TRANSFORMATION

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TRANSFORMATIVE SIMULATION: STRESS TESTING A NEW NEONATAL MAJOR HAEMORRHAGE PROTOCOL

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Introduction: Health Education England have recently endorsed the use of simulation activity as a crucial mechanism through which new policies and procedures can be tested to identify latent patient safety threats [1].

Our tertiary neonatal intensive care unit (NICU) has, in response to national requirements and recent safety incidents, developed a new Neonatal Major Haemorrhage Protocol (NMHP). This is a complex, dual-site protocol which requires action from staff in multiple departments over both sites. To aid development of the protocol, we utilised simulation to stress test the guideline and to identify gaps in the roll out of its use.

Methods: We designed a two-part simulation to test the NMHP. The key priorities of these simulations were in Identification and Innovation [2].

1. A 'Table-Top' Simulation in which knowledge of staff in each department was tested through simulation of principal phone calls within the NMHP.
2. An In-Situ Simulation of the NMHP within the NICU. This involved five nursing staff, three medical staff and four facilitators.

In lieu of a traditional debrief, participants and facilitators engaged in a modified debrief with the purpose of identifying problems that arose during the simulation and developing action points for improvement of the protocol and reduction in patient safety threats.

Results: The 'Table-Top' Simulation uncovered lack of dissemination of the new protocol to one key department. Following this, education of this team was completed.

The In-Situ Simulation identified 16 primary issues, from which 28 separate action points were developed. The primary issues identified related to equipment, process and educational needs for both nursing and medical staff, as well as inaccuracies and/or omissions within the new written protocol.

The action points developed included amendments to the protocol, need for additional staff training, changes to processes in ordering blood and sending blood samples to a second site and development of a "Neonatal Major Haemorrhage Box" which would provide staff swift access to the protocol, key drug guidelines, key equipment, tabards for role allocation and a newly designed record sheet.

Discussion: Simulation is a valuable tool in the development of new clinical protocols. Our experience demonstrates that, when utilised effectively, latent patient safety threats not recognised earlier in the protocol development stage, can be identified and minimised.

Ethics statement: Authors confirm that all relevant ethical standards for research conduct and dissemination have been met. The submitting author confirms that relevant ethical approval was granted, if applicable.

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