Group B Streptococcus in Pregnancy and the Newborn UHL Obstetric Guideline

University Hospitals of Leicester NHS
NHS Trust

Trust ref:C97/2008

Contents

1. Introduction and who the guideline applies to: 2
Background: 2
Related documents; 3
What's new? 3
2. Management of Group B Streptococcus in Pregnancy and the Newborn 3
2.1 Screening 3
2.2 Antenatal 'At risk' identification 4
2.3 Actions when GBS Colonisaton is identified 4
2.5 GBS carriage treatment 5
2.6 Care plans for pregnant women and people identified 'at risk' 6
2.7 GBS management in labour 6
2.7.1 Induction of labour 6
2.7.2 Prolonged latent phase of labour 7
2.7.3 Pre-labour rupture of membranes 7
2.7.4 GBS prophylaxis in pre-term labour 8
2.7.5 Women with low grade pyrexia in labour 9
2.7.6 Declining IAP 9
2.7.7 Caesarean section birth 9
2.8 Management in labour 9
2.9 Neonatal management 10
2.10 Parental advice 12
3. Education and Training: 12
4. Monitoring Compliance: 12
5. Supporting References: 13
6. Key Words: 13
Appendix 1: Neonatal algorithm for the management of the TERM infant (term at onset of labour/IOL/SROM) at increased risk for GBS sepsis 15
Appendix 2: Neonatal algorithm for the management of the PRE-TERM <37 weeks gestation infant (pre-term at onset of labour/IOL/SROM) at increased risk for GBS sepsis 16

1. Introduction and who the guideline applies to:

This guideline applies to all clinical healthcare professionals working within the Clinical Management Group of Women's and Children's who may be involved in the antenatal, intrapartum and postpartum care of women and babies at risk of Group B Streptococcus infection. The purpose of this guideline is to provide guidance to prevent early-onset neonatal group B streptococcal (EOGBS) disease.

Background:

Group B Streptococcus (GBS) is a leading cause of neonatal infection in the developed world, resulting in congenital pneumonia, septicaemia, and meningitis. In the U.K., the reported prevalence of early-onset neonatal infection is 0.57 per 1000 births, with a 2-3% mortality rate amongst term babies[1]. Early-onset GBS disease is defined as infection occurring within 7 days of birth, although 90% of cases will occur in the first 24 hours[2]. The overall rate of GBS disease in infants less than 90 days old has decreased from 0.75 to 0.63 per 1,000 live births between 2121-2022; both late (0.25 to 0.24 per 1,000 live births) and early onset infant disease (0.51 to 0.39 per 1,00 live births) fell between 2020 and 2022.

It is estimated that 20-40% of UK women are colonised with GBS and that 36% of babies born to colonised women are themselves colonised, and 3% of colonised babies develop bacteraemia[3, 4, 5]. Most early onset GBS infections (in babies aged 0-6 days) GBS is recognised as the most frequent cause of severe early-onset infection in newborn infants. GBS is present in bowel flora of 20-40% of adults (*colonisation) and those who have this are known as carriers. This includes pregnant women and people. There is a variation in practice cross the UK as to best strategies to prevent EOGBS disease (RCOG 2017)

In pregnant women and people known to be GBS carriers, the risk of early-onset GBS sepsis is highest in those with additional intrapartum clinical risk factors (i.e. preterm delivery, membrane rupture > 18 hours, maternal fever). The risk always remains high in pregnant women and people who have had a previous child affected by GBS sepsis, regardless of swab results in the current pregnancy.

Around 1 in every 1750 newborn babies in the UK and Ireland is diagnosed with early-onset GBS infection. The infection that GBS most commonly causes in newborn babies are sepsis, pneumonia and meningitis. Although GBS infection can make a baby unwell with prompt treatment, most babies will recover fully. However, of the babies who develop early onset GBS infection. 1 in 19 (5.2%) will die and of the survivors 1 in 14 (7.4%) will have long term disabilities.

Appropriate and complete intrapartum antibiotic prophylaxis will prevent more than two-thirds of neonatal GBS sepsis. However, it does not completely eliminate the risk and some cases will still occur.

The principle adverse effect of short-duration antibiotic prophylaxis is allergic reactions. The risk of a severe anaphylactic reaction to penicillin is estimated at 1 in 10,000, and fatal anaphylaxis estimated at 1 in 100,000[5]. Any anaphylactic reaction in the mother carries a high risk of fetal compromise. Much more common are minor allergic reactions such as a rash, which occur in up to 10% of women.

