

## SPEECH AND LANGUAGE THERAPY SIMULATION: EXPLORING SAFETY LEARNING

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**Background:** Continued collaboration between Senior Speech and Language Therapists (SLT) and the Simulation Centre at an acute hospital, led to further research into safety learning themes identifying issues with basic dysphagia care on the wards despite ongoing lecture-based training. This was interpreted as training being focussed on one way of learning for medical staff and not providing an equitable training service for those with differentiated learning needs [1]. This led to the SLT team creating a training programme titled 'dysphagia friendly wards'. As part of this, the SLT and Simulation Centre developed a simulation programme which was a hybrid of open theatre forum style and simulation using a bell to increase interaction within the scenarios. We created a realistic ward environment increasing the validity of the scenario with groups of up to four healthcare care assistants and nursing staff from stroke wards.

**Methods:** Three scenarios were designed around the safety learning themes identified in the incident reports such as poor mouth care, incorrect diet textures, and choking hazards which were noted on the ward by the SLT team. This created a realistic and interactive session using a live actor to demonstrate different swallowing difficulties, poor oral hygiene, and the importance of dysphagia management. The live actors are professionally trained and members of the simulation education team.

**Results:** Currently the programme is ongoing and we are due to finish our first ward by the end of March 2023 with the hope of rolling this out hospital-wide. Each ward is estimated to take 2 months to complete. Feedback during and after the sessions has been positive and participants have engaged by asking thoughtful questions and putting information into practice on the wards. Communication issues highlighted our diverse workforce and patients which was found in real time during the simulation. Supporting evidence has been written and available for presentation.

**Conclusion:** Very few SLT teams have used simulation training within their practice and the opportunity to create a programme that is proactive and differentiated for different learners is fantastic, and creates a work force that feels valued alongside giving gold standard care to patients with both communication and dysphagia.

## REFERENCE

1. L. Raffaelli (2014) 18 Teacher-Tested Strategies for Differentiated Instruction. Edutopia. Available online <https://www.edutopia.org/discussion/18-teacher-tested-strategies-differentiated-instruction> [Accessed on 15/06/2021]

## AS WE LIVE AND BREATHE – THE USE OF SIMULATED EDUCATION IN THE MANAGEMENT OF PATIENTS ON CONTINUOUS POSITIVE AIRWAY PRESSURE (CPAP) WITH COVID-19 USING BOTH A HIGH-FIDELITY MANIKIN AND A REAL PERSON

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**Background:** Continuous Positive Airway Pressure (CPAP) was being used on patients within designated wards to help reduce pressures on the Intensive Care Unit [1] and the number of

intubated patients. Those patients presenting with COVID-19 associated respiratory failure within 48 hours of diagnosis were placed on CPAP [2]. The aim was to reduce mortality from hypoxaemia and promote patient safety. Those eligible for CPAP showed deterioration in oxygenation on arterial gas sampling or were showing increased work of breathing including an unsustainably high respiratory rate [3]. The simulated education sessions were to upskill registered intermediate care nurses in the use of CPAP, our most advanced airway procedure outside of the intensive care unit, and support redeployed nurses rostered onto the COVID-19 wards from other non-COVID-19 clinical areas. The aim was to empower nurses to feel more confident in the management of patients requiring CPAP and for them to be able to troubleshoot common problems giving patients the best care and chance of survival.

**Methods:** Methods included coordinating exposure for each nurse to a CPAP preloading session following Trust policy, proformas and competency, then ensuring clinicians attended a dedicated two-hour practical simulation-based session using a mixture of high-fidelity manikins and real persons as simulated patients. Scenarios were developed based on issues that had previously happened or could occur in clinical practice. This created both a progressive simulation or shorter sessions followed by a debriefing depending on the experience of the nurse and how they performed on the day. Staff were asked to complete a feedback form about how they found the session and then assessment was made in clinical practice with the signing off of the CPAP clinical competency.

**Results:** Within two months the team delivered training to all nurses rostered onto the COVID-19 ward and 95% had the clinical competency signed off. The feedback following the debriefing sessions stated that they felt more confident in managing the CPAP machine and the patient. They felt that the educational processes now in place facilitated patient safety and improved the quality of care delivered.

**Conclusion:** Simulation-based education with the CPAP machine improved not only theoretical but also practical knowledge to help staff feel more empowered and confident when in clinical practice. Using a real person for several of the scenarios instead of the manikins meant staff could experience and respond appropriately to situations as they developed. This not only improved realism but enabled more immersive experiences for all involved.

## REFERENCES

1. Vaschetto R, Barone-Adesi F, Racca F, Pissaia C, Mastrone C, Colombo D, Olivieri C, De Vita N, Santangelo E, Scotti L, Castello L. Outcomes of COVID-19 patients treated with continuous positive airway pressure outside the intensive care unit. *ERJ Open Research*. 2021;7(1).
2. Ashish A, Unsworth A, Martindale J, Sundar R, Kavuri K, Sedda L, Farrier M. CPAP management of COVID-19 respiratory failure: a first quantitative analysis from an inpatient service evaluation. *BMJ open respiratory research*. 2020;7(1):e000692.
3. Talbot-Ponsonby J, Shrestha A, Vijayasingam A, Breck S, Motazed R, Raste Y. Adaptation of a respiratory service to provide CPAP for patients with COVID-19 pneumonia, outside of a critical care setting, in a district general hospital. *Future Healthcare Journal*. 2021;8(2):302–306.

