NHS Resolution

Case story

Maternal Multimorbidity

Advise / Resolve / Learn

Early Notification
Case story guidance

Background

In 'Resolution through collaboration', NHS Resolution's 2025-28 strategy, our second strategic priority is to contribute our unique data and insights to learn from harm and our third is to support maternity and neonatal safety improvements. 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/claims 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. We have had feedback that some Trusts use the case stories as part of multidisciplinary mandatory training such as Drills and Skills/In situ simulation and also use them to support teaching for student midwives/medical students. 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.

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

- Maternal multimorbidity is defined as two or more co-existing conditions in pregnancy and affects one in five pregnant women in the United Kingdom[1,2].
- The prevalence of multimorbidity in pregnancy is rising, due to several factors. These include lifestyle changes, socioeconomic conditions, an ageing maternal population, an increase in pre-existing chronic conditions and the rising rate of obesity[1,3].
- Maternal multimorbidity is a major factor influencing adverse birth outcomes[1].
- Surveillance data from Confidential Enquiries shows that women who become pregnant with pre-existing health conditions are at risk of poor outcomes, and those that have multiple medical problems are at greatest risk[4].

Maternity Story

Antenatal

A 40-year-old mother booked for antenatal care at 9^{+5} weeks gestation, in her fourth pregnancy. She previously had three spontaneous vaginal births. Two of the mother's previous babies were small for gestational age. She had a BMI 38, type 2 diabetes, and essential hypertension. She was taking metformin and labetalol at booking. English was not the mother's first language, and she required an interpreter for any detailed communication. The mother was referred for consultant led care because of her multiple risk factors.

The mother was seen in the joint obstetric diabetes antenatal clinic and received regular appointments with the diabetes midwife in line with guidance. She was prescribed Folic Acid 5mg, Aspirin 150mg and high dose vitamin D. The mother was noted to be at increased risk of venous thromboembolism (VTE), and she was prescribed VTE thromboprophylaxis from 28 weeks gestation in line with RCOG guidance[5].

The mother was given dietary and lifestyle advice, but the team noted she did not make the recommended changes. The mother recorded her blood glucose readings infrequently; she reported difficulty using the 'app' and did not like doing the finger prick tests. The readings the mother had recorded were persistently high; but due to

the infrequency of readings recorded, the team did not commence insulin. Her blood pressure remained well controlled on labetalol 200mg twice a day throughout the pregnancy.

Serial growth scans demonstrated normal fetal growth. The mother was recommended delivery according to NICE guidance[6], for women with type 2 diabetes between 37^{+0} and 38^{+6}. She was counselled about her individualised risks and the benefits of induction of labour and was provided with a patient information leaflet in her preferred language. A telephone interpreter service was used for this counselling. Following the consultation, the mother agreed to an induction of labour if she did not labour spontaneously beforehand. She was given safety-net advice and informed of the maternity triage 24-hour telephone line. The detail of this discussion was documented in the mother's maternity records.

Labour

At 37^{+1} weeks gestation the mother attended the maternity triage with abdominal pain. She was assessed immediately as staff were concerned that birth may be imminent in view of her apparent distress. The triage midwife reviewed the mother's antenatal history to confirm her pathway of care in labour. She was alone and communication was difficult, but she appeared to be in severe pain with contractions. The midwife thought it was likely that the mother was in advanced labour and therefore did not attempt to access a telephone interpreter. Based on her experience, obtaining an interpreter through the local telephone service often required a considerable amount of time.

The mother was clinically assessed and observations demonstrated maternal tachycardia (heart rate 120bpm) and hypertension (150/94mmHg). Her blood sugar was normal. The mother was unable to provide a urine sample at time of admission therefore a urine dip was not performed. Abdominal examination was consistent with cephalic presentation with two-fifths palpable per abdomen. The fetal heart was auscultated for one minute at 134 beats per minute (bpm). Vaginal examination identified her cervix as 1cm dilated, 2cm long and poorly applied (multips os). Membranes were intact and there was no evidence of vaginal bleeding. Staff concluded that she was not in established labour. The mother was commenced on cardiotocography (CTG) monitoring, and the midwife requested an obstetric assessment in view of the mother's pain and her medical history. She asked the mother to take her regular labetalol dose as this was overdue.

