MDT GLOBAL SOLUTIONS

Innovations in ventilation & clinical simulation

THE GUIDE to clinical simulation & ventilation feedback devices

www.mdtglobalsolutions.com

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MDT Global Solutions has a long history of bringing innovative Clinical Simulation products to market, providing educators with inspiring tools that help bring a new level of realism to scenario based medical education.

In recent times, we have added unique ventilation training feedback devices into the portfolio to help address the key challenge of delivering safe and effective ventilatory volumes to patients during life threatening Cardiopulmonary / Respiratory Arrest events.

In working closely with pioneering manufacturing partners, MDT continues its commitment to offer medical education products that make a real difference when preparing healthcare providers for the most challenging of clinical arenas.

We thank you for taking the time to review our enhanced product range and hope you find them thought provoking.

Please get in touch and let us know how we can help.

SALES

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iSimulate REALITi 360

The best simulation ecosystem

iSimulate provides smart simulation solutions that are used by organisations across the world. iSimulate's mantra is simple – they use the best of current mobile technology to create products that are more realistic, cost effective and simpler to use than traditional solutions.

iSimulate enables you to train anywhere at any time with their flexible simulation systems.

2018 EMSWORLD INNOVATION AWARDS WINNER

iSimulate

iSimulate REALITi 360 Specifications

- Tablet based modular simulation ecosystem
- Build your own system or select a package
- Mimic proprietary defibrillators, AEDs and monitors on the Monitor tablet
- Smart and versatile Control tablet
- Optional live video streaming and recording with Video module
- Optional CPR feedback with CPR module
- Comprehensive Sound, Radiology and 12 lead ECG library
- Modify waveforms with advanced controls
- Scenario library and editor
- Easy to use Checklist and Log interface
- iSimulate Training Management System (TMS)
- Integration with third parties
- Simulated Patient Electronic Record with optional Chart tablet
- Include observers with REALITi Engage

iSimulate CTGi

World first real-time obstetric simulator

CTGi provides an economical, highly advanced and realistic fetal heart rate monitor simulation package. Using just two iPads, the lightness and simplicity of CTGi makes it ideal for in-situ training. CTGi gives facilitators a great tool for training and students an incredibly realistic platform to learn from. CTGi offers obstetric simulation as you've never seen it before, built from technology you use every day. CTGi has many features that will simplify and enhance your simulation experience.

REALISTIC IN FUNCTION & DETAIL

Manage mother & child vitals, introduce decelerations & contractions. Everything CTGi offers is aimed at enabling you to create traces that are every bit the real thing, easily.

CTGi Features

- World's first tablet based, real time cardiotocography simulation technology
- Create and run realistic simulations quickly and easily
- Review, annotate and teach
- Powered by iSimulate's realistic, intricate and powerful ActiveWave technology
- Name, save and replay scenarios and traces for teaching
- Ultra-intuitive and feature driven
- Turn your low fidelity situation into a high fidelity simulation
- Use CTGi to create hours of traces

Atlas - The ALS Simulator

Atlas - The ALS Simulator

Atlas is a life-size ALS manikin. It features an intubation head, a CPR-capable chest, IV/IO arms and foam legs. The airway is anatomically realistic including tongue, nasopharynx, oropharynx, uvula, epiglottis, vallecula, vocal cords, esophagus, trachea, thyroid cartilages and lungs. You can perform both oral and nasal intubation using basic and advanced airway management devices. The unique design of the ribcage allows realistic compression movements during CPR.

Atlas is wireless and integrated with REALITi 360. Real-time CPR feedback (both compression and ventilation values) go directly into REALITi and the pulse is controlled by the REALITi settings on the controller. **The combination of these two products offers a complete solution for AHA/ERC compliant ALS training.**

EOlifeX Ventilation Training Monitor

A training solution that maximises the life-saving potential of emergency manual ventilation for cardiopulmonary arrest adult & paediatric patients

Emergency manual ventilation remains the most inconsistent skill in resuscitation today and as both the tidal volumes and ventilation rates delivered are typically higher than recommended levels, the resulting excessive delivered minute volumes cause hyperventilation and a corresponding reduction in a patients chance of survival.

