NHS Resolution

Case story

The role of pre-hospital care in maternity cases

NHS South Western Ambulance Service NHS Foundation Trust

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Part of NHS Resolution's Maternity campaign 2022/25
#ImprovingMaternityOutcomes

Early Notification
Case story guidance

Background

In Advise, resolve and learn Our strategy to 2025, our second strategic priority is to share data and insights as a catalyst for improvement and our third is to collaborate to improve maternity outcomes. Aligned with these aims we have gathered together learning from our Early Notification Scheme and produced a number of case stories to help support learning from harm identified through claims.

These resources

Our case stories are illustrative and based on recurring themes from real life events. These experiences have been highlighted and shared with you, to help identify potential risks in your clinical area, promote learning and prevent fewer incidents like these occurring in the future.

How to use the case stories

There are various ways you may use the case stories, from individual self-directed learning to support continuous professional development to using them in a team environment. The idea is that by learning from the experience of others, maternity unit staff will be able to change their approach to care.

As you read or discuss the examples of incidents that we are sharing we ask you to consider the following:

- Could this happen in my organisation?
- What changes within my organisation or team might I consider after reading the material, including individual practice?
- What information should I share with the team?
- How can I share the learning from this case story?
- Who else needs to know?

Practical applications

1. Consider the key elements of the case story and through reflection apply the learning to influence your practice in the future.
2. Use this case study as a point of discussion at appropriate multi-disciplinary team meetings, safety huddles, and/or human factor's training.
3. Use this case study to create a multi-disciplinary simulation in the clinical area or on mandatory training.
4. Review your claims scorecard to identify whether there are any themes which relate to this case story and identify where improvements could be made.

Case story

This case story is illustrative and based on a range of clinical cases. NHS Resolution is sharing the experience of those involved to help prevent a similar occurrence happening to pregnant women and pregnant people, 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?

Topic: The role of pre-hospital care in maternity cases.

Key points:

- The importance of understanding different job roles within the NHS and therefore the differing approaches to patient care.
- The importance of communication between teams and availability of communication tools to aid this.
- The need for multidisciplinary training to improve care.
- The benefits of multidisciplinary debriefs following incidents.

This case story has been written in collaboration with ambulance services to ensure learning for all.

Maternity story

Antenatal

22-year-old Mrs T, booked her first pregnancy at 26 weeks of gestation. She had recently moved to the United Kingdom (UK) with her husband and had received antenatal care prior to moving to the UK. She had some understanding of English but preferred to use an interpreter for appointments.

Mrs T chose to book her pregnancy at a unit recommended to her by a relative, this was not the nearest maternity unit to her home. Mrs T had an uncomplicated antenatal course with normal growth scans. Her care was provided by the obstetric and midwifery teams at her booked hospital[1].

At 39+6 weeks gestation, Mrs T presented to maternity triage reporting abdominal pain, leg pain, headache and itching. She was reviewed by a midwife and found to have normal observations, negative urinalysis and normal cardiotocography (CTG) monitoring. She was also reviewed by an obstetrician. Bloods were sent due to her presentation of itching, to investigate for intrahepatic cholestasis of pregnancy, but she was discharged home. These results were later found to be normal. Interpreting

services were not used during her attendance.

Labour

At 40+2 weeks gestation, Mrs T's husband called 999, reporting that he could 'see the baby's head' and requested help. A category 1 emergency response ambulance (*category 1 ambulances are dispatched in a potentially life-threatening situation, with an average response time of seven minutes. This timeframe is from the National Ambulance Response Programme established by NHS England in 2017*[2]) was dispatched and two ambulance crews arrived at the home within the seven-minute target timeframe. Two crews were dispatched to ensure care could be provided for both Mrs T and her baby.

Mrs T and her husband reported that she had been experiencing pain for several days and they hadn't known who to contact. The ambulance clinicians performed observations and found the mother to be hypertensive with a blood pressure of 156/97mmHg. They were unable to see the fetal head initially. The ambulance clinicians monitored the frequency of contractions and found them to be irregular, occurring every 3-5 minutes. The fetal head became visible at the height of a contraction and therefore the team felt birth may be imminent. They set up a neonatal life support area on the kitchen table in preparation. The ambulance clinicians also updated the control centre regarding the ongoing progress and a specialist paramedic was dispatched to provide additional support.

The ambulance clinicians contacted the booked maternity unit for advice. They did not have the direct phone number as Mrs T was unable to locate her notes, so the ambulance clinicians called switchboard. It took 15 minutes for the ambulance clinicians to speak to the correct team. The ambulance clinicians discussed the care with maternity triage and informed them that the father had called 999 due to the fetal head being visible. Maternity triage advised to proceed with delivery as it seemed to be imminent and then travel to the nearest maternity unit with the mother and baby.

The ambulance clinicians followed the advice and remained with the mother and father at their home. Mrs T remained hypertensive with repeat blood pressure readings of 161/99mmHg and 149/105mmHg. All other maternal observations were normal. There was no fetal monitoring performed as ambulance clinicians do not have the equipment or training to undertake this.

