Guideline for the Early Onset Neonatal infection including GBS

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1.0 Introduction

The guideline uses the terms 'woman' or 'mother' throughout. These should be taken to include people who do not identify as women but who are pregnant.

Early-onset neonatal bacterial infection (within the first 72 hours of birth) is a significant cause of neonatal morbidity and mortality.

Group B Streptococcus (streptococcus agalactiae (GBS)) accounts for 30-50% of neonatal infections affecting 0.5/1000 births with a mortality rate of 5-10%, however the presence of any maternal infection could affect the neonate.
GBS is present in the bowel flora of 20-40% of adults (colonisation) including pregnant women. People who are colonised are called ‘carriers’.

The GBS carriage rate varies amongst racial groups with the highest rates being amongst people of black African ancestry and lowest in people of South Asian ancestry.

In the majority of cases the babies come into contact with GBS during labour or delivery (vaginal). In most cases the baby will not develop an infection but some may develop life threatening sepsis, pneumonia or meningitis.

2.0 Objective

The purpose of this guideline is to provide information for Obstetricians, Midwives, Neonatal nurses and Paediatricians on the prevention of Early-onset neonatal infection.

3.0 Scope

This guideline applies to all medical and midwifery staff working on the maternity unit, neonatal unit, postnatal wards and midwifery staff in the community.

4.0 Main body of the document

4.1 Antenatal Screening

All women are routinely screened for bacteriuria at their first hospital visit.
GBS infection may be detected through incidental screening or intentional testing during pregnancy.

If GBS is detected in a urine sample it should be treated at the time of detection as well as offering treatment in labour.

All GBS positive results should be actioned as per the GBS positive SOP. Positive GBS Result

In those women who have had GBS in a previous pregnancy the likelihood of recurrence is 50% (RCOG,2017). They have two options:

- Intrapartum antibiotic therapy (IAP)
- Bacteriological testing between 35-37 weeks or 3-5 weeks prior to anticipated delivery date (should a preterm delivery be indicated).

A positive test would indicate a risk of 1 in 400 whereas a negative test would reduce the risk to 1 in 5000.

A swab should be taken from the lower vagina and anorectum. One swab is sufficient (please ensure the vagina is swabbed before the anorectal area).

The swab should be taken using a normal charcoal swab and transported to the laboratories for processing. The request should clearly indicate that the swab has been taken for GBS testing. GBS testing is not recommended for women with preterm rupture of the membranes as IAP should be offered when labour is confirmed or induced irrespective of GBS status.

All women who are positive should be given information about GBS on diagnosis (HSIB, 2020), the leaflet is available via the trust website or via the link below.
https://gbss.org.uk/wp-content/uploads/2018/01/2017-Joint-RCOG-GBSS-PIL_final.pdf

4.2 Preventing early-onset neonatal infection before birth

For the prevention of early -onset neonatal infection (including intrapartum antibiotics) please follow Neonatal infection: antibiotics for prevention and treatment, NICE guideline [NG195] Published 20 April 2021:**NICE section 1.2**

For women in labour, identify and assess any risk factors for early-onset neonatal infection (see box 1). Throughout labour, monitor for any new risk factors.

For guidance on managing prelabour rupture of membranes at term, see the guideline on intrapartum care. For guidance on managing PPROM, see the guideline on preterm labour.

4.3 Women who are GBS positive with Preterm Prolonged Rupture of Membranes (PPROM)

For women with evidence of colonisation in this pregnancy offer an immediate birth (by induction of labour or caesarean birth) to women who are between 34 and 37 weeks' gestation who:

- Have prolonged prelabour rupture of membranes, **and**
- Have group B streptococcal colonisation, bacteriuria or infection **at any time in their current pregnancy**

4.4 Management of induction of labour

Method of induction of labour is not affected by the woman's GBS carrier status. A membrane sweep is not contraindicated for women who are known GBS carriers.

