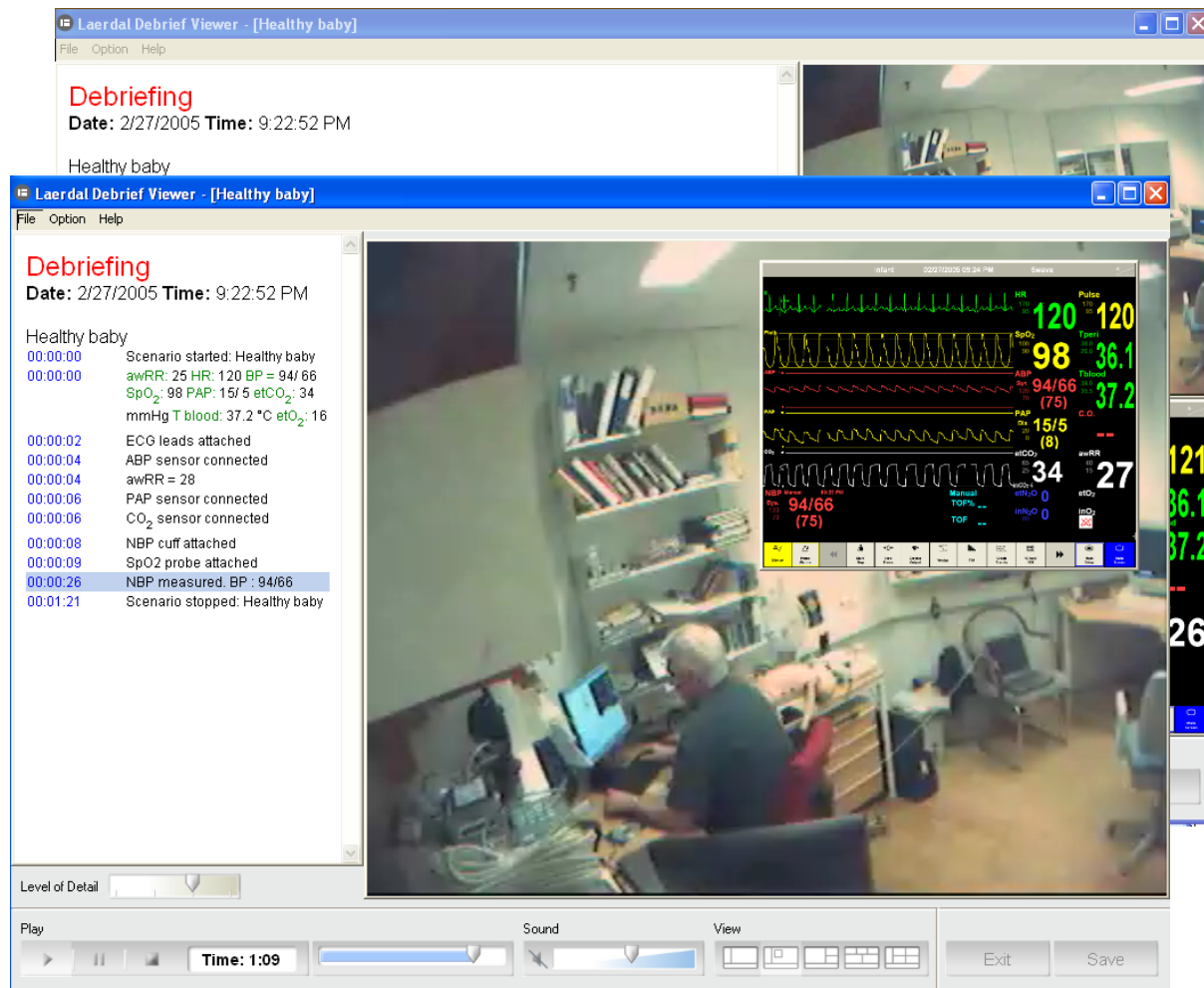
Monitor Setups – Unlimited number of Setups