Shortly after commencing the CTG, a three-minute deceleration of the fetal heart rate was noted. The midwife asked the mother to move into left lateral position and escalated to the obstetric doctor over the telephone, who was reassured that the CTG had normalised following a change of position. The doctor requested for the CTG to be continued, and they would attend to review the mother as soon as possible.

The obstetric doctor attended 40 minutes later. The mother's history and medical comorbidities were noted from her medical records. The doctor was reassured that the mother's blood sugar level was normal on admission. It was noted that she was hypertensive on admission, but this was not considered a concern, as she was

scheduled to take her regular labetalol at that time. The blood pressure measurement had not been repeated, and a urine dip was not performed. The doctor did not identify that the mother was taking VTE thromboprophylaxis and therefore did not ask about the timing of the mother's last dose of low molecular weight heparin. No interpreter was used for this interaction.

Abdominal examination demonstrated moderate contractions lasting 40 seconds. The mother was distressed and therefore it was difficult to determine if the uterus was soft between contractions. The CTG was noted to have had further decelerations following the initial prolonged deceleration but was felt to be improving. The CTG was not classified. The mother was prescribed codeine, and a plan was made to obtain intravenous access, send blood tests (Full Blood Count, Group & Save), continue the CTG and review again in 15 minutes.

After 30 minutes, the doctor had not returned. Triage staff contacted them over the telephone, the labour ward co-ordinator was also informed. The midwife had concerns about the mother's ongoing pain and further shallow decelerations on the CTG. The doctor stated they would attend as soon as possible, and 20 minutes later attended to review. During this assessment, the CTG was reviewed and signed but not classified. It demonstrated a significant rise in baseline to 155bpm and further repetitive decelerations. The doctor noted that the decelerations did resolve for a period of time following a change of position and was reassured by this.

During this review, two hours after arriving in the unit, the mother requested a caesarean birth. The doctor obtained a telephone interpreter to explore her concerns. During the conversation, the mother expressed that the pain she was experiencing was not like that she had in previous labours. She had been contracting at home since yesterday and was expecting to deliver quickly after arrival in hospital. She was surprised and confused as to why she was being told she was not in labour. The mother was concerned that something was wrong and was worried about her baby. She could not continue in this pain for any longer and wished for a caesarean section. In view of the mother's request and 'CTG concerns', a plan was made for a category two caesarean section. She signed the consent form, and the team began preparing to transfer the mother to theatre.

After 45 minutes, whilst awaiting transfer to theatre, a fetal bradycardia was noted. The fetal heart rate dropped from 160bpm to 90bpm and did not recover. The midwife activated the emergency alarm, and the obstetric team attended. The caesarean section was converted to a category one delivery. In theatre, the mother's blood pressure was elevated. The mother received a general anaesthetic, and delivery was achieved 16 minutes after the decision for category one caesarean section. Intraoperatively a placental abruption was confirmed with a 600-millilitre retro-placental clot measured. The mother had a postpartum haemorrhage of two litres.

Neonatal

The baby was born in poor condition. He was pale with reduced tone, heart rate and no respiratory effort. The neonatal team were present at delivery. The cord was

immediately clamped and cut and resuscitation commenced. Neonatal resuscitation was performed in line with Newborn Life Support (NLS) guidance.

Umbilical cord gases were taken, and the results were as follows:

- Arterial: pH 6.85, base excess -21.0, lactate 8.6
- Venous: pH 7.02. base excess – 16.3, lactate 6.7

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

The baby's birthweight was 2750g, the 25th centile on a customised growth chart.

The baby was transferred to the neonatal unit and therapeutic cooling was commenced in line with guidance. The baby was cooled for 72 hours. An MRI brain scan was performed on day five and showed evidence of severe hypoxic ischaemic encephalopathy. The baby was discharged home on day sixteen with ongoing support from physiotherapy, occupational therapy, and paediatric teams.