Related documents;

- Antibiotics for Neonatal Infection UHL Neonatal Guideline Trust ref: C54/2019
- Prematurity Prevention for Women at High Risk of Spontaneous Preterm Labour UHL Obstetric Guideline Trust ref: C4/2020
- Antimicrobial Summary UHL Womens Guideline Trust ref: C4/2018

What's new?

- Adequate Antibiotic prophylaxis for the prevention of newborn GBS changed from at least 2 hours before birth to at least 4 hours before birth.
- Updated neonatal management and separated the flow chart to specify term or pre term management.
- No longer recommends waiting for the administration of antibiotic loading dose to enable 2-4 hours' time lapse prior to C/S or ARM.
- Once contractions, or the active phase of labour (the cervix is >3 cms dilated), or the membranes have ruptured, regular antibiotic regime should then be commenced and continue during the course of IOL or labour until the baby/babies are born, irrespective of gestational changes (i.e. becomes term during IOL/labour).
- If in labour or ruptured membranes and requires a Caesarean section, standard intravenous prophylactic antibiotic regime for GBS must be commenced and continue until the birth. There is no need to delay the birth, delivery should proceed with a view to minimising the length of time of ROM and GBS exposure to the unborn baby; however, should there be a delay in delivery that exceeds four hours, then the regular antibiotic regimen should continue.
- In cases of very pre-term rupture of membranes (<24 weeks gestation), administration of oral antibiotics may be considered on an individualised basis, taking into account maternal preference and neonatal plan of care.

2. Management of Group B Streptococcus in Pregnancy and the Newborn

2.1 Screening

Universal Screening for Group B Streptococcus carriage is not currently recommended.

GBS is common commensal within the gastro-intestinal tract and vagina and colonises approximately 20-40% of pregnant women[5].

Genital tract carriage of GBS can be transient, sporadic, intermittent or chronic. Coupled with this, specialised techniques for both taking and processing the swabs are necessary to maximise detection.

For these reasons, investigations for GBS colonisation by non-specific swabs taken randomly throughout pregnancy may miss up to 60% of those colonised at delivery. Swab results may be negative and falsely reassuring.

Re-screening of previously positive pregnant women and people is not currently offered in UHL as all will be offered antibiotic prophylactic treatment in labour.

It is estimated in the UK to prevent 1 neonatal death from early onset GBS disease, 24 000 pregnant women and people would have to be screened, and 7000 treated with intrapartum

antibiotics[5]. There is also concern that widespread use of penicillin may encourage bacterial resistance, and that neonatal antibiotic exposure may affect gut flora.

Although it is recognised that other countries do recommend universal screening in pregnancy[2], and that patient support groups advocate a universal screening policy[6], universal screening in the UK is not currently recommended for the reasons outlined above[5].

Some pregnant women and people may choose to undergo private GBS testing. If found to be colonised, pregnant women and people should be offered intrapartum antibiotics.

2.2 Antenatal 'At risk' identification

All pregnant women and people identified antenatally as "at risk" of neonatal GBS infection should have the appropriate birth plan documented.

Pregnant women and people 'at risk' of neonatal GBS infection are considered as follows:

- A woman with a previous child affected by GBS neonatal sepsis.
- GBS colonisation detected in a previous pregnancy
- GBS carriage demonstrated in this pregnancy, either on genital tract swabs or urine culture

The recurrence of GBS colonisation after GBS was detected in the previous pregnancy is approximately 50%[1]. In view of this, routine antibiotic prophylaxis will be offered to all pregnant women and people who had GBS carriage identified in a previous pregnancy.

The Antenatal Core Midwife will ensure that:

- **A GBS sticker has been placed inside the front cover of the maternity notes of pregnant women and people 'at risk' of GBS to enable them to be easily identified.**
- **A red alert sticker (A) is on the outside of the notes**
- **An alert is generated on the electronic patient record clinical database system.**
- **An intrapartum care plan is completed and filed for this current pregnancy**

Pregnant women and people who require counselling by medical staff should be referred to the General Obstetric antenatal clinic if booking at Leicester Royal Infirmary or a Consultant antenatal clinic if booking at Leicester General Hospital.

