EARLY ONSET SEPSIS RISK ASSESSMENT AND MANAGEMENT FOR INFANTS ≥ 34 WEEKS' GESTATION IN THE POSTNATAL WARD AT UNIVERSITY HOSPITAL WISHAW

TARGET AUDIENCE	Neonatal and Maternity Services in NHS Lanarkshire
PATIENT GROUP	Neonatal patients within the postnatal ward in NHS Lanarkshire

Clinical Guidelines Summary

- This document provides guidance on assessment and management of infants born at **≥ 34/40 weeks** of gestation who are at risk of early onset sepsis (EOS) in the **postnatal ward only**, using the Kaiser Permanente Early Onset Sepsis Calculator (KP-EOSC), in conjunction with the infant's clinical presentation.
- The calculator produces the probability of early onset sepsis per 1000 babies by entering values for the specified maternal risk factors along with the infant's clinical presentation.
- Therefore, the use of KP-EOSC score must be used in combination with clinical assessment and use of clinical observations.
- This guidance relies on both Midwifery and Neonatal Medical Team input at different stages as detailed within the document.
- If a baby displays signs of clinical illness, or there are healthcare professional or significant carer concerns, the neonatal medical team must be alerted and the baby should be reviewed and managed appropriately, regardless of the KP-EOSC score.
- It is important to remember to be vigilant and observe for signs of illness in all infants, whether or not they have had a KP-EOSC score completed.
- Assessment and management plans must be documented clearly within the Maternity Badger EPR.
- **Any baby who has been risk assessed with the KP-EOSC will be assessed by a neonatal medical team member within 2 hours of birth, and should not be discharged prior to completing 24 hours of observation in hospital.**
- For babies starting intravenous antibiotics on the postnatal ward, intravenous cefotaxime will be used, with doses as per the University Hospital Wishaw Neonatal Drug Monograph, unless directed otherwise by a Consultant Neonatologist.

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Background

Early onset sepsis (EOS) is defined as blood or cerebrospinal fluid culture proven infection within 72 hours of birth. Published incidence in developed countries ranges from 0.3/1,000 to 0.9/1,000 live births, with an ongoing significant risk of morbidity and mortality, with most of the UK regions would accept 0.5/1,000 live births.[1-3] *Group B Streptococcus* (GBS) followed by *Escherichia coli* accounts for most infections. EOS in term (>37 weeks') and near-term (≥34 weeks' gestation) infants derive mostly from maternal risk factors.

Most UK Hospitals use either NICE guidance, Royal College of Obstetrics and Gynaecology guidance, or a hybrid version of these guidelines. These guidelines use a univariate risk-based algorithm, and can recommend commencing intravenous antibiotics based only on risk factors. Such guidance does not consider the baby's 'wellness' at birth. Evidence shows the 'wellness' of term and near term infants at birth reduces the EOS risk by 60%–70%.[4] Current UK audit suggests the use of empirical antibiotics in infants ≥ 34/40 weeks may be as high at 16%.[5]

Use of the Kaiser Permanente Early-Onset Sepsis Calculator (KP-EOSC) developed in California uses a Bayesian multivariate model of algorithm, using both maternal risk factors and the infant's clinical condition at birth.[6] A score is provided, which is used in combination with clinical assessment to guide the management of infants at risk of EOS. Published literature reveals the KP–EOSC can reduce the use of empirical antibiotics by around 50%, and this finding has been similarly replicated in several places with consistent results, including University Hospital Wishaw.[5-9]

This guideline uses a modified version of the KP-EOSC to suit to the local Lanarkshire population and experience, taking both NICE CG195 and West of Scotland network guidance including risk factors and clinical indicators into account.[10-11]

An incidence of EOS of 0.5/1,000 live births will be used for KP-EOSC risk assessment in the postnatal ward at University Hospital Wishaw.

The predictive ability of KP-EOSC is validated only for first 12 hours of age. Therefore, a baby with maternal risk factors needs to be put through KP-EOSC as soon as possible after birth. Most infants with EOS will become clinically unwell within 24 hours of age.[10]

Any baby who is identified as needing risk assessed with the KP-EOSC, should have the score calculated and reviewed within 2 hours of birth, and should not be discharged prior to completing 24 hours of observation.

Infants who display signs of clinical illness from birth

If there are certain signs of clinical illness in the newborn infant from birth, the KP-EOSC recommendations are not applicable, and the infant should be assessed and managed as appropriate by the neonatal medical team, with prompt consideration and timely administration of intravenous antibiotics.