Thirty minutes later the baby had not been born and so the ambulance clinicians decided to contact the nearest maternity unit and take Mrs T there for review. The ambulance clinicians were concerned her booked maternity unit was too far away and they were clinically concerned about her hypertension. They spoke to maternity triage and were advised to transfer the patient directly to labour ward. Mrs T and her husband were confused and upset as they wanted to go to the hospital where they had received antenatal care. The team found it challenging to explain their reasoning due to the language barrier and couldn't access interpreter services easily.

On arrival at the nearest maternity unit, the labour ward team were unaware of her expected arrival as the information had not been passed on by the person who took

the call. The ambulance clinicians provided a handover to the staff. They arrived on the labour ward 90 minutes after the initial 999 call was made. Mrs T was admitted and a CTG was performed. She remained hypertensive and therefore intravenous access was obtained, bloods taken to assess for pre-eclampsia and oral labetalol was given.

Within 30 minutes of arrival, the CTG was classified as pathological and a review by the obstetrician was requested. The CTG showed a baseline of 170bpm with reduced variability and deep decelerations with all contractions[3]. A vaginal examination was performed that found the cervix to be fully dilated with the fetal head in occipito-anterior position, station +1. There was significant moulding and caput. There was a clinical diagnosis of obstructed labour. A decision was made to perform an urgent forceps delivery, and this procedure was explained to Mrs T using virtual interpretation services.

Prior to performing the forceps delivery, the bladder was emptied, and more than 1.2 litres of blood-stained urine was drained. A Neville Barnes forceps delivery was performed with episiotomy[4]. Mrs T then had a postpartum haemorrhage of 1.4 litres requiring a postnatal blood transfusion. Blood results showed a stage 2 acute kidney injury which required treatment. She was discharged on day 4 postnatal.

Neonatal outcome

The neonatal team were present at delivery. The baby was born in poor condition, he appeared pale with reduced tone and heart rate. He was making no respiratory effort. The cord was immediately clamped and cut and resuscitation commenced.

Neonatal resuscitation was performed in line with NLS guidance[5]. Umbilical cord gases were taken, and the results were as follows:

Arterial: pH 6.85, base excess -19.2, lactate 9.2
Venous: pH 7.01. base excess – 15.9, lactate 7.4

The umbilical cord gas results showed evidence of acute on chronic hypoxia.

The baby was transferred to the neonatal unit and therapeutic cooling was commenced in line with guidance[6]. The baby was cooled for 72 hours. An MRI brain scan was performed on day 5 and showed evidence of severe hypoxic ischaemic encephalopathy. The baby remained an inpatient until day 27 of age due to feeding difficulties. The baby was then discharged home with ongoing support from physiotherapy and paediatric teams.

Debrief

A debrief was arranged one week following the delivery for the staff involved. This was led by a specialist midwife working for the ambulance service. The debrief included ambulance clinicians as well as maternity triage and labour ward staff. The goal was to discuss the case to highlight what went well and identify areas for improvement. This demonstrated an excellent use of multidisciplinary team debrief to aid learning and development.

Learning points

This illustrative case highlights the importance of:

- Ensuring you consider language needs at all assessments.

In this case story, there was a missed opportunity to use interpreter services during a review in maternity triage. This may have been a contributing factor to the parents being unaware of who to contact when symptoms of labour began. Earlier contact with healthcare providers may have led to earlier review of the mother and therefore may have led to a different outcome. In addition, the ambulance clinicians did not have easy access to interpretation services in the emergency scenario, this can impact the experience for parents and cause delays.

It is important to use interpretation services during consultations to ensure full understanding. The Royal College of Obstetricians and Gynaecologists offer patient information leaflets in many languages[7], and these can be useful to ensure information is accessible.

- Understanding the different job roles involved in the patient journey and the different approaches to patient care.

In this case story, the ambulance service provided patient care prior to maternity services. This case highlights the different approaches to patient care. Staff that work for the ambulance service are not all paramedics, for example a paramedic may work alongside an emergency care assistant. These job roles have different training requirements and therefore have varied clinical skills and responsibilities.

Ambulance clinicians may have had limited maternity care exposure and training. Only 1% of 999 calls are related to pregnancy, and therefore many ambulance clinicians have limited experience. They must also work within the scope of their own practice and professional guidelines, which differ to those in a maternity setting, for example fetal monitoring cannot be undertaken by ambulance clinicians.

Ambulance clinicians have access to guidance and algorithms for assessing if birth is imminent and this case highlights the importance of maternity staff having an awareness of this[8]. In this case, the advice given from maternity staff led to a different pathway of care which led to delays in transfer to hospital. Often teams are unaware of the guidance available to different teams, leading to conflicting advice being given.

It is also important for maternity staff to consider the environment in which the ambulance service is providing care. It can take time to move a patient from a setting, for example there may be multiple flights of stairs and no working lift. In addition, the ambulance service has limited resources available to them. For example, no equipment or training for fetal monitoring and the challenge of thermoregulation for the baby. These have subsequent impact on outcomes.