LAERDAL



Debrief Viewer



- 5 different view options

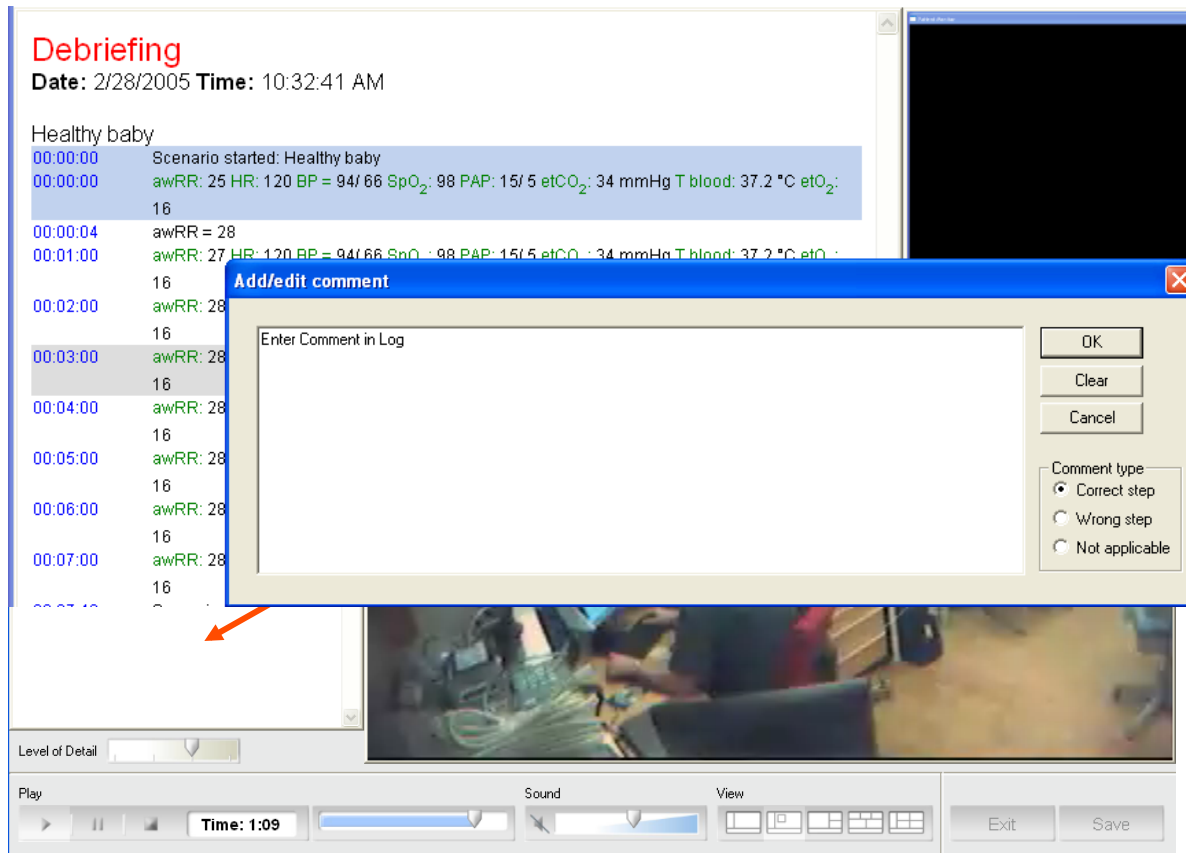
View Picture in picture

- resizable
- moveable

- Select camera source with right click
- Double click for full screen
- ESC or right click to restore
- Navigate in log



Debrief Viewer



- Level of details
 - comments only
 - events, actions, vital signs
 - settings
 - Trends, Handlers, Scenario
- Enter comments
 - right click
 - double click
- Save debriefing
 - video / monitor
 - log
- Save to CD
 - include Debrief Viewer

Laerdal introduce SimBaby,

- infant emergencies made real



The advance simulator for training in infant emergencies



Laerdal
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Laerdal
helping save lives

SimBaby anatomy

- 5 month old baby
- Length: 65 cm
- Weight: 4 kg
- Hinged joints
- Realistic movements of a baby head



Airway features:

- Opening airway by head tilt, chin lift and jaw thrust
- Suctioning, practicing the motions of suctioning
- Oropharyngeal and nasopharyngeal airways
- Bag-Valve Mask ventilation (mask 0)
- Oro- and naso-tracheal intubation (size 3,5)
- Sellick's maneuver
- LMA insertion (size 1,5)
- Fiber optic intubation
- Gastric tube insertion
- Variable lung compliance
- Variable lung resistance



Airway features

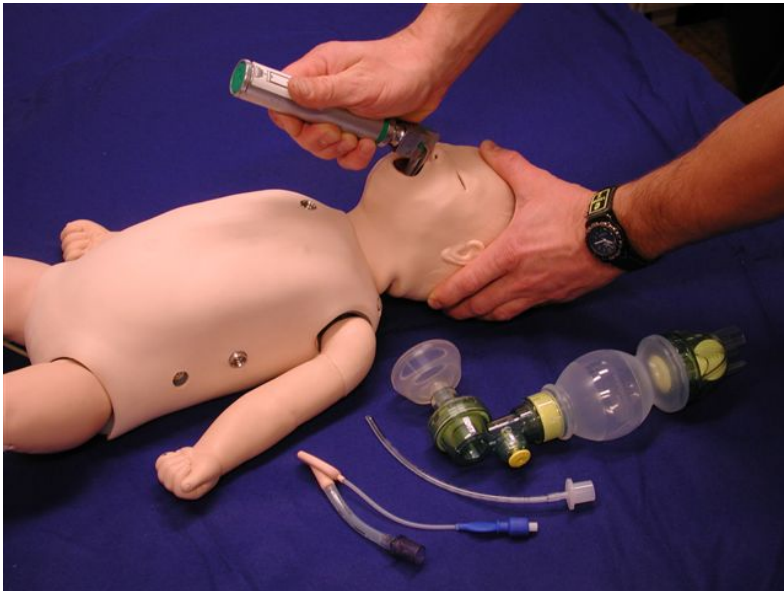


- Opening airway by head tilt, chin lift and jaw thrust
- Suctioning, practicing the motions of suctioning
- Oropharyngeal and nasopharyngeal airways
- Bag-Valve Mask ventilation (mask 0)