These signs of clinical illness include:

- Baby who required CPR at birth
- Baby who requires respiratory support from birth
- Baby who requires any form of supplemental oxygen to maintain oxygen saturations of ≥ 95%
- Baby who has bluish discolouration of tongue and buccal mucosa (central cyanosis)
- Baby whose perfusion is low (capillary refill time [CRT] > 2 sec), severe pallor, mottled skin appearance
- Cord pH < 7.0 or Base Excess more than or equal to -10mmol/L
- Baby who has abnormal movements/seizures, or encephalopathy
- Baby who is floppy
- Baby who develops jaundice in the first 24 hours of age
- Baby who has persistent refusal to feed
- Baby who has abdominal distension and/or excessive vomiting
- Baby who has bilious vomiting
- Unexplained excessive bleeding

Please contact the medical team for immediate review if one of the above signs are present. Such infants may require short stay observation or admission to the Neonatal Unit.

Infants without maternal risk factors for EOS

Babies who do not have maternal risk factors for EOS will not have KP-EOSC scoring, and therefore will not automatically be commenced on observations or reviewed by the medical team. It is however crucial to remain vigilant for possible signs of EOS, such as those listed above, and seek neonatal medical review if there are any concerns, and consider treating with intravenous antibiotics.

Other signs of sepsis may include:

- Jaundice in the first 24 hours of age
- Persistent feed refusal
- Signs of respiratory distress (such as persistent tachypnoea defined as RR ≥ 60/min with two readings at a gap of 2 hours, grunting, nasal flaring, head-bobbing, chest retractions)
- Temperature instability
    - A temperature <36°C or >38°C unexplained by environmental factors
    - A temperature 37.5°C – 38°C on two occasions with a gap of 2 hours
    - A temperature of 36.0°C – 36.5°C on two occasions with a gap of 2 hours, despite adequate thermal control measures
- Hypoglycaemia or hyperglycaemia
- Altered muscle tone (e.g. baby who is floppy)
- Feed intolerance including vomiting and abdominal distension
- Unexplained metabolic acidosis
- Persistent tachycardia (HR ≥ 160/min with two readings at a gap of 2 hours)

In cases of uncertainty, always seek senior advice, medical review and commence observations on a NEWTT2 chart.

Applicability for KP-EOSC Scoring (maternal risk factors)

Babies with the following maternal driven risk factors should have an assessment with the KP-EOSC **within the first 2 hours of life:**

- Premature delivery following spontaneous labour, up to 36+6 weeks' gestational age
- Suspected or confirmed infection in another baby in the case of a multiple pregnancy
- Invasive *Group B Streptococcal* infection in a previous baby
- Maternal *Group B Streptococcal* colonisation, bacteriuria or infection in the current pregnancy
- Mothers who are on the maternity 'Sepsis 6' pathway in the intrapartum or postnatal period (up to 12 hours after birth), or with suspected chorioamnionitis
- Maternal temperature ≥ 38°C on one occasion, or > 37.5°C on two occasions with a gap of two hours apart, in the antepartum and intrapartum periods, and up to 1 hour postnatally*****
- Maternal prolonged rupture of membranes (PROM) ≥ 18 hours in preterm (<37 weeks' gestation) and PROM ≥ 24 hrs in term infants (≥ 37 weeks' gestation)

If any one or more of the above risk factors is present, the midwife should fill the 'Early Onset Sepsis Calculator' form in Maternity Badger and ask the neonatal medical team to review the baby.

***Note for mothers who become pyrexial (≥ 38°C on one occasion, or > 37.5°C on two occasions with a gap of two hours apart), the midwifery team should contact the neonatal team to assess the baby, regardless of whether or not a KP-EOSC score has been calculated.**

Any baby who has been identified as needing assessment with the KP-EOSC should have the KP-EOSC completed and be commenced on observations within 2 hours of birth, or earlier if the baby has clinical signs or symptoms.

For babies with maternal risk factors who are admitted to the neonatal unit for observation/short stay straight from the delivery suite, the baby's KP-EOSC score should still be calculated and management plan documented before discharge back to the postnatal ward.

Maternal GBS Colonisation in a Previous Pregnancy

Current guidance suggests that mothers who have had previous *Group B Streptococcal* colonisation, should have a repeat microbiological swab between 35-37 weeks' gestation.

