# Guideline for Prevention of Neonatal Early Onset Group B Streptococcal Disease

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| **People who need to know about this document in detail** | All clinical healthcare professionals working within Women's and Children's care group who may be involved in the antenatal, intrapartum and postpartum care of women and babies at risk of Group B Streptococcus infection. |
| **People who need to have a broad understanding of this document** | *As above* |
| **People who need to know that this document exists** | *As above* |

**Integrated Impact Assessment:**

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| **Equality Impact Assessment Date & Outcome** | Date: November 2025 |
| | Outcome: No negative impact |
| **Welsh Language Standard** | Choose an item. |
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| If the review date of this document has passed please ensure that the version you are using is the most up to date version either by contacting the author or CTM_Corporate_Governance@wales.nhs.uk |

# Contents

## Purpose

This guideline provides guidance to prevent early-onset neonatal group B streptococcal (EOGBS) disease. Individualised care is essential, and decisions regarding prophylaxis must balance clinical risk with maternal preferences and potential adverse effects of antibiotics.

## Introduction and Background:

Group B Streptococcus (GBS) is a bacterium that lives healthily in the vagina in approximately 15-30% of women in the UK. Usually, GBS does not cause mother or baby any problems during childbirth, but in certain situations it can be the cause of serious neonatal infection.

Group B Streptococcus (GBS) is the most common cause of severe early onset infection in the neonate potentially resulting in congenital pneumonia, septicaemia, and meningitis.

Early-onset GBS disease is defined as infection occurring within 7 days of birth, although over 90% of cases will occur in the first 24 hours.

The prevalence of group B streptococcal bacteraemia in infants 0-90 days old in England, Wales and Northern Ireland in 2008 is 0.66 /1000 live births and in Wales 0.38/1000 live births. Prevalence of early onset (0–6 days) GBS infection in UK and Wales is 0.39 and 0.17 /1000 births respectively (Health Protection Agency Report, 2009). The mortality from early onset GBS disease in the UK is 6% in term infants and 18% in preterm infants (RCOG 2003). Intra-partum antibiotic prophylaxis will not prevent all deaths. Some infants will die of early onset disease, particularly where the disease is well established prior to birth.

In pregnant women known to be GBS carriers, the risk of early-onset GBS sepsis is increased substantially and may be as high as 40 per 1000 in the presence of one or more additional intrapartum clinical risk factors. These risk factors include:

- Previous infant with GBS infection
- Preterm labour (<37 weeks)
- Prolonged rupture of membranes (>24 hours)
- Maternal fever (Temperature ≥38.0°C) during labour

## Types of Neonatal GBS Disease:

- **Early-onset (EOGBS):** Occurs within the first 7 days of life; 90– 95% of cases present within 24 hours.
- **Late onset (LOGBS):** Occurs from day 7 to 90; can result from vertical or horizontal transmission.

Treatment Outcomes and Risks

**Intrapartum antibiotic prophylaxis (IAP)** reduces neonatal GBS sepsis by over two-thirds but does not eliminate the risk entirely.

**Adverse effects** include:

- Minor allergic reactions (e.g. rash): up to 10%
- Severe allergic reaction (anaphylaxis): 1 in 10,000
- Fatal anaphylaxis: 1 in 100,000
- Maternal anaphylaxis that can result in fetal compromise
- Altered neonatal bowel flora linked to allergy especially in preterm babies

Please refer to BNF for complete list of potential ADRs

## Screening and Prophylaxis

- A maternal request is not an indication for bacteriological screening. (RCOG 2017).
- Intrapartum antibiotics prophylaxis should be offered to all women with a previous baby with early or late onset GBS disease (RCOG 2017)
- Colonisation with GBS in a previous pregnancy is **not** considered an indication for intrapartum antibiotic prophylaxis in subsequent pregnancies.

  *Explain to women that the likelihood of maternal GBS carriage in this pregnancy is 50%. Discuss the options of intrapartum antibiotics prophylaxis in labour, or bacteriological testing in late pregnancy and then offer IAP if still positive. If bacteriological testing undertaken should ideally be carried out at 35-37 weeks gestation or 3-5 weeks prior to the anticipated birth date, e.g. 32-34 weeks gestation for women with twins* (RCOG 2017).
- Intrapartum antibiotic prophylaxis will not prevent all deaths.