Bag Valve Mask



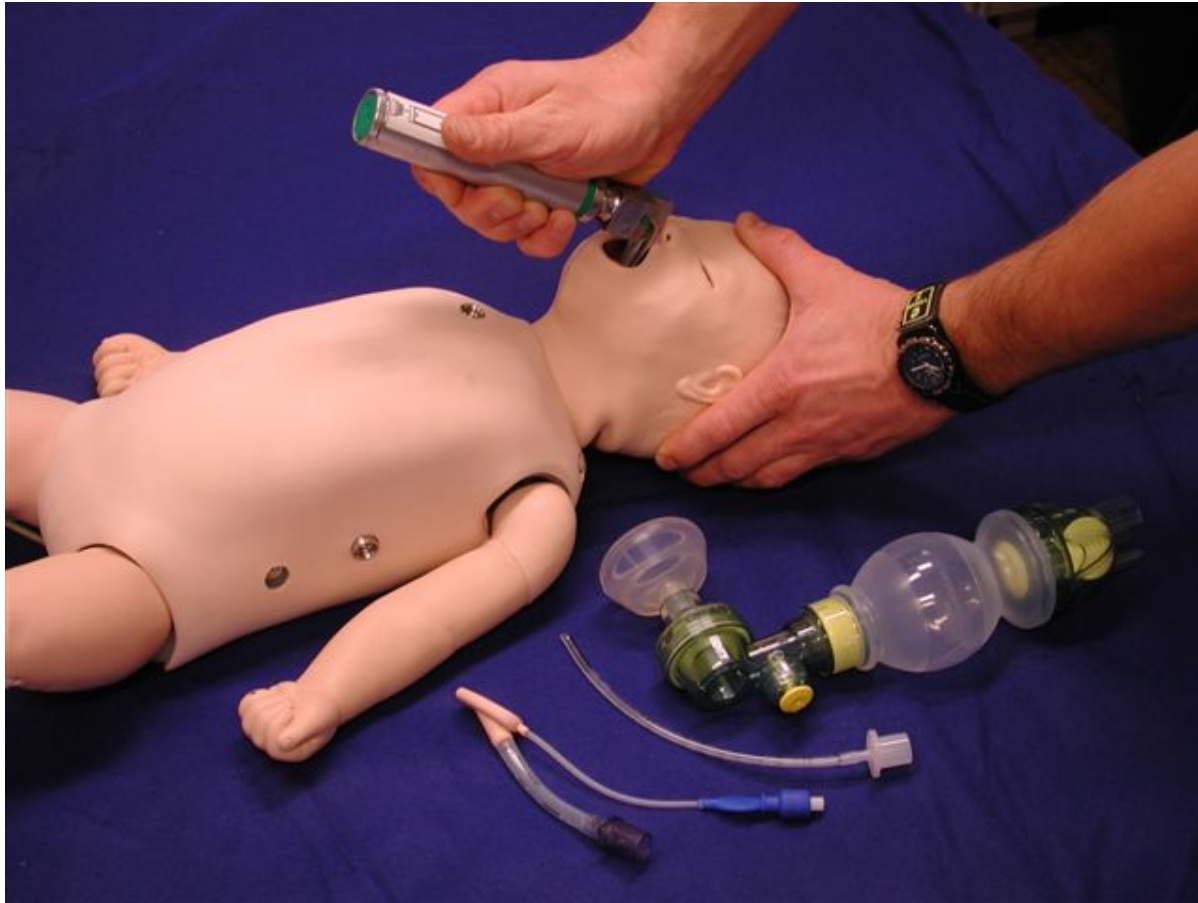
Airway features cont.



- Oro- and naso-tracheal intubation (size 3,5)
- Sellick's maneuver
- LMA insertion (size 1,5)
- Fiber optic intubation
- Gastric tube insertion

- Variable lung compliance
- Variable lung resistance

Intubation



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Airway complications

- Tongue edema
- Laryngospasm
- Pharyngeal obstruction
- Right mainstem intubation
- Gastric distention



Breathing features

- Spontaneous breathing with variable rate, depth and regularity
- Bilateral and unilateral chest rise and fall
- CO₂ exhalation
- Normal and abnormal breath sounds – bilateral
- Oxygen saturation

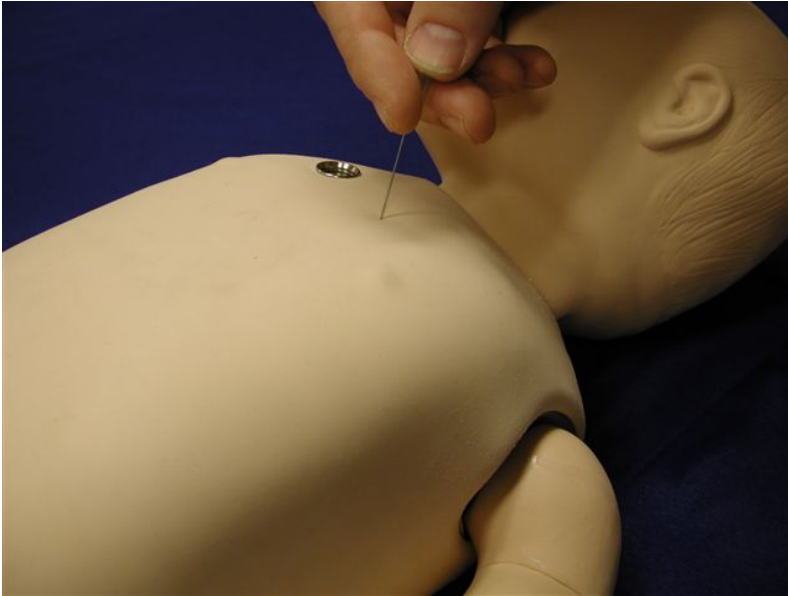
Breathing complications

- See-saw respiration
- Retractions
- Pneumothorax
 - Unilateral needle thoracentesis mid-clavicular and mid-axillary
 - Unilateral chest movement
 - Unilateral breath sounds
 - Unilateral chest tube insertion

Needle thoracentesis



Pneumotorax



Pneumothorax

- Unilateral needle thoracentesis mid-clavicular and mid-axillary
- Unilateral chest movement
- Unilateral breath sounds
- Unilateral chest tube insertion

Cardiac

- ECG library of cardiac rhythm variants, rate from 20-360
 - Reading of cardiac rhythms via 4-lead monitoring or 12 lead ECG display
 - CPR compression generates palpable pulses, blood pressure wave forms and artifacts on ECG
 - Radial, brachial and femoral pulses synchronized with BP and ECG
 - Defibrillation and cardioversion
 - External pacing
 - Variable puls rate end strength
 - Heart sounds
-
- Blood pressure measuring

Circulation features

- Blood pressure (BP) measured manually by auscultation of Korotkoff's sound, left arm
- Radial, brachial and femoral pulses synchronized with ECG, left arm
- Pulse strength variable with BP
- Heart sounds
- 12 lead dynamic ECG display