4.5 Management of planned caesarean section

Antibiotic prophylaxis specific to GBS is not required for women undergoing a planned caesarean section where the woman is not in labour and the membranes are intact. The normal regime of antibiotic cover for Caesarean section should be followed. Management of Caesarean Birth

4.6 Management of water birth

A pool birth is not contraindicated for women who are GBS carriers or who require IAP because they have had a previous baby with Early Onset Group B Streptococcus (EOGBS) disease. IAP should be offered and managed as per the Positive GBS Result guideline.

4.7 Clinical indicators and risk factors for early-onset neonatal infection

4.7.1 Assessing and managing the risk of early-onset neonatal infection after birth section 1.3.3

Please follow the Guideline For Newborn Early Warning Trigger And Track System for guidance on neonatal observations.

- In babies without red flags and only 1 risk factor or 1 clinical indicator, use clinical judgement to decide:
    - Whether it is safe to withhold antibiotics, **and**
    - Whether the baby's vital signs and clinical condition need to be monitored. If monitoring is needed, continue for at least 12 hours using a newborn early warning system
- Please follow the Guideline For Newborn Early Warning Trigger And Track System for guidance on neonatal observations.
- For babies without risk factors or clinical indicators of possible infection, continue routine postnatal care as per the Postnatal care guideline

Box 1 Risk factors for early-onset neonatal infection including "red flags"

Risk Factor	Red flag (treat with antibiotics)	Non-red flag (treat with antibiotics if 2 or more are present)
Suspected or confirmed infection in another baby in the case of multiple pregnancy		
Invasive group B streptococcal infection in a previous baby		✓
Maternal group B Streptococcal colonisation, bacteriuria or infection in the current pregnancy (in high vaginal swab/urine)		✓
Confirmed Prelabour rupture of membranes at term for more than 24 hours before the onset of labour		✓
Confirmed rupture of membranes for more than 18 hours in a preterm		✓
Preterm birth following spontaneous labour (before 37 weeks' gestation)		✓
Intrapartum fever higher than 38°C if there is suspected or confirmed bacterial infection		✓
Clinical diagnosis of chorioamnionitis		✓

Box 2 Clinical indicators of possible early-onset neonatal infection (observations and events in the baby) including "red flags"

Clinical indicator	Red flag (treat with antibiotics)	Non-red flag (treat with antibiotics if 2 or more are present)
Apnoea (temporary stopping of breathing)		
Seizures		
Need for cardiopulmonary resuscitation		
Need for mechanical ventilation		
Signs of shock		
Altered behaviour or responsiveness		✓
Altered muscle tone e.g. floppiness		✓
Feeding difficulties e.g. feed refusal		✓
Feed intolerance, including vomiting, excessive gastric aspirates and abdominal distention		✓
Abnormal heart rate (bradycardia or tachycardia)		✓
Signs of respiratory distress (including grunting, recession, tachypnoea)		✓
Hypoxia e.g. central cyanosis or reduced oxygen saturation level		✓
Persistent pulmonary hypertension		
Jaundice within 24 hours of birth		✓
Signs of neonatal encephalopathy		✓
Temperature abnormality (< 36˚ or > 38˚C) unexplained by environmental factors		✓
Unexplained excessive bleeding, thrombocytopenia, or abnormal coagulation		✓
Altered glucose homeostasis (hypoglycaemia or hyperglycaemia)		✓
Metabolic acidosis (base deficit of 10 mmol/litre or greater)		✓

4.8 Treatment

Common infections that produce positive cultures in this age group include: Group B Streptococcus bacteremia/meningitis, Staphylococcus Aureus, meningitis and Coagulase negative staphylococcus. The duration of treatment can vary between 5 -14 days depending upon the organism detected. Management should be agreed by the on-call consultant and may need a discussion with the microbiologist.

Treatment should be commenced within one hour of the decision to treat:	
Benzylpenicillin IV 50mg/kg **BD**	AND Intravenous **Gentamicin OD**

For Infants with raised inflammatory markers or a positive blood culture the course of antibiotic therapy and any further investigations will be decided by the paediatric team with input from the microbiologist.

