# Guideline Document Control Sheet

| | | | | | | |
|---|---|---|---|---|---|---|
| Reference Number | *GUID/MAT/1308* | | | | | |
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| Approving Committee | Family Health Governance Meeting | | | | | |
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| Lead Director or Associate Director | Associate Director of Nursing- Family Health | | | | | |
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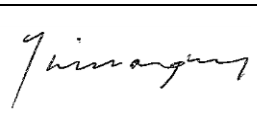
## Final approval

| | |
|---|---|
| Chairman or Executive Sponsor's Signature |  |
| Date Approved | 16.10.17 |
| Name & Job title of Chairman or Executive Sponsor | Maria Willoughby, Care Group Director |
| Approving Committee | Family Health Governance Meeting |
| Signed master copy held at: | Corporate Records Office, Trust Headquarters, Darlington Memorial Hospital |

# VERSION CONTROL TABLE

| Date of issue | Version number | Status | Author |
|---|---|---|---|
| 23/11/04 | 1.0 | Superseded | EBPG |
| 10/07/09 | 2.0 | Superseded | Jean Hatton |
| 19/01/12 | 2.1 | Superseded | J Hendy |
| 2/11/12 | 2.2 | Superseded | J Woodward |
| 14/5/13 | 3.0 | Superseded | T Saukila |
| 08.02.17 | 4.0 | Superseded | T Saukila |
| 8/12/2017 | 5.0 | Approved | T Saukila |

# TABLE OF REVISIONS

| Date | Section | Revision | Author |
|---|---|---|---|
| 10/07/09 | Full | Amended in line with CNST requirements | |
| January 2012 | Partial | Reviewed and amended in line with CDDFT policy for the development and management of policy and guidance documents | Jackie Hendy |
| Nov 2012 | Partial | Policy extended – awaiting full review | J Woodward |
| March 2013 | Full | Reviewed – changes made to how information given to woman.<br>No changes to treatment.<br>Changes to neonatal flow chart / treatment/antibiotics – observation form. | T Saukila<br><br>Mehdi Garbash |
| Dec 2016 | Full | Full review - Out of date<br>Into new format<br>Name change to aid ease of use<br>Reviewed process for informing patients – stickers to be sent<br>Cross referenced to neonatal management | T Saukila<br>J Woodward |
| OCT 2017 | Full | Full Review.<br>Amended in line with RCOG Green Top Guideline (No. 36, GBS, early-onset), Sept 2017<br><br>Dec 2017 Changes to antibiotics required after discussion and agreement with pharmacy and microbiology ( agreed at CSTC) | R Hartis<br>T Saukila<br>N Gormley |

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# 1 INTRODUCTION

Group B streptococcus *(Streptococcus agalactiae)* is recognised as the most frequent cause of severe early-onset (at less than 7 days of age) infection in newborn infants with 90% of infections occurring in the first 24 hours. GBS is present in the bowel flora of 20 – 40% of adults The incidence of EOGBS disease in the UK in 2015 was 0.57/1000 births. Case fatality rate between 2000 -2015 has fallen from 10.4 % to 5.2 %. Of the cases that were discharged, 7.4% had some level of disability. (RCOG 2017). Controversy still exists about testing in pregnancy.

Antenatal screening and treatment may carry disadvantages for the mother and baby. These include anaphylaxis, increased medicalisation of labour and the neonatal period, and possible infection with antibiotic-resistant organisms, particularly when broad spectrum antibiotics are used for prophylaxis. The UK National Screening Committee examined the issue of strategies for the prevention of EOGBS disease in March 2017 and recommended that routine screening using bacteriological culture or near-patient testing techniques should not be introduced into UK practice.

# 2 PURPOSE

To provide guidance for obstetricians, midwives and neonatologists on the prevention of early-onset neonatal group B streptococcal (EOGBS) disease.

# 3 DUTIES

Within this guideline the role and responsibilities of the obstetrician, midwife and paediatrician on the prevention of early-onset GBS disease have been defined.

