

# Multi-disciplinary in-situ simulation on the AMU



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In-situ simulation is an under-used but highly beneficial teaching tool. We embarked on a series of multi-disciplinary in-situ simulations on our AMU at Doncaster Royal Infirmary. This poster outlines the benefits of in-situ simulation and also highlights the pitfalls one might encounter when embarking on a similar project.



E-02 Education

## Introduction



**NHS**  
Doncaster and Bassetlaw  
Teaching Hospitals  
NHS Foundation Trust



## Introduction

Simulation based medical education has long been used to aid clinicians with obtaining and maintaining the knowledge and confidence to manage medical emergency scenarios<sup>1</sup>. Although used frequently within our trust as a training tool, simulation sessions are mostly run in a simulation lab away from the clinical environment and in a single disciplinary manner. In-situ simulation (ISS) has been shown to improve professional skills, communication and clinical care<sup>2</sup>. In this project we commenced a series of regular in-situ simulation scenarios on our AMU at Doncaster Royal Infirmary (DRI).

This poster will explore the benefits and pitfalls of providing multidisciplinary ISS.

## The Process



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The target audience for the scenarios were practitioners of all disciplines. Scenarios focused on the management of acute medical emergencies with specific topics selected by the teaching group according to recent experience of similar challenging situations where learning opportunities were identified.

The teaching group consisted of an acute medicine consultant with over 10 years experience of delivering simulation courses in her role as associate director of simulation in a regional simulation centre, an acute medical registrar and simulation fellow and a clinical skills and simulation educator within the trust.

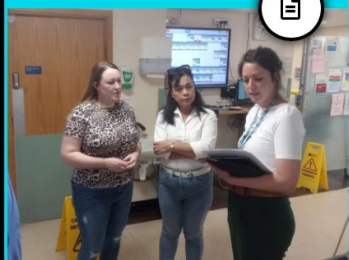
The learning group for each scenario were a health care assistant, nurse and student nurse. Following their initial assessment of the patient they are advised to act as they would do in clinical practice by seeking help from an appropriate doctor who is on shift. They may ultimately escalate to a more senior member of the medical team for advice or assistance. The teaching group then provided bedside "guerilla" debriefing to each learning group.

The first scenario was a hyperinflation lung injury in a patient with a large pleural effusion with a chest drain in situ. The case reflected a similar serious incident within the trust which highlighted a number of human factors which may have led to the adverse outcome that the patient experienced in reality.

Additional scenarios included anaphylaxis, diabetic ketoacidosis and cardiac chest pain.

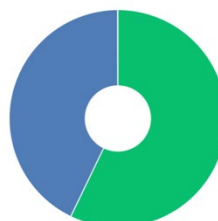
Following each scenario the learning group were given a feedback form via survey monkey which consisted of a series of likert scales and a free text section. Additionally, the teaching group met to discuss the innate factors influencing patient management as well as the challenges facing them in delivering simulation teaching in this way.

## Results



## Results

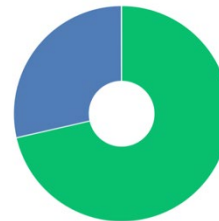
1. I enjoyed the training today



Answered: 7 Skipped: 0

Strongly agree	57.14%	4
Agree	42.86%	3
Neither agree nor disagree	0%	0
Disagree	0%	0
Strongly disagree	0%	0

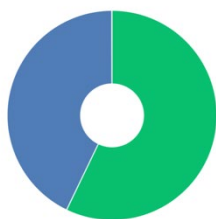
2. I learned something from the training today



Answered: 7 Skipped: 0

Strongly agree	71.43%	5
Agree	28.57%	2
Neither agree nor disagree	0%	0
Disagree	0%	0
Strongly disagree	0%	0

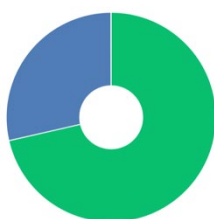
3. I think the training today will improve my clinical practice



Answered: 7 Skipped: 0

Strongly agree	57.14%	4
Agree	42.86%	3
Neither agree nor disagree	0%	0
Disagree	0%	0
Strongly disagree	0%	0

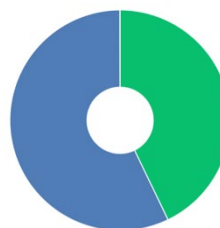
4. I think the training today will improve patient safety



Answered: 7 Skipped: 0

Strongly agree	71.43%	5
Agree	28.57%	2
Neither agree nor disagree	0%	0
Disagree	0%	0
Strongly disagree	0%	0