EOlife has been shown to improve compliance to International Guidelines from 15 to 90% in BLS providers, and from 15 to 85% in ALS providers by significantly reducing the proportion of hyperventilation.

Simple & Intuitive

EOlife is a small, lightweight and easy to use handheld device that simply connects to standard Bag Valve Mask Resuscitators to provide emergency responders with breath to breath feedback of the critical ventilatory parameters: Tidal Volume & Ventilation Rate. The use of EOlife helps ensure compliance to International Guidelines, thereby increasing the chance of survival for cardiopulmonary arrest adult and paediatric patients.

ARCHEON MEDICAL

Monivent NEO Training

Supporting gentle ventilation of newborns

Monivent Neo Training is an add-on to existing ventilation equipment and has minimal impact on clinical routines. It provides continuous feedback on several ventilation parameters, including the volumes of air given to the baby using a T-piece or a bag resuscitator.

The airflow is wirelessly measured via a sensor module integrated in the face mask and feedback on the ventilation parameters is displayed numerically and graphically in real-time on the external monitor. For quick guidance to the caregiver the expired tidal volume is indicated with colour to show if the volume of air given is within the desired range. For maximum user-friendliness the same color is also displayed by the LED light on the sensor module attached to the mask.

monivent

Decent Simulators

Airway Management Task Trainer

Designed using CT and MRI scans. Anatomically correct with very realistic airway details. Intubation difficulty can be easily adjusted (grades 1 to 3 on the Cormack-LeHane scale, stiff neck, and more).

Use it to teach:

- intubation algorithms
- laryngeal anatomy
- mask ventilation
- the use of different laryngoscopes and supraglottic devices
- nasal intubation
- surgical cricothyroidotomy

Cricothyroidotomy Task Trainer

Functional and affordable. It has all the important landmarks (including hyoid bone), mobile larynx (for 'laryngeal handshake'), easy to replace cricothyroid membrane and much more.

Use it to teach:

- needle and surgical cricothyroidotomy
- fona (front of neck access) airway management
- anatomy and landmarks important to the cric procedure

Decent Simulators

Control The Bleed Task Trainer

Can be used for both wet and dry training. Contains tourniquet application, wound packing and bleeding neck task trainers. The speed of blood flow can be easily adjusted.

Use it to teach:

- wound packing
- hemostatic devices application
- tourniquet application
- improvised tourniquets
- iTClamp® application

Catheterisation Task Trainer

For both male and female foley catheterisation training. With a visible fluid feedback after a successful foley catheter insertion.

Use it to teach:

- correct handling of male and female anatomy
- urinary catheterisation
- aseptic catheterisation techniques

Decent Simulators

Intravenous Cannulation Task Trainer

Made out of prosthetic grade, soft silicone and 3D printed parts. Cost effective and easy to set up. With realistic flashback and wrist movement.

Use it to teach:

- intravenous cannulation
- venipuncture
- iv infusion

Facial Laceration Suturing Task Trainer

A realistic suturing model that can be used for skin flap training. Contains two layers of strengthening mesh inside the silicone. Has three tissue layers (dermis, subcutaneous, muscle) plus bone underneath and adjustable stand to orient the face in different directions.

Use it to teach:

- instrument handling
- different suturing techniques: interrupted, continuous, subcuticular, vertical, horizontal, mattress
- skin flap surgery

Avkin

AVKIN
Bring Simulation to Life

Wearable simulation solutions

Manikins limit the potential for realistic interactions that a student can have with their patient during a simulation experience. Are your simulations limited by a lack of realistic patient reaction? Are you struggling to include communication objectives into your simulations? Are your simulations missing human interactions?

Avkin's goal has always been to create the highest quality products and services to faithfully replicate what learners will encounter at the bedside. Recently receiving its Women Business Enterprises certification further solidifies our customer-centered approach and goal of preparing the next generation of healthcare workers.

Avbirth

Birthing Simulation Redefined

Avbirth is a wearable simulator packed with all of the technology needed to transform childbirth education from an observation and shadowing experience to a fully immersed, patient care experience. You can now include objectives such as closed-looped communication with an interprofessional team and therapeutic communication with the patient and their significant other through all phases of labor and delivery.

