

Virtual Reality Simulation in Sepsis

Jack Pottle ¹, Jenny Zhou ²

1. Virtual Reality, Oxford Medical Simulation 2. Culture, Communication and Media, UCL

✉ **Corresponding author:** Jack Pottle, jack@oxfordmedicalsimulation.com

Categories: Medical Education, Medical Simulation, Emergency Medicine

Keywords: virtual reality, sepsis, medical emergency, innovations in emergency medicine, simulation, deliberate practice, gamification

How to cite this poster

Pottle J, Zhou J (2017) Virtual Reality Simulation in Sepsis . Cureus 9(11): e.

Abstract

Background: Sepsis kills more than 8 million people a year, much of which is preventable. Training in sepsis recognition and management plays a key role in reducing this burden. However, there is increasing pressure on simulation budgets and subsequently more cost-efficient methods of delivering simulation training are required. Oxford Medical Simulation have therefore created a virtual reality suite of sepsis scenarios, delivered via Oculus rift, designed to improve access and reduce the cost of simulation.

Learning objectives: The scenarios focus on the early recognition and optimal management of sepsis. This includes assessment, investigation and management in accordance with NICE sepsis guidelines. Feedback also focuses on crisis resource management principles including decision-making, communication and team management under pressure, as well as patient-focused communication skills.

Description of the simulation: Learners are immersed in a virtual emergency department with fully interactive patient, nurse, medications and adaptive, real-time physiology system. The learner must actively review the patient (performing history, examinations, investigations, interpreting results and administering treatment) and manage their team against the clock. This is followed by guided reflection and interactive feedback comparing learner actions to ideal management.

This structure is designed to emphasise elements of deliberate practice and encourage scenario repetition. Engagement is enhanced through increasing scenario difficulty, overt time pressure and gamification including score provision.

Summary of usage/evaluation: The sepsis suite is currently in pilots to evaluate learner engagement, efficacy and integration with the physical simulation curriculum. Preliminary results demonstrate it to be intuitive, immersive, well-liked and lead to significant improvement in key behaviours across scenarios.

A separate evaluation of learner response to guided reflection and objective feedback has been completed by University College London Knowledge Lab.

Open Access

Published 11/30/2017

Copyright

© Copyright 2017

Pottle et al. This is an open access article distributed under the terms of the Creative Commons Attribution License CC-BY 3.0., which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Distributed under

Creative Commons CC-BY 3.0

