

Guideline for the Management of GBS Intrapartum Antibiotic Prophylaxis

Introduction

Purpose

The aim of this document is to provide guidance regarding the indications and regimens to provide intrapartum antibiotics in labour for prevention of early onset neonatal group-B streptococcal disease.

This guidance has been developed based on RCOG guidance No.36 and the Neonatal West of Scotland GBS prophylaxis guidance as well as recent publications (see references) and local agreement.

Information for women

All pregnant women should be provided with an appropriate information leaflet regarding the risks management of GBS carrier status during pregnancy.

Universal bacteriological screening is not recommended.

A maternal request is not an indication for bacteriological screening.

Indications of intrapartum GBS antibiotics prophylaxis (IAP)

Women should be offered **antibiotic prophylaxis** effective against GBS in labour in the following conditions:

1	Previous baby affected with early or late onset GBS disease ⁽¹⁾
2	Women with GBS bacteriuria or GBS related UTI in the current pregnancy ⁽¹⁾
3	Vaginal and/or anorectal swab in current pregnancy confirmed GBS colonisation. ⁽¹⁾ Note -1: <u>Clindamycin sensitivity</u> should be requested if the patient is penicillin allergic . Note-2: If screening in current pregnancy is indicated and the patient is at high risk of preterm labour (e.g. multiple pregnancy), screening should be performed at 32 weeks.
3	Pyrexia in labour ($\geq 38C$) on one occasion, offer broad spectrum antibiotics that also cover GBS. ⁽¹⁾
4	Confirmed spontaneous preterm labour (before 37w+0D) or, irrespective of GBS status. ⁽¹⁾

5	Suspected or confirmed Preterm Prolonged Rupture of membranes lasting more than 18 hours .Babies must stay for observations for 24 hours if PPROM is more than 18 hours prior to delivery (see EOS Tool/Management Plan for EOS v3 (Neonatology))
6	Prolonged rupture of membranes at Term, more than 24 hours (NEW May 2021) before onset of labour. ⁽²⁾

All women with any of the above risk factors should be offered antibiotics prophylaxis for at least four hours before delivery .This is considered adequate for prophylaxis. ^(1,3)

How to screen for GBS colonization during pregnancy

Swab should be taken from the **low vagina** and the **anorectum**. A single swab (vagina then anorectum) or two different swabs can be used and processed ASAP.

Screening for women at risk should be done at 34-36 weeks

- Usually women with a history of GBS out with current pregnancy
- Women with a history of GBS who wish to avoid intrapartum antibiotics
- If at higher risk of preterm labour screening should be done at 32 weeks

If the patient is penicillin allergic, request sensitivity to Clindamycin on the request form.

Please refer to "Low vaginal swab "NHS Lanarkshire guideline.

How to manage women with previous GBS colonization with no previous neonatal infection

The likelihood of maternal GBS carriage in this pregnancy is 50%. The following options should be offered:

- GBS antibiotics prophylaxis in labour without testing in current pregnancy.
- Bacteriological testing in late pregnancy and then offering antibiotics prophylaxis in labour accordingly. Testing to be performed at 34-36 weeks of gestation or at 32 weeks if the patient is at high risk of preterm labour (e.g. multiple pregnancy).⁽¹⁾

GBS prophylaxis in elective caesarean section

Antibiotic prophylaxis is NOT needed in the following cases:

- 1 *Elective caesarean* section with *intact membranes at term* even if swab positive for GBS.
- 2 *Preterm planned caesarean* section with *intact membranes* and not in labour.

Note 1 *In women for planned CS with risk factor for GBS, who present with rupture of membranes, and CS is expected to be delayed for more than 4 hours from the time of clinical assessment, then GBS prophylaxis to be administered.*

Note 2 *If delivery occurs within less than 4 hours of starting GBS prophylaxis, then the neonate should be managed as inadequately treated.*

Antenatal management of GBS carriers

- 1 **Antenatal treatment** is not recommended for GBS cultured from a vaginal or rectal swab.
- 2 Patients with MSU samples positive for GBS colonization must be treated during pregnancy and intrapartum GBS prophylaxis to be administered as would for patients with positive rectal/vaginal swabs.

Induction of labour

Method of induction should not change nor depend on GBS carrier status.

Management of term pre-labour rupture of membranes

Women who are known GBS carriers should be offered immediate GBS antibiotic prophylaxis and induction of labour as soon as reasonably possible. (Please refer to NHSL guideline for "Pre-labour rupture of membranes at term")

Management of known GBS carriers with intrapartum pyrexia

Pyrexial patients in labour who are known to be GBS carriers should be offered intravenous broad spectrum antibiotic regimen (please refer to sepsis in maternity patients guideline for choice of antibiotics) which should also cover GBS in line with microbiology sensitivities checked at 34-36 weeks. **Intravenous Benzyl Penicillin in this category of patients is inappropriate.** ⁽¹⁾

Indications for antibiotics therapy for intrapartum pyrexia in patients who are NOT known GBS carriers

Intravenous broad-spectrum antibiotics should be offered irrespective of GBS carrier status if⁽¹⁾:

- One episode of maternal pyrexia of 38 degrees or more.
- Two episodes of maternal pyrexia of more than 37.5 degrees. **(With at least 2 hours interval between the two episodes).**

Water birth in GBS carriers

Birth in a pool is not contraindicated if the woman is a known GBS carrier provided she is offered appropriate GBS antibiotics prophylaxis.