# 4 MAIN CONTENT OF POLICY

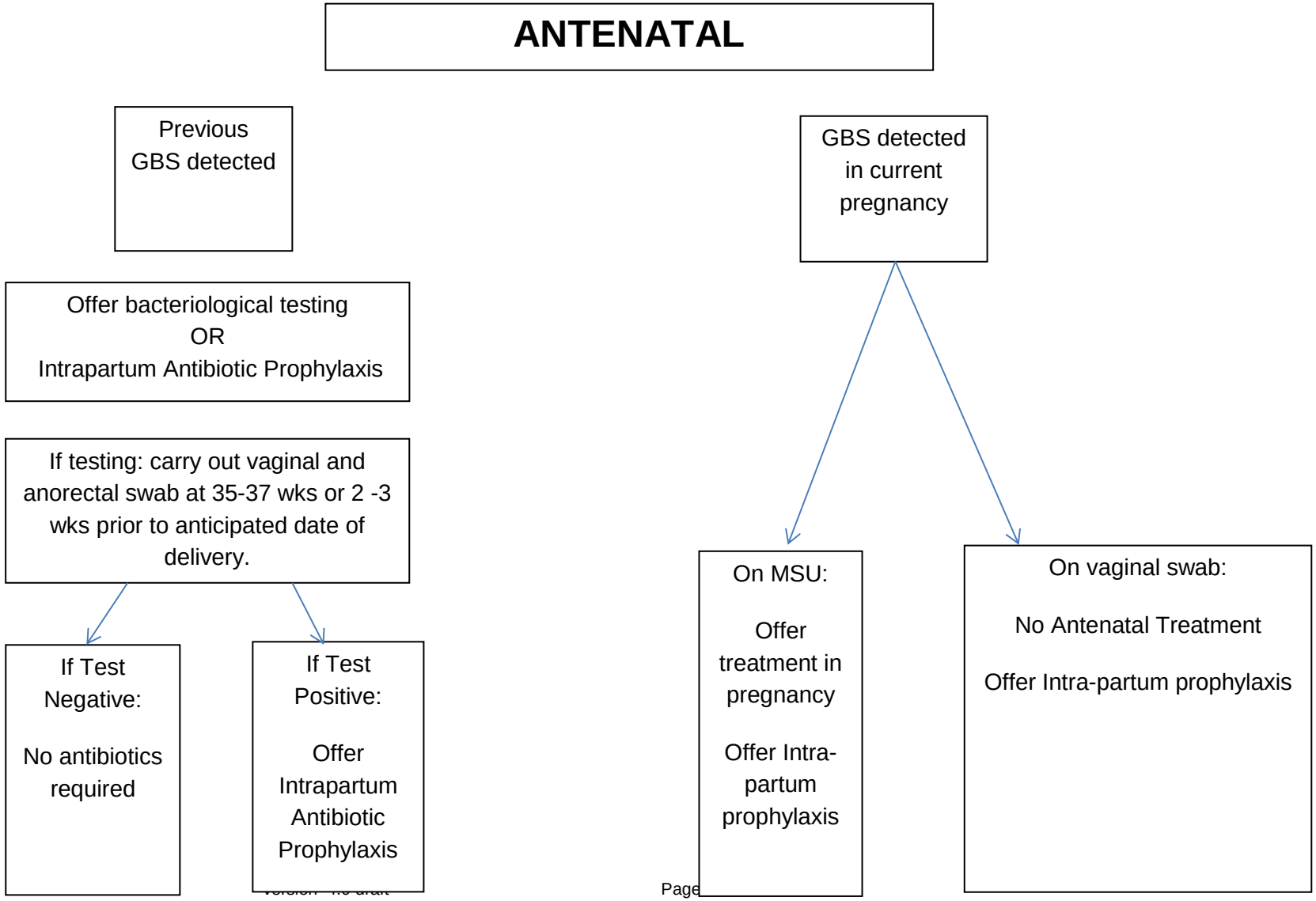
**Management**

## 4.1 Risk Factors:

(40% of EOGBS babies have no risk factors.)

