



Virtual Reality Medical Training for the Military

VALOR

Introducing **VALOR**. **SimX**'s answer to standardized operational medical training and readiness.

The **V**irtual **A**dvancement of **L**earning and **O**perational **R**eadiness (**VALOR**) program was created to build the next generation of simulation training for military healthcare personnel using virtual reality.

Developed with over \$12M in DOD R&D dollars and now deployed at dozens of installations, the **SimX** Virtual Reality Medical Simulation System (**VRMSS**) enables high quality, repeatable, and accessible training for a wide array of realistic scenarios.

Based on the commercial **SimX** platform in use at hundreds of civilian medical institutions, the **VALOR** program is used at military installations throughout the US, Europe, and Japan.

Specifically designed to overcome the limitations of prior VR medical simulation efforts, **VALOR** leverages low-cost, compliant hardware to provide a multiplayer simulation system and incorporates a virtual BATDOK tablet.



Any Scenario

Treat and stabilize a wide range of injuries across the continuum of care. Practice clinical and operational decision making in a fully immersive environment, while also saving time, money, and resources.

Fully Multiplayer



but until they can't get it wrong.

Fast Setup

SimX requires only VR headset and a laptop computer. Giving you all of the medical, environmental, and psychosocial complexity that you get from in-person exercises in a package that can be setup anytime anywhere in a matter of minutes.

VALOR CURRICULUM

VALOR CORE

(26 available now, additional 5 in development and testing) 26 selected scenarios spanning the full spectrum of Tactical Combat Casualty Care (TCCC), Prolonged Casualty Care (PCC), Small Unit Care (SUC), Chemical, Biological, Radiological and Nuclear (CBRN) medicine, and mandatory certifications (CERT). Appropriate for all TCCC responder levels. Includes multiple patient and mass casualty scenarios, as well as a 1 multi-squad full casualty profile training scenario, spanning care at the point of injury, during helicopter transport, and at a role 2 military treatment facility, including transload and handoff between teams with three simultaneous teams.

▶ [View VALOR Core](#)

VALOR En Route Care

(Aeromedical Evacuation/Critical Care Air Transport)

(Available ~Jun 2023) 14 scenarios spanning the aeromedical evacuation and critical care air transport spectrum, taking place across a variety of replicated airframes with appropriate sets, kits, and outfits. Appropriate for AE/CCAT medical personnel. Developed in collaboration with the USAF School of Aerospace Medicine.

▶ [View VALOR En Route Care](#)

VALOR TCCC-ARC

Advanced Resuscitative Care

Available ~Sep 2023) 6 scenarios spanning the Advanced Resuscitative Care spectrum, with fully implemented ARC tactics, techniques, and procedures, such as REBOA placement and massive transfusion. Appropriate for TCCC Tier Four (Combat Paramedic/Provider), Special Operations Surgical Teams, and similar providers. Developed in collaboration with the University of Alabama Birmingham Department of Acute Care Surgery and the Special Operations Center for Medical Integration and Development

▶ [View VALOR TCCC-ARC](#)

VALOR EMS

(Emergency Medical Services)

(Available ~Oct 2023) 10 scenarios targeting the assessment, field management, and transport of patients in the prehospital setting by EMS personnel. Developed in collaboration with the Stryker School of Medicine at Western Michigan University Department of Emergency Medicine. Appropriate for all EMT responders, including EMT-P.

▶ [View VALOR EMS](#)

VALOR CBRNE

(Chemical, Biological, Radiological, Nuclear, Explosive)

(Available ~Oct 2023) 15 scenarios targeting the assessment, management, and decontamination of CBRNE casualties, including 10 battlefield exposure scenarios and 5 civilian disaster/attack scenarios. Developed in collaboration with the Stryker School of Medicine at Western Michigan University Department of Emergency Medicine and the Special Operations Center for Medical Integration and Development. Appropriate for all TCCC responder levels.

