**Avoiding Brain injury in Childbirth (ABC)**

**Fetal surveillance**

Sub-optimal detection and response to suspected fetal deterioration during labour can cause avoidable brain injuries that can be catastrophic for babies and their families, with very negative experiences for staff, and are very important contributors to litigation claims and costs. An emerging view is that current practice for detection and response to suspected fetal deterioration are based too narrowly on fetal heart rate monitoring as the main source of information about fetal wellbeing, and that this is too limited to be effective. Risks can accumulate as labour progresses and may not be adequately detected using current fetal monitoring guidelines, which do not adequately integrate the fetal heart rate and clinical risk factors.

The ABC Avoiding Brain Injury in Childbirth (ABC) programme – a collaboration of the Royal College of Obstetricians and Gynaecologists (RCOG), the Royal College of Midwives (RCM) and THIS Institute at the University of Cambridge – is seeking to address deficits in relation to current practices for detecting and responding to fetal deterioration by developing new tools, processes and systems. Prototype intrapartum surveillance tools were initially developed by an RCOG/RCM “Task-and-Finish” group through expert clinical consensus, review of the evidence and consultation with maternity staff and families. Standard fetal heart rate classification was integrated with a cohort of clinical risk predictors to provide a series of tools for a personalised, holistic approach to intrapartum fetal monitoring.

The ABC collaboration has optimised these tools through highly participatory, evidence-based multidisciplinary consultation, development, testing and refinement, using inputs from clinicians (midwives, obstetricians, anaesthetists, and more), women and birth partners, social scientists, human factors specialists, and information scientists.

**Impacted fetal head (IFH)** is a complication of caesarean section where the baby’s head is low and fixed in the mother’s pelvis, making it difficult to deliver using the standard approach. In these circumstances, a range of manoeuvres can be employed to disimpact the baby’s head. One method involves a member of the maternity theatre team (an obstetrician or midwife) other than the main operator inserting their hand into the woman’s vagina to push the baby’s head out of the pelvis (vaginal push method). Another method involves delivering the baby feet first (reverse breech delivery).

Recent UK studies suggest that an IFH may complicate as many as one in ten emergency caesarean sections (1.5% of all births). These births are technically challenging and associated with significant risks to mother and baby. Complications for mothers include unintentional damage to the womb or urinary system, excessive bleeding and longer hospital stay. Babies are at increased risk of injury including head and face trauma, low oxygen levels, infection, admission to the neonatal intensive care unit, and even death. There has been a sharp increase in reports of perinatal brain injury associated with IFH, resulting in numerous coronial enquiries and increased litigation, both on a national and international scale. The NHS Resolution Early Notification Scheme identified IFH as a contributory factor in nearly 10% of potentially the most expensive maternity claims in 2018, making it twice as common as claims relating to cases of shoulder dystocia.

Despite this, there is no formal definition for IFH, no consensus for how best to manage these births, nor any evidence-based training. This has resulted in a lack of confidence amongst maternity staff, variable practice, and potentially harmful care in some circumstances. The Royal College of Obstetricians and Gynaecologists (RCOG), the Royal College of Midwives (RCM) and THIS Institute are working together to address these deficits and build consensus for management of training.