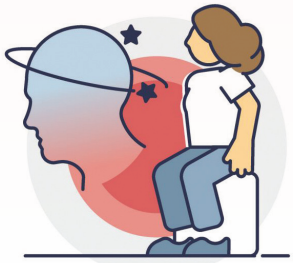
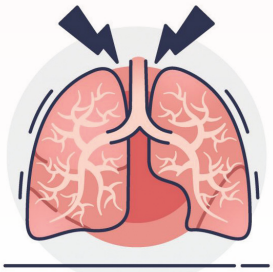
watch out for...

FEVER AND CHILLS – RIGORS



CONFUSION



RESPIRATORY DISTRESS

sepsis | mate whakatāoke: could this be sepsis?

Sepsis is a serious condition, which can develop rapidly and have catastrophic health outcomes. It is a leading cause of maternal deaths worldwide and is the third most common cause of death in newborn babies. Midwives, as with other maternity care providers, have a responsibility to identify early signs of infection in women and babies, provide appropriate midwifery care and activate referral.

Many midwives will have seen the impact of infection when providing midwifery care for women | wāhine | pēpē, particularly as this group of people are at higher risk of developing sepsis. This article aims to act as a refresher on sepsis for midwives.

Cheyne (2022) highlights that the majority of cases of maternal and infant infection are likely to occur in the postnatal period and that most maternal deaths from sepsis occur postnatally. In Aotearoa we are fortunate to be able to provide postnatal care up to 6 weeks after birth, supporting access to an essential primary care service that many countries do not prioritise. In both hospital and community midwifery practice we need to remain vigilant for signs of sepsis while women are an inpatient or at home, especially as women are discharged home early and we navigate rising intervention rates and inequitable health outcomes.

Midwives play a leading role in the recognition of sepsis, its diagnosis, management and early referral throughout the childbirth continuum. Information sharing with whānau relating to signs and symptoms of infection enable them to know when to be concerned and what action needs to be taken and when to seek help from their midwife. Any concerns shared by women during pregnancy and in the postnatal period need to be taken seriously. Recurring themes in perinatal and maternal mortality show the disproportionate impact on Māori, Pacific and Indian women, those under 20 years old and the effects of increasingly severe socioeconomic deprivation on these outcomes (PMMRC, 2020).

Much work on sepsis awareness has and continues to be undertaken by national entities in Aotearoa: Te Tāhū Hauora Health Quality & Safety Commission, ACC, and the Best Practice Advocacy Centre New Zealand (bpacnz guidelines). This guidance has been used to inform this article.

WHAT WE KNOW ABOUT SEPSIS

Sepsis is a multisystem disorder that can cause end organ damage, multi-organ failure, and mortality induced by infection (Vaught, 2018). Sepsis with shock is a life-threatening condition that is characterised by low blood pressure despite adequate fluid replacement, and organ dysfunction or failure.

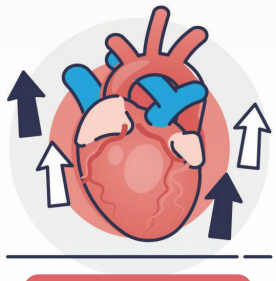
Sepsis is difficult to diagnose with certainty. Although people with sepsis may have a history of infection, one important fact to remember is that fever is not always present in all cases. The signs and symptoms of sepsis can be very non-specific, so the first consideration for anyone presenting with a possible infection is 'could this be sepsis?' Midwives need to always be cognisant that physiological changes related to pregnancy can mask early indicators of sepsis in order to avoid a 'normalisation' of possible sepsis.

SIGNS AND SYMPTOMS

Sepsis can occur because of pregnancy/birth/postpartum-related infections or other infections during the childbirth continuum, e.g., pneumonia. Many people can initially look well despite being septic and can deteriorate very quickly. Early recognition and suspicion of sepsis is therefore crucial.

