

## SBAR – Baby born in poor condition and actively cooled

WR112551

MI-003897

**Situation:** HSIB report

**Background:** Baby born in poor condition at 39+ weeks and transferred to NNU for cooling. A 22 year old lady in her first ongoing pregnancy attended the birth centre at 39+2 weeks gestation in early labour. Slow progress was noted over a period of 5 hours. Labour progressed to full dilatation and after a period of pushing, the baseline of the fetal heart rate was noted to have decreased. A medical review took place and a CTG was commenced. Five minutes after commencing the CTG, the baby was born unexpectedly in very poor condition, requiring full resuscitation including 72 hours of active cooling. Gases were:

- arterial pH 6.78 and base excess -13 mmol/L.
- venous pH 6.84 and base excess -24 mmol/L.

An MRI of the brain at six days of age showed changes indicative of a hypoxic ischaemic insult. At 21 days baby was discharged home to the care of the outreach team.

### Assessment:

#### Findings

1. The Mother received a combination of face to face and telephone antenatal consultations, due to changes made in line with the COVID-19 pandemic. The Mother's antenatal care was provided in line with national guidance. This included serial growth scans due to an increased risk of small for gestational age baby. The Mother received carbon monoxide monitoring during the pregnancy.
2. Slow progress in the first stage of labour was not recognised and this meant labour continued in a midwife-led environment. Recognition and escalation of delay may have changed the Mother's care pathway and may have changed the condition of the Baby at birth.
3. The Baby's heart rate was monitored using intermittent auscultation (IA). When a change in baseline of the heart rate occurred, clinicians considered it was due to the Baby being low in the birth canal and continued with IA. Escalation and cardiotocography (CTG) monitoring and expediting the birth may have changed the condition of the Baby at birth.
4. The interval between decision to perform an episiotomy and the birth of the Baby's head was 29 minutes. Whilst preparation for an episiotomy was being undertaken, an obstetric review of the Mother at this time may have considered expediting the birth of the Baby; earlier birth of the Baby may have made a difference to the condition of the Baby at birth.
5. A CTG was started after the episiotomy was performed when the Baby's heart rate was heard to have slowed; the CTG was pathological and the Baby was born around 5 minutes

later. There was an opportunity to prepare for the possible need for resuscitation of the Baby, by summoning the neonatal team and having equipment in the birthing room. This did not affect the outcome.

6. The process of summoning the senior neonatal clinician to a birth of a baby was not successful. A second call was required to alert them and they attended promptly. This did not affect the resuscitation of the Baby as the rest of the neonatal team had attended after the first call. The Trust may wish to review the neonatal emergency call process.

7. The Baby received resuscitation and therapeutic cooling in line with local and national guidance.

8. An MRI scan of the Baby's brain was performed at six days of age. It showed changes indicative of 'hypoxic ischaemic insult' as well as haemorrhagic injury with a large volume of intraventricular blood [IVH], causing hydrocephalus'. A plan was put into place for the Baby to receive outpatient care with the paediatric team to monitor their progress and development over time.

9. The Baby's placenta was not sent for a histopathological examination. The results of this examination may have provided useful information to understand the possible cause for the Baby's condition at birth.

#### **Safety recommendations**

1. The Trust to ensure that clinicians are supported to undertake a dynamic and holistic approach to risk assessment, enabling them to identify and promptly escalate delay in labour.

2. The Trust to ensure clinicians undertaking intermittent auscultation are supported to escalate changes in a baby's baseline heart rate in a timely manner.

3. The Trust to ensure clinicians recognise when a baby is likely to be born in poor condition and prepare for immediate resuscitation.

4. The Trust to support clinicians to adhere to local and national guidance by sending appropriate placentas for pathological and histological examination.

The Trust is in agreement with the safety recommendations and actions to implement the recommendations are in progress.

#### **Full investigation report**



20220126\_MI-00389  
7\_HSIB Final Materni