Management of preterm labour (including pre-term rupture of membranes) to reduce the risk of EOGBS disease:

- GBS IV antibiotic prophylaxis should be offered to **all patients in established preterm labour** (less than 37weeks+0), regardless of their GBS carrier status (Please refer to NHS Lanarkshire "Preterm Labour" guideline).
- In absence of clinical or laboratory evidence of intra-amniotic infection, **known GBS carriers** (or known carrier in previous pregnancy), with **preterm rupture of membranes**, should be **managed conservatively till 34 weeks of gestation** (see PPROM guideline).
- **In this category of patients, oral Erythromycin 250 mg every 6 hours for 10 days should be offered for GBS prophylaxis. This regimen is considered effective for prophylaxis.**
- **Evidence of sepsis/infection warrants broad-spectrum antibiotics and delivery**
- Delivery should be **expedited after 34 weeks** of gestation in known GBS carriers with preterm rupture of membranes.

Antibiotic choice for GBS prophylaxis

Benzylpenicillin is the antibiotic of choice for GBS prophylaxis in labour. Once commenced, treatment should be given regularly until delivery.

PGD will allow midwives to start without prescription:

- Loading dose: 3g, intravenous, administered as soon as possible after the onset of labour.
- Maintenance dose: 1.8 g, 4 hourly till delivery.

In Penicillin Allergic patients

Mild allergy (e.g nausea and vomiting only): Cephalosporin should be used:

Cefuroxime (requires prescription):

- Loading dose: 1.5 g
- Maintenance dose: 750 mg, 8 hourly till delivery.

Severe allergy (e.g. anaphylaxis, angioedema, respiratory distress, urticaria):

- First choice: **Clindamycin**: if GBS sensitivity was tested positive/sensitive at 34-36 weeks swab (80% sensitive in Lanarkshire population).
- Regimen: 900 mg 8 hourly till delivery.

- Second choice: **Vancomycin**: if GBS not sensitive to clindamycin or not tested at 34-36 weeks swab. **Caution**: If history of renal dysfunction seek advice.
- Dosage and administration^(8,9,10):
- Urea and electrolytes to be checked for all patients receiving Vancomycin at the time of venepuncture. Request as **urgent**, but do not delay treatment in women with no risk or history of renal disease.
- Loading dose of Vancomycin to be calculated according to the actual body weight as follows :

Initial Vancomycin LOADING does Actual body weight	Dose	Volume of Sodium Chloride (0.9%)	Duration of infusion	Rate of infusion (ml/hour)
< 40 Kg	750 mg	250 ml	90 mins	167 ml/hour
40-59 Kg	1000mg	250 ml	2 hours	125ml/hour
60-90Kg	1500 mg	500 ml	3 hours	167ml/hour
>90 Kg	2000 mg	500 ml	4 hours	125ml/hour

- Maintenance dose: to be calculated based on the Urea and electrolytes level using NHS Lanarkshire guideline for Vancomycin administration in adults.
- <http://www.medednhs1.com/sites/phcalx/vancomycin.asp>
- Give first maintenance infusion 12 hours after loading infusion

Women with known GBS colonisation who decline IAP

Patients should be advised that the baby should be **very closely monitored for 24 hours after birth**, and discouraged from seeking very early discharge from the maternity hospital.

Potential serious adverse effects of GBS intrapartum antibiotic prophylaxis^(1,4,5,6)

- **Maternal:** anaphylaxis.
- **Fetal:** possible impact on neonatal bowel flora (e.g.: reductions in colonization with Lactobacilli). Such changes were suggested to be linked to potential later childhood effects (e.g. allergy, obesity and diabetes), however such risks remains theoretical.^(7,8)

Urgent Neonatal advice

- If baby showing abnormal behaviour (for example, inconsolable crying or listlessness)
- Is unusually floppy
- Developed difficulties with feeding or with tolerating feeds
- An abnormal temperature unexplained by environmental factors (<36°C or > 38°C)
- Rapid breathing
- Change in skin colour

All babies with a risk factor for EOGBS, should be risk assessed by neonatal team using Kaiser Permanente tool and act accordingly regardless of gestation, mode of delivery or intrapartum prophylaxis: Krishnan, Gopala - Consultant Neonatology

The babies of women who have received broad-spectrum antibiotics during labour for indications **other than GBS prophylaxis may require investigation and treatment** as per the NICE clinical guideline on early onset neonatal infection

Well babies should be evaluated at birth for clinical indicators of neonatal infection and use:

- The "Early Onset of Sepsis for Infants \geq 34 weeks gestation Midwives Risk assessment"
- The "Early Onset of Sepsis for Infants \geq 34 weeks gestation steps 4-5. Guidance for Medical Staff"
- The "Early Onset of Sepsis for Infants \geq 34 weeks gestation step 7. Management Plan for Medical and Postnatal staff"

Postnatal antibiotic prophylaxis is not recommended for asymptomatic term infants without known antenatal risk factors

Babies with **clinical signs of EOGBS disease should be treated with appropriate antibiotics within an hour of the decision to treat**

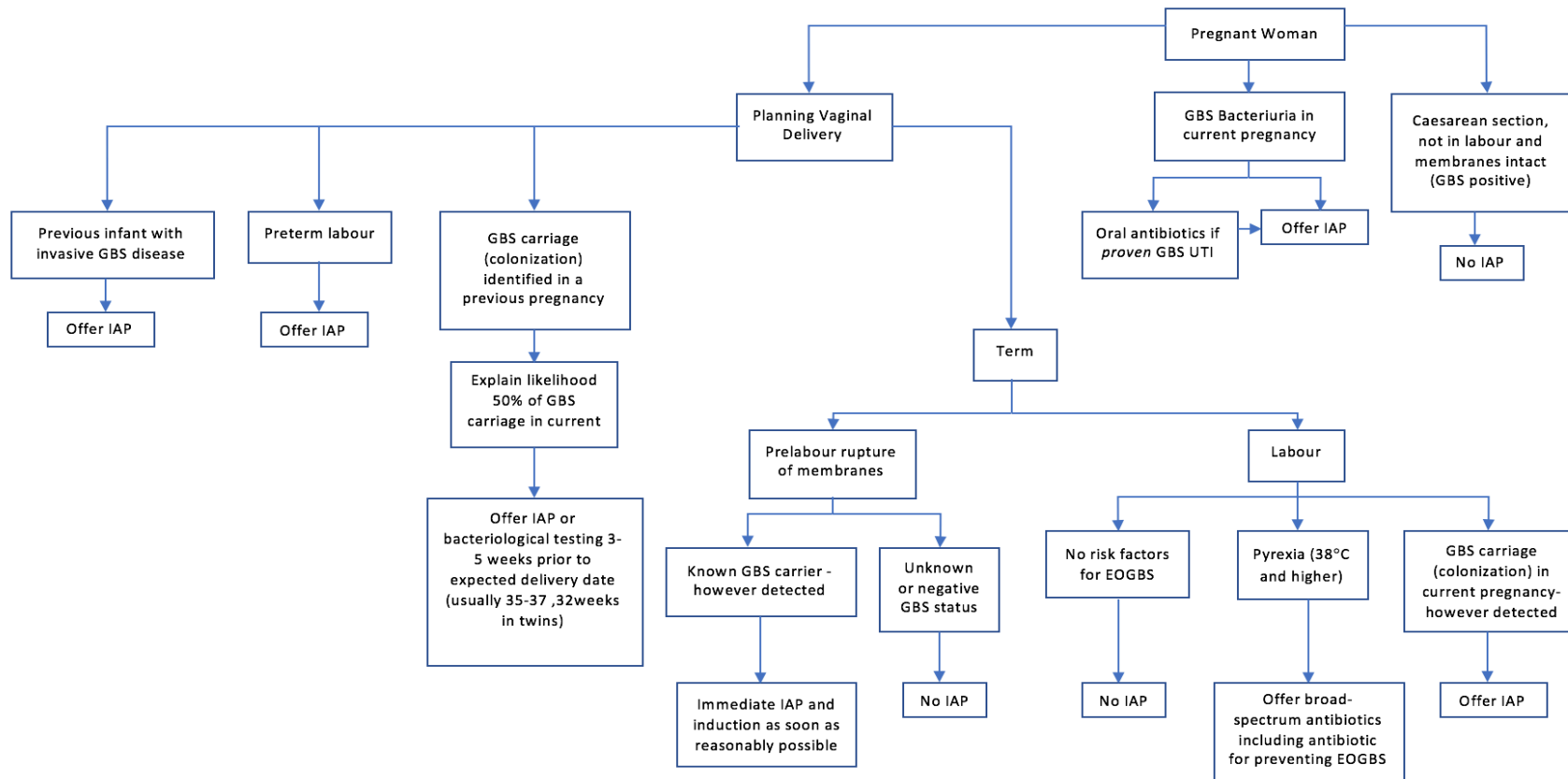
Previous baby with GBS disease

Should be evaluated at birth for clinical indicators of neonatal infection and have their vital signs checked at 0, 1, and then 4 hourly until 24 hours

Breastfeeding should be encouraged irrespective of GBS status

1. **NEW** to take a GBS swab at 34 and 32 weeks in cases of preterm delivery anticipated **and request to confirm Clindamycin sensitivity in case of GBS positive swab in penicillin allergic women**
2. **Documentation on Badger**

REDUCTION OF EOGBS RISK MANAGEMENT ALGORITHM⁽¹⁾



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