- Intrapartum fever ( more than 38°C)
- Prolonged rupture of membranes ( more than 18 hours) at term
- Prematurity
- Previous affected baby with GBS
- Any previous Positive GBS swab
- Positive GBS swab in current pregnancy

# GBS – Investigation, Antenatal and Intrapartum Management



# Intrapartum

**Planning vaginal birth or in presence of ruptured membranes**

**If Caesarean Section, membranes intact regardless of GBS status**

**At Term: Pre-Labour ROM**

**Confirmed Labour:**

All Preterm Labour (Regardless of GBS status)

Previous affected Neonate

GBS previously detected and opted for no testing

GBS detected in this pregnancy

If pyrexia >38 C or suspected chorioamnionitis

Offer Immediate IOL

Offer Intrapartum Antibiotic Prophylaxis

Offer Intrapartum Antibiotic Prophylaxis

Offer Broad – Spectrum Antibiotics including antibiotic to prevent EOGBS

No intrapartum prophylaxis indicated

## 4.2 Antenatal management:

- All women should be given information regarding GBS colonisation of the mother and the risk neonatal infection, during and after delivery.
- Routine bacteriological screening of all pregnant women for antenatal GBS carriage is not recommended.
- Women in whom GBS has been detected previously should **be offered the option of bacteriological testing in late pregnancy or intrapartum antibiotic prophylaxis (no testing required)**.
  f testing is to be carried out, a vaginal and anorectal swab (single swab to both sites) should be performed at 35 -37 weeks/ or 2-3 weeks prior to anticipated date of delivery.
- Women with a previous baby with neonatal GBS disease should be offered intrapartum antibiotic prophylaxis (IAP).

## 4.3 Incidental finding of GBS:

- All swab results must be checked on isoft, (including sensitivities) the midwife should inform the woman of the swab/urine result by letter, including a leaflet, sticker and contact numbers (Appendix 2) and put message on to the electronic CSC computer system.
- See flow chart for process (Appendix 1) – when community midwife next see's woman GBS status will be documented with sticker in the handheld antenatal notes and advice given to ring labour ward if thinks has ruptured membranes.
- A letter will be sent to the woman's GP for information only (Appendix 3)
- Intrapartum antibiotics should be offered to these women.
- Women with GBS urinary tract infection during pregnancy should receive appropriate treatment at the time of diagnosis as well as IAP. Letter to GP with results.

## 4.4 Intrapartum management:

- Women should be informed of the additional care that can be provided at an obstetric unit; that this is recommended i.e paediatric support so she can make an informed choice.
- Women undergoing planned caesarean section in the absence of labour and with intact membranes do not require antibiotic prophylaxis specific for GBS.
- Women who have had preterm prelabour rupture of membranes and require a caesarean section should have GBS specific antibiotics 4 hours prior to LSCS – inform paediatricians.
- Women with positive GBS and prelabour rupture of membranes at 37+0 weeks of gestation or more should be offered immediate induction of labour and IAP. Refer to CDDFT Pre Labour Rupture of Membranes.
- Women with preterm pre labour rupture of membranes: **Antibiotic administration specifically for GBS colonisation is not necessary prior to labour. From 34 weeks it maybe beneficial to expedite delivery if the women is a known carrier of GBS. Refer to -CDDFT Pre Term Pre Labour Rupture of Membranes.**
- **The following women should be offered intrapartum antibiotic prophylaxis:**
  - **All confirmed preterm labour (regardless of GBS status)**

- **GBS positive swab/urine in this current pregnancy**
- **Previous GBS affected baby (early/late onset disease)**
- **Women who were GBS positive previously and have opted for intrapartum prophylaxis in this pregnancy.**

- Birth in a pool is not contraindicated provided appropriate IAP is offered.
- Monitor any new risk factors in labour such as intrapartum fever higher than 38ºC, or the development of chorioamnionitis
- Women in whom chorioamnionitis is suspected, **broad-spectrum antibiotic therapy including an agent active against GBS should replace GBS-specific IAP and induction considered**

Women who are pyrexial (more than $38^0$C) in labour should be offered broad-spectrum antibiotics including antibiotic for prevention of neonatal EOGBS disease. Intrapartum pyrexia is associated with a risk of EOGBS disease of 5.3/1000 (versus a background risk of 0.5/1000), (ten times higher). In view of this increased risk, IAP should be offered in the presence of maternal pyrexia