- Identifying the ‘deteriorating patient’ in the pre-hospital setting

In October 2024, the Joint Royal Colleges Ambulance Liaison Committee (JRCALC) Pre-hospital Maternity Decision Tool came into use[9]. This is a tool that should be used by ambulance clinicians whenever attending patients who are pregnant (regardless of gestation) or up to four weeks following a pregnancy, pregnancy loss or termination. This tool incorporates the national maternity early warning score parameters for observations, reflecting the physiological changes in pregnancy. The tool then provides guidance based on the flags identified.

For example, in this case, the mother’s hypertension would have triggered a red flag. This should then have led to a pre-alert transfer to the nearest obstetric unit and irrespective of birth appearing imminent, immediate transfer to hospital would have been indicated.

- Importance of communication between teams.

This case story demonstrates the importance of good communication between multidisciplinary teams. Good communication requires awareness and understanding of the different job roles. In this case story, the advice given over the phone was inappropriate and the ambulance clinicians should have been advised to transfer the mother to the nearest maternity unit. There are tools available to be used for example, SBAR, to aid communication[10].

A pre-alert call is used by ambulance clinicians to notify a hospital that their patient requires immediate assessment and/or treatment on their arrival. It is important that the ambulance service has a direct protected line into the receiving unit and that the pre-alert is a one-way dialogue which is acted upon immediately.

Ambulance clinicians work regionally so are not always familiar with the layout of the hospital or the location of the labour ward. It is not always signposted as obviously as the emergency department. Often the labour ward can only be accessed using public lifts and swipe-access only doors. Therefore, it is important that there is a system to support timely access such as meeting the crew at the front door. It is important for maternity services to ensure that ambulance clinicians can access the maternity unit in a timely way during emergencies.

- Multidisciplinary debrief sessions.

This case highlights the benefit of having multidisciplinary debrief sessions. This enables reflection from all team members on aspects of good care but also provides an opportunity to highlight areas for learning and development. Involving ambulance clinicians and maternity staff in debrief sessions also helps to build on working relationships which can have a positive influence on future care provided.

Considerations for your hospital

- Does your hospital have a system in place to receive a pre-alert from the ambulance service?

For example, is there a 'red phone'? Is it a closed phone line? Who is responsible for answering the phone and communicating the call with the relevant team members?

- Is the labour ward well signposted to external staff?
- Have you considered running collaborative training for maternity and ambulance clinicians?[11]
- How do you share resources for learning?
- Do you have a process for inviting ambulance clinicians to be involved in a multidisciplinary debrief?
- Is your maternity unit aware that if the ambulance clinicians identify any red flags, they will be taken to the nearest maternity unit, and they cannot be diverted?

Considerations for your ambulance services

- Do crews have access to regular maternity training and education?
- Do you have a dedicated midwife to provide strategic support to the ambulance service in relation to maternity and newborn care?
- Are crews aware of the need to keep up to date with changes to their clinical practice guidelines e.g. imminent birth?
- Are crews aware of the newly implemented Pre-hospital Maternity Decision Tool and how and when this should be used?
- Is your team invited to be involved in post-event debriefs?

What has happened as a result?

This case story is illustrative. If a similar case were to occur in real life, then it would be referred to NHS Resolution's Early Notification Scheme. NHS Resolution's in-house, specialist teams 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 is used to proactively assess the legal risk and provide early support to families where liability is established.

NHS Resolution supports an open, transparent discussion between clinicians and families following adverse events[12]. 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 share learning.

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, over £10million. The human costs to the babies, families and clinical teams involved are immeasurable.

Resources:

1. National Institute for Health and Care Excellence Antenatal Care - August 2021: Antenatal care (accessed December 2024)
2. NHS England: Ambulance Response Programme. NHS England » Ambulance Response Programme (accessed December 2024)
3. National Institute for Health and Care Excellence Fetal monitoring in labour - December 2022: Fetal monitoring in labour (accessed December 2024)
4. Royal College of Obstetrics and Gynaecology. Assisted Vaginal Birth. Green-top guideline No.26, April 2020. Assisted Vaginal Birth (accessed December 2024)
5. Resuscitation Council UK Newborn resuscitation and support of transition of infants at birth Guidelines - May 2021
6. Therapeutic Hypothermia for Neonatal Encephalopathy - British Association of Perinatal Medicine - December 2020
7. Royal College of Obstetrics and Gynaecology. Translations. Translation patient information | RCOG (accessed January 2025)
8. Joint Royal Colleges Ambulance Liaison Committee. Imminent Birth Guideline. Updated 2024.
9. Joint Royal Colleges Ambulance Liaison Committee. c October 2024. Maternity Care (including Obstetric Emergency Overview) – JRCALC (accessed December 2024)
10. NHS Institute for Innovation and Improvement: Safer Care: SBAR: SBAR-Implementation-and-Training-Guide.pdf (accessed December 2024)
11. Humphreys A, Ranganathan M. A qualitative exploration of midwives' and ambulance clinicians' experiences working together. British Journal of Midwifery. 2025; (Vol. 33, No. 2). https://doi.org/10.12968/bjom.2024.0064 (accessed February 2025)
12. NHS Resolution Saying Sorry June 2017 Saying Sorry (accessed December 2024)

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