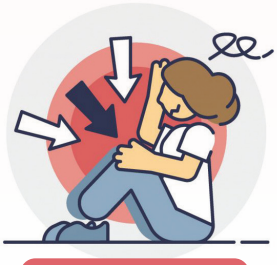
During pregnancy – non-specific:

- Malaise
- Lethargy
- Confusion
- Reduced appetite
- Urinary symptoms
- Productive cough
- Flank/back pain



TACHYCARDIA AND BRADYCARDIA

CLAMMY OR SWEATY SKIN



PAIN/PHYSICAL DISCOMFORT

- Diarrhoea and or vomiting
- Uterine and/or renal pain and tenderness
- Abdominal or chest pain
- Fever and chills – rigors
- Fetal tachycardia

Postnatal: all of the above plus

- Pain that is 'out of the normal expectations of pain'
- Breast engorgement/redness
- Increase in lochia (delay in involution)
- Cellulitis around surgical wound and/or discharge
- Perineal trauma signs of infection/ breakdown/haematoma/increased pain
- Offensive vaginal discharge/lochia (offensive may indicate anaerobes, serosanguinous, streptococcus infection)

This demonstrates the importance of visually assessing the woman's perineum throughout the postnatal period to assess healing when there has been perineal trauma at the time of birth. Signs of slow healing or infected tissues may alert the midwife to the need for additional care to prevent sepsis from developing.

PĒPĒ | NEWBORN BABIES

Primary sepsis infection is usually bacterial in nature in newborn babies; however, in rare cases it could also be due to a viral or fungal infection. Pēpē may become infected via vertical transmission from the pregnant wahine antenatally or during birth or less commonly from the immediate/surrounding environment (Cheyne, 2022). Bacteria that are known to cause sepsis in pēpē include E.coli, group B streptococcus, neisseria meningitis, salmonella, haemophilus influenza type b, and listeria monocytogenes. The herpes simplex virus can cause a viral infection. An existing medical condition may also trigger sepsis.

Signs may vary according to the type of infection, however pēpē may present with:

Fever, hypothermia and/or temperature instability; Respiratory distress; Increased irritability and unusual behaviour; Lethargic movements or floppy motions; Apnoea and bradycardia; Tachycardia; Cyanotic episodes; Unexplained jaundice; Eyes may have a sunken appearance; Decrease in urination; Abdominal distension; Bulging of the fontanelle; Umbilical flair and skin rashes.

TOOLS AND REFERRAL PROCESSES TO SUPPORT MIDWIVES IN PRACTICE

In recent years tools have been created in Aotearoa to support decision making and to identify acute illness and deterioration. These tools include the Maternity and Newborn Early Warning System charts (HQSC). Such tools are specifically designed to support care however they should be utilised with a thorough midwifery assessment which may include wider considerations not identified in the tool. Midwifery clinical judgement is the most important factor and is supported by such tools.

Multiple infectious diseases and conditions are described in the 2023 Referral Guidelines (Te Whatu Ora). These categories guide midwives to instigate to obstetric and paediatric colleagues. Maternal sepsis (code 7006) is categorised as a transfer of clinical responsibility, once discussions and exploration have occurred with the affected person. Maternal sepsis is described as: temperature >38°C or <36°C; heart rate > 100 beats per minute; respiratory rate > 25 breaths per minute; systolic blood pressure < 90 mmHg; new onset of pain; altered mental state. The Referral guidelines for pēpē are more generic and relate to various clinical signs and symptoms, however the urgency of referral is as important.

SUMMARY

Sepsis is the body's response to severe infection and develops as a result of undetected and unchecked infection. It can develop with rapid speed and is a significant cause of maternal and neonatal morbidity and mortality. Midwives play a crucial role in vigilance during pregnancy and particularly in the postnatal period. ■

References available on request.

"Could this be sepsis?"
(Adapted from the UK Sepsis Trust)

Does the wahine or pēpē look unwell?

- Was there a known antenatal infection e.g. group B strep?
- Has there been recent trauma e.g. perineal trauma repair?
- Has there been an invasive procedure e.g. caesarean section?
- Has there been an invasive procedure during labour and birth e.g. application of FSE?
- Was there anything that you had concerns about in the pregnancy/labour/ birth or postnatal period?

Could this be due to an infection relating to:

- Infected perineal wound
- Infected caesarean section wound
- A breast abscess
- A urinary tract infection
- Retained placental products – endometritis