Learning Points

This illustrative case highlights the importance of:

- **Personalised care in the antenatal setting and awareness of:**
  - **Barriers in communication**
  - **Technology literacy or access to technology**
  - **Cultural competency**

This mother had multiple medical and obstetric risk factors in addition to language needs. She was seen in the appropriate high-risk clinic and language services were utilised. However, the mother's blood sugar monitoring and engagement with diabetes treatment plan were not optimal. She struggled to make required dietary changes and recorded her blood sugars infrequently on the mobile 'app'. The clinical team did not record any discussions or evidence of information provided to the mother about why blood sugar testing is important. They also did not explore the reasons why she was not recording the readings on the mobile 'app'. It is important to recognise that a lack of personalised care and education provision can be linked to health inequalities[7]. If these factors had been addressed, it may have enabled the mother to optimise her diabetes control and consequently improve outcomes for her and her baby.

- **Providing holistic assessment in the context of:**
  - **Barriers in communication**
  - **Cultural stereotyping**

The importance of listening to women and their concerns is emphasised in this illustrative case story. In an enquiry by Birthrights[8], over half of respondents gave examples of being ignored or disbelieved when they had concerns. Many mothers reported their concerns or requests were minimised. In this case, the clinical team did not use interpretation services for the mother's initial clinical assessment. This barrier to effective communication had an impact on the team's ability to provide a

holistic assessment. It was only later when the mother requested a caesarean birth, that an interpreter was utilised. At this point the mother was able to communicate her concerns. The failure to listen to the mother's concerns early on contributed to the team losing sight of her deteriorating clinical picture. This resulted in delayed diagnosis and delivery of the baby. Effective communication with the mother from the beginning would have reduced the risk of an adverse outcome in this case.

- **Providing holistic assessment in the context of:**
  - **Multimorbidity**

This case highlights the importance of recognising maternal multimorbidity and its impact on the individual and their care. The mother in this case had several risk factors for placental abruption, including hypertension, advanced maternal age and multiparity. The team did not consider the significance of her hypertension upon arrival in triage, assuming it was normal for her. However, her blood pressure was usually well controlled with antihypertensive therapy. The team did not recheck her blood pressure after administering her usual labetalol dose and did not perform a urine dip at any point prior to delivery. This resulted in a missed diagnosis of severe hypertension and a missed opportunity to establish if the mother had developed proteinuria and a potential diagnosis of pre-eclampsia. These factors, in the context of severe abdominal pain and an abnormal CTG, should have alerted the team to the diagnosis of placental abruption. The lack of a holistic assessment of both the mother and her baby led to a delay in diagnosis and delivery. A comprehensive assessment considering the mother's multiple comorbidities would have reduced the risk of an adverse outcome.

Another consideration for this mother presenting with an obstetric emergency was her VTE thromboprophylaxis. The clinical team did not identify that she was taking regular low molecular weight heparin and failed to ask about the timing of her last dose. It had been administered 30 minutes before her hospital attendance. Due to an ongoing fetal bradycardia, the mother received a general anaesthetic. If a category 2 delivery had proceeded, it is likely she would have undergone a spinal anaesthetic. This would have been outside of national guidance due to recent administration of low molecular weight heparin and posed a significant risk of spinal haematoma. This near miss underscores the importance of obtaining a thorough history and considering all maternal risk factors when planning care for women, particularly those with multimorbidity.

- **Classification of CTG**

This illustrative case demonstrates the importance of classifying the CTG at all clinical reviews and interpreting the CTG in the context of the clinical picture. In this case the clinical team recognised decelerations in the fetal heart rate and latterly a rise in the baseline. However, the CTG was not classified at any point. If the CTG had been classified correctly, delivery would have been considered earlier.

Problems with fetal monitoring were identified as a factor in 70% of cases referred to the Early Notification Scheme in the 'EN second report'[9]. The most common findings were incorrect CTG interpretation, delays in escalation and delays in acting on the finding of an abnormal fetal heart rate, as well as problems with risk recognition[9]. All

these components contributed to the adverse outcome in this illustrative case. Saving Babies Lives[10] highlights the importance of effective fetal monitoring in labour and sets out interventions and process indicators for maternity units to implement, included in the Maternity Incentive Scheme[11].

