Worcestershire Acute Hospitals NHS Trust

# Guideline for the prevention of early-onset neonatal group B streptococcal (EOGBS) disease

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| **Key Document code:** | WAHT-TP- 094 | |
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| **Approved by:** | Maternity Governance Meeting | |
| **Date of Approval:** | 15th November 2019 | |
| **Date of review:** | 15th November 2022 | |

## Key Amendments

| Date | Amendments | Approved by |
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## Introduction

Group B Streptococcal Infection (GBS) is the most frequent cause of severe early-onset neonatal infection (less than 7 days of age), and can result in sepsis, pneumonia and meningitis. Infection is predominantly caused by exposure to maternal GBS during child birth, but the risk is increased if women have one or more of the following risk factors:

- previous baby with early- or late-onset GBS disease
- discovery of maternal GBS carriage through bacteriological investigation during pregnancy (e.g. MSU or HVS)
- prolonged rupture of membranes
- preterm birth
- maternal pyrexia ≥ 38ºC in labour
- suspected maternal intrapartum infection, including chorioamnionitis.

The transmission of GBS from mother to baby can be reduced with the use of intrapartum antibiotic prophylaxis (IAP) at least 4 hours prior to delivery. 90% of cases of EOGBS disease present by 12 hours of age.

These guidelines are designed to be used in conjunction with WAHT-NEO-001 Guidelines for reducing risk of neonatal group B streptococcal (GBS) infection.

## Antenatal screening

- **All pregnant women should be provided with an appropriate information leaflet.**
    - e.g. RCOG patient information leaflet *Group B streptococcus (GBS) infection in newborn babies*.
    - See appendix 1 for information for counselling women and local statistics.
- **Routine screening of all women in pregnancy for GBS is not offered in the UK or at WAHT.**
- **If GBS was detected in a previous pregnancy, likelihood of maternal GBS in current pregnancy is 50%.**
    - Discuss options of:
        - IAP *or*
        - bacteriological testing in late pregnancy (35-37 weeks or 3-5 weeks prior to anticipated delivery) and offer IAP if still positive.
- **IAP should be offered to women with a previous baby with early- or late-onset GBS disease.**

## Antenatal care

- **GBS bacteriuria**
    - Offer IAP to women with GBS bacteriuria identified during current pregnancy.

- Women with GBS UTI (growth greater then $10^5$ cfu/ml) should receive appropriate treatment at the time of diagnosis as well as IAP:
  - treat with PO amoxicillin 500mg TDS for 5 days
  - if *penicillin allergic* – consider cefalexin/seek advice from microbiologist (NB. 10% penicillin allergic patients are allergic to cephalosporins)
  - repeat MSU 1 week after course of antibiotics completed.
- Record UTI and GBS carrier status in antenatal notes (including patient handheld record).

- **GBS on vaginal swab**
  - Offer IAP to women with GBS detected on vaginal swab during current pregnancy.
  - Antenatal treatment at the time of diagnosis is not recommended.
  - Record GBS carrier status in antenatal notes (including patient handheld record).
- **IAP is not required for women undergoing planned caesarean section (regardless of gestation) in the absence of labour and with intact membranes.**

**Management of term labour (≥ $37^{+0}$ weeks)**

- **Ruptured membranes**
  - Women at term who are known GBS carriers should be offered immediate IAP and induction of labour as soon as reasonably possible.
  - Women who are known GBS carriers who are to be delivered by caesarean section after spontaneous rupture of membranes should be offered IAP and delivered by category 2 or 3 caesarean section depending on other clinical findings.
- **Pyrexia (≥38°C)**
  - Women who are pyrexial in labour, irrespective of GBS status, are at risk of chorioamnionitis and EOGBS disease of the newborn. An infection screen should be undertaken, and IV fluids and antibiotics commenced. A broad-spectrum antibiotic regimen that covers GBS should replace GBS specific prophylaxis:
    - IV cefotaxime 2g 6 hourly and IV metronidazole 500mg 8 hourly
    - seek advice from microbiologist as appropriate (e.g. if severe reaction to penicillin).
- **Water birth**
  - Birth in a pool is not contraindicated if the woman is a known GBS carrier provided she is offered appropriate IAP. Women who are otherwise low risk and are suitable to be treated with IV Penicillin can be signed off antenatally to birth in Meadow Birth Centre. Women can then be triaged on the birth centre and arrangements made for IAP there, once established labour has been confirmed.

**Management of preterm labour**

- **Confirmed preterm labour**
  - IAP is recommended for all women in confirmed preterm labour irrespective of GBS status.
- **Preterm rupture of membranes**
  - Bacteriological testing for GBS carriage is not recommended for women with preterm rupture of membranes.
  - IAP should be given once labour is confirmed or induced irrespective of GBS status.
  - Known GBS carrier:

- if <34$^{+0}$ weeks, perinatal risks associated with preterm delivery are likely to outweigh the risk of perinatal infection, therefore, early delivery is not indicated unless overt signs of infection
- if >34$^{+0}$ weeks, it may be beneficial to expedite delivery. Discuss with consultant obstetrician on call.

**Intrapartum Antibiotic Prophylaxis Regimen**

For details of intrapartum antibiotic prophylaxis see MicroGuide (navigate to Antimicrobial Prophylaxis Guidelines>Obstetrics).

- Ideally antibiotics should be commenced during labour AT LEAST 4 hours prior to delivery.
- Administer as soon as possible after the onset of labour or at time of ARM if undergoing induction of labour.
- Inform the woman of the potential adverse effects of IAP.
- Oxytocin and the IV antibiotic should not be 'Y-sited' as they should not be allowed to mix together.
- All babies should be referred to a Paediatrician following delivery for subsequent care plan.
- Women with known GBS who decline IAP should be advised that the baby should be very closely monitored for 12 hours after birth and discouraged from seeking early discharge. This should be documented in antenatal/intrapartum/postnatal notes.

**Appendix 1**

**Information for counselling patients**

| RISK FACTORS | EOGBS cases/10000 untreated women with risk factors | EOGBS deaths/10000 untreated women with risk factors | NNT with IAP to prevent one case of EOGBS | NNT with IAP to prevent one death from EOGBS | EOGBS cases prevented/ year in UK | EOGBS deaths prevented /year in UK |
|---|---|---|---|---|---|---|
| Intrapartum fever ≥38°C | 60 | 6.3 | 208 | 1984 | 52 | 5.5 |
| Prematurity <37 weeks | 25 | 4.6 | 500 | 2717 | 101 | 18.5 |
| Prolonged ROM | 21 | 1.2 | 595 | 10416 | 91 | 5.2 |

EOGBS (early onset GBS)
IAP (Intrapartum antibiotic prophylaxis)
NNT (Number needed to treat)

**Local Statistics**

i) Overall rate of EOGBS disease in West Midlands is 0.48/1000 live births.

ii) 15-20% of women are colonised within GBS (normal vaginal flora) – 50% of these women will have a colonised infant.

iii) Less than 1/250 GBS positive women will have a baby with EOGBS disease. The neonatal mortality of EOGBS disease is 6% i.e. the risk of GBS positive mothers having a baby that dies of GBS disease is in 1/5000 (0.02%).

iv) In Worcestershire – for every 1000 live births
- 200 GBS +ve mothers
- 100 colonised infants
- 0.7 EOGBS disease
- 0.04 neonatal deaths (i.e. 1 neonatal death for every 23817 births)