## 4.5 Antibiotic regime:

**See Trust Antibiotic Formulary:**

**Benzylpenicillin 3g intravenously initially then 1.5g at 4 hourly intervals until delivery.**

**If penicillin allergy:- Check sensitivity on isoft**

The sensitivity will be released from microbiology**.**

**If culture known to be sensitive to clindamycin –**
**Clindamycin 900mg intravenously at 8 hourly intervals until delivery**

**If culture resistant to clindamycin or sensitivity unknown (ie results not yet available)**
**Vancomycin 1g intravenously at 12 hourly intervals until delivery**

**(any patient who receives vancomycin for more than 48 hours must be discussed with consultant microbiologist)**

## 4.6 Recommended care of the term baby

- If had antibiotics at least 4 hours before delivery and no other risk factors may have 6 hour discharge. Newborn examination at birth and Neonatal Examination prior to discharge.
- For care of the neonate – follow paediatric guideline appendix 4.
- For those with increased risk – prolonged rupture of membranes, preterm etc to be reviewed by paediatrician even if had antibiotics in labour
- Midwife to perform observations of babies at risk ( ie those that have not had antibiotics in labour) at birth, 1 hour after birth, 2 hours after birth and 2 hourly thereafter to 12 hours and record on NEWS observation chart – babies at risk of sepsis – and filed in baby notes.
- Report any signs of infection to paediatrician, who will follow paediatric guideline for early onset neonatal infection.

- Discuss signs and symptoms of infection and give leaflet to parents to take home with advise re signs of infection. Appendix 5
- Ensure community midwife and GP aware by way of discharge letter that baby may be at increased risk of infection

Refer to paediatric guideline

http://intranet/Directorates/CCG/FH/childhealth/Shared%20Documents/All%20Neonatal%20Guidelines/Neonatal%20Guidelines%20CDDFT/PAED%200022%20Antibiotics%20for%20Early-onset%20Neonatal%20Infection.pdf

# 5 MONITORING

## 5.1 Key Performance Indicators

| Monitoring Criterion | Response |
|---|---|
| Who will perform the monitoring? | Maternity Services |
| What are you monitoring? | • Incident reporting where there has been an unanticipated admission to SCBU where GBS colonisation is known.<br>• Missed GBS positive results. |
| When will the monitoring be performed | On a case by case basis via ulysses<br>annually |
| How are you going to monitor? | Audit antenatal and intrapartum care pathway notes using maternity audit toolkit<br>UlyssesReporting<br>Risk Management Weekly Meeting |
| What will happen if any shortfalls are identified? | Audit results shared with assurance meeting<br>Action plan formulated |
| Where will the results of the monitoring be reported? | Monthly perinatal meeting |
| How will the resulting action plan be progressed and monitored? | Assurance meeting |
| How will learning take place? | Mandatory days – update on trends/ themes. Team meetings |

# 6 REFERENCES

GBS and Pregnancy. Group B Strep Support. *www.gbs.org.uk*

Interim “good practice” recommendations for the prevention of early onset neonatal Group B Streptococcal (GBS) infection in UK. PHLS Group B Streptococcus Working Group. *www.phls.org.uk/advice/goodpracticeStrepto.pdf*

Early Onset Group B Streptococcal Disease ( Green Top no.36) (September 2017 ) Royal College of Obstetricians and Gynaecologists.

Incidence of group B Streptococcal disease in infants aged less than 90 days. CDR Weekly 2003; **12**(16).

Kenyon S.L. et al 2001. Broad spectrum antibiotics for preterm labour rupture of membranes.

The Oracle 1 randomised trial Lancet Vol. 357 March pp979-988
Prevention of Early Onset Neonatal Group B Streptococcal Disease –Royal College of Obstetricians and Gynaecologists. *www.rcog.org.uk*

*http://guidance.nice.org.uk/CG149/NICEGuidance/pdf/English*

# 7 ASSOCIATED DOCUMENTATION

This policy should be read in conjunction with the following:
Paediatric guideline - ANTIBIOTICS FOR EARLY-ONSET NEONATAL INFECTION

CDDFT Preterm Pre labour ruptured membranes
CDDFT Suspected Chorioamnionitis
CDDFT Pre labour ruptured membranes
CDDFT Preterm labour
POL/CA/0001 Policy for the Development and Management of Policy of Policy and Guidance Documents. CDDFT
CDDFT Induction of labour
Nursing & Midwifery Council. (2007) Midwives Rules & Standards. Rule 9

