

IN PRACTICE

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CAN MULTI-DISCIPLINARY SIMULATION BASED TRAINING REDUCE TIME TO DELIVERY OF BLOOD PRODUCTS DURING A MASSIVE TRANSFUSION**Emma-May Curran**¹, Victoria Meighan; ¹Tallaght University Hospital, Ireland**Correspondence:** emmamaycurran@rcsi.com

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Introduction: Haemorrhagic shock is the one of the leading causes of death in trauma patients and early recognition of blood loss, haemorrhage control and rapid massive transfusion is lifesaving [1]. Efficient delivery of blood products is essential to the care of trauma patients [2] and is dependent on excellent multi-disciplinary teamwork and communication.

In our institution, a Dublin based designated Trauma Unit, we sought to investigate the effect of multi-disciplinary simulation based medical education on time to delivery of blood products in a massive transfusion.

Methods: Four multi-disciplinary team (MDT) simulation based medical education training sessions were held between 2020 and 2022. The MDT included prehospital National Ambulance Service, emergency department medical and nursing staff, porters, health care assistants, surgical and intensive care doctors and blood bank staff.

Each simulation was based on a major trauma and used a standardised massive transfusion protocol.

To evaluate the efficacy of the MDT simulation-based training, a retrospective review was carried out which analysed the; i) Activation of the massive transfusion protocol, ii) time to issue pack one, and, iii) time for pack one to be collected from the lab.

Results: Prior to the MDT simulation-based education the average time from activation of the MTP to the blood arriving in the emergency department was in excess of 40 minutes. After conducting the training, the time decreased to 32 minutes. The average time from activation of the MTP to issuing pack one was 13 minutes and from issuing the blood to delivery to the emergency department was 20 minutes which was a significant improvement on the pre-training times.

Discussion: We demonstrated a reduction in time to delivery of blood products associated with regular MDT in situ simulation training. Deliberate practice of the massive transfusion protocol improved teamwork and communication which lead to a reduction in time taken for the delivery of blood products.

Ethics Statement: As the submitting author, I can confirm that all relevant ethical standards of research and

dissemination have been met. Additionally, I can confirm that the necessary ethical approval has been obtained, where applicable.

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