

Oxford University partners with Virtual Reality Company Oxford Medical Simulation to Transform Medical Education



- **Oxford University partners with Oxford Medical Simulation to bring virtual reality training to medical students**
- **VR simulation allows students to practice medical emergencies as often as they need**
- **Training healthcare professionals using VR will improve patient care in real life**

The world's leading medical school is embracing state of the art virtual reality software to push student's learning to new heights. Oxford University has partnered with Oxford Medical Simulation to train medical students using virtual reality. Students can now practice medical emergencies using true to life virtual scenarios without risking patients' lives.

The technology, developed by UK-based Oxford Medical Simulation (OMS), allows medical students to practice treating acutely unwell patients in a simulated, virtual environment as often as they like. Training in this way improves patient care in real life by allowing repeated practice in simulation to build competence and confidence.

Oxford University decided to employ this innovative technology as a way to get more students through simulation. Simulation - where trainees practice medical emergencies as they would present in real life - is widely regarded as one of the most effective ways of training healthcare professionals. Simulation is traditionally practiced with high fidelity plastic mannequins in mocked up hospital wards. However, this form of simulation is time, space and budget consuming meaning medical students may only get to experience one physical simulation in an academic year. With virtual reality simulation, students are now able to practice simulated scenarios as often as they like.

The system is being used at the OxSTaR centre based at the John Radcliffe Hospital in Oxford - the main teaching hospital for Oxford University Medical School.

Rosemary Warren, Centre Manager at OxSTaR commented, “As a world-leading institution, it is important for us to remain at the forefront of changes in the types of learning opportunities we offer our students. Embedding virtual reality simulation into what we do has enabled us to give a far greater number of learners access to simulation in a shorter space of time. It’s encouraging to see how quickly our students have adopted the technology. I’m excited to see how they progress clinically as they use it more and more. Simulation is a vital part of medical education and students just don’t get to do it enough. The OMS virtual reality platform allows learners to enter simulation as often as they like to transfer their knowledge to practice.”

The OMS system works by providing students access to libraries of medical emergencies that allows them to simulate the treatment of a range of conditions such as sepsis, diabetes, cardiac failure, pancreatitis and many more. Students enter the interactive virtual scenario using an Oculus headset and are greeted by a virtual nursing assistant and their patient. Learners are able to question, comfort, examine and treat the patient as they would in real life. Every action the learner takes up to - and including - diagnosis and resolution is recorded and fed into the system’s inbuilt feedback engine. Once the scenario is complete, the learner is taken through this feedback to understand what went well and what they need to improve on.

The emphasis is on training effective decision making, critical thinking and clinical reasoning. Healthcare learners have a safe space where they can apply their knowledge and learn from their mistakes. Dr Jack Pottle, Medical Director at Oxford Medical Simulation said: “We’re delighted to be working with the world’s leading university to bring our virtual reality simulation platform to Oxford medical students. We have developed OMS out of a belief that training healthcare professionals in a flexible, zero-risk environment will transform patient care around the world. We learn best when learning from experience and our system allows users to do just that - without putting patient’s lives at risk.”

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Oxford Medical Simulation delivers virtual reality medical training. Using Oculus Rift VR headsets, learners can practice in immersive, fully-interactive clinical scenarios as if in real life. They then receive personalised feedback and can repeat as often as they like to improve performance. These scenarios deliver consistently excellent, standardised clinical training for students, doctors, nurses and other healthcare professionals. The focus is on clinical decision-making under pressure, crisis resource management, team interaction and patient engagement. Oxford Medical Simulation allows healthcare professionals to learn through practice, without risking patient lives, to improve patient care.