2.3 Actions when GBS Colonisaton is identified

If GBS colonisation is identified opportunistically at any stage of a pregnancy, the Antenatal Screening Team will inform the Antenatal Core Midwives.

An automatic report should be generated daily and sent to the Antenatal and Newborn Screening Team to inform them of all people in whom GBS colonisation has been identified, in order that they are managed appropriately.

The Screening Team should then inform the Antenatal Core Midwives of all positive results in women and people who are pregnant or early postnatal.

The screening team and maternity records staff will send GP letters and stickers previous obstetric notes as required for women and people who have not had a recent maternity episode with UHL.

The Antenatal Core Midwives will inform the pregnant woman or person of their result and ensure the appropriate birth plan is documented in all the relevant systems.

If the woman or person is currently pregnant then the Antenatal Core Midwife will put a 'GBS' sticker inside the front cover of the notes, and a red alert sticker on the outside of the notes, prepare an intrapartum care plan, contact the pregnant woman or person by telephone to inform them of the result, and send a patient information leaflet.

If it is not possible for the Antenatal Core midwife to contact the pregnant woman or person to inform them by telephone (at any gestation), a text message stating that we have urgent results that we need to discuss must be sent and it must inform them to ring into AAA/PAS.

Send an urgent message to the community office with the details so that the community midwife can inform the pregnant woman or person of the results – continue to sticker the notes and complete the intrapartum care plan.

- It is not appropriate to write to the pregnant woman or person with these results especially near to Term as the message may not be received prior to the birth.

If the baby has been born and;

- **Is still an in-patient** then the Antenatal Core Midwife / Ward Midwife will inform the paediatricians, counsel the parent/s and provide a patient information leaflet (if available) and put a GBS sticker on the notes for future pregnancies.

OR

- **Has been discharged** then the Antenatal Core Midwife / Ward Midwife will contact the Community Midwife and General Practitioner. They will ensure that the Community Midwife is confident to discuss the result with the parent/s and has a patient information leaflet (if available) to give to them.

2.5 GBS carriage treatment

Pregnant women or people carrying GBS should not routinely be treated antenatally. There is no evidence that antenatal treatment reduces the risk of colonisation at the time of delivery[5].

GBS carriage should only be treated antenatally if GBS bacteriuria is identified on MSU or a pregnant woman or person complains of a symptomatic vaginal discharge for which no other cause can be found.

Asymptomatic GBS bacteriuria indicates heavy Group B Streptococcus genital colonisation. More importantly, asymptomatic bacteriuria with any organism is associated with a significantly higher rate of preterm delivery and premature rupture of membranes.

If GBS is reported as sensitive to penicillin, it can be presumed to be sensitive to amoxicillin and cephalexin. If neither is appropriate, discuss with microbiology or treat as per sensitivities

A repeat midstream specimen of urine should be collected two to four weeks after completion of the course of antibiotics and treatment repeated as necessary.

See UHL Guideline for UTI Management for full details of urinary tract infection management.

N.B. Intrapartum antibiotic prophylaxis and other precautions should still be taken, regardless of any antenatal treatment.

2.6 Care plans for pregnant women and people identified 'at risk'

Pregnant women and people identified antenatally as "at risk" of neonatal GBS infection & offered intravenous antibiotic prophylaxis will need specific intrapartum care plans for each of the following circumstances:

1. Induction of labour
2. Prolonged latent phase of labour
3. Pre-labour rupture of membranes
    - At term
    - Preterm
4. Caesarean section
5. Declining IAP
6. Management in labour

2.7 GBS management in labour

The following pregnant women and people should be considered as 'at risk' of neonatal GBS infection and offered intravenous antibiotic prophylaxis when in active labour:

1. A previous baby affected by neonatal GBS sepsis.
2. GBS carriage has been demonstrated in this pregnancy, either on genital tract swabs or urine culture
3. GBS carriage has been demonstrated in a previous pregnancy, either on genital tract swabs or urine culture
4. Pyrexia in labour (defined as Temperature ≥38°C or two temperatures of 37.5 - 37.9°C one hour apart)
5. Birthing women and people in confirmed preterm labour

It is recommended that birthing women and people considered at risk of neonatal GBS sepsis, as defined above, should receive intrapartum antibiotic treatment[5]. This includes those with a positive result obtained by private GBS testing.