Blood pressure measuring

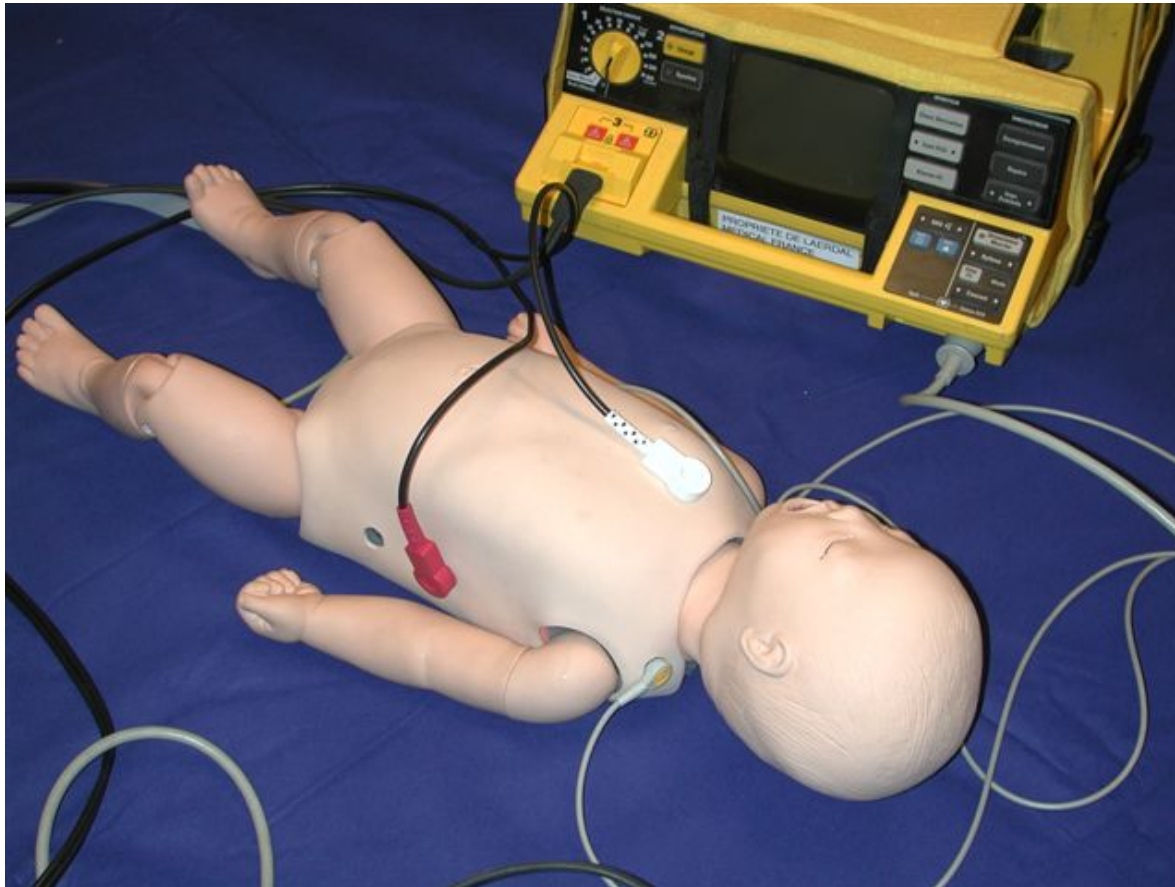


Blood pressure measuring



- Blood pressure (BP) measured manually by auscultation of Korotkoff's sound, left arm
- Radial, brachial and femoral pulses synchronized with ECG, left arm
- Pulse strength variable with BP