If a negative swab has not been obtained in the current pregnancy, the baby should have a KP-EOSC score calculated, regardless of whether or not intrapartum antibiotic prophylaxis was administered. The GBS status should be selected as 'Unknown' when calculating the KP-EOSC score, with the recommendations followed through.

Group B Streptococcus Detection After Birth

If *Group B streptococcus* is first identified in the mother within 72 hours after the baby's birth, the parents/carer of the baby should be informed. The maternity team should inform the neonatal team. The neonatal team should ask about any clinical concerns or symptoms of sepsis, (such as those listed on page 4), identify any other infection risk factors and use this information to make an assessment and management plan for the baby. It should be remembered that the KP-EOSC is only validated to be calculated within the first 12 hours of life.

Maternity Badger Early Onset Sepsis Calculator Form

Midwifery staff looking after the mother and baby should prepare the Early Onset Sepsis Calculator form on Maternity Badger. The following information is required:

- Gestational age: .....weeks + ...days
- Maternal Highest antenatal/intrapartum/ 1 hour post-partum temperature : C

  Date & Time of highest temperature:.....
- Duration of rupture of membranes : .....hours .....minutes
- GBS status : Positive Negative Unknown (=not done)
- Maternal IV antibiotics: Yes No

  Date & time of antibiotics:.....
  - Broad spectrum antibiotics > 4 hrs prior to birth
  - Broad spectrum antibiotics 2-3.9 hrs prior to birth
  - GBS specific antibiotics > 2 hrs prior to birth
  - No antibiotics or any antibiotics < 2 hrs prior to birth

Once the above information is inputted, the midwifery staff can calculate the score, but the medical team must be informed to review the baby.

Neonatal Medical Team Assessment (KP Scoring)

Following completion of the Early Onset Sepsis Recognition Tool Form on Maternity Badger by midwifery staff, the neonatal medical team should then:

- Review and ensure the correct information has been inputted into the Early Onset Sepsis Calculator Form, and review the calculated KP-EOSC score
- Perform and document a comprehensive clinical examination on the baby in the Early Onset Sepsis Calculator Form
- Review the observations performed by the midwife on the NEWTT2 chart

- Provide the baby's parent/carer a copy of the Early Onset Neonatal Infection information leaflet
- Ensure the parent/carer is aware that their baby is being observed in view of a risk of early onset infection, and ensure they are aware to seek midwifery attention if they are worried about their baby being unwell

Based on the clinical presentation of the baby and their observations, the baby should then be classified into one of the three clinical categories detailed below.

The clinical category of the baby then guides the recommendations for the baby, as detailed overleaf. **This guidance should be referred to when documenting the management and observation plan.**

Clinical Illness	Equivocal	Well Appearing
Any of: • Need for respiratory support • Central cyanosis • SpO_2 < 95% in air and need for supplemental oxygen • Poor perfusion: CRT > 2 seconds, pallor, mottling • Lethargy or floppiness • Abnormal movements • Clinical discretion that baby is acutely unwell	Any of: • Persistent tachycardia: HR ≥ 160/min with two readings at a gap of 2 hours • Persistent tachypnoea: RR ≥ 60/min with two readings at a gap of 2 hours • Temperature instability: < 36°C or ≥ 38°C on one occasion or >37.5°C on two occasions with a gap of 2 hours • Grunting, nasal flaring, chest recession, persisting for two hours	• No signs, symptoms or clinical concerns

- **Clinically ill babies** should be reviewed immediately and if clinically appropriate, moved to the neonatal intensive care unit immediately for ongoing care. The KP-EOSC should be calculated in the neonatal unit, but **clinical judgement overrides the KP recommendation**
- **Equivocal babies** or **well appearing babies** should have a management plan made based on the KP-EOSC
- If classified as **well appearing**, then look at the 'well appearing' category in KP-EOSC management plan section. If you have classified the baby as **equivocal**, then look at the 'equivocal' category within this document
- Babies who have an **equivocal** first set of observations, but are not categorised as clinically ill, require diligent observation over the first 2 hours on the NEWTT2 chart to determine their clinical category and management plan

Neonatal Management Plans

The following should be used to guide the neonatal management plan. **Note that observations should be done more frequently as directed by the NEWTT2 chart if there are any abnormal observations, and medical review should be sought as appropriate.**