Antibiotic therapy should be reviewed after 36 hours and discontinued if:

- The blood culture is negative
- The level and trends of the 2 CRP concentrations are reassuring FBC is reassuring
- The infant has remained clinically well and there are no clinical indicators of possible infection

Infants with CRP levels between 10- 40 with otherwise reassuring features and negative blood culture will require a senior review in collaboration with the NNU consultant regarding duration of treatment. This is a clinical decision (based upon initial clinical suspicion, CRP trends, clinical progress and condition) and antibiotic treatment will vary between 36 hours and 7 days. The infant will be reviewed by a Paediatrician as a minimum every 24 hours. The infant may be discharged immediately after discontinuing antibiotic treatment. The Paediatrician will complete a D1 form to inform the GP and midwife of the reasons for starting antibiotics.

For more information, NG195 Visual summary on neonatal infection: determining the need for antibiotic treatment of babies within 72 hours of birth (nice.org.uk)

4.9 Duration of antibiotic treatment for early- onset neonatal infection

4.9.1 *Investigations during antibiotic treatment for early-onset neonatal infection*
In babies given antibiotics because of risk factors for infection or clinical indicators of possible early-onset infection, measure the C-reactive protein concentration 18 to 24 hours after presentation.
Consider performing a lumbar puncture to obtain a cerebrospinal fluid sample in a baby who did not have a lumbar puncture at presentation who is receiving antibiotics, if it is thought safe to do so and if:

- the baby has a positive blood culture (other than coagulase negative staphylococcus) or
- the baby does not respond satisfactorily to antibiotic treatment, or
- there is a strong clinical suspicion of infection or
- there are clinical symptoms or signs suggesting meningitis.

4.9.2 *Decisions 36 hours after starting antibiotic treatment*

In babies given antibiotics because of risk factors for early-onset infection or clinical indicators of possible infection, consider stopping the antibiotics at 36 hours if:

- the blood culture is negative and
- the initial clinical suspicion of infection was not strong and
- the baby's clinical condition is reassuring, with no clinical indicators of possible infection and
- the levels and trends of C-reactive protein concentration are reassuring.

Consider establishing hospital systems to provide blood culture results 36 hours after starting antibiotics, to allow timely stopping of treatment and discharge from hospital. Healthcare professionals with specific experience in neonatal infection should be available every day to give clinical microbiology or paediatric infectious disease advice.

4.10 Treatment duration for early-onset neonatal infection without meningitis

Give antibiotic treatment for 7 days for babies with a positive blood culture, and for babies with a negative blood culture if sepsis has been strongly suspected. Consider continuing antibiotic treatment for more than 7 days if:

- the baby has not yet fully recovered or
- this is advisable because of the pathogen identified on blood culture (seek expert microbiological advice if necessary).

If continuing antibiotics for longer than 36 hours despite negative blood cultures, review the baby at least once every 24 hours. Consider at each review whether it is appropriate to stop antibiotic treatment, taking account of:

- the level of initial clinical suspicion of infection and
- the baby's clinical progress and current condition and
- the levels and trends of C-reactive protein concentration

4.11 Management of babies whose mothers decline IAP

If a woman declines antibiotics she should be made aware that the risk of the baby developing EOGBS disease is higher (the overall risk remains low). Close observation of the baby for 12 hours following delivery is recommended and therefore early discharge from hospital is not recommended.

