Discussion/Conclusions Despite the small study number, a clear statistical improvement in performance was seen following the new simulation session. Feedback from the entire year group has been positive.

Early application of simulation is now essential in medical training. This includes undergraduate level, in order to prepare students adequately to provide effective and safe patient care. We therefore fully recommend this approach to expand in undergraduate training.

O32 USE OF IN-SITU SIMULATION TO TACKLE LATENT THREATS IN A MAJOR HAEMORRHAGE PROTOCOL – DIFFICULTIES AND DETERMINATION

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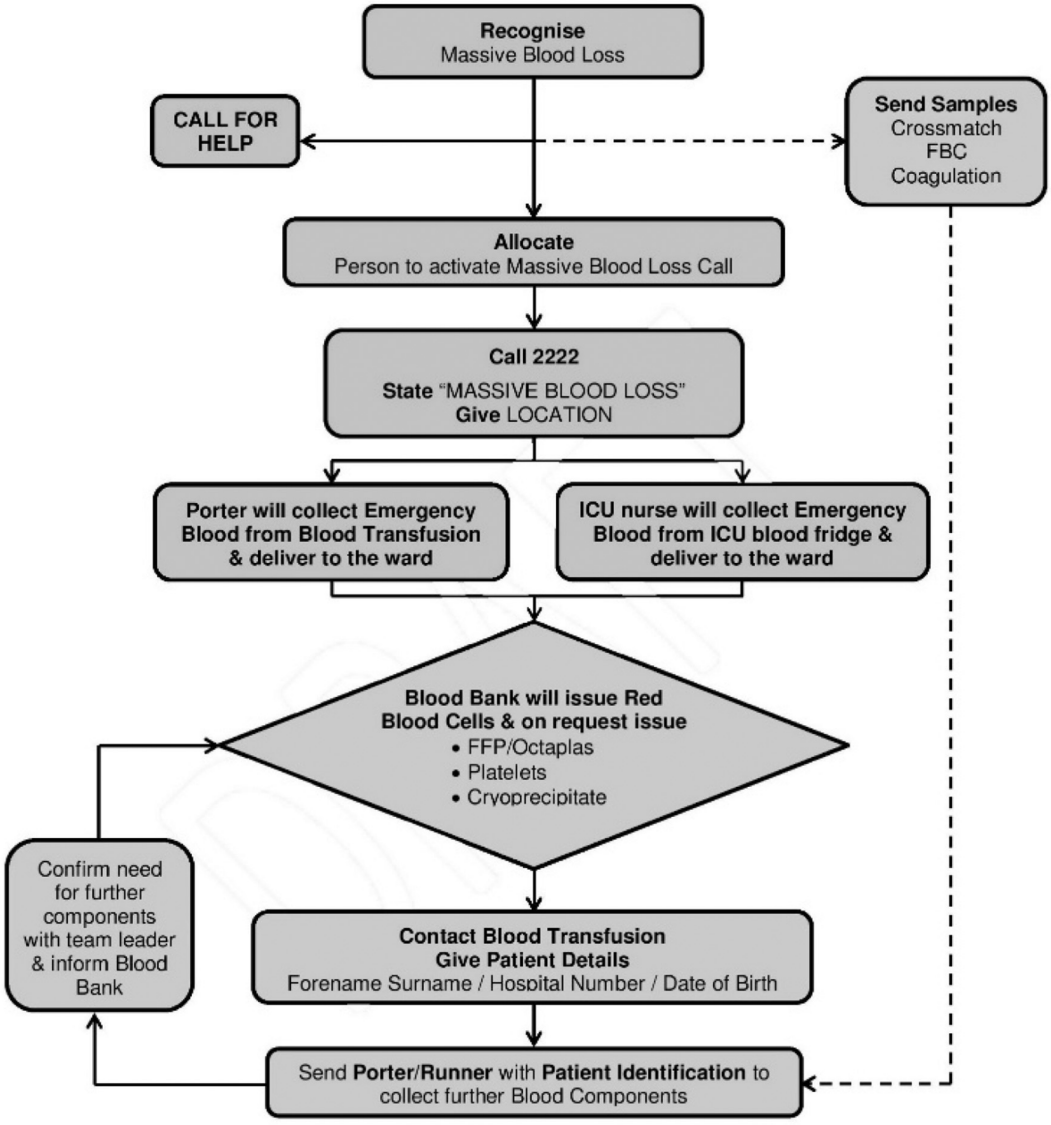
Introduction Major Haemorrhage carries a high mortality of 32%[1] and requires a co-ordinated response from bloodbank, clinical areas and porters. In-situ simulation can reveal latent threats which are not shown by Patient Safety Incident reporting.[2] Repeated simulations allow iterative Quality Improvement (QI) to mitigate latent threats. In this tertiary hospital specialising in adult and paediatric cardiac surgery we experience on average 17 Major Haemorrhage cases a year. We report our experiences of SPRinT (Simulated interPRofessional Team Training) in-situ simulations of Major Haemorrhage between 2012 and 2018. We discuss the latent threats identified and arising QI projects.

