Guideline No: 6 Group B Strep

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All policies and guidelines will be circulated to appropriate staff for a two week consultation prior to being finalised. The date of issue reflects the date finalised after this consultation has taken place.

MONITORING COMPLIANCE WITH THE GUIDELINE	
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Frequency of monitoring	3 yearly
Responsible individual development of action plan	Head of Midwifery

NATIONAL GUIDANCE RELATING TO THIS GUIDELINE(E.G. NIHCE, NATIONAL INSTITUTE FOR HEALTH AND CLINICAL EXCELLENCE)

- National Institute for Health and Clinical Excellence, 2008. *Antenatal Care.* NICE Clinical Guideline No.62. London: NICE.
- National Institute for Health and Clinical Excellence, 2012. *Antibiotics for early-onset neonatal infection: Antibiotics for the prevention and treatment of early-onset neonatal infection.* NICE Clinical Guideline No.149, London, NICE.
- Royal College of Obstetricians and Gynaecologists, 2017. Prevention of early onset group B streptococcal disease, *Green top guideline No 36.* London, RCOG. (Online) https://obgyn.onlinelibrary.wiley.com/doi/epdf/10.1111/1471-0528.14821

DOCUMENT REVIEW HISTORY			
Version	**Review Date**	**Reviewed by**	
1	June 2018	Trish Nolan Melfi, Deputy Head of Midwifery	Updated in line with Guidance
2	August 2019	Liz Halliday, Assistant Head of Mid-wifery	Updated in line with guidance

AUDITABLE STANDARDS	
1.	Give Antenatal information to all clients - If they test positive for GBS they should be given a copy of this guideline and have an opportunity to discuss it with their Midwife
2.	Notes reflect discussion and informed decision making
3.	In the event that antibiotic prophylaxis is declined the midwife should ensure that a NEWS chart is completed over the first 24 hours and that the parents are aware of the signs and symptoms of EOGBS infection. This should be clearly documented.

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1.0 INTRODUCTION AND BACKGROUND INFORMATION

Group B Streptococcus (Streptococcus Agalactiae, GBS, Beta Strep, Haemolytic Strep)

GBS is a benign, common bacterium carried in the vagina/rectum which colonises the digestive, urinary and reproductive tracts of about 20% to 40% of adults in the UK and Ireland. Occasionally it may cause a UTI, septicaemia or pneumonia in susceptible individuals, usually the chronically ill. [9]

Women who test positive for GBS in pregnancy are rarely infected and do not require any treatment. However, it is possible that a woman colonised with GBS may pass the bacteria on to her baby during the birth process. 50% of babies born to colonised mothers will become colonised themselves and require no intervention. There are 2 types of neonatal GBS infection.

Early onset GBS (EOGBS):

0-6 days and most frequently in the first 24 hours after birth (90%)
Almost exclusively occurs in babies born to carriers of GBS
Occasionally occurs in babies whose mothers are not colonised
Occurs in 1:1750 babies

Late Onset GBS (LOGBS):

Occurs between 7 days and up to 3 months of age.
Not associated with pregnancy, and more likely to have been exposed after birth.
Not considered preventable by labour or post-partum intervention and thus not relevant to this guideline.

The risk of EOGBS infection is increased in the following circumstances and 78% of babies who contract early onset GBS (EOGBS) will have at least one of these risk factors:

- **Mother has had a previous child with EOGBS infection.**

- **Mother has been shown to be colonised by GBS in this pregnancy.**
  Women who were colonised are a previous pregnancy have a 40-50% chance of being colonised in subsequent pregnancies and should be advised of such when considering whether to test for GBS.

- **Pre-term Labour (before 37 weeks completed gestation) (22-38% of EOGBS infections)**
  Premature babies with EOGBS also have an increased mortality rate (20-30% at 33 weeks, which increases with gestation to 2-3% at 37 weeks

- **Baby weighs less than 2500g at birth**

- **Prolonged rupture of membranes (more than 18 hours before birth) regardless of signs of labour or lack thereof (68% of EOGBS infections)**

- **Maternal pyrexia in labour (38°C or higher) (19% EOGBS infections)**

- **GBS found in urine sample in late pregnancy**

However, most women presenting with one or more of these risk factors will not go on to have a baby with EOGBS infection.

