

Introduction of a Programme of Standardised Training and Competency Assessment in Intrapartum Electronic Fetal Monitoring for multidisciplinary staff in a high-risk London maternity unit: a Quality Improvement Project

Background

Continuous electronic fetal monitoring (CEFM) with cardiotocography (CTG) is the most reproducible way of screening for fetal hypoxia during labour. Correct interpretation of fetal heart rate patterns and changes in labour enables:

- **Timely identification** of babies who are not getting enough oxygen to enable appropriate action before the occurrence of injury; and
- Reassurance about babies who are adequately oxygenated, in order to **avoid unnecessary interventions**.

CTG is, however, an operator dependent tool and its efficacy in improving outcomes is dependent on the skill and competence of those employing it.

There have been various systems recommended to aid CTG interpretation and variations in nomenclature surrounding classification of traces may lead to confusion about the significance of fetal heart rate changes and the action required.

Setting

Homerton maternity unit:

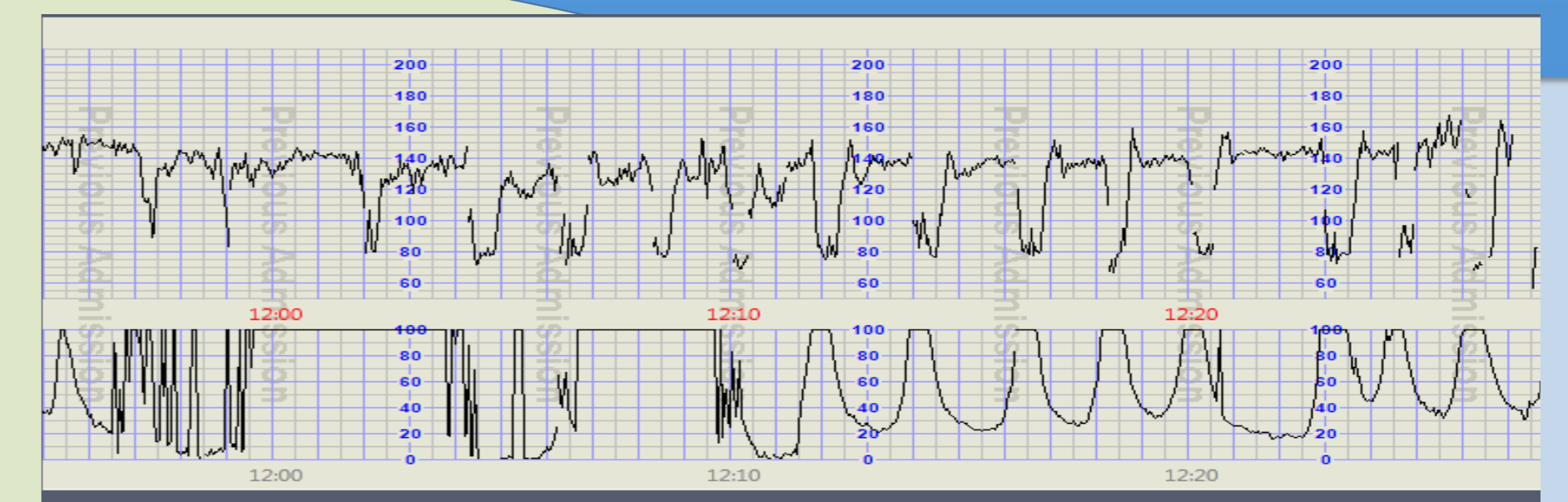
- 6000 deliveries
- Level 3 Neonatal Unit
- **'Amber' RAG rating** - extended PMR 7.04 deaths/1000 births (MBRRACE 2015)

Aim

To **reduce adverse perinatal outcomes** by improving the quality of intrapartum CTG monitoring in our unit

Objectives

To develop a package of interventions for **multidisciplinary training** and **competency assessment** in CTG interpretation; to **standardize** the way obstetric and midwifery staff analyse and act on CTG traces; and to establish pathways to support and manage staff not meeting competency expectations



Interventions:

1. Annual mandatory competency assessment
2. Twice-monthly multidisciplinary training day
 - Based on FIGO 2015 Consensus guidelines (2015)
 - Considers CTG changes in the context of fetal physiology during labour
 - Emphasizes need to consider cause of changes in the fetal heart rate pattern so that appropriate steps can be taken to reverse any factors contributing to the development or evolution of hypoxia
3. New local guideline with detailed discussion about fetal physiology, CTG characteristics and algorithms to aid assessment and clinical decision-making, as well as clear pathways for referral and escalation when CTG concerns arise
4. Weekly informal multidisciplinary lunchtime review of pertinent CTG traces to inform, share learning and monitor adherence to the classification system recommended in the new guideline



Impact:

Adherence will be assessed formally by **annual audit**, with robust data collection via our K2 Athena system. Maternity dashboard statistics and MBRRACE perinatal mortality surveillance data will allow us to assess the impact of this project on our perinatal mortality rate.

References:

1. FIGO Consensus Guidelines on intrapartum fetal monitoring 2015. *International Journal of Gynecology and Obstetrics* 131 (2015) 13-24
2. Homerton University Hospital 'Competency in Antenatal and Intrapartum fetal monitoring' guideline 2016
3. Homerton University Hospital 'Continuous electronic fetal monitoring' guideline 2016
4. MBRRACE-UK Perinatal Mortality Surveillance report UK Perinatal Deaths for births from Jan to Dec 2013. Supplementary report for UK Trusts