

### Leeds Children's Hospital

A cross department, multidisciplinary approach was undertaken in Leeds Children's Hospital to test our current processes of major haemorrhage using a high-fidelity simulation.

#### The scenario is the same as outlined in the neonatal major haemorrhage.

A patient was brought in by ambulance crew for initial trauma stabilisation by the emergency department team. As per protocol, the major trauma team was activated and the patient was subsequently transferred and managed in theatre.

Expanding the scenario to test handover between different teams and locations provided excellent insight into our current processes for major haemorrhage blood management (pre-hospital, emergency department and theatre). Post simulation analysis has informed changes that need to be made to our current workflows. Furthermore, there were specific key issues that were only identified due to the testing of a scenario across multiple departments/teams.

Examples of key learning outcomes, identified by testing the process across multiple locations rather than a single setting:

- Awareness in all departments of how to initiate a major haemorrhage and location of protocol
- Early blood samples for cross matching and named person to take sample to laboratory.
- Continuous communication with laboratory about severity of major haemorrhage, need for further blood components, location of patient, upcoming transfer to different locations and most appropriate blood fridge for delivery of blood components
- Need to include porters in this communication loop.
- Need to make additional teams aware of major haemorrhage (e.g. theatre coordinator, appropriate consultant colleagues (e.g. critical care, anaesthetics, surgeons).
- Need for dedicated scribe for blood components and subsequent documentation, ensuring documentation follows through for each location.
- Awareness of how a patient with significant blood loss can deteriorate following induction of anaesthesia and how to be prepared for this both surgically and anaesthetically
- We had the added benefit of having transfusion practitioners observing the simulation, their feedback was extremely helpful and gave the following learning points. If the transfusion laboratory receives a sample after emergency stock is given then it will be a "mixed field" result. This then requires ongoing provision of emergency group O blood which is then an ongoing cycle if patient requires further transfusions.
- Ensure everyone is aware where blood bank is located and who collects/delivers blood products.

