Lucina

Lucina delivers an all-in-one simulation experience. Designed to demonstrate both gravid and non-gravid scenarios, this wireless manikin comes with a fetus to teach proper prepartum, labor, delivery and postpartum care as well as a non-gravid abdomen for clinical situations unrelated to maternity.

Integrated with maternal-fetal physiological modeling, Lucina automatically reacts to medical interventions while the fetus cries upon delivery and senses the amount of force applied to its neck.

Packed with advanced features and multiple simulated clinical experiences, learners can:

- Evaluate anterior and posterior lung sounds
- Witness realistic uterine contractions
- Monitor vital signs and maternal data
- Hear the fetal heartbeat
- Cut and clamp umbilical cords (cord not reusable post-cut)
- Control postpartum bleeding and uterine inversions
- Perform CPR and analyze metric

This childbirth simulator supports pregnancy conditions such as breech delivery, shoulder dystocia and postpartum hemorrhage. Additional equipment is available to help teach the all-fours birthing position.

DELIVERING AN IMMERSIVE EXPERIENCE

Expand the training with Microsoft HoloLens 2. The world's first augmented reality childbirth simulator, LucinaAR, can be paired with the Lucina manikin or used as a standalone tool to:

- Increase the understanding of childbirth and postpartum
- Improve knowledge through repeated self-paced learning
- Educate learners using minimal space

VALUABLE PREPARATION FOR QUALITY HEALTHCARE

covered, resulting in a true interprofessional education (IPE) experience for learners.

General Practitioners	Obstetricians	Midwives
Detect normal and abnormal maternal-fetal vitals with authentic heart, lung and fetal sounds.	Train to care for true-to-life pregnancy scenarios with realistic birth canal, uterine contractions, fetus rotations and postpartum options.	Sharpen skills on various birthing positions and the McRoberts maneuver for shoulder dystocia.

Learn more at **elevatehealth.net**

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LUCINA

Technical Specifications

MANIKIN
Dimensions: 69″ H x 22″ W x 15″ D
(175 cm x 56 cm x 38 cm)
Weight: 111 lbs. (50 kg)

ELECTRICAL
AC Input: 100-240V, 50/60 Hz, 2.3 A
Internal batteries: 14.4V, lithium-ion, rechargeable
Maternal manikin battery life: 4 hours
Fetus battery life: 7 hours

Available in two skin tones:
Medium   Dark

FETUS
Dimensions: 19″ H x 6″ W x 4.5″ D
(48 cm x 15 cm x 11.5 cm)
Weight: 5.5 lbs. (2.5 kg)

Standard Equipment

Birthing fetus	Fetus to support Leopold's maneuvers
Three abdomens (1 for delivery, 1 for prepartum and postpartum, and 1 for non-gravid scenarios)	
Postpartum uterus	Static cervices for vaginal exams
Additional static cervices	Software-compatible tablet
Maestro operating software	Wireless emulated patient monitor
Fully and partially inverted uterus with a uterine inversion SCE	
Four patient profiles (3 maternal, 1 non-gravid)	

10 simulated clinical experiences (SCEs)
- Normal delivery
- Instrumental vaginal delivery
- Fetal tachycardia (due to maternal pyrexia)
- Breech delivery
- Fetal central nervous system depression (due to narcotics administered to mother)
- Shoulder dystocia
- Major postpartum hemorrhage (due to uterine atony)
- Maternal cardio-respiratory arrest
- Eclampsia
- Umbilical cord prolapse

One Maestro Standalone license including both manual and modeled mode

One year of Premier warranty support and maintenance and option to renew

Electronic user guide

Female patient module with non-gravid abdomen and 5 SCEs
- Chronic heart failure exacerbation
- Acute respiratory distress syndrome
- Sepsis with hypotension
- Brain attack with thrombolytic therapy
- Motor vehicle collision with hypovolemic shock

Optional Equipment

Microsoft HoloLens 2 application for LucinaAR with 5 SCEs
- Normal delivery
- Breech delivery
- Shoulder dystocia delivery
- Instrumental delivery
- Postpartum hemorrhage

Additional Maestro Standalone licenses

Additional battery and charger

Abdominal cover for all-fours birthing position (required for this position)

LearningSpace

Maternal Features

Airway and Breathing

Realistic upper airway

Positive pressure ventilation including bag-valve-mask ventilation

Advanced lungs with mechanical ventilation support, including patient-triggered modes

Airway management and ventilation

Supports endotracheal tubes, nasopharyngeal and oropharyngeal airways

Spontaneous breathing with chest excursion

Lung auscultation: anterior and posterior

Cardiovascular

Correct hand placement detection for chest compressions	
Advanced CPR analysis (compression depth and rate, chest recoil, compression fraction, ventilation volume and rate)	
Compliant with 2020 AHA BLS guidelines and 2021 ERC guidelines	
Pacing, cardioversion and defibrillation with real equipment	
NIBP by auscultation and palpation	Heart sounds

Circulatory System

Electrocardiogram (ECG) monitoring posts for interface with real ECG monitor with a library of over 50 cardiac rhythms	
12-lead dynamic ECG display	Variable pulse strength
Dynamic bilateral pulses: carotid, radial, brachial and dorsalis pedis	

Fetus

Fetal heart sounds (five locations based on fetal presentation)	
Articulated fetal body and neck (with lateral neck movement), shoulders, elbows, hips and knees	
Clinically accurate fetal size with tactile realism–50th percentile on the WHO growth chart	
Fetal neck traction sensing	Palpable fontanel and sagittal suture
Fetal airway suctioning	Programmable audible cry upon delivery
Predicted 1-minute and 5-minute Apgar scores based on fetal blood-gas values	
Umbilical cord that can be cut and clamped (cord not reusable post-cut)	

Fluids

Postpartum bleeding tank (1.8 L)	Bilateral IV arms
Urinary catheterization with urine release	Epidural infusion

Intrapartum

Realistic palpable uterine contractions	Trendelenburg position with detection
Controllable rate and duration of contractions	Shoulder dystocia with presentation of turtle-sign
Left lateral tilt with detection	Vertex and breech delivery
Shoulder dystocia with presentation of turtle-sign	
McRoberts maneuver with observable/software detectable pelvic tilt	
Suprapubic pressure support and detection with palpable symphysis pubis	
Supports delivery of posterior arm during shoulder dystocia	
Zavanelli maneuver with detection	C-section team training support
Rubin II and Woods: Screw maneuvers to resolve shoulder dystocia	
Forceps application	Vacuum extraction
Intact/fragmented placenta with realistic color, texture and flexibility	

Obstetrical

Integrated maternal-fetal physiological modeling	Realistic birth canal and vulva
Perineum support with accurate fetal descent and rotation	Multiple birthing positions: lithotomy, sitting and all-fours
Rectal suppository administration	Urgent obstetrical learning module

Postpartum

Postpartum hemorrhaging, including Class III hemorrhage	
Contracted and boggy uterus	Uterine blood released upon massage
Bimanual compression and uterine massage with detection and automatic response	
Inverted postpartum uterus	Uterine reversion
Intrauterine balloon insertion	

Prepartum

Vaginal examinations for evaluation of the cervix, fetal station and position	
Static cervices represent various stages of dilation from closed to 5 cm and effacement from 0 to 90%	
Leopold's maneuvers	Epidural port with infusion and aspiration

Speech

2-way voice communication	Prerecorded speech
User-recorded speech	

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Reduce medical errors. Improve performance. Enhance patient care.