4.12 Therapeutic drug monitoring for babies receiving gentamicin

Please see appendix 3

4.13 Care of newborn infants requiring treatment for Early Onset Neonatal Infection on the Postnatal Ward

The infant's condition, wellbeing and treatment will be regularly assessed. The infant should be nursed in the clinical area most appropriate for his/her condition and may require transfer to the Neonatal Unit.
Follow the guidelines for Postnatal Care and the Infant Feeding guidelines when planning management.
Guideline For Postnatal Care V6
Infant feeding policy and guidelines

Please provide parents with the leaflet about the administration of IV antibiotics. My-Baby-is-on-IV-Antibiotics.pdf (barnsleyhospital.nhs.uk)

4.14 Ongoing Management of Early Onset Neonatal Infection

CRP levels will be checked 18-24 hours after the initial sample.
Lumber puncture should be considered, if not already performed with one of the following:

- Positive blood cultures (excluding skin contaminants)

- CRP >40
- Infants with clinical signs suggestive of meningitis
- A strong clinical suspicion of sepsis
- Not improving despite antibiotic treatment

The following are contraindications for a lumbar puncture:

- Clinical signs of shock
- Coagulopathy (please refer to the North Trent Neonatal Network guideline)
- Platelet count <100x109/l
- Respiratory insufficiency

4.15 Parents and carers of babies treated for neonatal infection

Reassure parents and carers that they will be able to continue caring for and holding their baby according to their wishes, unless the baby is too ill to allow this. If the severity of the baby's illness means they need to change the way they care for the baby, discuss this with them.

Offer parents and carers contact details of organisations that provide parent support, befriending, counselling, information and advocacy.

If a baby has been treated for suspected or confirmed neonatal infection:

- advise the parents and carers about potential long-term effects of the baby's illness and likely patterns of recovery, and reassure them if no problems are anticipated
- take account of parents' and carers' concerns when providing information and planning follow-up.

4.16 Parents and carers of all babies

Before any baby is transferred home from the hospital or midwifery-led unit (or in the immediate postnatal period in the case of babies born at home), advise parents and carers to seek urgent medical help (for example, from NHS 111, their GP, or an accident and emergency department) if they are concerned that their baby:

Provide the lullaby trust Baby Check advice My-Baby-is-on-IV-Antibiotics.pdf (barnsleyhospital.nhs.uk)

If a mother is found to be a carrier of Group B streptococcus in the first 72 hours following delivery, the baby will be assessed by a healthcare professional with a view to potential treatment dependent upon risk factors.

- If the baby is on the postnatal ward, a paediatrician will review to determine whether antibiotics are indicated.
- If the baby has been discharged, the community midwife and/or the GP to review the baby.

4.17 Advice for women for future pregnancies who have previously been GBS positive

Advise the woman that if she becomes pregnant again:

- that her new baby will be at increased risk of early-onset group B streptococcal infection.
- she should inform her maternity care team that she has had a positive group B streptococcal infection test in a previous pregnancy.
- her maternity care team will offer her antibiotics in labour.

Inform the woman's GP in writing that there is a risk of group B streptococcal infection in babies in future pregnancies in line with positive GBS result SOP.

5.0 Roles and responsibilities

5.1 Midwives

To provide the best evidence-based care for women and their babies who are at risk of early onset neonatal infection including GBS in accordance with appropriate guidance from diagnosis to delivery.

5.2 Obstetricians

To provide the best evidence-based care for women who are at risk of developing an infection or have GBS in accordance with appropriate guidance from diagnosis to delivery.

5.3 Paediatricians

To provide the best evidence-based care for babies who are at risk of early onset neonatal infection including GBS in accordance with appropriate guidance from diagnosis.

5.4 Anaesthetists

To attend when their presence is requested and provide an MDT review of women if required.

6.0 Associated documents and references

Barnsley Hospital GBS positive result SOP (2020).
Positive GBS Result

https://www.hsib.org.uk/investigations-cases/group-b-streptococcus-infection/

baby-check-2015.pdf (lullabytrust.org.uk)

NICE Clinical Guidance Neonatal infection: antibiotics for prevention and treatment (2021) https://www.nice.org.uk/guidance/ng195/resources/neonatal-infection-antibiotics-for-prevention-and-treatment-pdf-66142083827653

NICE Clinical Guidance 55 – Intrapartum care, section 1.11 Prelabour rupture of membranes at term (2014). https://www.nice.org.uk/guidance/cg190/resources/intrapartum-care-for-healthy-women-and-babies-pdf-35109866447557

RCOG. Audit of current practice in preventing early-onset neonatal group B streptococcal disease in the UK. Second report. (2016) [online] https://www.rcog.org.uk/globalassets/documents/guidelines/research--audit/gbs-audit-second-report-january-2016.pdf

RCOG. Guideline No. 36. Prevention of early onset neonatal group B streptococcal disease (2017). https://obgyn.onlinelibrary.wiley.com/doi/epdf/10.1111/1471-0528.14821

7.0 Training and resources

Training will be delivered as outlined in the Maternity Training Needs Analysis. This is updated on an annual basis.