Avbirth pairs with the Avkin App to control the release of a variety of natal fluids, haptically cue the wearer during a contraction, progress the labor at the desired rate, and include additional challenges for the development of critical thinking such as shoulder dystocia or postpartum hemorrhage.

Avbirth
Wearable Birthing Simulator

Avtrach

Tracheostomy Simulation Redefined

Avtrach, a high-fidelity, wearable tracheostomy simulator, is designed to replicate an anterior thorax so tracheostomy care and suctioning can be authentically replicated in simulation. Through a Bluetooth connection between Avtrach and the Avkin app, an assortment of lung sounds can be changed at any time by the educator from the control room. Optional lungs allow Avtrach to be connected to a ventilator.

Avtrach
Wearable Tracheostomy Simulator

Avstick

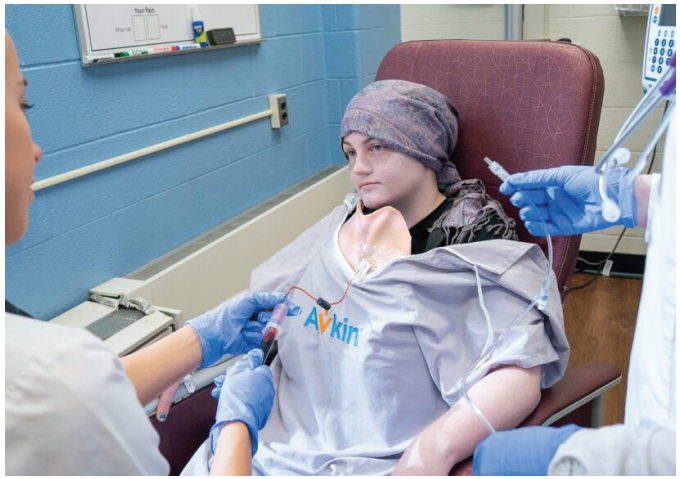
Intravenous Simulation Redefined

A wearable simulator worn as a left-arm sleeve allows learners to practice high-fidelity IV insertion during simulation. Our smart skin technology allows learners to visualise and palpate unblemished skin even after 10,000 needle insertions. A pressure-based circulatory system mimics the human body allowing for a realistic flash after the learner has correctly cannulated the vein. The wearable simulator cues the live patient wearing the sleeve through haptic vibration when the needle first pierces the smart skin. Multiple layers of woven plastic have been integrated into premium silicone to protect the wearer from any harm during the simulation.

The Avstick includes Avkin's anti-microbial blood and two vein sizes (normal or large). Quickly and easily replace the veins using the zippers on the sleeve, allowing the educator to spend minimal time setting up. This simulator can be used in different simulation settings such as an ambulance, classroom, outdoors, or a traditional hospital room.

Avstick
Wearable IV Simulator

Avline



Port Infusion Simulation Redefined

The Avline is a wearable simulator that delivers a high-fidelity patient experience for a multitude of central venous care (CVC) simulations. This innovative simulator has two options for central venous treatment and care, a right subclavian triple lumen or a left subclavian implanted port; each option is removable, allowing the educator flexibility with learning outcomes. Learners can practice a range of procedures. Options for the triple lumen include flushing, infusion, blood draws, cap changes, and dressing change. For the implanted port learners can practice access, and de-access, infusion, flushing, and blood draws.

Haptic feedback cues the live patients to respond when a needle is inserted into the simulated implanted port or excessive pressure is applied to the surgical site of the triple lumen. The technology is also equipped with an assortment of real patient heart sounds controlled via Bluetooth on the Avkin app, The learner can do a full cardiac assessment before providing care. Avline provides the latest technology to deliver a vast array of realistic patient presentations while also allowing learners to hone their communication skills while caring for their patients.