## Informed Decision Making

The following principles around informed decision making Shared decision making (NICE 2021) should be used during counselling, including:

- Encouraging the woman to talk about what is important to her
- Communicating with the woman in a way that she can understand
- Using clear language, avoiding jargon and explaining technical terms
- Sharing and discussing the information needed to make informed decisions
- Making sure that the woman understands the choices available to her (including the choice of doing nothing or not changing her current plan)
- Accept and acknowledge that women may vary in their views about the balance of risks, benefits and consequences of treatments, and that they may differ from those of their healthcare professionals

## Group B Streptococcus (GBS) Management

### Antenatal Care

- **Routine screening for GBS in pregnancy is not currently advised (RCOG 2017).** Swabbing should only be offered /recommended when there is a clinical indication, such as: vaginal discharge or vaginal bleeding. Women will make an informed decision following discussion and will provide informed consent if proceeding with the GBS testing.
- If required, **a low vaginal swab (LVS)** should be collected. Women may self – collect the sample if preferred.
- **High vaginal swabs (HVS)** or **anorectal swabs** may also be taken if clinically relevant.
- The standard charcoal swab contains the transport medium. Specimens should be transported and processed as soon as possible. If processing is delayed, specimens should be refrigerated.

Results should be followed up by the clinical area responsible for taking swab. If a positive GBS swab is confirmed, the midwife in the clinical area will inform Antenatal clinic (ANC) midwife who will ring the woman and discuss the findings.

## Informing women of presence of GBS infection

Inform woman of the result verbally in a way that she can understand. Counselling information must include: -

- GBS is a normal vaginal commensal in up to 40% of the population (RCOG 2017).
- Antenatal treatment with oral penicillin does not reduce the likeliness of GBS colonisation at the time of birth, and so is not recommended.
- A note of the presence of vaginal GBS should be made in the woman's maternity records.
- The option of intrapartum antibiotics in labour should be discussed with the woman and documented in her records whether the woman wishes to have antibiotics or not and whether antibiotics are recommended at the current time (vaginal swab with symptoms or GBS bacteriuria).
- GBS is highly unlikely to be the cause of the vaginal discharge.
- Following discussion with the woman a GBS information leaflet, and alert sticker is posted to the woman and documented in the maternity records Group B Streptococcus (GBS) in pregnancy and new born babies | RCOG

## Informing health professionals of GBS

If the swab or MSU has been taken in the hospital setting:

ANC will inform the woman's community midwife of the result. The community midwife will document the swab/urine culture result in the woman's maternity record in the 'intrapartum care' section.

If swab or MSU was requested by community midwife:

If the vaginal swab or MSSU has been taken in the community setting, the community midwife will document the swab/urine culture result in the woman's maternity record in the 'intrapartum care' section and inform ANC of the result.

## A positive swab for GBS detected in a woman following a midwife-led care pathway

If GBS detected incidentally on a vaginal swab antenatal treatment for GBS is not recommended (RCOG 2017). However, these women should be offered intrapartum antibiotic prophylaxis (IAP) in labour (RCOG 2017)

## GBS urine infection

If GBS is cultured at any time during the current pregnancy from urine, this indicates a higher level of genital tract GBS carriage but exact quantification of the risk of neonatal disease is not possible. These women should be recommended treatment as follows:

- Women with GBS urinary tract infection (growth of greater than $10^5$cfu/ml) during pregnancy should be recommended appropriate treatment at the time of diagnosis as well as intrapartum antibiotic prophylaxis in labour.
- A repeat MSSU (mid-stream specimen of urine) is advised 2-4 weeks after completing antibiotics to confirm clearance.
- Asymptomatic bacteriuria, especially GBS related, is associated with a higher risk of preterm labour and pre labour rupture of membranes.

## Birth Settings and Preferences

- Women with a GBS positive culture planning to birth at home or birth within an alongside or freestanding midwifery led unit should be referred to a consultant midwife to support individualised counselling and planning where benefits and risks will be discussed and documented, and an informed choice can be made around planned place of birth.
- Birth in a pool on labour ward is not contraindicated if the woman is a known GBS carrier provided she is offered appropriate IAP. Intravenous antibiotics can be administered whilst the woman is in the pool on labour ward (Water Birth Guideline).
- Method of induction should not vary according to GBS carrier status.
- Membrane sweeping is not contraindicated in women who are carriers of GBS.
- GBS carrier status **alone is not an indication** for continuous fetal heart rate monitoring in labour.

## Intrapartum Care

All women with known GBS status should be advised to attend the **maternity priority unit (MPU)** immediately for a full clinical assessment upon:

- Onset of labour
- Spontaneous rupture of membranes
- Concerns about altered fetal movements

Check the Welsh Clinical portal for GBS status on admission.