8.0 Monitoring and audit

Any adverse incidents relating to the management of early onset neonatal infection will be monitored via the incident reporting system. Any problems will be actioned via the case review and root cause analysis action plans. The action plans are monitored by the risk midwife to ensure that improvements in care are made. The trends and any root cause analysis are discussed at the monthly risk meetings to ensure that appropriate action has been taken to maintain safety.

The guideline the Prevention of Early Onset Neonatal infection will be audited in line with the annual audit programme, as agreed by the CBU. The audit action plan will be reviewed at the monthly risk management meetings on a quarterly basis and monitored by the risk midwife to ensure that improvements in care are made.

9.0 Equality and Diversity

This section is mandatory for all Trust Approved Documents and must include the statement below:

The Trust is committed to an environment that promotes equality and embraces diversity in its performance as an employer and service provider. It will adhere to legal and performance requirements and will mainstream equality, diversity and inclusion principles through its policies, procedures and processes. This guideline should be implemented with due regard to this commitment.

To ensure that the implementation of this guideline does not have an adverse impact in response to the requirements of the Equality Act 2010 this policy has been screened for relevance during the policy development process and a full equality impact assessment is conducted where necessary prior to consultation. The Trust will take remedial action when necessary to address any unexpected or unwarranted disparities and monitor practice to ensure that this policy is fairly implemented.

This guideline can be made available in alternative formats on request including large print, Braille, moon, audio, and different languages. To arrange this please refer to the Trust translation and interpretation policy in the first instance.

The Trust will endeavor to make reasonable adjustments to accommodate any employee/patient with particular equality, diversity and inclusion requirements in implementing this guideline. This may include accessibility of meeting/appointment venues, providing translation, arranging an interpreter to attend appointments/meetings, extending policy timeframes to enable translation to be undertaken, or assistance with formulating any written statements.

9.1 Recording and Monitoring of Equality & Diversity

This section is mandatory for all Trust Approved Documents and must include the statement below:

The Trust understands the business case for equality, diversity and inclusion and will make sure that this is translated into practice. Accordingly, all guideline will be monitored to ensure their effectiveness.

Monitoring information will be collated, analysed and published on an annual basis as part of Equality Delivery System. The monitoring will cover the nine protected characteristics and will meet statutory employment duties under the Equality Act 2010. Where adverse impact is identified through the monitoring process the Trust will investigate and take corrective action to mitigate and prevent any negative impact.

Appendix 1

Investigations before starting antibiotics in babies who may have early-onset infection

- When starting antibiotic treatment in babies who may have early-onset neonatal infection (see recommendations on recognising risk factors and clinical indicators), perform a blood culture before giving the first dose.
- Measure baseline C-reactive protein concentration when starting antibiotic treatment in babies who may have early-onset neonatal infection.
- If it is safe to do so, perform a lumbar puncture to obtain a cerebrospinal fluid sample when:
    - there is a strong clinical suspicion of early-onset neonatal infection or
    - there are clinical symptoms or signs suggesting meningitis.
- Do not routinely perform urine microscopy or culture as part of the investigations for early-onset neonatal infection.
- Do not perform skin swab microscopy or culture as part of the investigations for early-onset neonatal infection if there are no clinical signs of a localised infection.

