Brochure

Laparoscopic

Surgical Patient Simulator





MEDICAL·X

ADVANCING SIMULATION



The Laparoscopic ADAM-X

Laparoscopic ADAM-X is a high-fidelity full-body surgical patient simulator!

Faithful reproduction of a man's anatomy and physiology, Laparoscopic ADAM-X is our highest fidelity manikin with a specially designed abdomen for the insertion of trocars and laparoscopic instruments, allowing the students to practice their laparoscopic skills using real devices. With a software that includes an Anesthesia Machine Simulator, Laparoscopic ADAM-X is not just a laparoscopic simulator; it's a real patient under surgery!





LAPAROSCOPIC TRAINING

The Laparoscopic ADAM-X has a specially designed abdomen for the insertion of trocars and laparoscopic instruments, allowing the students to practice their laparoscopic skills in

two different ways:

1. By using a real laparoscopic device, ADAM's abdomen can be used as a traditional box trainer, with endless possibilities of exercises;



2. And using our laparoscopic surgical simulator LAP-X in Virtual Reality mode, students can practice several motor skills exercises, have a realistic experience in an anatomical environment, and practice actual surgical laparoscopic procedures.



In both modes, the students practice with real laparoscopic graspers, developing manual dexterity, hand-eye coordination, and laparoscopic depth perception. Pg. 02



User interface

Command-X is our user-friendly touchscreen interface, offering manual and automatic modes. The instructor can control scenarios and parameters by wireless operation and

remote control.

Scenario Editor

15 pre-programmed evidence-based scenarios that can be easily edited + Scenario Editor to create your own completely customizable scenarios.

Debriefing

All states, actions, activities, and added comments during a scenario or CPR training are

logged in for posterior debriefing.

Multi-parameter patient monitor

From basic vital signs to advanced monitoring parameters, the wireless bedside monitor

displays all the patient's information.





4.2 s	œ	Keep the affected limb elevated		
4.7 s	œ	Obtains a focused history (Ask if the patient knows any snakes' characteristics)		
5.1 s	Ø	Don't delay treatment waiting for snake identification.		
		Perform a focused examination		
7.1s	*	The student forgot to ask about previous allergic reactions.		
36.9 s	~	Request laboratory tests: CBC, basic metabolic panel, coagulation tests, Creatine Kinase		
		The student should have requested CK.		
38.7 s		State is BLEEDING & HYPOTENSION		
38.7 s	8	CaseSIM - unlocked LABORATORY TESTS RESULTS		
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Anesthesia Machine

The MEDICAL-X Anesthesia Machine Simulator is an interactive simulation model of an Anesthesia Machine and ventilator for medical training purposes.

It was carefully designed to display the main features of an Anesthesia Machine, preparing learners for using real devices. Combined with Command-X and our Patient Monitor, it's possible to gather the device training with clinical scenarios and patient's vital signs changes, allowing clinical reasoning training.



User interface:

Enables you to view and change monitoring, ventilation, and status information using keys





Anesthetic agents' vaporizers





The Anesthesia Machine Simulator supports the most common ventilation modes in order to provide the students with an overview of the main ventilation parameters:

Manual/Spontaneous ventilation

- Volume-controlled ventilation
- Pressure-controlled ventilation
- Synchronized intermittent mandatory ventilation
- Pressure Support



Real-time communication with Command-X: All actions are logged in for posterior

debriefing:

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(2) Prepare drugs for induction	6.5 6 Aventhesis Machine - Press, Control setting Free (born) + 18	(7)
Prepare drugs to use in case of an energency	6.5 s (2) Aventhesia Machine - Press, Control setting PontP (cm+CO) + 20	° 14
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General | Laparoscopic ADAM-X

Laparoscopic ADAM-X has flexible joints and a human-like soft skin made with our unique

special silicone blend.











Blinking eyes and pupillary light reflex



×	Argh	Complaining of weakness	Complains Of Chest Discomfort
Confused	Coughing	Crying	Healthy
Hiccups	I am going to die	I don't know	I'm in pain
No	Sneezing	Stridor	Whining

Life-like looking with soft silicone skin

Vocal sounds: pre-recorded and voice reproduction wirelessly

Tetherless and Wireless

With internal electrical power and air compressor, Laparoscopic ADAM-X is fully operational on battery power. Pg. 06

Yes

Talk (F4)



Airway



Needle and surgical cricothyrotomy with realistic bleeding





Basic and Advanced Airway Training

- Correct airway anatomy
- Airway maneuvers: head tilt, chin lift, and jaw thrust
- Airway management with multiple devices
- Airway complications: swollen tongue, pharyngeal and laryngeal edema





Breathing

With an accurate **pulmonary system**, Laparoscopic ADAM-X can breathe spontaneously with variable rate and depth, be ventilated with bag-valve-mask, or be attached to real

mechanical ventilators.



Pneumothorax and bilateral needle decompression





Other pulmonary features:

- Variable lung compliance and airway resistance
- Auscultation of the lungs
- Chest tube placement





Cardiovascular







Bluetooth stethoscope for auscultation of heart, lungs, and abdominal sounds



Blood pressure measurement with a real cuff and audible Korotkoff sounds

- 14 sites to palpate central and peripheral pulses
- Pulses strength varies with blood pressure
- Pulses palpation detected by sensors and recorded by the software





Resuscitation

With anatomical landmarks and realistic compression resistance, Laparoscopic ADAM-X is an ideal solution for CPR training.



Defibrillation and cardioversion can be performed with real devices and energy.





The software detects hands position, displays compression and ventilation counters, and gives real-time feedback on CPR quality: frequency, depth, and release between compressions.







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And much more...



IV injections administration and automatic drug recognition. Supplied with more than 50 syringes





Urethral catheterization



Intraosseous Access in the

tibia and humerus

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The entire team train together!

Providing safe and high-quality surgical care requires a multifaceted approach provided by a multidisciplinary team of surgeons, anesthesiologists, nurses, and other healthcare

professionals.

Besides allowing the training of several technical skills, Laparoscopic ADAM-X is also an

effective tool for improving teamwork dynamics.

It's possible to create endless surgical scenarios and simulate realistic situations in a safe environment. During all stages of perioperative care, multidisciplinary teams are expected to work interdependently and collaboratively to meet the needs of the patient and manage emergency situations with confidence.

Training surgical scenarios with Laparoscopic ADAM-X allows the training of all the

healthcare team involved in the enormous responsibility of caring for a patient under

surgery.





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Warranty

While we're confident that the MEDICAL-X's products are highly user-friendly,

we also understand that this is an advanced product with the need for strong

support and service. That's why we provide application training and guarantee

the product for two years.

Additional service packages can also be delivered.

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About Medical-X

MEDICAL-X is a Dutch company specialized in the design, development, manufacturing, marketing and distribution of simulation products for medical teaching and training. Our mission is to provide healthcare professionals with simulation-based training

solutions and cutting-edge technological simulators that are cost-effective and

time-efficient to teach and train clinical skills without risk to actual human patients.

Design philosophy

Realism is the key to our design philosophy! Simulator training gives medical teams the experience, competence, and confidence they desire. Realism adds to the quality and efficacy of training.

Our products are developed through extensive feedback programs to produce an engaging experience for healthcare professionals. Form and function come together in a

realistic and interactive simulator, ready to be used in training for all levels of care.

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