### Indications for Intrapartum Antibiotic Prophylaxis (IAP)

IAP should be offered in the following situations:

- GBS detected on low vaginal/high vaginal swabs (LVS/HVS), anorectal swabs, or midstream urine (MSU) in the **current pregnancy**
- History of a previous infant affected by early or late-onset GBS sepsis
- Women requesting IAP due to anxiety about GBS
- **Term SROM in GBS-positive women**
- **Preterm SROM**: IAP once labour is established
- Women with a **temperature of 38°C or above in labour** should be offered a broad spectrum antibiotic active against GBS.

## Antibiotic Regimen

If GBS positive on vaginal swab, or where GBS bacteriuria has been identified offer intrapartum antibiotic prophylaxis, as per CTMUHB guidance (available via Eolas Medical).

Antibiotics should be started as soon as possible during labour and continued until the baby is born. Intrapartum intravenous antibiotic prophylaxis given more than 2 hours before birth may reduce the risk of infection for the baby.

For guidance on how to prepare and administer IV antibiotics please refer to NHS Injectable Medicines Guide (Medusa).

## Women who choose Midwifery Led Care

If women are midwifery led care and have no other complications, they should be offered to continue with the midwife as their lead professional. For women who accept the recommendation for intrapartum antibiotic prophylaxis who otherwise meet the criteria for the All-Wales Clinical Pathway for normal labour, cannulation and antibiotic prescription and administration can commence as above in the alongside midwifery led unit. (NB. IAP cannot be administered in the freestanding midwifery unit or at home)

- If GBS is confirmed, recommend admitting immediately to undertake a full clinical assessment. If spontaneous rupture of membranes or established labour confirmed offer antibiotics immediately, as per CTMUHB antimicrobial guidance (Eolas Medical).
- If in established labour, and no other complications woman can remain in the alongside MLU. If not in established labour discuss option to transfer to obstetric led care after 4 hours for induction of labour.

## Intrapartum Care Plans for Specific Scenarios

For individuals identified as "at risk" and offered IAP, individualised intrapartum care plans must be developed for the following:

### 1.Induction of labour

Women undergoing induction of labour at <37 weeks for any indication should be offered intrapartum antibiotic prophylaxis:

- Prior to induction being commenced if PPROM
- Prior to ARM if intact membranes at start of IOL and administration must continue until birth.

<u>Prostaglandin/Dilapan:</u>

Do not routinely give antibiotics prior to induction with either prostaglandin or Dilapan.

The initial dose IAP should be given once the woman begins to experience contractions or is in the active phase of labour or the membranes have ruptured.

<u>By ARM:</u>

If applicable give the loading dose prior to performing an ARM, oxytocin should be commenced promptly after ARM.

The aim is to shorten the time that the baby remains in utero between ruptured membranes and birth reducing fetal exposure to the GBS organism.

## 2. Pre -labour rupture of membranes

Pre-term (24+0 – 33+6 weeks)

- Confirm SROM
- For antibiotic recommendation please see Eolas Medical.
- IAP (intrapartum antibiotic prophylaxis) should be offered once labour is confirmed or induced irrespective of GBS status.
- Birth is indicated is there is clinical evidence of infection or a rise in inflammatory serum markers.

Pre-term (34+0 – 36+6 weeks)

- For women more than 34+0 weeks of gestation it may be beneficial to expedite birth if a woman is a known GBS carrier (RCOG 2017).

Term (37 weeks and beyond) pre labour rupture of the membranes (PROM) in GBS carriers

- Women who are known GBS carriers in the current pregnancy or have had a previous baby develop GBS infection, immediate induction of labour (or caesarean birth if this is the planned mode of birth) and intrapartum antibiotic prophylaxis should be offered as soon as reasonably possible (RCOG 2017).
- GBS carrier status is not an indication for continuous fetal heart rate monitoring in labour in the absence of any other risk factors.
- Minimise the number of vaginal examinations to reduce the risk of GBS infection of neonate.
- In women where the carrier status is negative or unknown, offer a choice of expectant management for up to 24 hours or induction as soon as possible (RCOG 2017, NICE 2025).

## 3. Caesarean birth

- **IAP is not required** for women undergoing elective caesarean birth with **intact membranes**, regardless of GBS status.
- Women undergoing pre-labour caesarean birth with ruptured membranes should be offered GBS antibiotic prophylaxis, this is in addition to the maternal antibiotics routinely administered preoperatively at induction of anaesthetic. Please refer to CTMUHB antimicrobial guidance via Eolas Medical.