# 8 APPENDICES

Appendix 1 - Flow chart for management

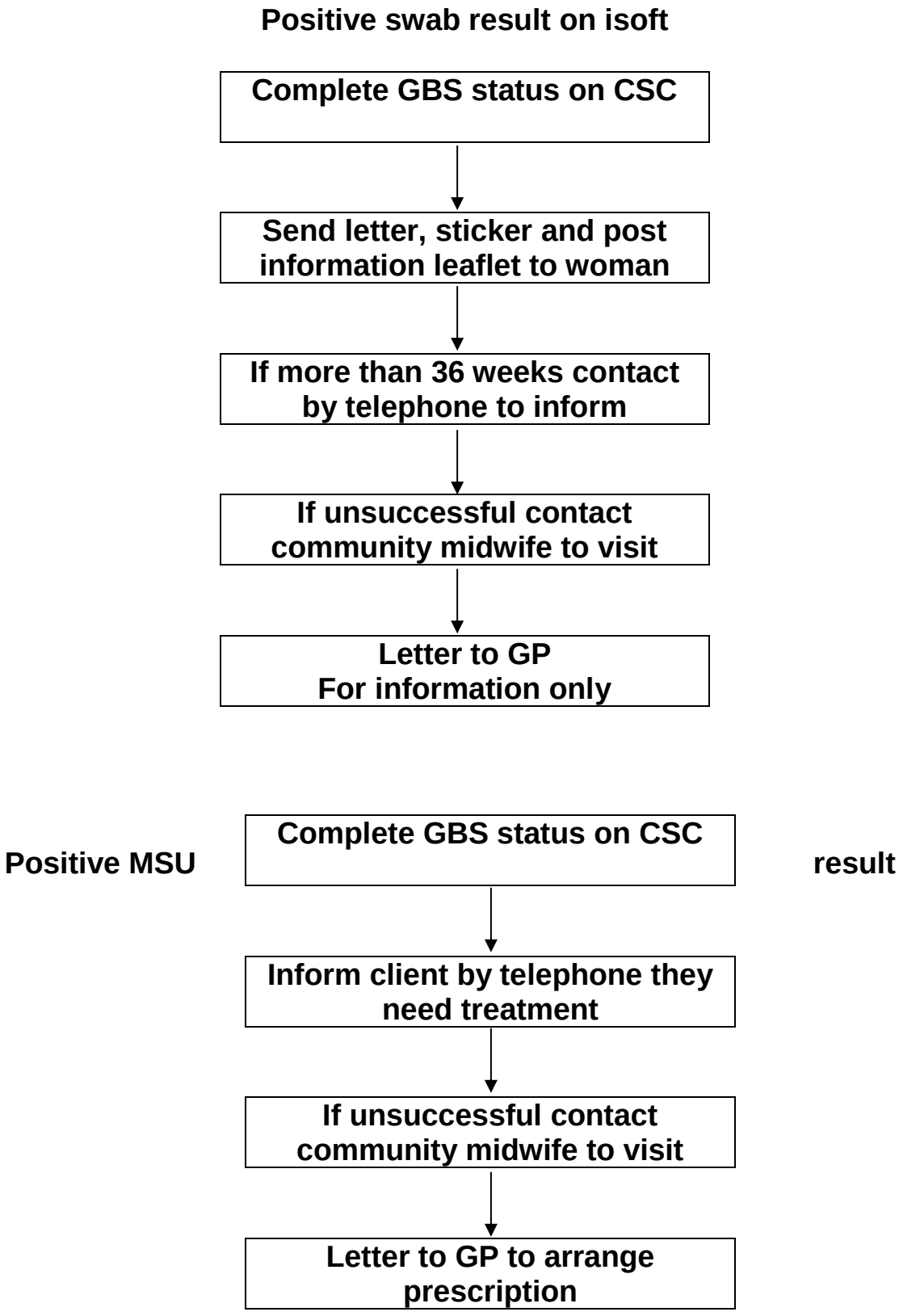
Appendix 2 - Letter to patient

Appendix 3 - Letter to GP

Appendix 4 - Identifying neonatal infection – flow chart

Appendix 6 - EIA

## 8.1 Appendix 1 - Flow chart for management



## 8.2 Appendix 2 – Letter to Patient

County Durham and Darlington NHS
NHS Foundation Trust

Date:

Dear

The swabs you have had taken on _____ identified that you are positive for Group B Streptococcus (GBS). A quarter of women carry this bacteria and it does not require treatment.

