



# Improving patient care under fire

## Tactical Casualty Care Simulation Suite

The Tactical Casualty Care Simulation Suite is a suite of the world's **most lifelike and anatomically-accurate, high-fidelity, male and female simulators** for comprehensive TCCC and medical provider level care training.

Featuring lifelike tissue and high anatomic fidelity, the TCCS and TCCS Plus line of simulators are highly ruggedized, water-resistant, fully mobile, and with over 10+ hours of battery life they are ideally suited for challenging, real-world, indoor and outdoor environments.



# Tactical Casualty Care Simulator (TCCS)

## Comprehensive Tactical Combat Casualty Care Preparedness



### Airways

- Assessment of oral and nasal areas
- Realistic airway - intubation capable
- Insert nasal & oral pharyngeal airways
- Manage difficult airway
- Perform advanced foreign body removal from airway
- Perform suction of the airway – nasal and oropharyngeal
- Tracheal intubation
- Supports supraglottic devices (incl. LMAs)
- Cricothyrotomy

### Breathing

- Remote-controlled respiratory rate
- Bilateral and independent chest excursion
- Tension pneumothorax corrected by midclavicular and anterior axillary needle insertion
- Support to external ventilation

### Circulation

- Remote-controlled heart rate
- Remote-controlled pulses—carotid and non-injured limbs
- Humeral and sternal intraosseous

### Hemorrhage Management

- Remote-controlled pulsatile bleeding and arterial hemorrhage
- Bleeding control via pressure, elevation, and pressure points
- Apply tourniquets to control bleeding
- Apply junctional tourniquets to control massive hemorrhage
- Assess and treat upper and lower limb amputations
- Wound packing
- Multiple and independent bleeding sites
- Penetrating trauma wounds
- 3 liter blood reservoir

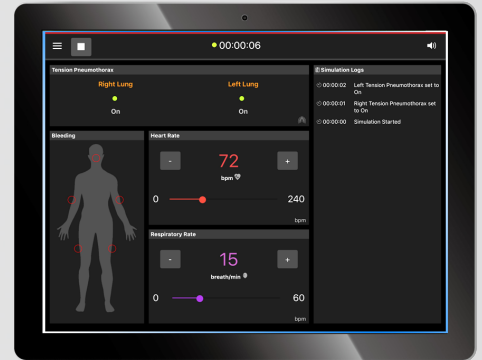
### Mannequin and Software

- Full-body, wireless and tetherless simulator
- Ruggedized and water-resistant for indoor and outdoor environments
- Realistic and lifelike
- 185 lb weight
- Fully-articulated limbs
- Easy-to-use instructor tablet and software (iOS, Android and Mac/PC)
- Two-way headset communication system
- Simulation logs
- System “health” status with complete and real-time self-diagnostics



# Tactical Casualty Care Simulator Female (TCCSF)

The World's First Life-Identical Female Tactical Simulator for TCCC Training



## Airways

- Assessment of oral and nasal areas
- Realistic airway - intubation capable
- Insert nasal & oral pharyngeal airways
- Manage difficult airway
- Perform advanced foreign body removal from airway
- Perform suction of the airway – nasal and oropharyngeal
- Tracheal intubation
- Supports supraglottic devices (incl. LMAs)
- Cricothyrotomy

## Breathing

- Remote-controlled respiratory rate
- Bilateral and independent chest excursion
- Tension pneumothorax corrected by midclavicular and anterior axillary needle insertion
- Support to external ventilation

## Circulation

- Remote-controlled heart rate
- Remote-controlled pulses—carotid and non-injured limbs
- Humeral and sternal intraosseous

