Sherwood Forest Hospitals
NHS Foundation Trust

# GROUP B STREPTOCOCCAL INFECTION: GUIDELINES FOR THE PREVENTION OF EARLY ONSET NEONATAL INFECTION

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| **Document Type:** | **GUIDELINE** |

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| **Lead Division:** | Women's & Children's |
| **Lead Specialty:** | Maternity |
| **Lead Author:** | Miss S Tao, Consultant in Obstetrics & Gynaecology |
| **Sponsor:** | Head of Service |

| | *Name the documents here or record not applicable* |
|---|---|
| Associated Policy | Not applicable |
| Associated Procedure(s) | Not applicable |
| Associated Pathway(s) | Not applicable |
| Associated Standard Operating Procedure(s) | Not applicable |
| Other associated documents e.g. documentation/ forms | Not applicable |

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| **Template control:** | v1.4 November 2019 |

**CONTENTS**

## 1 INTRODUCTION / BACKGROUND

Group B streptococcus (GBS) is recognised as the most frequent cause of severe early onset (at less than 7 days of age) infection in neonates. The incidence of early onset neonatal GBS disease in the UK and Ireland in 2015 was 0.57/1000 births, which is a significant increase from the previous surveillance in 2000 which was 0.48/1000 births.

Mortality rates have, however, declined between the two surveillance periods: 10.6% to 5.2% respectively.

Of the cases of early onset GBS disease in 2015, 35% had one or more of the following risk factors: a previous baby affected with GBS disease; GBS bacteriuria; a vaginal swab positive for GBS; or a maternal temperature of 38ºC or greater in labour.

Approximately 20-40% of women are likely to be GBS carriers. It is a normal commensal in bowel flora and cannot be eradicated. In one quarter of women the vagina may be intermittently colonised, a high vaginal colonisation rate sometimes being reflected in a urine sample growing GBS.

There is currently a large variation in UK practice in the prevention of early onset GBS disease. Intra-partum antibiotics (IAP) have been found to significantly reduce the risk of culture-positive early-onset but not late-onset disease (occurring 7 or more days after birth), with a Cochrane review of three trials (all at high risk of bias) showing a reduced incidence of early-onset GBS disease (relative risk 0.14; 95% CI 0.04-0.74) when colonised mothers were treated with IAP.

Antenatal screening and treatment may carry disadvantages for the mother and the baby including anaphylaxis, increased medicalisation of labour and the neonatal period, and possible infection with antibiotic-resistant organisms. The UK National Screening Committee examined the issue of strategies for the prevention of early-onset GBS disease in 2016-2017 and in March 2017 recommended that routine universal screening using bacteriological culture or near-patient testing techniques should not be introduced into UK practice.

## 2 AIMS / OBJECTIVES / PURPOSE (including Related Trust Documents)

This guideline is to provide guidance for midwives, obstetricians and paediatricians on the prevention of early-onset neonatal group B streptococcal disease and the information that should be provided to women, their partners and family.

This clinical guideline applies to:

**Staff group(s)**

- Midwives (Community and Hospital)
- Obstetricians
- Paediatricians

**Clinical area(s)**

- Community
- Antenatal clinics
- Pregnancy day care
- Sherwood Birthing Unit
- Postnatal ward
- Neonatal Unit

**Patient group(s)**

- Antenatal and postpartum women

**Related Trust Documents**

- Preterm Labour
- Preterm Prelabour rupture of membrane
- Management of suspected sepsis in pregnancy, labour & the puerperium
- Care of the Newborn
- Management of babies born to mothers with risk for infection (Neonatal guideline)
- Summary Obstetric Antibiotic Prescribing Guidance.

Abbreviations:

| | |
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| GBS | Group B streptococcus |
| IAP | Intra-partum antibiotics |
| NHS | National Health Service |

## 3 ROLES AND RESPONSIBILITIES

- Responsibilities of the Midwife
  It is the responsibility of the midwife to refer women who are identified as having GBS positive or at risk of having babies with sepsis early to an obstetrician and paediatrician and to continue to provide care to the woman in accordance with the instructions of the obstetrician.

- Responsibilities of the Obstetrician
  It is the responsibility of the Obstetrician to follow this guideline in the management of women who are identified as having GBS positive or at risk of having babies with sepsis to ensure that clear management plans are documented to guide other staff.

- Responsibilities of the Paediatrician
  It is the responsibility of the Paediatrician to be aware of this guideline in relation to the Care of the Newborn Guideline.