Advice for site-specific infections

- Be aware that, although minor conjunctivitis with encrusted eyelids is common and often benign, a purulent discharge may indicate a serious infection (for example, with chlamydia or gonococcus).
  In babies with a purulent eye discharge take swab samples urgently for microbiological investigation, using methods that can detect chlamydia and gonococcus. Start systemic antibiotic treatment for possible gonococcal infection while waiting for the swab microbiology results.
- In babies with clinical signs of umbilical infection, such as a purulent discharge or signs of periumbilical cellulitis (for example, redness, increased skin warmth or swelling):
    - perform a blood culture **and**
    - take a swab sample for microscopy and culture **and**
    - start antibiotic treatment with intravenous flucloxacillin and gentamicin
- If the microbiology results show that the infection is not caused by a Gram negative bacterium, stop the gentamicin.

Appendix 2

Antibiotics for suspected early-onset infection

Use intravenous benzylpenicillin with gentamicin as the first-choice antibiotic regimen for empirical treatment of suspected early-onset infection, unless microbiological surveillance data show local bacterial resistance patterns that indicate the need for a different antibiotic.
Give benzylpenicillin in a dosage of 25 mg/kg every 12 hours. Consider shortening the dose interval to every 8 hours, based on clinical judgement (for example, if the baby appears very ill).
Give gentamicin in a starting dose of 5 mg/kg
When prescribing gentamicin, be aware that:

- the summary of product characteristics recommends a dosage of 4 to 7 mg/kg/ day administered in a single dose.
- the evidence reviewed for the guideline supports a starting dosage of 5 mg/kg every 36 hours administered in a single dose.
- In 2021, a dosage of 5 mg/kg every 36 hours is an off-label use of gentamicin.
- If a second dose of gentamicin is given this should usually be 36 hours after the first dose. Use a shorter interval if clinical judgement suggests this is needed, for example if:
    - the baby appears very ill.
    - the blood culture shows a Gram-negative infection.
- Take account of blood gentamicin concentrations when deciding on subsequent gentamicin dosing regimen
- Record the times of:
    - gentamicin administration.
    - sampling for therapeutic monitoring.
- Regularly reassess the clinical condition and results of investigations in babies receiving antibiotics. Consider whether to change the antibiotic regimen, taking account of:
    - the baby's clinical condition (for example, if there is no improvement) .
    - the results of microbiological investigations.
    - expert microbiological advice, including local surveillance data.
- If there is microbiological evidence of Gram-negative bacterial sepsis, add another antibiotic to the benzylpenicillin and gentamicin regimen that is active against Gram-negative bacteria (for example, cefotaxime). If Gram-negative infection is confirmed, stop benzylpenicillin.

Appendix 3

Therapeutic drug monitoring for babies receiving gentamicin

Trough concentrations

If giving a second dose of gentamicin, measure the trough blood gentamicin concentration immediately before giving the second dose. Take the trough concentrations into account before giving the third dose of gentamicin.

Repeat the measurement of trough concentrations immediately before every subsequent third dose of gentamicin, or more frequently if necessary (for example, if there has been concern about previous trough concentrations or renal function).

Hospital services should make blood gentamicin concentrations available to healthcare professionals in time to inform the next dosage decision.

Adjust the gentamicin dose interval, aiming to achieve trough concentrations of less than 2 mg/litre. If the course of gentamicin lasts for more than 3 doses, aim for a trough concentration of less than 1 mg/ litre.

Do not withhold a dose of gentamicin because of delays in getting a trough concentration measurement, unless there is evidence of impaired renal function (for example, an elevated serum urea or creatinine concentration, or anuria).

Peak concentrations

Consider measuring peak blood gentamicin concentrations in selected babies, such as in those with:

- oedema
- macrosomia (birthweight more than 4.5 kg)
- an unsatisfactory response to treatment
- proven Gram-negative infection.

When measuring peak blood gentamicin concentrations, take the measurement 1 hour after starting gentamicin.

If a baby has a Gram-negative or staphylococcal infection, consider increasing the dose of gentamicin if the peak concentration is less than 8 mg/litre.