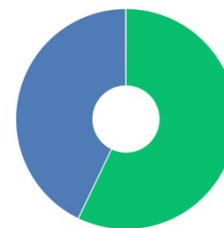
5. I found the training realistic



Answered: 7 Skipped: 0

Strongly agree	42.86%	3
Agree	57.14%	4
Neither agree nor disagree	0%	0
Disagree	0%	0
Strongly disagree	0%	0

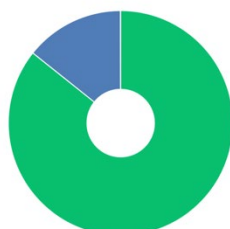
6. I found the debriefing useful



Answered: 7 Skipped: 0

Strongly agree	57.14%	4
Agree	42.86%	3
Neither agree nor disagree	0%	0
Disagree	0%	0
Strongly disagree	0%	0

7. I would like to do this sort of training again



Answered: 7 Skipped: 0

Strongly agree	85.71%	6
Agree	14.29%	1
Neither agree nor disagree	0%	0
Disagree	0%	0
Strongly disagree	0%	0

### Why in-situ is better



### Why in-situ is better

ISS provides learning to all of the clinical team. This contributes not only to increased fidelity with regards to the simulation scenario but also forges stronger relationships within the clinical team. Collaborative learning provides a bidirectional relationship with regard to increased safety and trust in the team's ability to manage both the simulated and human patient<sup>3</sup>. Although simulation suite learning can be multidisciplinary, it is unrealistic to expect that a whole clinical team can be recruited contemporaneously for the same simulation suite course.

By delivering education at the point of care there is no requirement for study leave or extra staffing to accommodate the learning process.

Providing simulation in the clinical environment improves patient safety by allowing for the identification of latent errors<sup>4,5</sup> such as equipment availability and inefficient processes and can highlight the need for updated protocols.

Although the faculty members are highly experienced simulation facilitators the collective body of knowledge of delivering in ISS is weaker. There has been a journey of discovery for the faculty throughout this process which aids familiarity and confidence with ISS. The team hope that through this increased confidence, they will be able to support all teams across the trust to use ISS in their teaching. In improving staff familiarity with ISS across the trust, the teaching group also hope that there may be a future role for ISS in the investigation process for serious untoward incidents.

### Challenges



### Challenges

We faced a number of challenges during the process.

The series of scenarios were due to run during a period of junior doctor industrial action with escalating clinical demands and staffing shortages. The schedule therefore suffered a number of cancellations. There needs to be an acceptance of clinical provision always taking priority over simulation in these circumstances.

Initially the teaching group asked for additional staff to be made available for the learning experience which we found was an additional barrier to the process. Following the first scenario the team realised that providing individual scenarios in a short time frame enabled the learning group to be entirely drawn from existing staff members without significant disruption to clinical work.

The conventional process for simulation involves team prebriefing and debriefing in a safe and non-judgemental environment. Although the nursing staff that are due to be involved can be prebriefed comprehensively prior to the scenario, in order to maintain the organic referral process to the doctors, all the doctors on shift need to be prebriefed in order for them not to be confronted by the simulated scenario.

Similarly, there is limited space for delivering this type of learning and no additional safe and neutral space for debriefing. This means there needs to be a hot debrief within the simulated environment which is less comfortable for the learners and might inhibit their ability to reflect in as much depth.

The provision of high fidelity simulation such as this requires the transportation and installation of a cumbersome and technologically complex mannequin which requires training to use. There needs to be consideration given for how to efficiently store or transport the mannequin between teaching sessions. Even with some familiarity, the change of environment resulted in a two hour setting up period for the teaching group. The increased accessibility for the learners is offset by the inefficiencies for the teaching group.

The delivery of simulation suite courses within the environment of a regional teaching centre by experienced simulation instructors ensures a level of quality in the teaching that is delivered. Small silos of insitu practice ad hoc can fall victim to lower quality educational experiences delivered by well-meaning but inadequately experienced members of faculty in order to meet curriculum requirements. We would argue that in situ teaching requires more experience than sim suite teaching and that ideally there should be trust instigated governance surrounding the quality of teaching provided.

## Conclusion



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The value of more traditional, simulation suite courses should not be overlooked. They provide a safer, purpose built learning environment and allow for the maximisation of time and resources from a teaching perspective.

ISS provides the opportunity for wider distribution to learning groups in the current climate when clinical demands and healthcare funding limit access to study leave. There needs to be an acknowledgement and acceptance by the teaching group of the time inefficiencies and other challenges highlighted above.

## Authors



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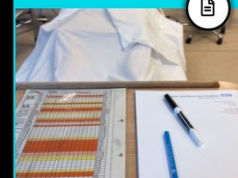
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## References



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