The following figures can be extrapolated for mothers who have no identified risk factors:

- 1:5000 chance of being affected by EOGBS
- 1:39682 chance of experiencing neonatal death or serious ongoing illness

With prompt treatment of confirmed EOGBS infection:

- 87.4% babies will fully recover
- 7.4% babies will recover but be left with some level of disability
- 5.2% babies will, unfortunately, die

Management of GBS

The midwife should discuss any risk factors for GBS and the implications of GBS testing for the woman and baby in the event of a positive test including potentially increased medicalisation of birth and the neonatal period.

If requested an Enriched Culture Medium swab test should be completed at 35 to 37 weeks. Women should be advised that in the case of a negative result there is a 4% chance that they will be positive for GBS at birth, and in the case of a positive result there is a 13% chance that they will be negative for GBS at birth.

Currently in the UK and Ireland women who have tested positive for GBS in their current pregnancy or who fall into one of the aforementioned risk-groups are offered prophylactic antibiotics in labour as per national guidelines and may be offered immediate induction in the case of SROM.

Women who have tested GBS positive in a previous pregnancy should not be offered antibiotic therapy for a current pregnancy unless their baby contracted GBS disease or they have tested positive in this pregnancy.

Antibiotics

Giving prophylactic IV antibiotics in labour is thought to eliminate GBS bacteria from the vagina before birth and will cross the placental barrier providing cover for the baby if transmission occurs. However, the Cochrane Review concluded that the evidence for giving prophylactic antibiotics in labour is

lacking and though it appears to reduce the incidence of GBS infection in neonates by 86-89%, this practice does not reduce mortality rates stemming from GBS or other infection and all cases of EOGBS cannot be prevented by antibiotic prophylaxis.

Many risks are associated with the use/overuse of antibiotics including gut disturbance, incidence of fugal infections (candida albicans), increased susceptibility to other bacteria, asthma, allergies, obesity, OCD, Type 1 Diabetes and anaphylaxis.

IV antibiotics cannot be facilitated at home. In the case that antibiotic prophylaxis is recommended and consented to, it is the responsibility of the named midwife to liaise with the obstetric team at the clients booked hospital to arrange the plan for care.

Alternate Management

There is no evidence upon which to recommend any of the following remedies however women may wish to discuss the alternative options below:

- **Vaginal Douching -** causes transient reduction in vaginal bacteria A Cochrane Review concluded that studies in Chlorohexadine douching indicated a reduction in colonisation of the newborn but no reduction in morbidity or mortality. Douching in other substances such as vinegar or lemon juice remains unresearched. The use of any foreign solution in the vagina brings with it risks of local inflammation and reaction, although no serious adverse reactions have been reported.

- **Garlic -** taken by women both orally and as a vaginal pessary remains unresearched, although the likelihood of any positive effect is probably greater with pessary treatment.

- **Oral Pro-biotics -** A small test study suggests that daily pro-biotics reduce GBS count but are not effective at removing it altogether.

- **Water Birth –** Reduces the incidence of GBS colonisation and infection and is thought to wash the bacteria off the baby. Mothers birthing in water are perhaps less likely to undergo intervention, see below. [9]

- **Avoidance of intervention** - interventions such as routine VE, ARM, FBS and FSE are likely to increase the risks of GBS infection. Handling of the neonate by many health care workers also increases the chance of horizontal transmission. It may be more appropriate for GBS colonised women to insist on low intervention labour in a home environment although no research has been undertaken to explore this.

Signs and Symptoms of GBS Infection

Should a baby become symptomatic it is essential to seek paediatric consultation immediately (regardless of GBS status) in order to access swift treatment.

