**Call to Action**

Early recognition of potential maternal illness is essential as deterioration can be alarmingly rapid, with catastrophic consequences. Although maternal mortality in the UK has improved, sub-standard care in detection and escalation of maternal deterioration remains an issue. Many national audits in the UK consistently recommend the development of a national MEWS to recognise, respond and escalate potential maternal illness in a standardised manner.14

**Scotland’s context**

Population: 5.4 million
Births: 51,000 per annum
14 NHS Health boards
35 Maternity units
14 different early warning tools in operation with 75 different combinations of abnormal vital signs, ranges and escalation.

**Aim of the project**

The Scottish Patient Safety Programme (SPSP) is a unique national initiative in Scotland that aims to improve the safety and reliability of healthcare and reduce avoidable harm. In 2016, the Maternity and Children’s Quality Improvement Collaborative (MCQIC), an arm of SPSP, set out to lead large scale improvement. The aim was to design and implement a national MEWS aimed at facilitating standardisation and consistency of practice in all 14 NHS boards in Scotland by December 2019. The intention was this would be co-designed between SPSP and clinical multi-professional teams across Scotland.

**Method**

- Formation of core focus group – 10 NHS boards formed the team
- Literature review and physiological parameters and escalation pathway agreed
- Chart co-designed by core focus group and SPSP MCQIC (Figure 2) what does this correspond to?
- Use of quality improvement methodology, rapid-cycle PDSA testing of front and back pages of the chart
- Virtual and face-to-face meetings to study quantitative and qualitative data from testing
- Communication with NHS boards on progress and social media plan developed for launch
- Collaboration with colleagues in Ireland to learn from their success
- Chart validation from Royal College of Gynaecologists and Obstetricians
- Official Launch 24th October, 2018

**Results**

Rapid PDSA testing was carried under a variety of conditions. Snippets of some of the feedback from clinicians is detailed below.

**Caitlin**

Simulation and testing demonstrated national MEWS was more sensitive to predicting potential maternal illness than any existing chart in Scotland and is the only chart with a robust pathway for escalation. This was validated in the story of Caitlin (Figure 2) who developed severe sepsis after the birth of her daughter. Both the maternity staff and Caitlin have advocated how important the tool was in supporting staff recognise the severity of sepsis and subsequent management of her care.

**Conclusion / next steps.**

MEWS was launched on 24 October 2018 (Figure 3) Figure 4 demonstrates how many hospitals are using the tool. At this time, 85% of pregnant women in Scotland are receiving a standardised approach to recognition, response and escalation of potential maternal deterioration no matter their place of residence. SPSP MCQIC have developed a pocket card for all staff using MEWS (figure 5). This is helpful in providing a visual guide of the MEWS triggers and escalation. Work is now under way to validate national MEWS for out-of-hospital use and in non-obstetric settings such as the Scottish Ambulance Service and Accident and emergency services, thereby providing a national system-wide approach to assessing and responding to deteriorating maternity patients.

**References:**


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