IN PRACTICE

A18

A PILOT STUDY EXPLORING HOW IMMERSIVE SIMULATION CAN BE USED TO IMPROVE EDUCATION IN BREAST IMAGING, FOCUSING ON TRANSFORMATION AND INCLUSION

Beverley Scragg[1], Christopher Beaumont[1], Adam Finkill[2], **Leah Greene**[1]; [1]*University of Salford, Salford, United Kingdom,* [2]*It's Interventional Ltd, Sheffield, United Kingdom*

Correspondence: l.greene2@salford.ac.uk

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Introduction: The inherent challenge in learning radiography lies in the inability to confirm the correct positioning of a person until the resultant x-ray is examined. Spurious use of ionising radiation is unlawful and unethical, so radiography education has been limited to the teaching of theoretical concepts reinforced by practical placement learning. Latterly, the profession has introduced procedural simulation using radiographic phantoms or interactive electronic media [1], but immersive simulation involving patient journeys and procedures is uncommon due to the need to expose the subject to ionising radiation.

Simulation in mammography education is further limited by the intimate nature of the procedures and

Figure 1-A18.

the radiosensitivity of the breast. Immersive simulation, providing technical and non-technical learning has not been described in the literature, but we posited that it would be highly beneficial to learners, as breast imaging and interventional procedures require excellent communication and technical proficiency.

We describe a pilot study undertaken to transform mammography education; whereby immersive simulation was used to follow a patient journey in a high-risk situation in breast imaging and advanced practice.

Methods: The study involved 37 learners and a blended immersive simulation, whereby learners interacted with a human simulated person (SP) and a voiced manikin, when necessary, to remove risk of harm to the human SP. The manikin underwent an assessment of a breast mass involving different imaging modalities (Figure 1-A18) and communication challenges over 5 hours. Industry partners facilitated the simulation and academics facilitated learner debrief.

Results: Anecdotal evidence was collected from all attendees. Learners suggested that the communication issues and techniques discussed during the event would be used in their future practice. Industry partners were enthusiastic about their inclusion and were keen to participate again.

Discussion: Literature suggests the quality of the individual's experience during breast imaging is crucially dependent on the radiographer's interpersonal skills [2]. Performing radiological interventional procedures requires high haptic sensitivity and fine motor skills [3]. The pilot study garnered anecdotal feedback from learners suggesting that this method of teaching and learning satisfied both needs.

Industry partners have since repeated the exercise for their application specialist trainees, suggesting that this also holds value for 'training the trainers' who teach those who use the equipment.

In conclusion, it is possible to transform radiography education and include industry partners by using immersive simulation. The study continues to gather evidence to support the use of immersive simulation of this type for radiography education and for future research.

Ethics statement: Authors confirm that all relevant ethical standards for research conduct and dissemination have been met. The submitting author confirms that relevant ethical approval was granted, if applicable.

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