The parents and midwife should be alert to the following:

- **Antenatal education and NEWS chart**
- **Respiratory distress, fast breathing, struggling to breath, grunting or other unusual noises, stops breathing or takes long gaps between breaths**
- **Temperature outside of acceptable range (36-38°C), significant temperature fluctuations or notable poor peripheral perfusion**
- **Notable changes in heart rate, tachycardia, bradycardia**
- **Lethargic, floppy, unusual behaviour responses**
- **Feeding difficulties, refusing feeds, vomiting, distended stomach**
- **Seizure**
- **Jaundice within 24 hours of birth**
- **Bleeding (bruises, unusual swelling especially on the head)**
- **Hypoglycaemia, hypotension, low oxygen saturation, metabolic acidosis, respiratory acidosis**. Identification of these symptoms usually requires medical equipment which may not be available in a home environment

Further complications may include septicaemia, pneumonia and/or meningitis.

In the event that a woman has tested positive for GBS, has chosen to decline prophylactic IV antibiotics in labour and chooses to remain at home the midwife should document discussions thoroughly. Routine vaginal examinations should be avoided in labour and any further risk factors should warrant discussion with the woman and the midwife's line manager. A NEWS chart should be commenced at birth and observations should be taken in line with UKBC POLICY 37. NEWS and MEWS for a minimum of 24 hours post birth. The midwife and the parents should be alert to symptoms of EOGBS and maintain a high index of suspicion with a low threshold for transfer to hospital.

Wider Implications of Refusing Conventional Therapy

When a woman decides against prophylactic antibiotic therapy there may be further implications for her care and that of her baby in the immediate post-partum period. Hospital policies vary greatly on a local basis and we recommend that the midwife or client educate themselves appropriately as to local policy guidelines before considering a GBS test or entering into dialogue about treatment options.

Most hospitals offer a neonatal infection screen, followed by 36-48 hours of IV antibiotics and 4 hourly observations (TPR) for babies whose mothers did not receive an accepted level of antibiotic cover in labour.

Antibiotics can of course be life saving when required, but women should be aware that they may choose to observe baby for signs and symptoms of infection rather than have prophylactic antibiotics. Should the mother choose to remain at home and refuse all antibiotic treatment it is essential that she is instructed in how to closely monitor her baby for signs and symptoms of infection. Although these can be subtle (and may often present in a healthy baby) once infection takes hold babies become seriously ill very quickly and thus we would advise a low tolerance level for any concerns, and all parents should be aware of the need to contact emergency services should their baby become unwell.

It is important to note that any woman declining treatment as outlined by hospital policies (whether those guidelines are evidence based or not) may come under pressure to comply with those guidelines and may require extra support and information in order to ensure that her wishes are respected. It is essential that she is fully informed as to the risks and benefits of all possible care pathways and she may wish to read around this topic before entering into negotiation with her booked hospital, for example Sara Wickham's work "Group B Strep Explained" (2019).

GBS remains a serious illness and requires treatment when active infection is confirmed, however the evidence surrounding who to test, how to test, and whether antibiotic treatment does more good than harm is unclear and as such the issue is not quite as black and white as guidelines (local, regional and national) may appear. Full discussion should be entered into with the client and agreed care pathways should be documented clearly in her notes along with a detailed description of all discussed around the subject.

2.0 GUIDELINE OUTLINE

- Issues around and risk factors for GBS colonisation and infection should be discussed with all women, and the consequences that a positive test could have on their care pathway should be made clear.

- Women presenting with known risk factors (previous baby with GBS disease, GBS colonisation in this pregnancy) should be offered the option of testing at 35-37 weeks.

- Women should be advised of the risks and benefits of antibiotic treatment and the lack of evidence to support blanket coverage. Women should be advised of the serious nature of GBS infection in neonates, and the chances of infection for their baby.

- Should a woman test positive for GBS:-
  a) she should be counselled regarding her options, including IV antibiotics, and supported in making an informed decision.
  b) A copy of this guideline and local NHS/HSE policy should be provided to the woman by the lead midwife.
  c) Appropriate referral for access to therapies that cannot be provide at home should be sought.

- Women should be made aware of potential conflicts with NHS or HSE health care providers in the event that she refuses IV antibiotics in labour or for her baby postnatally.

- Regardless of GBS status midwives should advise clients of signs and symptoms of an unwell baby and refer swiftly and appropriately with any concerns.

- Record keeping must be clear, detailed and robust – reflecting on discussions, advice and information given along with a detailed plan of care.

3.0 REFERENCES

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