## RAPID CYCLE DELIBERATE PRACTICE MODEL: CARDIAC ARREST SIMULATION FOR WARD-BASED STAFF

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**Background:** The Simulation Centre, in a largest district general hospital, provides a large portfolio of scenario-based

courses, for all staffing groups, including the development of modified rapid cycle deliberate practice (RCDP) simulation. Modified RCDP is a model of simulation where learners repeat a scenario, with micro-debriefings, allowing for improvement upon each cycle, in a dynamic learning experience [1]. The centre developed a hybrid style of RCDP and simulation to create a model called Die, Debrief, and Develop, with a focus on the initial response during a cardiac arrest, based upon safety learning events and staff confidence during these emergency events. The aim of the sessions was to improve learner confidence, focusing on technical and non-technical skills in a safe learning environment. The simulation approach was delivered within the clinical environment, utilizing a manikin and equipment on the ward, including the cardiac arrest trolley. A clear pre-briefing was provided to ensure transparency around the expectations within the scenario, for example, the patient will be in cardiac arrest. Due to the repetitive nature of the simulation, there was also the freedom to fail [2].

**Methods:** Each cycle was 5 minutes and repeated 3 times, with a micro-debriefing between each cycle. The improvement between each cycle included patient assessment, ergonomics, human factors, critical thinking, communication, clinical skills and latent threats using elements of gamification. The micro-debriefing between each cycle allowed candidates to reflect on the experience to allow for improvement during each cycle.

**Results:** As well as learning personal safety in the pre-briefing, patients and relatives in the clinical area were informed that the session would be taking place. The feedback from learning following the simulation sessions included:

'I enjoyed cardiac arrest practice it made much more sense and more relatable than talking through what you would do!'

'Was valuable learning and very relevant to our ward'

'Has helped me understand cardiac arrest'

'I feel empowered!'

'Now I know where things are on the crash trolley'

**Conclusion:** As a result of the RCDP model of training, this has been replicated in simulation sessions for Preceptorship and Internationally Educated Nurses. The outcome from this training has demonstrated the impact of RCDP in learner confidence and in technical and non-technical skills, that can be replicated in other forms of scenario-based training.

## REFERENCES

1. Peng CR, Schertzer, K. Rapid Cycle Deliberate Practice in Medical Simulation. Treasure Island, Florida: StatPearls Publishing; 2022. <https://www.ncbi.nlm.nih.gov/books/NBK551533/>
2. Erickson A, Lundell J, Michela E, Pfleger PI. Gamification. In: Kimmons R, Caskurlu S (eds.) The Students' Guide to Learning Design and Research. EdTech Books; 2020. <https://edtechbooks.org/studentguide/gamification>

## UTILISATION OF DIGITAL AUTHORIZING PLATFORM TO ENHANCE SIMULATION DELIVERY

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**Background:** The development and ongoing critique of simulation-based scenarios is critical to ensure a researched and standardised approach to learning [1]. This is achieved by creating scenarios that have set learning objectives to improve clinical practice within multidisciplinary teams and patient safety. Additionally, a robust scenario leads to stimulating and open debriefings [2]. Whilst a paper-based scenario will do this, the aim is to highlight the benefits of using a digital platform for both creating and updating scenarios.

**Methods:** Paper scenarios have been used for many years to achieve the goals highlighted above but it became increasingly obvious that the resources needed to review, critique, and update those scenarios were no longer effective. This situation was emphasised due to the need to have multiple copies of scenarios across many sites. In order to maintain a quality service, whilst still being able to maintain resources to redevelop and enhance existing scenarios, we implemented a digital authoring platform called IRIS.

**Results:** Scenarios were transferred and created allowing a centrally controlled catalogue that could be audited and version controlled. Any changes made would automatically update the scenario on all the users' tablets thus ensuring the same version of the scenario was used across all sites. An immediate benefit was the reduction in time spent redeveloping scenarios. This allowed for added details to be entered dependent on if it was a standardised patient or manikin driven scenario. Another benefit was the ability to rapidly collaborate and co-author with peers and subject matter experts. IRIS interfaces with manikins from leading vendors, sending patient data states directly to the manikins reducing setup time. We noticed an increase in simulation engagement as authors were able to log on remotely to update work.

**Conclusion:** IRIS allows easy design and supports the development of high-quality scenarios. Its implementation saved resources in terms of time, staffing and environmental footprint. It enabled us to have a central hub of scenarios that dismissed the need to do multiple updates in multiple places and enabled us to have an audit trail of changes, by date time and user. Moving to a digital platform enhanced the experience of our users giving them a better learning experience leading to improved patient care.

## REFERENCES

1. Alinier G. Developing high-fidelity health care simulation scenarios: A guide for educators and professionals. *Simulation & Gaming*. 2011;42(1):9-26.
2. Dieckmann G, Gaba D, Rall M. Deepening the theoretical foundations of patient simulation as social practice. *Simulation in Healthcare Journal*. 2007;2(3):183-193.

## INTRODUCTION OF AN INTERNAL MEDICAL TRAINEE HIGH-FIDELITY SIMULATION COURSE PROGRAMME

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**Background:** The Trust felt that a targeted programme was needed to help further prepare Internal Medical Trainees' (IMT) for their current duties and forthcoming roles as registrars. We wanted to provide them with the opportunity to boost their confidence and practice working alongside junior medical colleagues, in order to enhance patient safety [1]. These programmes could also work alongside the regional THRIVE and STRIVE sessions.

**Methods:** A three-year programme was introduced. For IMT year 1, it is a half-day of 3 scenarios following a patient's journey through an admission with key objectives being around difficult decision-making and communication. For IMT year 2, this includes a day of 5 challenging scenarios based around situations the IMT's are called for. They look at non-technical aspects of their job in the context of complex clinical situations including bradycardia, supraventricular tachycardia, cardiac arrests, mental capacity, and duty of candour. IMT year 3, includes two days with the IMT3A course