2.7.1 Induction of labour

a) with prostaglandin/foleys balloon

Do not routinely give antibiotics prior to induction with either prostaglandin or foley balloon.

The initial priming dose of intravenous antibiotic (Benzylpenicillin 3g or Cefuroxime 1.5g or Teicoplanin 400mg or 600mg depending on weight - see page 8) should be given once the birthing woman or person begins to experience contractions, or is in the active phase of labour (the cervix is >3 cms dilated), or the membranes have ruptured. The regular antibiotic regime should then be commenced and continue until the baby/babies are born. Once commenced, this regime should be followed during the course of IOL or labour until birth, irrelevant of gestational changes.

b) by ARM

If applicable give the loading dose, or if already administered, commence the regular ongoing doses immediately prior to performing an ARM

Oxytocin should be commenced promptly after ARM.

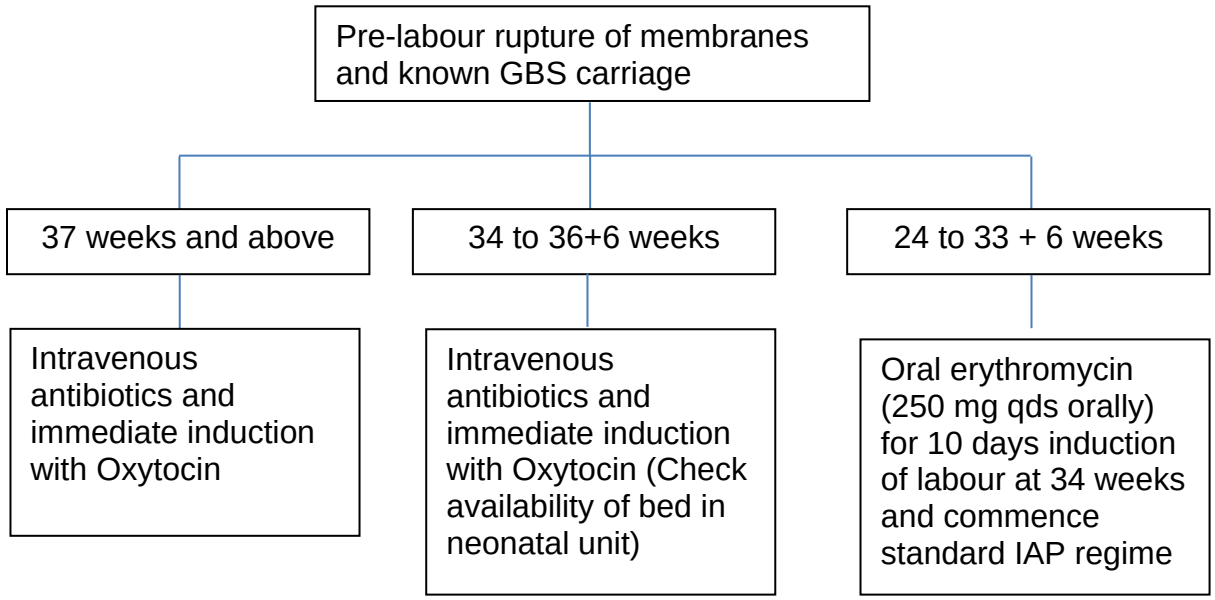
The aim is to shorten the time that the baby remains in utero between ruptured

membranes and delivery, reducing fetal exposure to the GBS organism. Extending this exposure in order to give antibiotics is inappropriate.

2.7.2 Prolonged latent phase of labour

In general, this should be managed as for "induction of labour with Prostaglandin". After an initial loading dose of antibiotic (Benzylpenicillin 3g or cefuroxime 1.5g or teicoplanin 400mg or 600mg depending on weight – see page 8), further doses should be withheld until the pregnant woman or person is either in active labour (cervix ≥ 3 cm dilated), or the membranes have ruptured. Once the membranes rupture, labour should be actively managed. If the interval between the first dose and either the active phase of labour or membrane rupture exceeds 8 hours, the loading dose of Benzylpenicillin (3g) should be repeated. Once commenced, this regime should be followed during the course of IOL or labour until birth, irrelevant of gestational changes.