## Hemorrhage Management

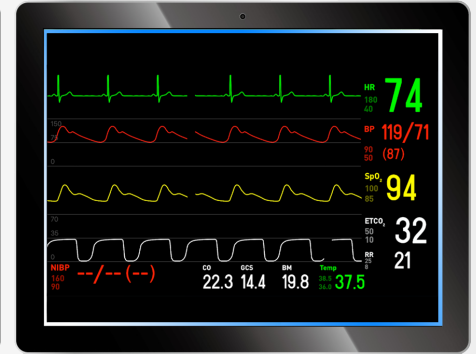
- Remote-controlled pulsatile bleeding and arterial hemorrhage
- Bleeding control via pressure, elevation, and pressure points
- Apply tourniquets to control bleeding
- Apply junctional tourniquets to control massive hemorrhage
- Assess and treat upper and lower limb amputations
- Wound packing
- Multiple and independent bleeding sites
- Penetrating trauma wounds
- 1.2 liter blood reservoir

## Mannequin and Software

- Full-body, wireless and tetherless simulator
- Realistic female form with less muscle mass, lighter skeleton and anatomically accurate genitalia
- Ruggedized and water-resistant for indoor and outdoor environments
- Realistic and lifelike
- 130 lb weight
- Fully-articulated limbs
- Easy-to-use instructor tablet and software (iOS, Android and Mac/PC)
- Two-way headset communication system
- Simulation logs
- System “health” status with complete and real-time self-diagnostics

# Tactical Casualty Care Simulator Plus (TCCS Plus)

A high-fidelity, clinically-responsive tactical trauma simulator for prolonged field care training



## Airways

- Endotracheal tube placement
- Tongue-swelling for difficult airway
- Bag-valve-mask ventilation
- Assessment of oral and nasal areas
- Insert nasal and oral pharyngeal airways
- Supports supraglottic devices (incl. LMAs)
- Cricothyrotomy

## Breathing

- Remote-controlled respiratory rate
- Bilateral and independent chest excursion
- Tension pneumothorax corrected by midclavicular and anterior axillary needle insertion
- Support to external ventilation
- Bilateral chest tube insertion

## Circulation

- Remote-controlled heart rate
- 4 lead ECG
- Unilateral blood pressure measurement
- Carotid, brachial, radial, femoral, popliteal, dorsalis pedis and posterior sensed pulses
- Defibrillation, cardioversion and pacing\*

## Hemorrhage Management

- Remote-controlled pulsatile bleeding and arterial hemorrhage
- Bleeding control via pressure, elevation, and pressure points
- Apply tourniquets to control bleeding
- Wound packing
- Multiple and independent bleeding sites
- Penetrating trauma wounds
- 3 liter blood reservoir

## Mannequin and Software

- Full-body, wireless and tetherless simulator
- Ruggedized and water-resistant for indoor and outdoor environments
- Realistic and lifelike 185 lb weight
- Fully-articulated limbs
- Easy-to-use instructor tablet and software (iOS, Android and Mac/PC)
- Two-way headset communication system
- Simulation logs
- System "health" status with complete and real-time self-diagnostics

## Medication and IV

- Medication and Vascular Access
- Intramuscular sites for medication
- IV cannulation
- Humeral, sternal and tibial IO

## Neurological

- Blinking eyes with tri-state pupils

## Patient Monitoring

- ECG monitoring
- Patient vital signs
- Multiple waveform display

## Sounds

- Airway sounds
- Heart sounds
- Lung sounds

\*requires iSimulate patient monitor software

# Tactical Casualty Care Simulator Female Plus (TCCSF Plus)

High-Fidelity  
Medical Provider  
Level Prolonged  
Field Care for the  
Female Combatant



## Airways

- Endotracheal tube placement
- Tongue-swelling for difficult airway
- Bag-valve-mask ventilation
- Assessment of oral and nasal areas
- Insert nasal and oral pharyngeal airways
- Supports supraglottic devices (incl. LMAs)
- Cricothyrotomy

## Breathing

- Remote-controlled respiratory rate
- Bilateral and independent chest excursion
- Tension pneumothorax corrected by midclavicular and anterior axillary needle insertion
- Support to external ventilation
- Bilateral chest tube insertion

## Circulation

- Remote-controlled heart rate
- 4 lead ECG
- Unilateral blood pressure measurement
- Carotid, brachial, radial, femoral, popliteal, dorsalis pedis and posterior sensed pulses
- Defibrillation, cardioversion and pacing\*