## 4. Women who choose not to have IAP

We encourage the woman with known GBS colonisation who has chosen not to have IAP during labour to stay within the postnatal setting for a period of 12 hours to observe and monitor their baby following birth.

If the woman chooses to go home and not accept recommendation for prophylactic neonatal observations, she should be supported with written information and discussion around abnormal signs/symptoms to look out for and encouraged to seek medical care with any neonatal concerns.

This decision should be clearly documented in the women's records.

## Women who choose Midwifery Led Care

If women are midwifery led care and have no other complications, they should be offered to continue with the midwife as their lead professional. For women who accept the recommendation for intrapartum antibiotic prophylaxis who otherwise meet the criteria for the All-Wales Clinical Pathway for normal labour, cannulation and antibiotic prescription and administration can commence as above in the alongside midwifery led unit. (NB. IAP cannot be administered in the freestanding midwifery unit or at home)

- If GBS is confirmed, recommend admitting immediately and administer recommended antibiotics (as per Eolas Medical) regardless of labour status
- Conduct a full clinical assessment
- If in established labour, and no other complications woman can remain in the alongside MLU. If not in established labour discuss option to transfer to obstetric led care for induction

## Post-Birth: Neonatal Care

### Paediatrics Review

Pre-labour rupture of membranes **paediatrician must be informed within 1 hour of birth** and review the new-born to establish a **plan of care**, especially in:

- GBS-exposed infants
- Cases where antibiotics were not given ≥2 hours before birth
- Suspected maternal infection.

### Newborn Care

Well babies at risk of early onset GBS should be evaluated at birth for clinical indicators of neonatal infection. Their vital signs checked at 0, 1 and 2 hours, and then 2hourly until 12 hours which includes assessments of general wellbeing, feeding, heart rate, respiratory rate and temperature which will be recorded on the Neonatal Early Warning Track and Trigger chart (NEWTT2). NEWTT2_Track_and_Trigger_revised_June23.pdf. The baby will require a paediatric review and management plan in relation to whether observations are recommended following the initial 12 hours.

Babies born at home or in a free-standing midwife-led unit, will not have any additional neonatal observations. Women should be given the option to transfer to a post-natal ward if they choose for their babies to have the recommended neonatal observations.

For babies with risks or signs of sepsis, the Neonatal Guideline Treatment and management of babies with suspected or confirmed early onset neonatal sepsis should be followed. EOS Risk Assessment Document.pdf.

<u>If GBS is identified after birth</u>

If the baby is still an inpatient:

- **Inform paediatricians**
- Counsel parents and provide a GBS leaflet

If the baby has been discharged:

- Notify the **Community Midwife and GP** (for GP to note the risk of GBS in future pregnancies).