Defibrillation

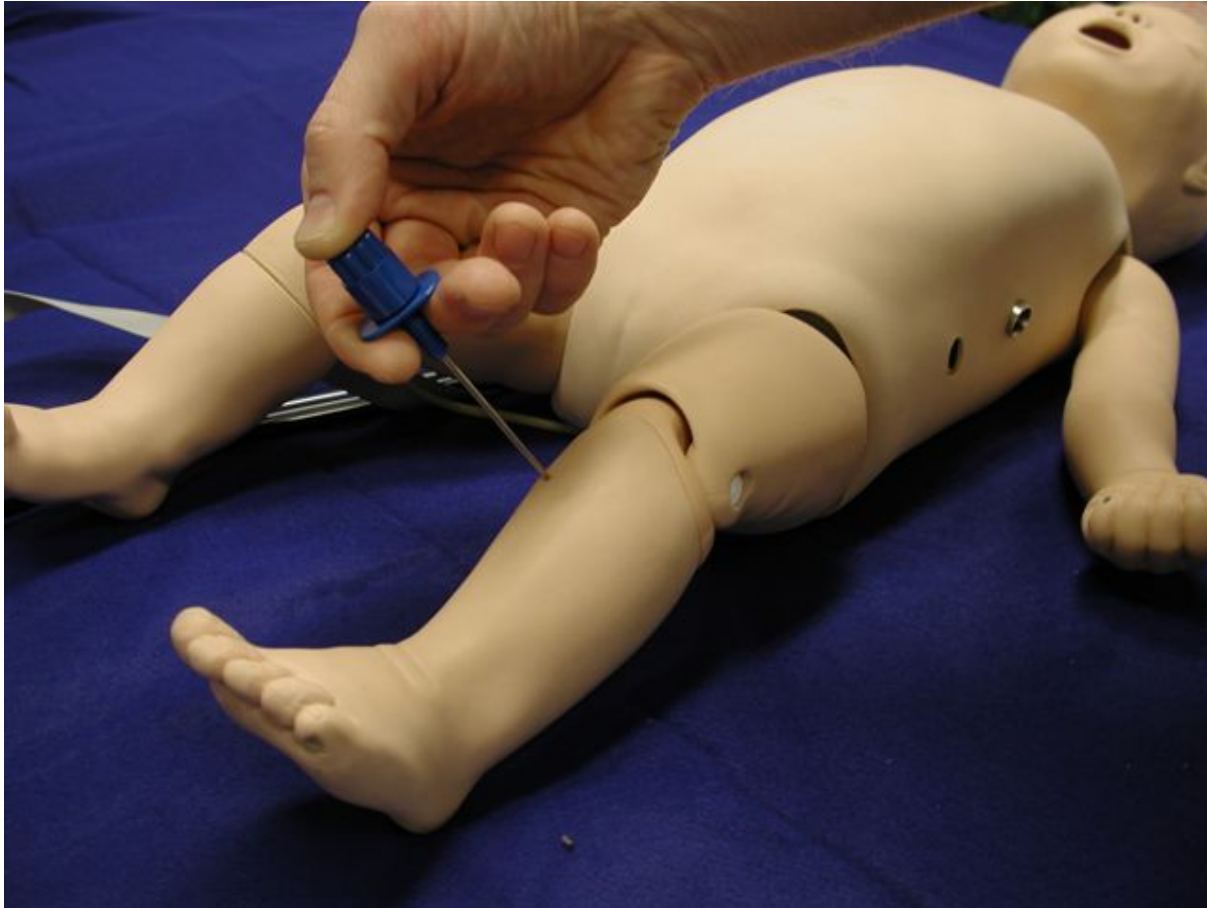


Cardiac cont.

Vascular access

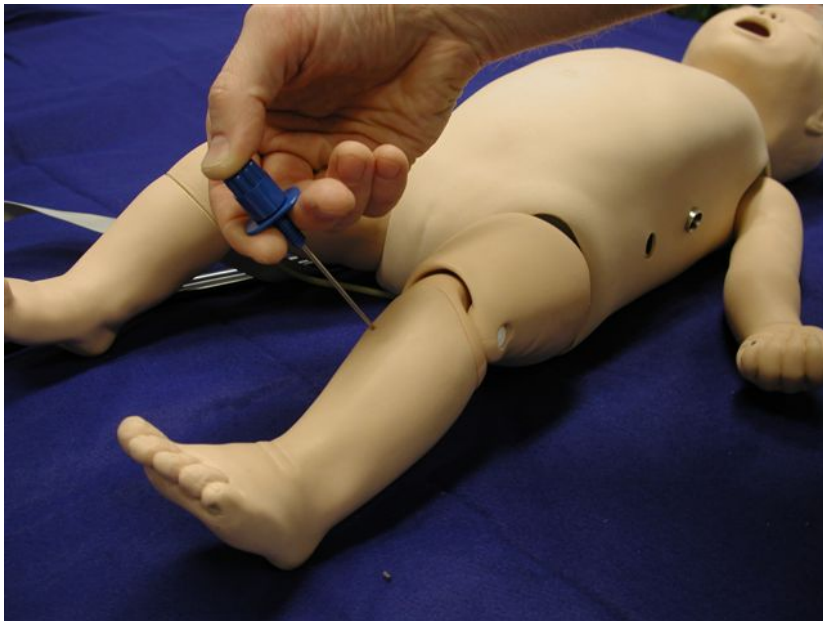
- Venous access antecubical fossae, dorsum of the hand and long saphenous vein
- Intraosseous insertion – bilateral
- IV bolus and infusion
- Simulated blood flashback upon venous cannulation

IO access



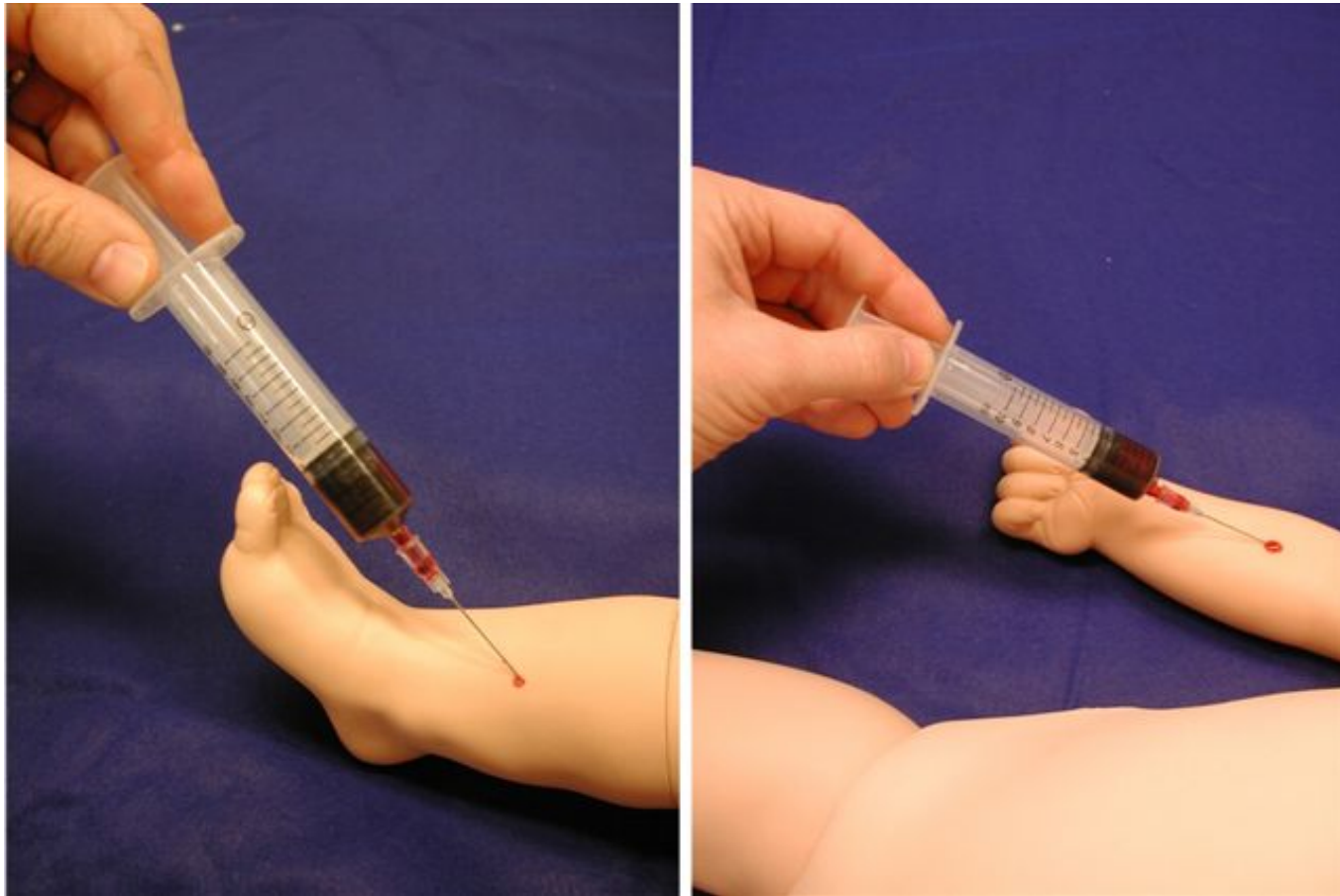
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IO access