Considerations for your hospital

When making changes in response to a patient safety incident, it is important to consider the use of national system-based learning response tools to explore the contributory factors and to inform improvement[12]. The SEIPS (System Engineering Initiative for Patient Safety) framework describes how a work system can influence processes, which can have an impact on outcomes[13]. The following considerations may form part of a 'SEIPS work system template' to guide improvement work at Trust level.

- During antenatal appointments is your trust able to offer extra time and provide interpretation services for those that need them?
- Is there written information available for pregnant women about induction of labour, as recommended by the RCOG?
- Does your trust offer leaflets or signpost to online resources which are in the woman's preferred language?
- Does the multi-disciplinary teaching programme at your trust include a discussion of holistic assessment and cultural competency as well as the clinical assessment in cases?
- Does your trust use standardised proformas or checklists to aid comprehensive clinical assessment of women presenting to Maternity Triage?
- Do you have accessible language services for use in an emergency setting?
- Do you audit the language services commissioned by your trust? Is the service fit for purpose?
- Are your staff compliant with mandatory training for fetal monitoring in line with Maternity Incentive Scheme Safety Actions[11] and Saving Babies Lives v3.2[10]?
- Does your trust have systems and processes in place to ensure classification of CTG at each clinical review?
- Does your trust audit compliance of CTG classification?

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[14]. 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 £13.5 million. The human costs to the babies, families and clinical teams involved are immeasurable.

References:

1. Bestman P, Kolleh E, Moeng E, Brhane T, Nget M, Luo J. Association between multimorbidity of pregnancy and adverse birth outcomes: A systemic review and meta-analysis. *Preventative Medicine*. 2024;180.
2. Lee S *et al.* Maternal and children's outcomes for pregnant women with pre-existing multiple long-term conditions: a study protocol of an observational study in the United Kingdom. *BMJ Open*. 2022.
3. Lee S *et al.* Epidemiology of pre-existing multimorbidity in pregnant women in the UK in 2018: a population-based cross-sectional study. *BMC Pregnancy Childbirth*. 2022;22(120).
4. D'Arcy R, Knight M, MacKillop L. A retrospective audit of the socio-demographic characteristics and pregnancy outcomes for all women with multiple medical problems giving birth at a tertiary hospital in the UK in 2016. *Pregnancy Hypertension*. 2018;13(1):145.
5. Reducing the Risk of Thrombosis and Embolism during Pregnancy and the Puerperium. 2015. *Royal College Obstetricians & Gynaecologists.* GTG 37a. Reducing the Risk of Thrombosis and Embolism during Pregnancy and the Puerperium (Green-top Guideline No. 37a) | RCOG
6. Diabetes in pregnancy: management from preconception to the postnatal period. 2015. *NICE Guideline*. NG3. (Last updated 16 December 2020) Diabetes in pregnancy: management from preconception to the postnatal period | NICE
7. Knight M, Patel R, Harmer C, Vousden N. Achieving equitable maternal health services in the UK. *BMJ.* 2025;389:875.
8. Inquiry into racial injustice in maternity care. *Birthrights*. 2022. Inquiry into racial injustice in maternity care - Birthrights
9. The second report: The evolution of the Early Notification Scheme. *NHS Resolution.* 2022. The second report: The evolution of the Early Notification Scheme
10. Saving babies Lives version 3.2. *NHS England*. 2025. Saving babies' lives: version 3
11. Maternity (Perinatal) Incentive Scheme. Year 7 Guidance. *NHS Resolution*. 2025. MIS Year-7 guidance
12. Patient safety learning response toolkit. *NHS England.* 2025. Patient safety learning response toolkit

13. SEIPS quick reference guide and work system explorer. *NHS England*. 2022. SEIPS quick reference and work-system explorer
14. Saying Sorry. *NHS Resolution*. 2017. Saying Sorry

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