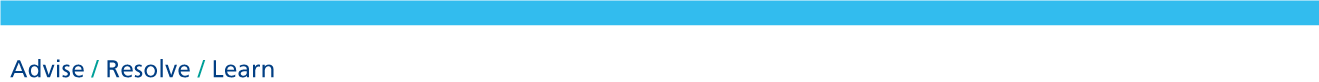


**Case Story**

Undiagnosed breech presentation

in advanced labour



## This case story is illustrative based on a range of examples of real events. NHS Resolution is sharing the experience of those involved to help prevent a similar occurrence happening to patients, families and staff. As you read about this incident, please ask yourself:

### Could this happen in my organisation?

### Who could I share this with?

### What can we learn from this?

# **Key points**

### 3-4% of babies are in a breech presentation at term. Breech presentation is associated with nulliparity, uterine abnormalities, and previous breech presentation.1

### 25% of term breech presentations are diagnosed in labour1 and, if diagnosed at an advanced stage, accurate management of a vaginal breech birth can be required in any birth location.

### Term infants with a breech presentation have poorer outcomes than infants in a cephalic presentation, independent of mode of birth.1

### Regular training is key to ensuring staff in all birth locations are skilled and knowledgeable regarding the management of acute emergencies, including rehearsal and local systems for vaginal breech birth.2

### In particular, awareness of the duration of the birth as well as the entire clinical situation (delivery progress, fetal wellbeing) are required to ensure vaginal breech births are managed safely and effectively.1

# **Maternity Story**

## A 29-year-old mother booked for antenatal care at 10+1 weeks’ gestation, in her fourth ongoing pregnancy. She had previously had three spontaneous vaginal births, with a second degree tear and infected perineum after her first birth. Her antenatal course was straightforward and she followed a low risk care pathway, attending all scheduled appointments.

## Her last baby had been delivered in a standalone midwifery-led unit (MLU), and she was keen to deliver in the same unit again. At 36-weeks the mother had an appointment at home and an updated risk assessment confirmed no new risk factors. A birth plan was agreed, including use of the birthing pool for analgesia and delivery at her chosen MLU.

## At 39+3 weeks, the mother reported regular contractions from 02:00. She contacted the MLU at 02:30 when her contractions were 2-3:10, and lasting 45 seconds. Recognising the mother was a multiparous woman with previous short labours, the midwife invited her in directly. The mother arrived at 03:00, and it was clear on arrival she was actively labouring; her contractions had increased to 4:10 and were reported as strong to palpate. Her antenatal history was reviewed to confirm her suitability for MLU delivery. Observations were normal, and the abdominal palpation was thought to be consistent with a cephalic presentation with 1/5 palpable. The fetal heart (FH) was auscultated for one minute at 130 beats per minute (bpm). Vaginal examination identified her cervix was 5cm dilated and fully effaced with intact membranes. As per her birth plan, she entered the pool at 03:25, and there was a plan to auscultate the FH every 15 minutes. The unit’s protocol was to document key information on a whiteboard within the birthing room, to support situational awareness, and the midwife did so at this point, adding further relevant information as the labour progressed.

## The midwife providing her with 1:1 care requested a second midwife to work in the MLU, as another mother was expected to arrive for assessment, and the usual staffing of the unit was one midwife and one maternity support worker (MSW). The mother continued to progress in labour, and FH auscultations every 15 minutes were within the normal range. At 04:02, the mother had urges to push, and the midwife noted her membranes had ruptured in the pool, with fresh meconium visible. She immediately requested the MSW to aid her in helping the mother from the pool to the bed for vaginal examination, to assess progress and presentation.

## Vaginal examination at 04:05 identified a fully dilated cervix, but there was a sacroposterior breech presentation, with the station at the spines and no feet felt presenting. The midwife explained this to the mother whilst auscultating the FH, which remained in the expected range, and asked the MSW to phone for an emergency ambulance, anticipating the potential for emergency transfer if the delivery was complicated. She then used a speakerphone to contact the obstetric-led unit and the co-ordinator remained on the line to provide support and guidance whilst the ambulance was awaited, estimated at 15 minutes. The obstetric and neonatal teams were informed of the clinical situation. They were also available to provide support over the phone and began planning for transfer referring to the local guideline, including liaison with the neonatal unit.

## The midwife and MSW had recently completed in-house multidisciplinary team (MDT) training that had included scenarios of breech vaginal delivery in an MLU or home birth setting. The FH was auscultated and remained at 130 bpm, and auscultation was performed every 5 minutes throughout the second stage. The mother was moved to lithotomy position on the delivery bed, with the end of the bed removed, as this was the position that the midwife was most confident to employ for vaginal breech birth. The mother began to push, and the breech was noted to be descending well over the next 10 minutes, and the FH remained stable. The midwife vocalised the progress being made, so both the mother and the delivery suite co-ordinator were aware.