# REFERENCES


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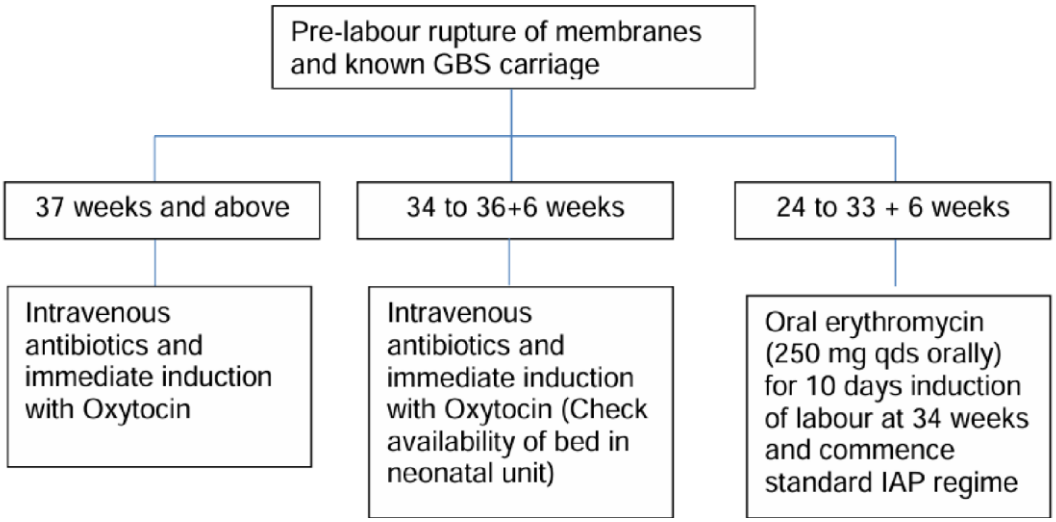
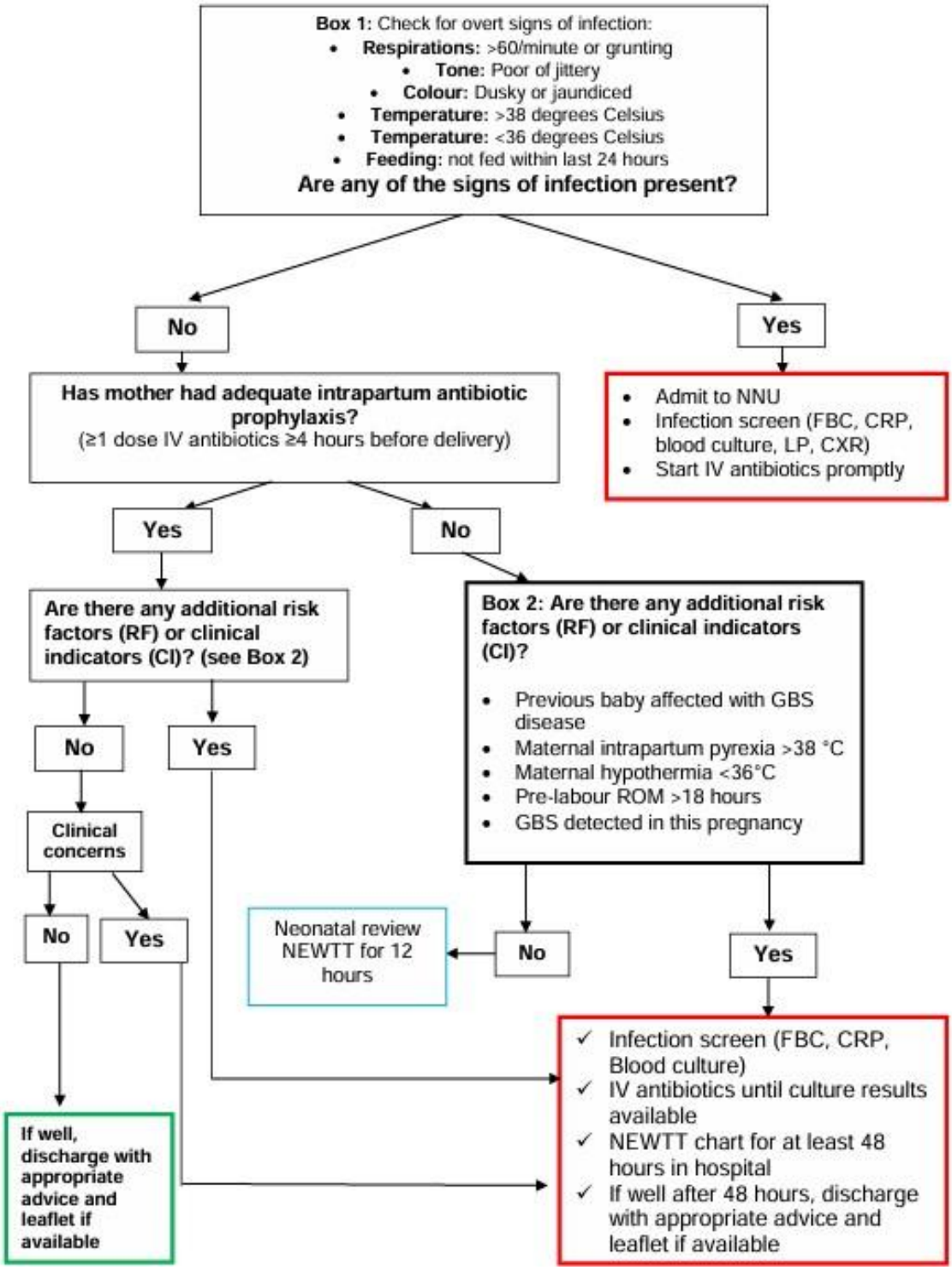
# Pre-labour rupture of membranes management chart

Please refer to CTMUHB antimicrobial guidance for antibiotic recommendations (Eolas Medical).



# Neonatal algorithm for the management of the TERM infant (term at onset of labour/IOL/SROM) at increased risk for GBS sepsis



# Neonatal algorithm for the management of the PRE-TERM <37 weeks gestation infant (preterm at onset of labour/IOL/SROM) at increased risk for GBS sepsis )