## Hemorrhage Management

- Remote-controlled pulsatile bleeding and arterial hemorrhage
- Bleeding control via pressure, elevation, and pressure points
- Apply tourniquets to control bleeding
- Wound packing
- Multiple and independent bleeding sites
- Penetrating trauma wounds
- 1.2 liter blood reservoir

## Mannequin and Software

- Full-body, wireless and tetherless simulator
- Ruggedized and water-resistant for indoor and outdoor environments
- Realistic and lifelike 130 lb weight
- Fully-articulated limbs
- Easy-to-use instructor tablet and software (iOS, Android and Mac/PC)
- Two-way headset communication system
- Simulation logs
- System "health" status with complete and real-time self-diagnostics

## Medication and IV

- Medication and Vascular Access
- Intramuscular sites for medication
- IV cannulation
- Humeral, sternal and tibial IO

## Neurological

- Blinking eyes with tri-state pupils

## Patient Monitoring

- ECG monitoring
- Patient vital signs
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## Sounds

- Airway sounds
- Heart sounds
- Lung sounds

\*requires iSimulate patient monitor software

# Tactical Hemorrhage Control Trainer (THCT)

Rapid Assessment and Hemorrhage Control Training



The Tactical Hemorrhage Control Trainer (THCT) is an ultra-lifelike, wireless and autonomous patient simulator for TCCC rapid assessment and hemorrhage control training. The THCT features independent upper and lower body venous and pulsatile arterial bleeding, controlled remotely with a free and easy-to-use mobile phone application. The THCT can also be used to train essential TCCC point-of-injury skills such as emergency airway management, needle decompression and intraosseous injection.

## Full-body Mannequin

- Full-body, wireless, tetherless, and autonomous simulator
- Anatomically-accurate soft tissue
- Ruggedized and water-resistant for indoor and outdoor environments
- Multiple wound configurations including amputations and gunshot wounds
- Realistic and lifelike weight
- Fully-articulated limbs
- Easy-to-use instructor phone app (iOS and Android)
- Extended battery life: 20+ hours

## Essential Skills Training

- Endotracheal tube placement
- Supports supraglottic devices (incl. LMAs)
- Bag-valve-mask ventilation
- Assessment of oral and nasal areas
- Oropharyngeal and Nasopharyngeal airway
- Needle decompression (mid-clav/mid-ax)
- Chest Seal
- Cricothyrotomy
- Humeral and sternal intraosseous
- Catheterization
- IV cannulation

## Hemorrhage Control

- Remotely-activated venous and pulsatile arterial bleeding
- Wound packing and bandaging
- Junctional and standard tourniquet application
- Blood reservoir: 6L male/3.5L female

## Rapid Assessment

- Airway and breathing
- Oral and nasal Bleeding



# Trauma Care with Advanced Patient Monitoring

Together, TCCS and REALTi 360 provide a fully integrated, realistic simulation experience.



## Deliver lifesaving training with the power of TCCS and iSimulate patient monitoring.

Combining TCS and REALTi 360 by iSimulate allows you to provide trauma care patient simulation with advanced monitoring all in one package, allowing learners to accurately evaluate a patient's vital signs in any indoor or outdoor setting. REALTi 360 mimics real-world monitors, defibrillators and ventilators with meticulous attention to detail so they look, sound and function just like the real thing.

### REALTi 360

Tablet based modular simulation ecosystem

Build your own system or select a package

Mimic proprietary defibrillators, AEDs and monitors, including LifePak, Zoll and Philips

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

Defibrillation, cardioversion and pacing

Vital signs with single waveform simulation

Modify waveforms with advanced controls

Scenario library and editor

Easy to use checklist and log interface

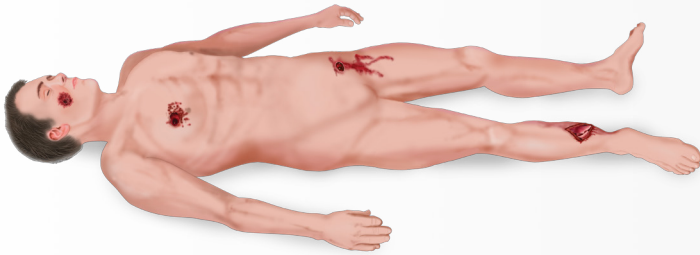
iSimulate Training Management System (TMS)

