THE GUIDE to clinical simulation & emergency ventilation
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 manual ventilation training 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 a small group of pioneering manufacturing partners, MDT has also now added the first clinically deployable medical devices to the portfolio, with these devices offering a significant step forward in emergency ventilation monitoring & control.

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.

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The best simulation ecosystem

iSimulate provides smart simulation solutions that are used by organizations 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.

iSimulate REALITi 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

iSimulate AURiS

AURIS Simulation Stethoscope.

The realism and simplicity of AURIS makes it ideal for in-situ training which provides facilitators with a great tool for training and learners an incredibly realistic platform to learn from. AURIS allows simulation and scenario based education to be delivered quickly, easily and intuitively.

AURIS can be used on a manikin or with standardised patients. AURIS uses an iPhone or iPad connected to the stethoscope via Bluetooth to send sounds directly to the ears of the student.

Using innovative sensor technology, the student only hears sounds when the stethoscope is placed on the patient. AURIS can be used for teaching and assessment as well as in simulated scenarios.

AURIS Features

Teaching

• Educates by allowing students to see, listen and do
• Assists students with understand the different sounds
• Faculty can adjust the level of sounds to account for student levels
• Makes it easy for faculty to use in the anywhere with minimal setup

Assessment

• Increases the level of fidelity
• Works in real time
• Enhances the OSCE experience
A solution that maximises the life-saving potential of emergency manual ventilation for cardiopulmonary arrest 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 patient's 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 patients.

Adult Manual Ventilation Training Monitor

On average, 35 to 85% of the air leaks out before reaching the patient's lungs. 30% of patients regurgitate gastric contents when the jaw-thrust manoeuvre is not used correctly. The most common complication is failure to intubate. After two failed intubation attempts the patient is more likely to suffer serious complications and die.

Hyperventilation is feared by most carers when performing CPR as it can cause:
- Lung damage and barotrauma.
- Lung infections and pneumonia.
- Reduced blood flow to the heart and brain.

Hyperventilation can affect the chance of survival by around 70% with International studies having reported that hyperventilation occurs in 80% of CPR procedures.

The EOlifeX® Training Solution

EOlife X® uses algorithms based on ERC and AHA guidelines to help deliver the appropriate oxygen volume and follow the correct ventilation frequencies for every type of adult patient.

The visual feedback increases the quality of manual ventilation by 70% and reduces the risk of hyperventilation tenfold. EOlife X® gives feedback on leaks and its bar graph displays the volumes inhaled and exhaled in real time, teaching you how to:
- Position and seal the mask more effectively.
- Use the jaw-thrust manoeuvre correctly to avoid insufflation of air into the stomach.
- Intubate successfully.
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 color to show if the volume of air given is within the desired range. For maximum user-friendliness the same color is displayed also by the LED light on the sensor module attached to the mask.

Monivent NEO Training Specifications

- Simple set up by connecting the Monivent Neo Training face mask to conventional bag valve mask or T-piece ventilation device.
- Provides feedback on expiratory tidal volume, peak inspiratory pressure, positive end expiratory pressure, mask leakage and ventilation rate
- Wireless data transfer enhances realism by eliminating connecting cables or tubing.
- Continuous real time feedback enhances and speeds up learning.
- Feedback on face mask leak helps identify need to adjust face mask position.
- PIP in combination with VT helps identify potential airway obstruction and provides a better understanding of lung compliance.
- Personal training log showing performance over time, increases motivation to practice and improves ventilation skills.
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 and effective simulated clinical space solution.
Simology

The new standard in ultra-realistic wound simulation.

Simology™ 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.

Simology™ 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, are 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.

The Simology™ Range Includes:

- Bladed Wounds
- Traumatic Wounds
- Fractures
- Buns
- 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 Simology™ Range comes with access to easy to follow instructional videos to help you
maximise the impact of your wound simulation.
Resternotomy Skills Trainer

Practice the skills required to perform emergency resternotomy.

Our new Resternotomy Skills Trainer, developed in partnership with the Royal Brompton Hospital in London, provides surgical staff with the opportunity to practice the skills required to perform emergency resternotomy.

This skills trainer utilises the same patented mechanism created for the TOM team training mannequin to provide a realistic sensation of sternal opening. The skills trainer includes a synthetic heart model which may be interchanged with alternative models according to training needs.

The skills trainer also includes the facility to simulate ventilating the patient, and to inject simulated medication and/or fluids for training environments where a full team is involved (i.e. Cardiac surgery, advanced life support etc.).

This skills trainer is designed to withstand repeated use. It is made of durable material which is easy to clean and set-up for the next training session. Consumable components (such as skin) which will require periodic replacement are available.

Developed in partnership with...