## 4 GUIDELINE DETAILS (including Flowcharts)

### 4.1 INFORMATION AND SUPPORT GROUPS FOR WOMEN

There are useful materials, including patient information, available from:

- Royal College of Obstetricians and Gynaecologists: https://www.rcog.org.uk/globalassets/documents/patients/patient-information-leaflets/pregnancy/pi-gbs-pregnancy-newborn.pdf

- Group B Strep Support https://gbss.org.uk/

### 4.2 ANTENATAL SCREENING

#### 4.2.1 Universal Screening

The National Screening Committee does not recommend universal bacteriological screening for GBS as there is no clear evidence to show that it would do more good than harm due to the following reasons.

- Many women carry the bacteria and, in the majority of cases their babies are born safely and without developing an infection.
- Screening women late in pregnancy cannot accurately predict which babies will develop GBS infection.
- No screening test is entirely accurate. (17-25% of women with a positive swab at 35-37 weeks of gestation will be GBS negative at delivery. 5-7% of women who are GBS negative at 35-37 weeks of gestation will be GBS positive at delivery)
- Many of the babies who are severely affected from GBS infection are born prematurely, before the suggested time for screening
- Giving all carriers of GBS Intra-partum Antibiotic Prophylaxis (IAP) would mean that a very large number of women would receive treatment they do not need; this may increase adverse outcomes to mother and baby.

If a woman has chosen to seek GBS testing outside of the National Health Service NHS and this is performed by an accredited laboratory, then IAP should be offered if the woman is found to be a carrier.

#### 4.2.2 Screening for women if GBS was detected in a previous pregnancy

Women with GBS detected in a previous pregnancy should be offered the options of:

- IAP
  *or*
- bacteriological testing in late pregnancy (3-5 weeks prior to the anticipated delivery date) and IAP if this is positive.[1]

50% of women are likely to be recurrent carriers, and the risk of early-onset GBS disease in these circumstances is around 1 in 700-800. This risk level might be enough for women to opt directly for IAP.

Bacteriological testing for GBS would help to refine the risk, with a positive bacteriological test meaning the risk is around 1 in 400, and the risk with a negative test being 1 in 5000, helping a significant number of mothers avoid IAP if they test negative.

### 4.2.3 Bacteriological Screening Tests for GBS

When testing for GBS carrier status a swab should be taken from the lower vagina and the anorectum. Either a single swab (vagina then anorectum) or two different swabs can be used.[7]

## 4.3 RECOGNISED RISK FACTORS FOR GBS NEONATAL INFECTION:

*Antenatal*

1. Previous baby infected with GBS
2. GBS in urine or vaginal swab in the **current** pregnancy
3. Preterm labour
4. Preterm pre labour rupture of membranes

*Intrapartum*

1. Term prolonged rupture of membranes >48hrs
2. Pyrexia in labour (≥38.0°C)
3. Chorioamnionitis

- Broad Spectrum Antibiotics to include GBS cover (http://pharmacy.sfh-tr.nhs.uk/microbiology)

## 4.4 GENERAL MANAGEMENT

### 4.4.1 Intrapartum Antibiotic Prophylaxis (IAP)

To optimise the efficacy of IAP, the first dose should be given at least 4 hours prior to delivery.

Please refer to SFH antibiotics website for antibiotic guidance

http://pharmacy.sfh-tr.nhs.uk/microbiology

### 4.4.2 Planned Caesarean Section

No antibiotic prophylaxis specific for GBS is required for women undergoing planned caesarean section in the absence of labour and with intact membranes.

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.

### 4.4.3 Induction of Labour

The IV antibiotic regime should be commenced following establishment of labour, spontaneous rupture of membranes during the induction process or at the time of artificial rupture of membranes. Ideally this will be more than 4 hours prior to delivery.

## 4.5 MANAGEMENT WITH SPECIFIC RISK FACTORS

### 4.5.1 Previous baby infected with GBS

- Screening and empirical treatment antenatally is ineffective and unnecessary.
- IAP should be offered to these women.

### 4.5.2 GBS in urine or vaginal swab in the current pregnancy

- Antenatal treatment is unnecessary unless GBS on MSU.
- Intrapartum antibiotic prophylaxis should be recommended.
- The presence of GBS must be recorded on the alert section on
  - The hand held records
  - The hospital records (GBS sticker)
  - The maternity electronic pathway

### 4.5.3 Preterm labour

- see Sherwood Forest Hospitals Guideline – Preterm Labour

- IAP is recommended for women in confirmed preterm labour
- Results from swabs should be requested and followed up urgently.
- If a swab is reported as GBS positive following delivery, the Paediatricians should be alerted to this immediately.

