Improving Readiness for Obstetric Emergencies in a Non-Obstetric Hospital: A Baseline Audit and Quality Improvement Project

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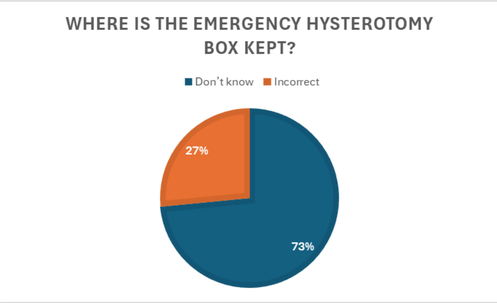
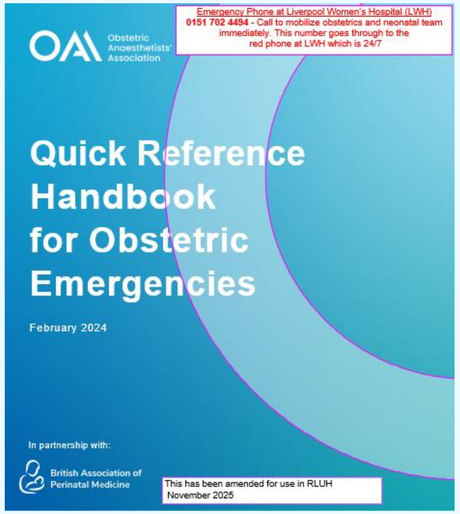


Introduction

The Guidelines for the Provision of Anaesthesia Services (GPAS) and Anaesthesia Clinical Services Accreditation (ACSA) require anaesthetic emergency guidance to be immediately available wherever anaesthesia and sedation are delivered, including guidance on resuscitation of the pregnant patient and the anaesthetic management of major obstetric haemorrhage (1). Although the Royal Liverpool University Hospital (RLUH) has no on-site obstetric service, pregnant patients may present to emergency care or be admitted for a non obstetric reason, potentially requiring anaesthetic input. Prior to this project, the availability of obstetric anaesthetic emergency guidance and staff awareness of relevant emergency resources had not been assessed.

Methods

1. A baseline audit assessed the availability of obstetric anaesthetic emergency guidelines in theatres, critical care and the emergency department, measured against ACSA and GPAS standards.
2. A multidisciplinary staff survey assessed knowledge of the location of obstetric emergency guidelines, uterotonic drugs and emergency hysterotomy equipment.
3. An in situ simulation assessed the arrival times of staff members and required equipment to perform resuscitative hysterotomy, against ACSA standards.

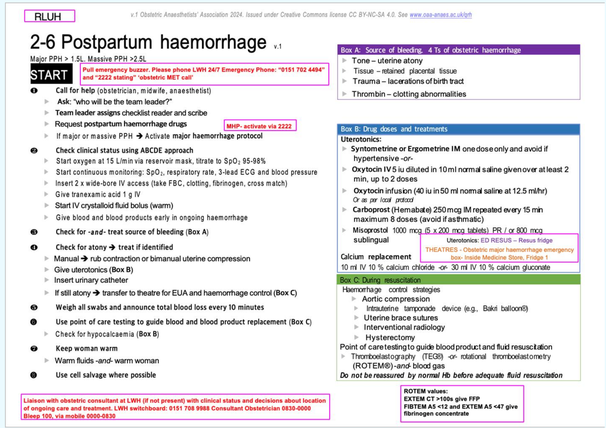


Results

Guidelines: No obstetric anaesthetic emergency guidelines were available in any audited area, including 18 theatres, 4 critical care bays and 4 emergency department resuscitation bays.

MDT staff survey: Forty-nine staff were surveyed, including anaesthetists, operating department practitioners and anaesthetic associates. There were 15 different responses to the question “Where would you access obstetric emergency guidelines?”. Almost 60% did not know where uterotonic drugs were stored. The entire cohort surveyed either did not know the location of the emergency hysterotomy box (73%) or gave an incorrect location (27%).

Resuscitative hysterotomy simulation: The fastest time the hysterotomy kit reached destination from initial bleep was 8 minutes 36 seconds. RCOG guidelines state hysterotomy should begin at 4 minutes post arrest (2).



Interventions

A trust-specific Obstetric Anaesthetic Quick Reference Handbook was developed, including specific drug and resource locations and personnel contact numbers.
An obstetric-specific medical emergency call was introduced in collaboration with the Trust resuscitation team.
An obstetric major haemorrhage box was developed with a crib sheet for dilutions, dosing and contraindications .
Tea trolley teaching was implemented as part of a wider theatre teaching programme.

Discussion

Our initial work highlighted various shortcomings in the provision of obstetric emergency care at RLUH compared to ACSA standards.
The interventions were disseminated locally and supported further by multidisciplinary simulation training and tea trolley teaching.
A re-audit and follow-up staff survey are planned to assess improvements in guideline availability and staff confidence.
This project supports national safety standards and provides a transferable model for improving obstetric emergency readiness in non-obstetric hospitals.

References

1. RCoA. Guidelines for the Provision of Anaesthetic Services. The Royal College of Anaesthetists. Published 2020. https://www.rcoa.ac.uk/safety-standards-quality/guidance-resources/guidelines-provision-anaesthetic-services
2. Chu J, Johnston TA, Geoghegan J, on behalf of the Royal College of Obstetricians and Gynaecologists. Maternal Collapse in Pregnancy and the Puerperium. BJOG2020;127:e14–e52.