Well appearing baby: KP-EOSC score <0.65

- No blood culture and no antibiotics
- Observe using NEWTT2 observation chart with a minimum observation frequency of 4 hourly, until 24 hours of age.
- After 24 hours of observation, the baby can be signed off by the attending midwife, provided the observations were normal. No medical review is needed unless there are any clinical concerns. The medical team should be informed and this should be documented in Maternity Badger.
- If the observations on the NEWTT2 observation chart become abnormal anytime during the 24 hour observation period, ask the neonatal medical team to review the baby. The neonatal medical team should examine the baby and move the baby to the '**Equivocal**' category and follow the recommendations (see below)

Equivocal baby: can have one of the three different recommendations

1. **No blood culture and no antibiotics: score 0.65 – 1.54**
   - If the recommendation is for **no blood culture and no antibiotics**, observe the baby using NEWTT2 chart with a minimum observation frequency of 2 hourly for the first 6 hours, and then 4 hourly for next 18 hours.
2. **Do blood culture and no antibiotics: score > 1.54**
   - If the recommendation is to **do blood culture and no antibiotics**, perform a blood culture, CRP and full blood count, and observe the baby using the NEWTT2 chart with a minimum observation frequency of 2 hourly for the first 6 hours, and 4 hourly for next 30 hours, or until the 36 hour blood culture result is reported. A repeat CRP should be taken 18 hours after the first CRP, and acted on accordingly.
3. **Start Empirical Antibiotics: score > 1.54**
   - If the recommendation is to start empirical antibiotics, then perform a blood culture, CRP and full blood count, and commence intravenous cefotaxime as per the University Hospital Wishaw Neonatal Drug Monograph. Observe the baby using the NEWTT2 chart with a minimum observation frequency 2 hourly for the first 6 hours, and 4 hourly for next 30 hrs or until the 36 hour blood culture result is reported. A repeat CRP should be taken 18 hours after the first CRP, and acted on accordingly.

- Even if the baby is already commenced on antibiotics, but subsequent observations stay abnormal, ask the neonatal medical team to review the baby, **as the baby may require admission to the neonatal unit for further care**.

Equivocal baby review and discharge criteria

- Any baby who has required bloods, or bloods and antibiotics should be reviewed before discharge home.
- If the baby was not on intravenous antibiotics, did not have blood tests, and observations were normal, the baby can be discharged by the attending midwife, after discussion with the neonatal team.
- Any infant started on antibiotics, or who have had blood tests, must be reviewed daily by the neonatal medical team and again before discharge. The duration of the antibiotics is by senior medical decision, and should be clearly documented within Maternity Badger.
- If the blood culture becomes positive at any time, please discuss with neonatal medical team for neonatal admission and further care.

For all infants where intravenous antibiotics are prescribed, steps should be taken to administer antibiotics within 1 hour of the decision to treat.

Additional Investigations

As detailed above, the minimum investigation set would be a blood culture, CRP and full blood count if appropriate. In any baby that has had a CRP level taken as directed by the recommendations above, a repeat CRP level should be taken 18 hours later, to help guide antibiotic duration, in alignment with NICE guidance.[11]

Some babies will require additional investigations at the discretion of the clinical team such as:

- **Cerebrospinal fluid (CSF) analysis** should be considered if there is strong clinical suspicion of infection, a blood culture is positive or there are clinical signs suggestive of meningitis. If it is felt safe to do so, a CSF sample should be taken before starting intravenous antibiotics, **but** if performing a lumbar puncture would delay antibiotics in an unwell baby, perform it as soon as possible after starting antibiotics. CSF samples should be sent for:
    - Microscopy, culture and sensitivity
    - Protein and glucose **with paired serum glucose sample**
    - Viral PCR
- **Swabs** are not routinely taken for culture, unless there is a site of purulent discharge e.g. purulent discharge around periumbilical cellulitis or purulent eye discharge
- **Imaging** may be considered. A chest x-ray should be performed in babies with persistent respiratory symptoms to exclude a chest focus of infection (and other respiratory pathology). Additional imaging is at the discretion of the clinical team and presenting features of the baby.
- **Maternal microbiology** – it is important to remember to review maternal microbiology taken around the time of delivery (e.g. urine culture, blood culture, vaginal swab) as

this may be the only growth identified and can be helpful when there is no growth on the baby's blood cultures

Intravenous Antibiotic Duration

Culture positive infection or strong clinical suspicion of sepsis

Babies who have blood culture proven sepsis will generally require a **minimum of 7 days** of intravenous antibiotics. These babies should initially be managed in the Neonatal Intensive Care Unit.