Information Leaflet enclosed

As a precaution you will be offered antibiotics in labour to reduce the risk of passing this bacteria to your baby at delivery.

Please make an appointment to see your community midwife at your usual antenatal clinic to discuss this further. Please bring this letter with you to your appointment so we can document this information in your hand held notes.
If your waters break or you go into labour please contact labour ward directly

Please place the enclosed sticker on the front page of your handheld notes

Yours sincerely

## 8.3 Appendix 3 – Letter to GP

County Durham and Darlington NHS
NHS Foundation Trust

**Private and Confidential**

Date:

To GP of:

| |
|---|
| Name:<br><br>Address:<br><br>Date of Birth: |

Dear Dr

Your patient is booked for maternity care at County Durham and Darlington NHS Foundation Trust.

A HVS/LVS result has tested positive for Group B Streptococcus. Treatment is not necessary; this is for information only. ☐

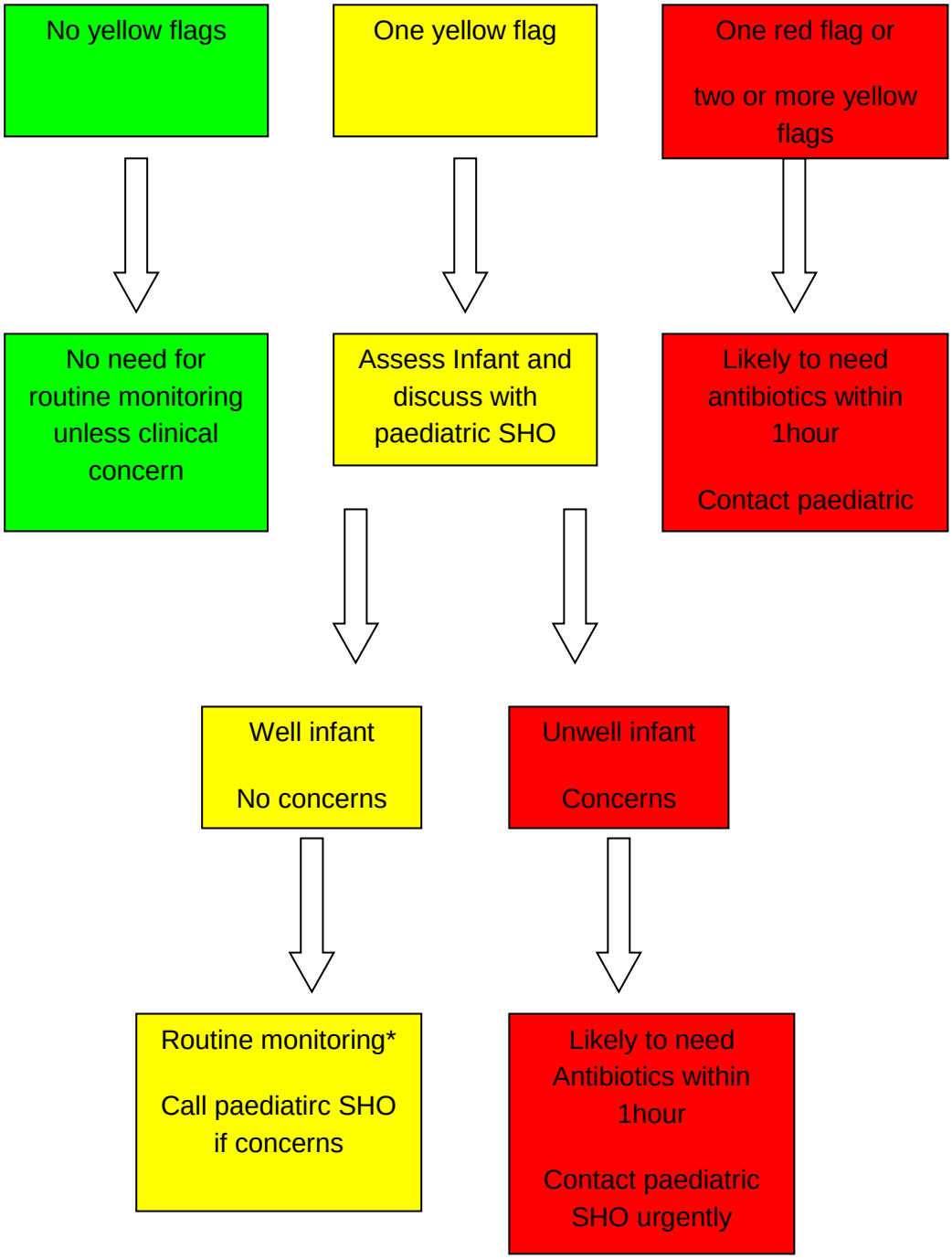
A urine sample has tested positive for Group B Streptococcus. Requires antibiotics. ☐