Appendix 4 Management of Early Onset Neonatal Sepsis

Appendix 5

Signs of group B Strep infection in babies

Early treatment saves lives.
If your baby shows signs consistent with group B Strep infection, seek urgent medical advice.

Early-onset 0-6 days

Early-onset group B Strep infection occurs in the first 6 days of life. Most of these infections show signs within 12 hours of birth.

Early-onset group B Strep infection in babies usually presents as sepsis, pneumonia and meningitis.

Typical signs include:

- Grunting, noisy breathing, moaning, seems to be working hard to breathe when you look at the chest or tummy, or not breathing at all
- Being very sleepy and/or unresponsive
- Inconsolable crying
- Being unusually floppy
- Not feeding well or not keeping milk down
- A high or low temperature (if parents have a thermometer), and/or hot or cold to the touch
- Changes in their skin colour (including blotchy skin)
- An abnormally fast or slow heart rate or breathing rate
- Low blood pressure*
- Low blood sugar*

* Identified by tests done in hospital

Late-onset 7-90 days

Late-onset group B Strep infection occurs after a baby's first six days of life, is uncommon after a month and very rare after three months.

Late-onset group B Strep infection in babies usually presents as meningitis and sepsis.

Typical signs are similar to those of early-onset infection and may include signs associated with meningitis such as:

- Being irritable with a high pitched or whimpering cry, or moaning
- Blank, staring or trance-like expression
- Floppy, dislike being handled, being fretful
- Tense or bulging fontanelle (soft spot on babies' heads)
- Turning away from bright light
- Involuntary stiff body or jerking movements
- Pale, blotchy skin

WORKING TO **STOP** GBS INFECTION IN BABIES.

www.gbss.org.uk tel: 01444 416176

Find us on social media: #GBSaware

Health & care information you can trust

Registered charity number: 1112065 | Registered company number: 5587535
Date published: May 2018 To be reviewed: May 2021

Appendix 6

Glossary of terms
CRP – C reactive protein
GBS – Group B streptococcus
HSIB- Healthcare Safety Investigation Branch
IAP – Intrapartum antibiotic prophylaxis
INR – International Normalised Ratio
LP – Lumbar puncture
NHS – National Health Service
NICE – National Institute for Health and Clinical Excellence
NNU – Neonatal Unit

Appendix 7

Maintain a record of the document history, reviews and key changes made (including versions and dates)

Version	Date	Comments	Author
1	19/04/2013		Maternity guideline group
2	15/08/2016		Maternity guideline group
3	19/06/2018		Maternity guideline group

Review Process Prior to Ratification:

Name of Group/Department/Committee	Date
Reviewed by Maternity Guideline Group	N/A
Reviewed at Women's Business and Governance meeting	17/03/2023
Approved by CBU 3 Overarching Governance Meeting	22/03/2023
Approved at Trust Clinical Guidelines Group	N/A
Approved at Medicines Management Committee (if document relates to medicines)	N/A

Trust Approved Documents (policies, clinical guidelines and procedures)

Approval Form

Please complete the following information and attach to your document when submitting a policy, clinical guideline or procedure for approval.

Document type (policy, clinical guideline or procedure)	Guideline
Document title	Guideline for the Early Onset Neonatal infection including GBS
Document author (Job title and team)	Consultant Paediatrician, Consultant Obstetrician and Practice Educator Midwife
New or reviewed document	Reviewed. Replaces; Prevention of neonatal group b streptococcal disease
List staff groups/departments consulted with during document development	Paediatricians Obstetricians Midwives
Approval recommended by (meeting and dates):	WB&G 17/03/2023 CBU3 Governance 22/03/2023
Date of next review (maximum 3 years)	23/03/2026
Key words for search criteria on intranet (max 10 words)	Group B Strep Antibiotics Benzylpenicillin
Key messages for staff (consider changes from previous versions and any impact on patient safety)	
I confirm that this is the FINAL version of this document	Name: Jade Carritt Designation: Governance Midwife

FOR COMPLETION BY THE CLINICAL GOVERNANCE TEAM

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