### 4.5.4 Preterm pre labour rupture of membranes

- see Sherwood Forest Hospitals Guideline - Preterm prelabour rupture of membranes

- Bacteriological testing for GBS carriage is not necessary for women with preterm prelabour rupture of membranes as IAP should be given to all in pre-term labour once labour is confirmed or induced irrespective of GBS status.
- Planning delivery in these cases should involve senior obstetric advice to confirm the management plan.
- For those with evidence of colonisation in the current pregnancy or in previous pregnancies, the perinatal risks associated with preterm delivery at less than 34 $^{+0}$ weeks of gestation are likely to outweigh the risk of perinatal infection. For those at more than 34 $^{+0}$ weeks of gestation it may be beneficial to expedite delivery if a woman is a known GBS carrier.
- If chorioamnionitis is suspected, discuss with the obstetric consultant AND give antibiotics to cover GBS and other organisms (see 4.5.5)

### 4.5.5 Pyrexia in labour –suspected chorioamnionitis

Suspected chorioamnionitis should be managed by broad-spectrum antibiotic therapy including an agent and dose active against GBS and should replace GBS specific antibiotic prophylaxis.

- Antibiotic therapy should be continued as required – see Sherwood Forest Hospitals antibiotic website http://pharmacy.sfh-tr.nhs.uk/microbiology/
- The placenta should be swabbed.

## 5 EDUCATION AND TRAINING

This guideline needs no specific education or training before its implementation.

## 6 MONITORING COMPLIANCE AND EFFECTIVENESS

Annual audit of compliance with the guideline in relation to management of the newborn where there is known Group B Haemolytic streptococcus present in the mother, where a previous baby infected with GBS or there is GBS in urine or vaginal swab in the current pregnancy:

Auditable Standards

1. The presence of GBS is recorded on the alert section on (100%)
   - The hand held records
   - The hospital records (GBS sticker)
   - The electronic maternity pathway

2. Intrapartum antibiotic prophylaxis is given more than 4 hours prior to delivery as per the guideline. (80%)

Results of audits and action plans will be presented to the maternity & Gynaecology Clinical Governance group and action plans monitored.

## 7 EVIDENCE BASE/ REFERENCES

RCOG Green-top Guideline - Prevention of Early-onset Neonatal Group B Streptococcal Disease, Green-top Guideline No. 36 Sept 2017

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National Institute for Health and Clinical Excellence. Inducing labour. NICE clinical guideline 70. London: NICE; 2008

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National Institute of Health Care and Excellence. Neonatal Infection (Early Onset): Antibiotics for Prevention and Treatment. NICE clinical guideline 149. London. NICE 2012

## 8 EQUALITY IMPACT ASSESSMENT

- Guidance on how to complete an Equality Impact Assessment
- Sample completed form

| | | | |
|---|---|---|---|
| Name of service/policy/procedure being reviewed: Group B Streptococcal Infection Guidelines for the prevention of Early Onset Neonatal Infection | | | |
| New or existing service/policy/procedure: Existing | | | |
| Date of Assessment: September 2021 | | | |
| *For the service/policy/procedure and its implementation answer the questions a – c below against each characteristic (if relevant consider breaking the policy or implementation down into areas)* | | | |
| Protected Characteristic | a) Using data and supporting information, what issues, needs or barriers could the protected characteristic groups' experience? For example, are there any known health inequality or access issues to consider? | b) What is already in place in the policy or its implementation to address any inequalities or barriers to access including under representation at clinics, screening? | c) Please state any barriers that still need to be addressed and any proposed actions to eliminate inequality |
| The area of policy or its implementation being assessed: | | | |
| Race and Ethnicity: | None | N/A | N/A |
| Gender: | None | N/A | N/A |

| | | | |
|---|---|---|---|
| Age: | None | N/A | N/A |
| Religion: | None | N/A | N/A |
| Disability: | None | N/A | N/A |
| Sexuality: | None | N/A | N/A |
| Pregnancy and Maternity: | None | N/A | N/A |
| Gender Reassignment: | None | N/A | N/A |
| Marriage and Civil Partnership: | None | N/A | N/A |
| Socio-Economic Factors (i.e. living in a poorer neighbourhood / social deprivation): | None | N/A | N/A |

What consultation with protected characteristic groups including patient groups have you carried out?

- None

What data or information did you use in support of this EqIA?

- None

As far as you are aware are there any Human Rights issues be taken into account such as arising from surveys, questionnaires, comments, concerns, complaints or compliments?

- None

Level of impact

From the information provided above and following EqIA guidance document please indicate the perceived level of impact:

***Low Level of Impact***

For high or medium levels of impact, please forward a copy of this form to the HR Secretaries for inclusion at the next Diversity and Inclusivity meeting.

Name of Responsible Person undertaking this assessment:

Signature:
Sharon Tao

Date:
September 2021