The patient has been informed and an information leaflet has been given.

Yours sincerely

## 8.4 Appendix 4 - Identifying neonatal infection

**Infants at Risk of Sepsis**




*Routine monitoring (unless had antibiotics in labour more than **4 hrs before delivery** – may have 6 hour discharge). temperature, heart and respiratory rate, capillary refill time and assessment of colour\tone. These should be performed at 0, 1 and 2 hours, then 2 hourly for a minimum of 12 hours.
If additional risk factors eg if prolonged rupture of membranes for paed review after delivery

Please use neonatal observation chart (NEWS) for infants at risk of sepsis. Completed by the midwife and stored in notes.

| Red flags |
|---|
| Parenteral antibiotic treatment given to the woman for confirmed or suspected invasive bacterial infection (such as septicaemia) at any time during labour, or in the 24-hour periods before and after the birth<br>[NOT intrapartum antibiotic prophylaxis] |
| Suspected or confirmed infection in another baby in the case of a multiple pregnancy |
| Respiratory distress starting more than 4 hours after birth |
| Seizures |
| Signs of shock |
| Need for mechanical ventilation in a term baby |

| Further risk factors (Yellow flags) |
|---|
| Invasive group B streptococcal infection in a previous baby |
| Maternal group B streptococcal colonisation, bacteriuria or infection in the current pregnancy |
| Prelabour rupture of membranes |
| Preterm birth following spontaneous labour (before 37 weeks' gestation) |
| Suspected or confirmed rupture of membranes for more than 18 hours in a preterm birth |
| Intrapartum fever higher than 38°C, or confirmed or suspected chorioamnionitis |

| Further clinical indicators (Yellow flags) | |
|---|---|
| Altered behaviour or responsiveness | Altered muscle tone |
| Feeding difficulties | Feed intolerance |
| Abnormal heart rate | Signs of respiratory distress |
| Local signs of infection (for example, affecting the skin or eye) | Hypoxia (for example, central cyanosis or reduced oxygen saturation level) |
| Jaundice within 24 hours of birth | Signs of neonatal encephalopathy |
| Apnoea | Need for cardio–pulmonary resuscitation |
| Need for mechanical ventilation in a preterm baby | Temperature abnormality unexplained by environmental factors |
| Persistent fetal circulation (persistent pulmonary hypertension) | Unexplained excessive bleeding, thrombocytopenia, or abnormal coagulation |
| Metabolic acidosis (deficit more than 10 mmol/litre) | Hypoglycaemia or hyperglycaemia |

## 8.5 Appendix 5 – Neonatal Infection Advice Sheet

You have been provided with this information sheet as your baby was either monitored or treated for a possible early onset (first 72 hours of life) neonatal (newborn) infection.

It is considered good practice that at discharge we provide you with the following information.