## When the breech became visible, the midwife noted that the perineum seemed tight, and infiltrated lidocaine in case an episiotomy was needed. FH was 134 bpm. The breech was delivered at 04:20. Due to the sacroposterior position, as delivery progressed the midwife grasped the bony pelvis to gently rotate the trunk to sacroanterior and then resumed a hands-off approach. The mother continued to push well, with the MSW announcing time each minute. Three minutes after delivery of the buttocks, the co-ordinator asked whether the arms had delivered; as they had not, she suggested the midwife perform Lovsett’s manoeuvre. The left arm delivered easily, but the right arm was a nuchal arm and therefore more difficult to deliver. When the MSW announced 5 minutes, the midwife recognised the delivery of the head should be expedited. She voiced her concern about the length of time the delivery was taking, and her intention to attempt a modified Mauriceau-Smellie-Veit (MSV) manoeuvre. The co-ordinator advised if there was any difficulty, to consider an episiotomy.

## The midwife attempted modified MSV but was unable to position her hands to perform the manoeuvre effectively due to lack of space, so she performed an episiotomy with consent. She was then able to perform modified MSV to flex and deliver the head at 04:27, 7 minutes after the delivery of the buttocks. The second midwife arrived at 04:28 and informed the team an ambulance had just arrived.

## The baby was born in poor condition, and the cord was clamped and cut immediately. The baby was taken to the resuscitaire for assessment and stimulation. There was no improvement after stimulation; the baby made no respiratory effort, had a heartrate of 80bpm, and poor tone and colour. The midwives commenced resuscitation, and the MSW supported the mother. Five inflation breaths were given, with a good chest wall rise seen, and the heart rate subsequently improved to 120 bpm. There was no respiratory effort, and the tone was still poor, so the midwives continued ventilation breaths using a two person technique.

## At this point the paramedics arrived, and an SBAR (Situation, Background, Assessment and Recommendation) handover was performed, utilising the information documented on the room’s whiteboard. The midwife recommended that the baby should be transferred to the nearest neonatal unit, which was 18-minutes away by ambulance. After discussion with the delivery suite co-ordinator, neonatal co-ordinator, and midwives and paramedics present, it was agreed that one of the midwives would continue resuscitation of the baby during the ambulance journey, aided by one of the paramedics, with the other midwife staying to care for the mother.

## The situation was explained to the mother, and another ambulance was called to transfer her. The baby was transferred in the ambulance with ongoing respiratory support, and on arrival at the neonatal unit at 25 minutes of age the neonatal team were waiting to receive the baby. The baby was making some gasping attempts at respiration, but no co-ordinated effort. On a capillary gas the pH was 6.99, base excess of -14, CO2 of 8.3 and lactate of 5.6. The baby was intubated and admitted to the neonatal unit for ongoing management. The neonatal team considered that the pH of <7.0 within the first hour of life, as well as the ongoing need for resuscitation past 10 minutes of age, both fulfilled the A criteria for therapeutic cooling. Following a neurological examination, the baby was found to be very lethargic, had decreased tone and had absent primitive reflexes. These features also fulfilled the B criteria for therapeutic cooling.

## Therapeutic hypothermia was commenced and continued for 72 hours. Cerebral function monitoring (CFM) demonstrated activity suppression initially but this normalised over the first 12 hours, and a magnetic resonance imaging (MRI) scan on day 5 showed minor changes consistent with hypoxic ischaemic encephalopathy.

## The baby was discharged home, fully breastfeeding on Day 10 of life, and routine paediatric follow-up showed normal development up to 2 years of age.

# **Learning Points**

## This case demonstrates the importance of effective management of a vaginal breech birth and but for the prompt and co-ordinated action of the team, the outcome for this baby could have been significantly worse.

## The following points highlight key elements of effective management:

### The presence of birth attendants skilled in vaginal breech birth in all birth settings is essential to achieving good outcomes for unplanned breech deliveries.1 This is supported by regular attendance at multidisciplinary training2,3 that should include unplanned breech deliveries in home births and midwifery-led units, with clear advice on how to access support from those birth locations.

### If delivery is imminent, it is safest to plan for and continue with the delivery, rather than trying to transfer a mother in advanced stages of labour to avoid a vaginal breech birth in an ambulance. The midwife recognised this, and focused her efforts on a safe birth, but it can be common to become task-focused on transfer to an obstetric unit when complications are recognised.