- Replaceable lower leg with blood reservoir
- Realistic intraosseous insertion

IV access right arm and both lower legs



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Sounds

Vocal:

- Moaning, coughing, crying, grunting, snoring

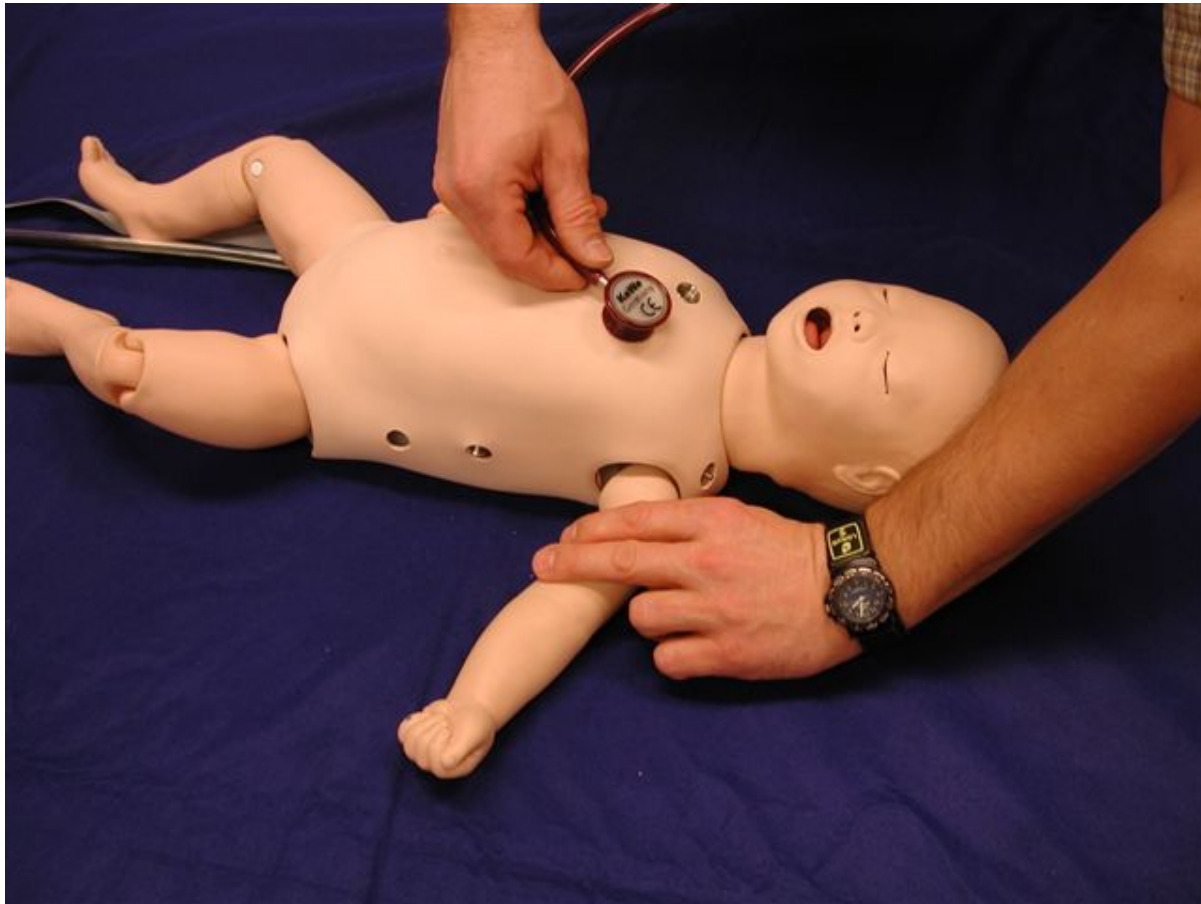
Lung:

- Normal, crackles, stridor, wheezes and other

Heart:

- Normal, diastolic murmur, systolic murmur and other

Auscultation of heart and lung sounds



Other features

- Distendable fontanel
- Replaceable pupils with different pupil size
- Torso motions
- Indication of cyanosis in mouth, correlated to oxygen saturation

