Different Lens: Enhancing Orientation Using Virtual Reality

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Background
- Advocate Lutheran General Hospital (LGH) is a Level 1 Trauma and Magnet recognized Hospital in the North Chicago Suburbs.
- The use of Virtual Reality (VR) and augmented reality is now expanding in the healthcare setting.
- It allows healthcare professionals to explore, learn and practice in a safe environment away from patient care.
- The leadership team at LGH recognized these advances and used VR to enhance, bridge, and supplement new nurses in the perioperative field during their orientation.

Preparation and Planning
- LGH provides an orientation program that runs for 36 weeks and covers major specialties in the perioperative area.
- Perioperative nurses are oriented and trained to perform both scrubbing and circulating role of the nurse.
- VR will supplement the orientation by providing additional avenue to practice the scrubbing skills of a nurse.
- A technology trial was conducted with orientees (end-user) to determine the need and use of VR.

Assessment
- It is important that nurses have a safe space to practice and learning new scrubbing skills.
- Foundational skills in general surgery and gynecological surgery are needed to build complex scrubbing skills as the orientee moves from service line to the next.
- A need to develop anticipation skill was also identified by orientees to help ease the stress of orientation.
- The department starts a cohort four times a year and a complimentary mode of learning would help new team members transition to practice.

In your opinion, what is the most TIME CONSUMING to learn?
- Instrumentation 33%
- Anticipation of Steps (Procedure) 67%
- Gowning/Gloving 0%
- Counting 0%

In your opinion, what is the most CHALLENGING to learn?
- Instrumentation 33%
- Anticipation of Steps (Procedure) 67%
- Gowning/Gloving 0%
- Counting 0%

Outcomes
- Gamification in learning increases retention and engagement of learner or orientees.
- VR mimics the perioperative environment in a safe way where novice nurses can practice and hone their skills.
- VR improves and alleviates stress on orientees when preparing and anticipating instrumentation during cases.
- Post survey was completed to assess the use of technology and how it enhanced orientation.

Implementation
- OR Leadership and Education team was initially trained in the new technology to provide support to orientees in the department.
- A cohort of 4 novice perioperative nurses were initially enrolled and tracked.
- Each orientee are given protected time during the week to use the technology.
- The orientee’s progress was tracked through the platform and guidance was provided by the educator on their learning needs.

Using PeriopSim helped me prepare better when I scrub (1-Not Well; 5- Very Well)
- 4.0

Using PeriopSim helped me anticipate better when I scrub (1-Not Well; 5-Very Well)
- 4.0

Would you recommend PeriopSim? (1- Not Recommend; 5-Highly Recommend)
- 4.3

Implications for Practice
- VR training can be expanded to other roles in the operating room that includes surgical technician and surgical assistants.
- VR training can also provide education and support for low volume specialties where nurses can review, and recapture learned skills.
- VR can also be used as an introduction to student nurses who are interested in growing professionally in operating room
- VR or augmented reality can be expanded to competency management like fire safety, malignant hyperthermia crisis and local anesthetic systemic toxicity.

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Figure 1. Team evaluating the VR technology.

Figure 2. Pre-implementation survey showing the need of orientees.

Figure 3. Nursing orientees using the VR platform during their orientation.

Figure 4. Survey results after using the VR platform.