

Aim: How can simulation-based methodology be used to support clinical departments on a large scale to adapt/integrate/prepare in moving to a brand-new hospital?

Method/design: Collaboration with authors of PEARLS for system integration use ^[1], using it as the main framework for delivery and structure of PESSI. Stages of delivery were: pre-phase work, system testing day, debrief/reflection and evaluation. Immediate feedback of enjoyment and learning was collated from all participants. Three-month post-move feedback is planned to review ongoing impact/behaviour change plus analysis of safety incidents.

Implementation outline: Pre-phase work involved meeting stakeholders and establishing aims of testing. Ward managers were key departmental links, meeting with members of PESSI to plan scenarios. System testing days involved familiarizing themselves with the environment, followed by 'day in the life' simulations with a representation of the whole team. All participants were called 'co-faculty' and knew exactly what would happen. Debrief involved facilitated conversations with the whole team describing reactions, and deeper analysis of the key events, with concerted efforts by facilitators to give a balanced approach of positives and challenges. A short report was given back to the department detailing the findings teams would need solutions to. Solutions from simulation were implemented prior to the move, increasing staff confidence, with many feeling PESSI played a major role in feeling prepared for the new site. The PESSI framework is being utilized in adult services and we hope to publish our methodology to share with the wider simulation community.

REFERENCE

1. Dubé M, Reid J, Kaba A, et al. PEARLS for systems integration. *Simul Healthcare*. 2019;14(5):333–342.

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THE CREATION OF A 'CHOOSE YOUR OWN ADVENTURE STYLE' VR TRAINING PACKAGE FOR POST ANAESTHETIC CARE UNIT (PACU) STAFF

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Background: Lack of training materials for Post Anaesthetic Care Unit (PACU) staff leads to the creation of a 'choose your own adventure' style VR training package, working collaboratively with the TEL team and incorporating quality improvement methodology prior to rollout. The development of this training package was initiated following the introduction of a theatre-specific induction programme, during which it was discovered that the learning opportunities for PACU staff were limited, particularly during the COVID-19 response.

Aim: Therefore, the aim of creating this learning package was to make available more interactive learning opportunities for PACU staff, giving them the chance to develop their knowledge and skills in a safe environment, without the pressure of a live patient.

Method/design: Planning was completed in collaboration with a Theatre Practice Educator and Simulation and Human Factors Fellow. This was initiated with the use of a modified decision tree as shown in figure one. Following completion of this, the Technology-Enhanced Learning (TEL) Lead and clinical expert advice were sought to assist in the creation of high-quality content. Communication was

then sent out seeking actors and location/dates for filming were planned. Appropriate consent was gained from all participants involved. Filming had to be planned around theatre utilization; therefore, it was necessary for this to take place on audit sessions dedicated to training of theatre staff. After the completion of filming, further collaboration with the TEL Lead was required to create the learning package. On completion of the package, it was shared with experienced members of PACU staff to test the quality and validity of the learning experience. At this point, a quality improvement approach was adopted with the use of PDSA (Plan-Do-Study-Act) cycles. Adopting this approach allowed adjustments to be made to the package before it was utilized on a larger scale.

Implementation outline: The learning package was implemented rapidly after completion. It was immediately included in the Theatre Induction Programme for every PACU member of staff and was also then available to be utilized on audit training sessions for existing PACU staff. This learning package was a creative approach, exploiting technology not yet harnessed within our speciality. Patient post-Anterior Repair brought into PACU with an LMA (Laryngeal Mask Airway) *in situ*, spontaneous respirations are present.

Patient regains consciousness: LMA expelled:

1. Laryngospasm – recognize – O₂, Waters Circuit/PEEP
2. Vomit – positioning – suction – anti-emetics
3. PV PAIN – check wound – analgesia (ineffective)

Get help

1. Laryngospasm has broken with PEEP
2. Auscultation and order chest x-ray
3. Multimodal analgesia – add patient PV pack band

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PRACTICE MADE PERFECT: THE EVOLUTION OF AN LVAD ALGORITHM THROUGH CLINICAL SIMULATION

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Background: In total, 70% of patients implanted with a left ventricular assist device (LVAD) will experience a life-threatening emergency within the first year of implantation^[1,2]. Complexities surrounding deterioration and resuscitation in these patients are clinically vast and intimidating to the staff who encounter them. This may present significant challenges for staff caring for this complex patient group and often leaves them feeling anxious and insufficiently prepared when presented with LVAD deterioration. A literature review revealed a lack of clear guidance for the management of in-hospital LVAD emergencies. As a result, an organization-wide project was launched to design the first ever, non-brand-specific, LVAD emergency algorithm. A multi-disciplinary clinical simulation programme was fundamental to the evolution of the tool and the clinical decision-making, competence and confidence of the staff group.

Aim:

- Develop and introduce an emergency algorithm that provides a standardized approach to LVAD patient emergencies.
- Increase staff confidence, competence and clinical decision-making.