Ventilating the manikin

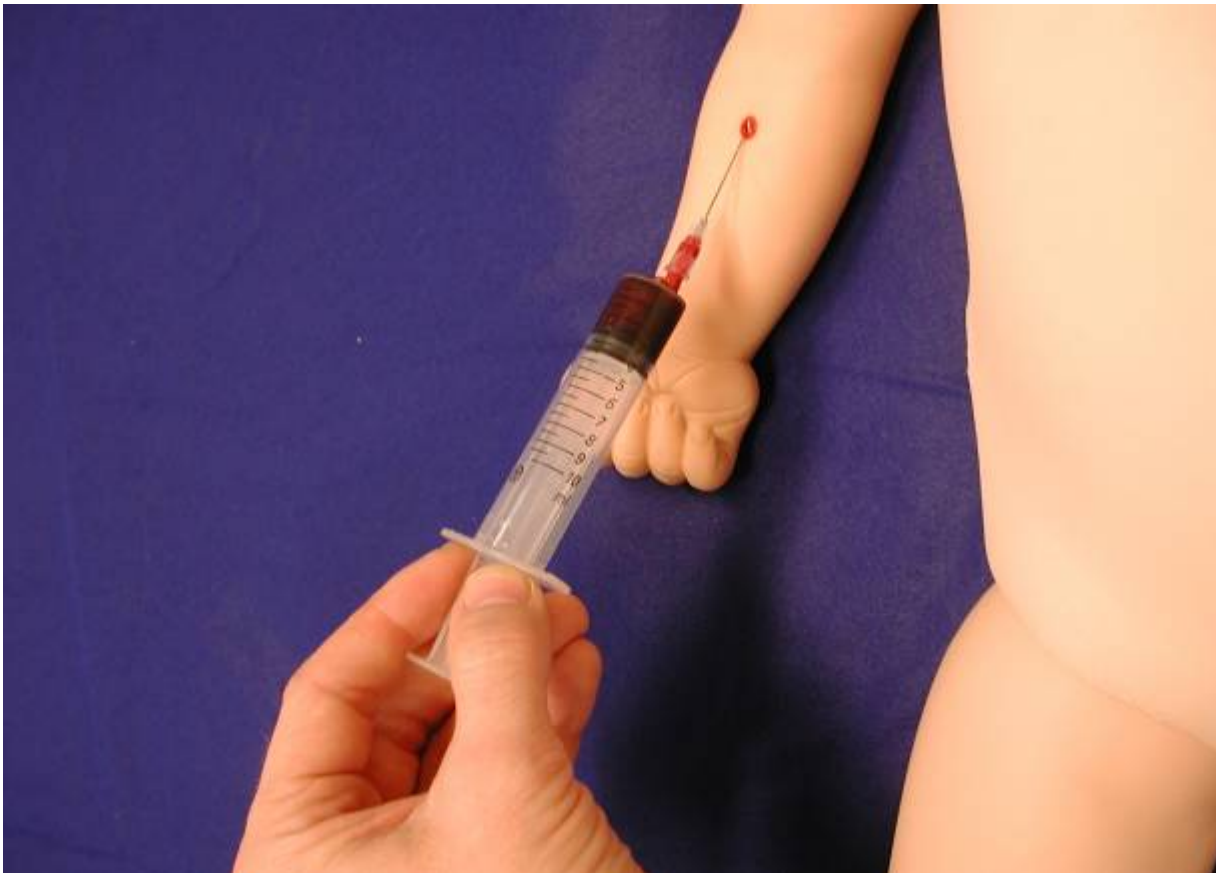
- Opening of airway by head-tilt or jaw-thrust (sensors in head)
- 3 valve positions:
 - Closed
 - Partially open
 - Open
- Air in stomach
- Exhaled CO₂

Sounds

- Lung-sounds (4 speakers in chest)
- Heart sounds (2 speakers in chest)
- Blood pressure sound (1 speaker in left arm)
- Vocal sounds (1 speaker in head)

IV / IO

- The legs have both IV and IO functionality (left and right side)
- Right arm = IV-arm (NB! No needles in left arm!)