Methods Repeated SPRinT courses were planned cross-departmentally on the ward and in bloodbank to deliver simulated major haemorrhage events. The 'Plan-Do-Study-Act' tool was applied to the Massive Blood Loss (MBL) guideline to identify latent threats and deliver QI. Observer checklists measured compliance with any new changes. Systems errors responsible for poor outcomes were identified and staff trained. This process was repeated in multiple PDSA cycles with the aim to reduce latent threats to zero. Time to start transfusion of both the first unit of blood, and subsequent cross-matched blood, were



Abstract O32 Figure 1

Abstract O32 Table 1

QI aim	Performance gap	System/process error	QI intervention	Outcome measure
Efficiency	Delayed response	Difficulty contacting Blood Bank (BB) Difficulty triggering Catastrophic Blood Loss protol on phone No redundancy in system were porters to fail to attend	To put out a 2222 Call stating 'Catastrophic Blood Loss' which will call upon the resuscitation team, porters and BB. Avoids wasting time trying to contact BB directly. Terminology changed to 'Massive' Blood loss - easier pronunciation. Keep 2 Emergency blood units in ICU blood fridge. The nurse on the crash team takes the emergency blood from the ward fridge to the massive blood loss event and a porter will come to blood bank to collect a further two units to take to the clinical area.	Time to transfusion fell by 2/3rds: 6.25 mins to 2.0 mins
		Electronic requesting impractical in an emergency- time consuming.	Paper forms introduced on resuscitation trolleys.	
Patient safety	Blood Transfusion error	Collecting wrong patient's blood products from refrigerator.	Blood handed to Staff directly during emergencies.	Ongoing incident reporting helps study outcomes in real situations.
		Wrong patient identification: emergency drug chart used; corded phone couldn't reach patient name band. Also unable to open BB door to porters as on corded phone	Cordless phones introduced.	
		Porters / ICU nurse unable to access outlying ward out of hours – key needed to get into building	Changed door security for outlying building so no longer require a key to enter or leave overnight.	
Reducing waste	Unnecessary products ordered	Poor communication	Role allocation of a specific team member for blood bank communication.	

monitored. Participants' confidence was monitored with questionnaires. Observer checklists were analysed in cross-departmental meetings looking for solutions. QI aims were categorised into efficiency, patient safety and reducing wastage.

Results A total of 9 SPRinT courses and 8 PDSA cycles were completed between 2012 and 2018, with 74 participants. Feedback forms suggest realism of the scenario's environment and stress level were 82% (IQR 70–90%) and 80% (IQR 65–90%) respectively. Latent threats were identified resulting in 7 significant QI projects (figure 1). Time for emergency blood administration improved from 6.15 mins to 2.0 mins (reduction of 2/3rds).

Discussion/Conclusion Over 3 years of simulation-based PDSA we have overhauled our Major Blood Loss Protocol (figure 1), resulting in increased participant confidence and reduced time to initial blood transfusion. QI projects have included tackling systems issues such as a lack of overnight access to an outlying site, providing improved resources eg a cordless phone for Bloodbank. The iterative simulation process was used to improve our Major Blood Loss Protocol by combating latent threats, and for staff training. The time to resolve major QI issues was greatest for estates issues (4 years) followed by additional resources (1 year) and training (6 months) (table1). We have shown that with targeted in-situ simulations, and determination, major improvements are possible in cross departmental protocols.

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O33 EVALUATION OF A EUROPEAN PROJECT (NURSKIT) ON COMMUNITY-BASED SIMULATION SCENARIOS FOR UNDERGRADUATE NURSING STUDENTS

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The area of simulation based education (SBE) as a strategy to support student learning and engagement has been well established within the constructs of undergraduate (UG) nurse education (Coppa et al., 2019). However, when this pedagogical strategy is utilised, it predominates around the acute care arena. Husson et al. (2014), recognises the lack of community-based simulations and described the potential of this as 'a new frontier' and as an opportunity to grow and develop as we move towards a more community-based approach to patient care.

In response to this challenge an undergraduate simulated nursing resource (NURSkit), funded by the European Commission, involving nine European partners was developed. The learning resource consists of three community-based simulations which engages students in the trajectory of a chronic disease process from diagnosis to end of life. This toolkit is suitable for all stages of an UG nursing programme.

This paper will present the evaluation of the third community-based simulation (Nurskit 3; Complex Care at the End of Life). Twenty undergraduate final year nursing students engaged in and evaluated this resource. The prebrief phase consisted of students listening to pod casts of patients` experiences of terminal illness. The students were then invited to role play a scenario using a standardised patient depicting a level of grief. Finally, within a two-week window, students were invited to debrief using a world café format. The