### In this scenario, the delivering midwife’s situational awareness was supported by the MSW providing time updates, and the prompts from the coordinator over the phone. It is important to note that the support was not dictating management, and the midwife continued to manage the birth as she was better placed to do so than the coordinator.

### Interventions to expedite delivery must be made in a timely fashion.1 In this case, it was recognised that the buttock-to-head delivery time was taking longer than the expected 5 minutes, and interventions started at 3 minutes when delivery progress halted. The delivery was complex, and the head delivered at 7 minutes. However, without this intervention, hypoxia would have been more prolonged and would have resulted in a more severe neonatal hypoxic insult.

* Co-ordination within the MDT is also essential to ensure babies born in low-risk settings receive the care they need as soon as possible. Local guidance in this case aimed to minimise delay in care provision by transferring directly to the neonatal unit, where there was a dedicated team waiting in familiar environment equipped for resuscitation. This guidance was widely available to all teams, including the ambulance service, and effective communication ensured all relevant staff were aware of the plan.

# **Considerations for your hospital**

### Are staff from all birth locations included in the MDT maternity emergency training, as per MIS safety action 82 and the Core Competency Framework,3 and does this training include scenarios in all the potential birth locations your trust offers?

### Training should include:

* Local ambulance clinicians to ensure that any additional skills they offer are covered, including scene management
* A clear protocol for obstetric emergencies in low risk and remote settings, including undiagnosed breech in labour
* Practical guidance to support situational awareness, such as using a whiteboard to communicate key information to new staff and reduce cognitive load, allocating staff to report the time and phoning for telephone support when working alone
* A clear protocol regarding transfer of neonates from home births and MLU deliveries, clearly defining the process, communication with emergency services and relevant teams, location, and staff members required to provide ongoing neonatal care. An example of a tool to support this is the [London Ambulance Service Midwives Communication Card](https://www.mamaacademy.org.uk/professionals-hub/midwifery-resources/ambulance-call-cards/).4
* Training resources for vaginal breech birth are available in the PROMPT training resources.5

### Finally, it is important that staff are supported by local culture, service provision, training and equipment availability to request or perform an ultrasound scan when there is uncertainty regarding presenting part on palpation.6

# **What has happened as a result?**

## This case story is illustrative. If a similar case were to occur, then it would be referred, via the Healthcare Safety Investigation Branch, to NHS Resolution as part of the Early Notification Scheme. NHS Resolution’s in-house, specialist team will review all available information about the care received, to decide whether there is any evidence of substandard care which could potentially result in compensation.

## The expertise of NHS Resolution staff is used to proactively assess the legal risk, investigate care, and provide early support to families where liability is established.

## NHS Resolution supports an open, transparent discussion between clinicians and families following adverse events. The scheme is also designed to improve the experience for NHS staff by time-limiting the need for protracted involvement in the legal process and rapidly sharing learning from avoidable harm.

## It is very important to note that no amount of money is comparable with the loss of a

## child or a child living with lifelong neurological injuries. Where poor outcomes occur as a result of deficiencies in care, NHS Resolution aims to resolve all such claims or cases fairly and as quickly as possible.

The current compensation cost to the NHS for a baby who has long term severe brain injury is on average £12 million. The human costs to the babies, families and clinical teams involved are immeasurable.

# **Resources:**

### Royal College of Obstetricians and Gynaecologists. Green-top Guideline No. 20b: Management of Breech Presentation. 2017. <https://obgyn.onlinelibrary.wiley.com/doi/full/10.1111/1471-0528.14465>. [Accessed 01/11/2021.]

### NHS Resolution. Maternity incentive scheme- year four. 2021. <https://resolution.nhs.uk/wp-content/uploads/2021/08/MIS-Y4-guidance.pdf>. [Accessed 01/11/2021]

### Maternity Transformation Programme (NHS E/I). Core Competency Framework. 2020. <https://www.england.nhs.uk/wp-content/uploads/2020/12/A-Core-Competency-Framework-FINAL-REVISED-21.12.-2020-002.pdf> [Accessed 29/11/2021.]

### MAMA Academy. Ambulance Call Cards. <https://www.mamaacademy.org.uk/professionals-hub/midwifery-resources/ambulance-call-cards/>. [Accessed 13/12/2021]

### PROMPT. Vaginal Breech Training. 2018. <https://www.youtube.com/watch?v=EWjKswZ3Mm8> [Accessed 06/01/2022]

### National Institute of Clinical Excellence. Inducing Labour. NICE guideline NG207. 2021. <https://www.nice.org.uk/guidance/ng207/chapter/Recommendations#assessment-before-induction-monitoring-and-pain-relief>. [Accessed 13/12/2021]