▶ [View VALOR CBRNE](#)

VALOR SUC

(Small Unit Care)

(Available ~Jun 2024) 10 scenarios targeting assessment and management of Warfighter health concerns by the TCCC provider in the austere, forward-deployed small unit setting. Developed in collaboration with the Special Operations Center for Medical Integration and Development and appropriate for all TCCC responder levels.

▶ [View VALOR SUC](#)

VALOR VRMSS Introduction



What is Combat Casualty Care?

Combat casualty care spans the continuum from Role 1 combat lifesavers, medics, pararescuemen, IDMTs and other personnel providing care under fire, to Role 2 forward medical units and special operations surgical teams providing resuscitation and stabilization, to Role 3 MTF personnel providing definitive care.

These highly varied care environments all require warfighters to take quick and decisive action in environments presenting a wide variety of acute clinical challenges and psychoenvironmental stressors (such as enemy action, moving transports, etc.).

Simulation training is the only proven educational approach that improves the ability of elite medical personnel to achieve the mission regardless of distractors and challenges, in any role and any environment.

What Is VR Training for Military Medicine?

VR simulation training for medical personnel allows medics to get real-time experience in advance that will give them the foundation they need for better performance in real situations they may face in the field.

Using lightweight virtual reality headsets, trainees can step into fully immersive simulation experiences. They can practice skills in environments that resemble any scenario to help them become truly prepared.

Military medical VR simulations can be customized to cover the scenarios that will be most valuable to combat medics in the field.

Military Uses for Virtual Medical Training

Military medics regularly encounter extreme situations that are difficult or impossible to duplicate in traditional simulations. With VR, trainees get the chance to experience an environment and scenario and to work through the best, most effective response.

SimX can create highly customized scenarios that fit the terrain, situations, and conditions that medics will face in the field. Trainings can be created with more than 150 patient models in over 30 environments. Skills available include more than 300 tools and procedures. Covered skills and scenarios include:

battlefield triage

battle-specific trauma treatment

helicopter rescue

tactical casualty combat care procedures

The VALOR Program

SimX partnered with the US Air Force to create the [**Virtual Advancement of Learning and Operational Readiness \(VALOR\)**](#) program. This program makes medical simulation more comprehensive, flexible, and accessible. The overall goal is to make simulation training ubiquitous in both civilian and military medicine.

VALOR's guiding principle is to enable healthcare workers to train how they fight. Fully immersive training means better retention of skills and better preparation.



VR Training vs Traditional Simulation Training

experienced in VR in a way that is realistic yet safe for participants.

Traditional

- ⊗ Traditional simulations often involves a mix of training with other students and mannequins
- ⊗ They can be artificial, costly to maintain, overbooked, and cannot cover all potential scenarios

Virtual Reality

- ✔ Interactions with patients with variable outcomes. Trainees can speak with the patient and provide medical care.
- ✔ Simulation of caregiving in a warzone environment. Training in advance makes it easier to operate even in highly stressful conditions.
- ✔ Multi-participant scenarios. Trainees can work together as a team to gain valuable practice.
- ✔ Highly cost-effective. Repeat scenarios as often as necessary without incurring additional costs.
- ✔ Post-scenario evaluations. Students can look back at their performance to get feedback and improve their skills.

Get Started with SimX

How It Works

Personnel don wireless VR headsets and find themselves fully immersed in the sorts of scenarios they are likely to find out in the field. They will find themselves in responsive virtual environments that feel like the real thing.

A trainee can practice emergency procedures with virtual patients that provide variable responses. This training provides a more realistic experience than they could have with bulky laptops and drop-down menus. Instead, they move in a virtual environment performing procedures, manipulating tools, and performing just as they would in a real combat situation.

SimX Experience Overview

At SimX, we can provide whatever specific scenarios are needed in a matter of weeks, at one-tenth the cost of our closest competitors. With virtual reality simulation training, you can ensure that the people working under you have the skills that they need at the times that they need them.

What skills and scenarios do the combat medics in your program need? Get in touch to discuss the solutions we can provide for you.

Get Started

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