Those with a strong clinical suspicion sepsis, but a negative blood culture generally will require a 5-7 days of intravenous antibiotics too. This is not prescriptive, and should consider the clinical presentation of the baby, and available laboratory and imaging results, and so can be adjusted and guided at senior clinical discretion. Longer courses of antibiotics may be required dependent on microbiological results from blood and CSF analysis, and may require input from microbiology.

Those with a CRP level of >6 require discussion with the senior neonatal medical team regarding duration of intravenous antibiotics, which will take into account microbiological results, persistence of clinical signs and CRP trends.

Consider alerting the maternity team if a blood culture is reported positive, as this may be relevant for maternal management too.

Well babies or babies without a strong clinical suspicion of sepsis

In babies who have been commenced on empirical intravenous antibiotics for possible early-onset infection, consider stopping the antibiotics at 36 hours if:

- The blood culture is reported negative at 36 hours by microbiology **and**
- The baby's clinical condition is reassuring and not worsening **and**
- Both CRP levels (at the time of commencing antibiotics and 18 hours later) are <6

In cases of uncertainty, always seek senior neonatal medical advice before stopping antibiotics.

Neonatal Medical Team Daily Assessment

All infants assessed using KP-EOSC must be highlighted on the Neonatal Medical Team handover for team awareness.

In addition to the baby's observations, babies who are on intravenous antibiotics should be reviewed by the neonatal medical team at least every 24 hours. This should be documented as a 'Specialist Review' in Maternity Badger, and should consider:

- A review of the baby's observations
- The baby's current clinical presentation and progression since initial presentation, including feeding and behaviour
- Microbiological results from **baby and mother**, trends of CRP levels, and review of any other investigations
- Considering whether or not antibiotics can be discontinued on the baby
- Documenting the overall plan

Audit and Governance

All infants assessed using KP-EOSC must be highlighted on the Neonatal Medical Team handover for awareness, audit and governance purposes. In alignment with NICE recommendations, University Hospital Wishaw will audit use of KP-EOSC, including:

- Total number of babies assessed using the calculator
- Number of babies correctly identified by the calculator who develop a culture-confirmed neonatal infection
- Number of babies incorrectly identified by the calculator who do not develop a culture-confirmed neonatal infection
- Number of babies missed by the calculator who develop a culture-confirmed neonatal infection

All clinical incidents or adverse events relating to sepsis risk assessment on the postnatal ward should have a DATIX adverse event report completed. Examples include:

- Incorrect data inputted into Early Onset Sepsis Calculator Form on Maternity Badger
- Babies who should have had a KP score calculated after delivery, but was not performed
- Babies who have not had a KP score calculated and medical review by 2 hours of age
- Term admission to the neonatal unit from the postnatal ward

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Appendix 1 – KP-EOSC Evidence Review

Current UK Practice

The processes behind the development of the KP-EOSC by the Kaiser Permanente Research Group are published and available through the KP-EOSC website.[13] The KP-EOSC was endorsed by the American Academy of Pediatrics in 2018.

For risk-assessing infants ≥34 weeks' gestation and within 12 hours of birth in the UK, most hospitals use the National Institute for Health and Care Excellence (NICE) guidance (CG195) published in 2021, or local adaptations of this guidance, such as the West of Scotland regional 'Early Onset Sepsis in the Neonate: Prevention and Treatment' guideline. At present, NICE recommend that units who chose to use the KP-EOSC, should do this as part of an audit project, as mentioned earlier within this document.

However, there has been an increase in uptake of the KP-EOSC for infants across the UK in view of antibiotic stewardship following release of NICE CG195 guidance.[8] Most of these centres have used adapted guidance to align with their local practice.

The reduction in the use of empirical antibiotics for infants at risk of sepsis associated with KP-EOSC use has now been clearly demonstrated in the literature, and so implementation of the KP-EOSC can result in avoiding antibiotic use in infants who do not need them. The focus of new research is now determining the sensitivity of the KP-EOSC in detecting culture proven EOS. In view of this, relevant and recently published literature was reviewed with the re-drafting of this guidance document in 2024.

Evidence Review

Three published meta-analyses relating to the KP-EOSC were reviewed. In 2019, Pettinger et al reviewed 11 studies with meta-analysis, where 75 cases of EOS were described within their published data, to establish the sensitivity of the calculator in detecting EOS.[14] They concluded that as many as 22 of these babies could have been 'missed' for treating for EOS, who would have been on treatment in alignment with NICE guidance. However, since publication of this meta-analysis, there has been updated NICE guidance (guideline CG149 has now been replaced with CG195 from 2021), which removed a mother being on intravenous antibiotics as a risk factor for EOS. This may have an impact on these results.

