

Case story

Good practice in sepsis

This case story is based on real events and NHS Resolution is sharing the experience to improve the quality of care provided to all patients, families and staff. Although this incident may have happened sometime in the past, as you read about it, please ask yourself:

- Could this happen in my organisation?
- Who could I share this with?
- What can we learn from this?

Topic:

Management of suspected maternal sepsis

Key points:

- Maternal sepsis remains a significant cause of morbidity and mortality in the UK.
- Improving prevention and care of sepsis is highlighted in the latest Mothers and Babies: Reducing Risk through Audits and Confidential Enquiries in the UK (MBRRACE UK) report: [Saving Lives, Improving Mothers' Care 2017](#). One of the actions suggested is a 'declaring sepsis' alert as described below.
- Where sepsis is suspected a sepsis care bundle, applied in a structured and systematic way with urgency, can save lives.

Maternity story

A mother attended the maternity assessment unit looking unwell with a history of diarrhoea and painful contractions at 37 weeks pregnant. A full set of physiological vital signs were assessed and recorded shortly after she arrived. Her vital signs were documented on a modified early obstetric warning system (MEOWS) chart. Apart from being tachycardic, all other vital signs were within normal range. The midwife assessing her was concerned and noting the MEOWS score, triggered the use of a maternity sepsis screening tool.

MATERNITY SEPSIS SCREENING	
1. Has MEOWS triggered? or Does the woman look sick? or Is the baby tachycardic (≥160 bpm)?	Y N <input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
	2. Could this be an infection? Y <input checked="" type="checkbox"/> N <input type="checkbox"/> Source unclear <input type="checkbox"/> Urinary Tract Infection <input type="checkbox"/> Pneumonia, Influenza, severe sore throat <input type="checkbox"/> Abdominal pain or distension <input type="checkbox"/> Breast abscess <input type="checkbox"/> Infected caesarean or perineal wound <input type="checkbox"/> Chorioamnionitis/endometritis <input type="checkbox"/>
If yes in both sections start Sepsis proforma and action plan.	

On recognising that this may be sepsis, the midwife quickly started a maternal sepsis care bundle used by the hospital that included '[the sepsis 6](#)'. The care bundle triggered a 'declaring sepsis' alert to the consultant obstetrician and consultant anaesthetist on-call for labour ward. Staff completing the bundle were also alerted to commence fetal heart monitoring and consider delivery of the baby.

There was rapid mobilisation of the multi-professional team including obstetric registrar, anaesthetist and theatre staff. The whole team worked together and within 40 minutes of arrival the mother had been fully assessed, blood cultures taken, oxygen, intravenous antibiotics and intravenous fluids administered in accordance with guidelines. The mother's blood lactate was significantly raised over 4. Fetal heart monitoring showed an abnormal pattern and plan made for emergency caesarean section. There was a short delay while the mother was resuscitated and stabilised for an anaesthetic. The baby required resuscitation and was transferred to the neonatal unit for therapeutic cooling and treatment for sepsis. As a result of the early recognition of maternal sepsis the neonatal team were well prepared and in attendance at the birth.

Everything that could be done to reduce harm to the mother and baby was done.

Considerations for your hospital

- Implementation of a maternal sepsis 'trigger' and care bundle if not already in use. The Royal College of Obstetricians and Gynaecologists, NHS Improvement, NICE and the UK Sepsis Trust all offer guidance on key elements to include such as the 'the Sepsis 6' as used in this case.
- A maternal sepsis 'call to action' similar to major haemorrhage calls to mobilise and alert the multi-professional team.
- Nominate a team member to be a maternity sepsis 'champion' for your unit. Champions can raise awareness, promote use of new care pathways and audit effectiveness.
- Add a sepsis training package to your in-house multi-professional emergency training to embed use of a care pathway or bundle.

What has happened as a result?

This case was referred to NHS Resolution as part of the Early Notification scheme in light of the potential risk of severe brain injury to the baby. The case was reviewed and feedback to the trust commended them on the care provided.

Resources

- Draper ES, Gallimore ID, Kurinczuk JJ, Smith PW, Boby T, Smith LK, Manktelow BN, on behalf of the MBRRACE-UK Collaboration. MBRRACE-UK Perinatal Mortality Surveillance Report, [*UK Perinatal Deaths for Births from January to December 2016: Summary Report*](#). Leicester: The Infant Mortality and Morbidity Studies, Department of Health Sciences, University of Leicester. 2018.
- <https://sepsistrust.org/>

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