Parents and carers should seek medical advice (for example, from NHS Direct, their general practice, or an accident and emergency department) if they are concerned that their baby:

- is showing abnormal behaviour (for example, inconsolable crying or listlessness), or
- is unusually floppy, or
- has developed difficulties with feeding or with tolerating feeds, or
- has an abnormal temperature unexplained by environmental factors (lower than 36°C or higher than 38°C), or
- has rapid breathing, or
- has a change in skin colour

Provision of this information has been recommended by NICE (National Institute for Health and Clinical Excellence) as part of their published guidance "Antibiotics for early-onset neonatal infection", August 2012.
*http://guidance.nice.org.uk/CG149/NICEGuidance/pdf/English*

Further parent/carer information can also be found at
*http://guidance.nice.org.uk/CG149/PublicInfo/pdf/English*

## 8.6 Appendix 6 - Equality Analysis / Impact Assessment

| Full Assessment Form | v2/2011 |
|---|---|

| | |
|---|---|
| **Division/Department:** | **Family Health** |
| **Title of policy, procedure, decision, project, function or service:** | **Group B Streptococcal Disease** |
| **Lead person responsible:** | **Evidence Base Practice Group - chair** |
| **People involved with completing this:** | **Tadala Saukila**<br>**Neonatologists**<br>**Pharmacy** |

**Type of policy, procedure, decision, project, function or service:**

Existing Yes ☐

New/proposed ☐

Changed ☐

## Step 1 – Scoping your analysis

**What is the aim of your policy, procedure, project, decision, function or service and how does it relate to equality?**

| |
|---|
| **To ensure women have the safest care that can be given** |

**Who is the policy, procedure, project, decision, function or service going to benefit and how?**

| |
|---|
| **Pregnant women and babies** |

**What outcomes do you want to achieve?**

| |
|---|
| **No incidents – good outcome – good experience for women and their families** |

**What barriers are there to achieving these outcomes?**

| |
|---|
| **Not adhering to guidelines and policies - non attendance at training and education** |

**How will you put your policy, procedure, project, decision, function or service into practice?**

| |
|---|
| **Monitoring incidents and ensuring lessons are learned** |

**Does this policy link, align or conflict with any other policy, procedure, project, decision, function or service?**

| |
|---|
| **None** |

## Step 2 – Collecting your information

**What existing information / data do you have?**

| |
|---|
| **Incident data** |

**Who have you consulted with?**

| |
|---|
| **Clinical colleagues – paediatricians. Pharmacy** |

**What are the gaps and how do you plan to collect what is missing?**

| |
|---|
| **N/A** |

## Step 3 – What is the impact?

**Using the information from Step 2 explain if there is an impact or potential for impact on staff or people in the community with characteristics protected under the Equality Act 2010?**

**Ethnicity or Race**

| |
|---|
| No |

**Sex/Gender**

| |
|---|
| No |

**Age**

| |
|---|
| no |

**Disability**

| |
|---|
| **No** |

**Religion or Belief**

| |
|---|
| **No** |

**Sexual Orientation**

| |
|---|
| **No** |

**Marriage and Civil Partnership**

| |
|---|
| **no** |

**Pregnancy and Maternity**

| |
|---|
| **No** |

**Gender Reassignment**

| |
|---|
| **No** |

**Other socially excluded groups or communities e.g. rural community, socially excluded, carers, areas of deprivation, low literacy skills**

| |
|---|
| **No** |

## Step 4 – What are the differences?

**Are any groups affected in a different way to others as a result of the policy, procedure, project, decision, function or service?**

| |
|---|
| **No** |

**Does your policy, procedure, project, decision, function or service discriminate against anyone with characteristics protected under the Equality Act?**

**No**

**If yes, explain the justification for this. If it cannot be justified, how are you going to change it to remove or mitigate the affect?**

| |
|---|
| **N/A** |

## Step 5 – Make a decision based on steps 2 - 4

**If you are in a position to introduce the policy, procedure, project, decision, function or service? Clearly show how this has been decided.**

| |
|---|
| **Agreed at Obstetrics and Gynaecology Operational Group and approved at the quality & Health Care Governance Committee** |

**If you are in a position to introduce the policy, procedure, project, decision, function or service, but still have information to collect, changes to make or actions to complete to ensure all people affected have been covered please list:**

| |
|---|
| **N/A** |

**How are you going to monitor this policy, procedure, project or service, how often and who will be responsible?**

| |
|---|
| |