Simulated patient electronic record with optional chart tablet

Control monitors remotely over the internet

# TCS and TCCS Plus Wound Configurations

Available for male and female simulators



1. GSW right side of the face  
Left back GSW exit wound  
GSW right side of the chest  
Left inguinal wound  
Right tib/fib open fracture



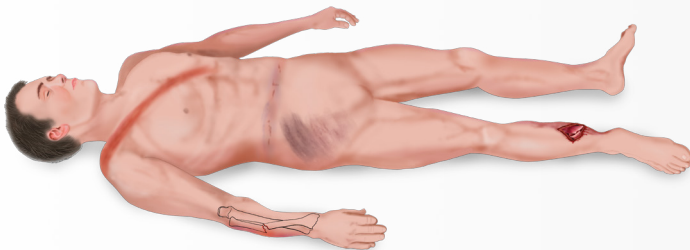
2. GSW left chest entrance wound  
GSW exit wound to the right back  
Left axillary wound  
Bilateral below the knee amputations



3. Right chest GSW entrance wound  
Left back GSW exit wound  
Left lower arm amputation  
Left tib/fib below the knee amputation  
Right inguinal wound



4. 2nd degree burns to the chest  
3rd degree circumferential  
Closed right leg fracture  
Airway compromise  
Electrical wound bottom of foot  
  
(not available for THCT models)



5. Seat belt injury  
Pelvic injury with bruising/swelling  
Closed lower arm fracture  
Right tib/fib open fracture  
  
(not available for THCT models)



6. Healthy body  
No visible wounds  
  
(not available for THCT models)

Available in Caucasian, African American and Hispanic skin tones.  
Illustrations by Suzanne Hayes Visuals.



# Tactical Casualty Care Suite – Phases of Care

**The Tactical Casualty Care Simulation suite is designed to support every tier of casualty care training requirements.**

TCCC Training Requirements	THCT	TCCS	TCCS Plus
All Service Members (ASM)	✓	✓	✓
Combat Lifesaver (CLS)	✓	✓	✓
Combat Medic/Hospital Corpsman (CM/HC)		✓	✓
Combat Paramedic/Provider (CP)			✓
Advanced Resuscitation Care (ARC)			✓



## Support and Maintenance

**Operative Experience offers an extensive optional support and maintenance program to provide help when you need it and to ensure you get the most out of your simulators, including:**

Phone and online customer support

Remote and on-site maintenance

Annual on-site preventative maintenance

Installation and training

Ongoing remote and on-site training

Free shipping and loaner simulator during maintenance

Free software updates

# Technical Specifications

Full-body wireless mannequin

Water resistant

Male: 76"H x 28"W x 12" D (192cm x 70 x 30)  
185 lbs (82 Kg)

Female: 65" H x 23.6"W x 11" D (165 cm x 60 cm x 28 cm)  
130 lbs (59 kg)

(Simulator weight can vary +/- 5%)

Fully-articulated limbs

Internal batteries – dual pack

Li-Ion 18.5V, 6400 mAh

6A rate with built in thermal protection

UN38.3 certified

Run time: 10+ hours

Electrical Input: 110v – 240v

Two-Way communication system

Line of sight two-way communications headset

Range up to 100 yards

Instructor Control Interface tablet

Patient monitor tablet (Plus models only)

Instructor Control Interface Software and License

(iOS, Android, Windows 10, Mac OS 10.12 or greater)

Rugged carry case

One gal. concentrated antimicrobial, antifungal,  
antifreeze simulated blood



**Contact your Operative Experience representative  
for more information about all our training products.**

Operative Experience