Conversely, in 2020, Deshmukh M et al reviewed six trials through meta-analysis and concluded that KP-EOSC was associated with the reduced usage of antibiotics, laboratory tests and neonatal unit admissions, with no increase in mortality, culture positive EOS or readmissions.[15] The six studies provided data included 172,385 neonates (KP-EOSC: 66,949, control: 105,436), with none of these studies reporting statistical significance in culture positivity within these groups, confirmed by meta-analysis. It should be noted however, that the six studies that met inclusion criteria in this meta-analysis were not randomised control trials, which may overestimate effect size and introduce bias.

In relation to the above, in 2022, Snoek et al published a prospective observational cohort study comparing the sensitivity of the KP-EOSC compared to both Dutch national and NICE CG195 EOS guidelines, when applied to 88 culture positive cases over a 3 year period in the Netherlands.[16] This demonstrated that the KP-EOSC would have recommended antibiotic treatment 36% patients, compared to 55% by the NICE guideline (p<0.01). However, at 24 hours after birth, the KP-EOSC would have recommended antibiotic treatment in 61% infants 72% by the NICE guidelines (p = 0.06). This demonstrates that there are limitations in sensitivity in both NICE guidance and the KP-EOSC. It may also suggest that in infants assessed with the KP-EOSC who are more well appearing, may receive antibiotic later than those who have been assessed using NICE guidance.

These findings were in alignment with a third meta-analysis published in 2021 by Achten et al, assessing how culture-positive EOS cases are risk stratified by the KP-EOSC.[10] Two hundred and thirty-four culture-positive EOS cases from 18 studies were looked at. Use of the KP-EOSC resulted in initial assignments to empiric/strong consideration of antibiotic administration in 40.6%, more frequent vital signs for 15.4% and routine care for 44.0% of these cases. The proportions did change with age, with 61% fitting into the empirical antibiotic group by 12 hours of age. Within this cohort, 88.6% of infant who developed signs of illness after birth did so within 24 hours and 98% within 48 hours after birth.

The findings of these studies reinforce the importance in diligent and regular clinical reassessment of infants who have been assessed with KP-EOSC, given the heavy reliance on the clinical presentation of the infant, particularly within the first 24 hours of age. Two studies in Italy and Norway looking at serial reassessment of infants, as opposed to intravenous antibiotic treatment demonstrated that EOS risk was low in well appearing babies, and observation may reduce antibiotic overuse without worsening short-term outcomes. However, studies on long-term outcomes are lacking.[16-17] These findings have driven the decision to observe all infants who have been assessed by KP-EOSC for 24 hours after birth.

Implementation Within UK Healthcare Settings

In addition, several recent papers were reviewed, reporting the safe implementation of KP-EOSC within a UK healthcare setting.[5,8,9] A recently published large cohort study compared the diagnosis of EOS associated with the use of the KP-EOSC compared to NICE guidance in 26 London hospitals.[8] In this study, there was no significant difference in the incidence of EOS identified between both methods. It is important to note that this was not a randomised controlled trial, and that the implementation of KP-EOSC may have varied between hospitals.

Conclusion

There are limitations to the sensitivity in the detection of EOS with all available risk stratification methods currently available. As there is no strong evidence to suggest inferiority of KP-EOSC, which has also been reflected with local experience through audit, the KP-EOSC will continue to be used in conjunction with clinical assessment and safety-netting for infants without

maternal driven risk factors (such as implementation of the NEWTT2 observation chart). Judicious audit of the KP-EOSC will continue within University Hospital Wishaw. Emphasis should continue to be placed on using clinical judgement, diligent assessment, particularly within the first 24 hours of life, and ensuring that any baby who displays signs of possible infection is assessed and treated with intravenous antibiotics promptly.

Further high-quality research is needed in risk assessing infants for EOS. Newly updated evidence and national/regional guidance should be reviewed and considered with the planned review of this guidance document.

Appendix 2 – Governance Information

Governance information for Guidance document

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CHANGE RECORD			
Date	**Lead Author**	**Change**	**Version No.**
16/09/2024	Amarpal Bilkhu	Additional bullet point at end of page 7 for clarification, and change in the order of bullet points on page 9 for readability; no other change from V2.0.	2.1
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