SimBaby

The first advanced pediatric simulator

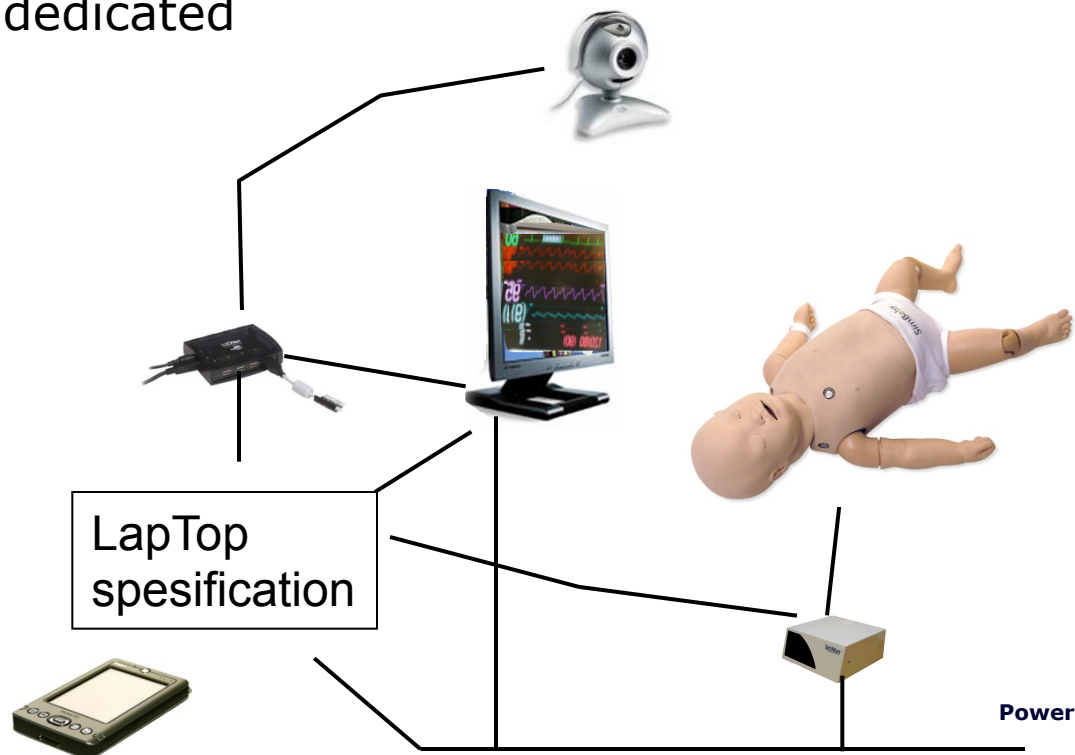


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245-00033

SimBaby Main Product

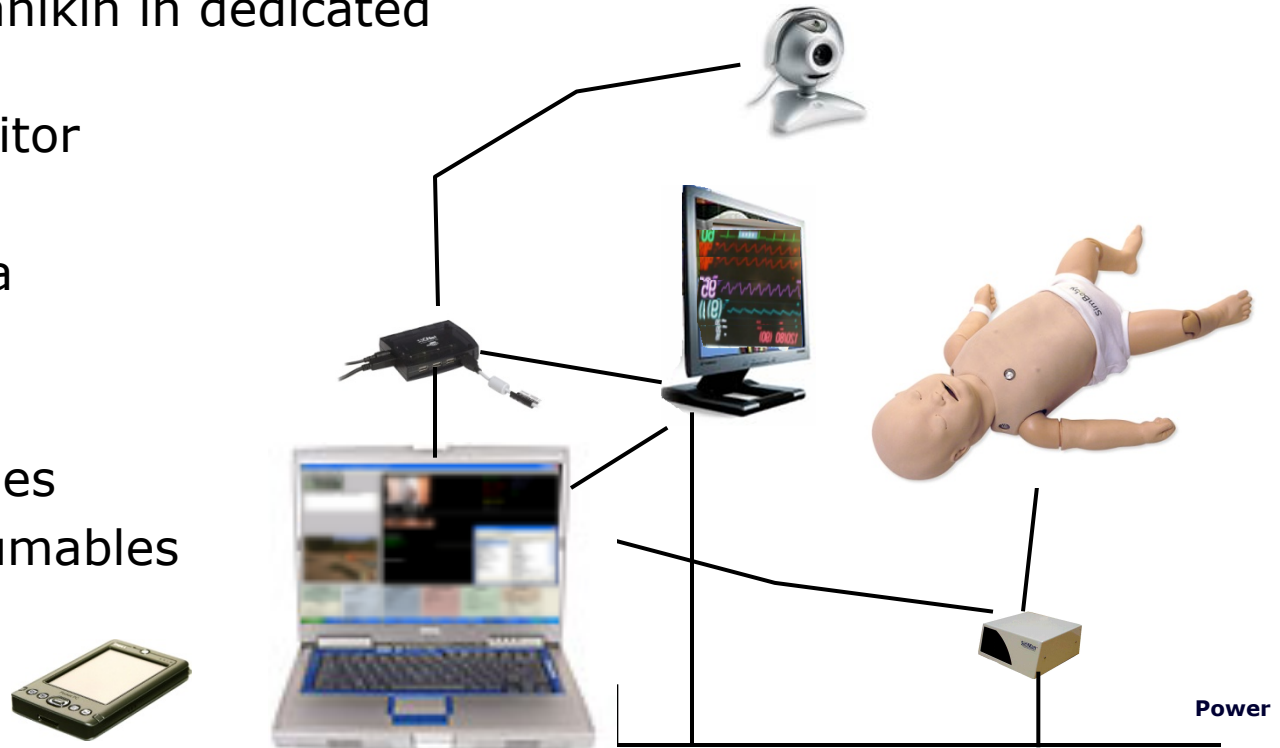
- SimBaby Manikin in dedicated suitcase
- Patient monitor
- Link box
- Web-camera
- USB-hub
- PDA
- Needed cables
- Set of consumables



245-010xx

SimBaby Main Product incl Laptop

- SimBaby Manikin in dedicated suitcase
- Patient monitor
- Link box
- Web-camera
- USB-hub
- PDA
- Needed cables
- Set of consumables



Following Accessories

- Clothes and rug
- BP cuff
- Bloodbag
- Simulated blood
- Replaceable IV/IO foot, left and right
- Arm skin and IV tube right arm
- Chest skin
- Pleura skin replacement
- Pneumothorax bladder
- Replaceable pupils with three different pupil sizes
- Concentrated blood x1
- Airway lubricant 45 ml
- Baby powder
- d-fib stud set
- Esophagus filter x10
- DFU English
- Software CD
- Interactive presentation



Benefits

- **Educational effectiveness** - through providing highly realistic patient simulation training experiences for the practise of teamwork, leadership and communication skills
- **Multi function use** - facilitates training of a wide range of health care professionals encompassing all areas of patient care.
- **Cost efficient**, - durable and dependable for long term use and cost efficiency
- **Practise uncommon scenarios.** Practise in training the unusual cases that learner may face in real life.
- **Anatomically realistic** enabling a wide range of emergency medical interventions to be practised
- **Logistically convenient** and portable with quick and easy assembly and disassembly



Features

- **Full scale infant patient simulator** which allows you to perform relevant PALS skills and scenarios.
- **Interactive manikin** which gives you immediate feedback to interventions
- Simulator utilises **software based on medical models**, allowing the instructor to focus on interacting with learners rather than operating the Simulator.
- **Realistic airway system** allows accurate simulation of all relevant difficult infant airway management and patient care scenarios.
- **Automatic debriefing** after the scenario provides immediate, detailed feedback on performance to learners
- **Realistic infant breathing patterns and complications** bring realism to the infant simulation experience.
- **IV training arm and IV/IO legs** allows practise of peripheral intravenous and intraosseus therapy