Avline
Wearable Central Line Simulator

Avtone

Heart & Lung Sound Simulation Redefined

The only wearable high-fidelity heart and lung simulator on the market. Its compact and lightweight design is comfortable for the live patient to wear, and the anatomically correct chest piece allows students to identify proper landmarks just like they would in the clinical setting. Learners can use their personal stethoscope with no additional attachments to listen and identify an array of realistic heart and lung sounds both anteriorly and posteriorly.

The technology in the product allows the educator to control the heart and lung sounds independently for novices or simultaneously for advanced learners.

Avtone
Wearable Auscultation Simulator

Avcath

Catheterisation Simulation Redefined

A wearable simulator that seamlessly replicates the human urinary system. The interchangeable male (circumcised or uncircumcised) and female genitalia provides learners with the ability to practice various types of urinary catheterisation while also practicing all of the essential communication skills. The female genitalia was designed to include an anatomically correct external labia, clitoral hood, and non-obvious urethral meatus to provide a learning experience that will replicate actual clinical practice. Additionally, our genitalia is made with high-quality silicone so learners can use the betadine and lubrication right out of their kits.

Educators can teach proper hand placement during both female and male catheterisation because the physical anatomy feels and responds just like authentic anatomy. The live patient is cued when the catheter enters the urinary meatus. Additionally, if running a urinary retention simulation, the patented sensor technology will cue the patient to "feel relieved" when the learner participant successfully inserts the catheter foley into the urethra and when it hits the bladder. Students will see a steady stream of urine to reinforce realistic bedside practice. For additional realism, the bladder can be scanned and palpated. To ensure a safe learning environment for both learner and patient, space is left between the live patient and the product.

Avband

Wearable Communication Redefined

Created by Simulationists for Simulationists, Avband is a smartwatch look-a-like for inconspicuous 3-way communication between the control room, patient, and Avkin simulators. Pair Avkin products with the Avband to change the vibration feedback from the product strap to the patient's watch on their wrist. Utilizing the Avkin app educators can customise the assortment of colored lights in the Avband to progress the simulation forward and quietly notify the patient that there should be a change in condition.

Avband is meant to replace the need for including bulky ineffective earpieces in simulation. An additional feature of the Avband includes an alert button on the side of the product that allows the live patient to send a panic notification to the control room if they feel psychological and/or physically unsafe at any time during the simulation. Experts recommend Avband as the only solution for inconspicuous closed-loop communication between the control room and the live patient during the simulation.

Simology

The new standard in ultra-realistic wound simulation

SimologyTM wounds are moulded from premium quality soft silicone, come pre-painted and are easy to apply.

All wounds come in a choice of 4 skin tones with various kits and instructional videos being available for wound application, bruising creation and skin tone blending.

SimologyTM wounds are suitable for use on humans and manikins, including the ground-breaking Lifecast Body Simulation range.

Bespoke Wounds

In addition to our standard range, our in-house wound developers are able to create wounds that meet your specific requirements, so please don't hesitate to get in touch and provide photos of what you are looking for.

Simology™
Critical Moulage Kits

The SimologyTM Range Includes:

- Bladed Wounds
- Traumatic Wounds
- Fractures
- Burns
- IV Training
- Gunshot & Blast Injuries • Wound Application Kit
- Skin Tone Blending Kit
- Bruising Effects Kit
- Raised JVP
- Pressure Sore
- Post-Operative Scar
- Suture Pads
- Fake Blood Pools
- Fake Vomit
- Fake Glass

The SimologyTM Range comes with access to easy to follow instructional videos to help you maximise the impact of your wound simulation.

LifeSpace

High impact, practical and cost-effective teaching spaces

Providing amazing flexibility, easy deployment and storage, MDTs LifeSpace Foldaway Medical Education Environments enable educators to create clinical spaces that enhance realism during medical simulation training.

MDT offers a generic ambulance design along with bespoke systems that replicate individual coach-built ambulance designs (inside and out) or critical care department areas. LifeSpace provides a cost effective simulated clinical space solution.

LifeSpace Features

- Bespoke graphic design to internal and external surfaces
- Constructed from 10 durable panels complete with castors for easy movement
- Each panel is 2m high by 1m wide, producing an internal space of 3m x 2m
- Suitable for Ambulance or a variety of Clinical area spaces

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