2.7.3 Pre-labour rupture of membranes



a) At term (37 weeks and above)

The standard prophylactic antibiotic regime should be commenced immediately as for any pregnant woman or person considered to be at risk of neonatal GBS infection

Benzylpenicillin 3g IV stat, followed by 1.5g IV 4 hourly

Or ***(if non-severe allergy to penicillin)***

Cefuroxime 1.5g IV stat, followed by 750mg IV 8 hourly

Or ***(if severe penicillin allergy) This should be confirmed by taking comprehensive history***

Teicoplanin STAT

(400mg if <100kg booking weight, 600mg if ≥100kg booking weight)

(Repeat dosing is required after 12 hours if labour continues)

Prompt induction with oxytocin (as opposed to induction with Prostin or expectant management) is recommended, as it appears to significantly lower the risk of neonatal infection[9]. Propess/prostin should not be given.

b) Pre-term (34+0 – 36+6 weeks)

If confirmed GBS carriage in the current or previous pregnancies, these pregnant women and people should be offered immediate induction of labour with intrapartum antibiotic prophylaxis (please follow section 2.7.1 IOL).

If they are not known to carry GBS, then they should be managed conservatively with a plan made regarding timing of delivery.

c) Pre-term (24+0 – 33+6 weeks)

There is no evidence regarding the use of routine intravenous antibiotics in pPROM in GBS colonised women, and the practice is not routine[4]. However women with pPROM may undergo precipitate labour, and preterm neonates are at increased risk of early onset GBS sepsis.

Pregnant women and people who have preterm pre-labour rupture of membranes between 24 and 33 weeks gestation and no clinical evidence of chorioamnionitis should be treated with oral erythromycin (250 mg qds orally) for 10 days. This has been shown to improve neonatal outcome[10] and is also active against GBS. If steroids have not previously been administered, two doses of dexamethasone (12mg intramuscularly) should also be given 12 hours apart. If unable to take erythromycin, 10 days of oral amoxicillin 500mg TDS should be prescribed[1].

When the pregnant woman or person subsequently labours, the standard intravenous prophylactic antibiotic regime for GBS should be commenced.

In cases of very pre-term rupture of membranes (<24 weeks gestation), administration of oral antibiotics should be considered on an individualised basis, taking into account maternal preference and neonatal plan of care.

2.7.4 GBS prophylaxis in pre-term labour

The incidence of EOGBS is significantly higher in babies born after spontaneous preterm labour compared to term (2.3/1000 preterm births), and has a 20-30% mortality rate in preterm babies. Intrapartum antibiotic prophylaxis is recommended for the following;

- All birthing women and people in **confirmed preterm labour** (22 – 36+6 weeks) regardless of GBS carriage status, whether with intact membranes or following PPROM, must be offered intrapartum antibiotic prophylaxis and if accepted must be administered as soon as possible and administration must continue until birth.
- Birthing women and people undergoing **induction of labour at <37 weeks** for any indication should receive intrapartum antibiotic prophylaxis;
  -Prior to induction being commenced if PPROM
  -Prior to ARM if intact membranes at start of IOL and administration must continue until birth

2.7.5 Women with low grade pyrexia in labour

Women who are not known to carry GBS, but have intrapartum pyrexia (defined as one temperature ≥38°C or two temperatures of 37.5 - 37.9°C one hour apart) have a risk of EOGBS disease of 5.3/1000 (versus a background risk of 0.5/1000) [12, 13] and should receive antibiotics in labour. Please see 'pyrexia in labour guideline' for full details of recommended management.

Antibiotic treatment should be continued until delivery unless the diagnosis of active labour is subsequently refuted. This treatment should be used for women who have two temperatures of 37.5°C – 37.9°C one hour apart.
For maximum benefit, at least one dose of intravenous antibiotics should have been given at least 4 hours prior to delivery[5]

If chorioamnionitis is suspected clinically or intra-partum pyrexia (defined as Temperature ≥38°C), then the above regimen should be **replaced** by broad spectrum antibiotic cover as per Pyrexia and Sepsis in Labour UHL Obstetric Guideline.

2.7.6 Declining IAP

Pregnant women and people with known GBS colonisation who decline IAP should be advised that the baby should be very closely monitored for 12 hours after birth, and discouraged from seeking very early discharge from the maternity hospital. Please refer to the Supporting Birth Outside of Trust Guidance in Low Risk Midwifery Birth Settings UHL Obstetrics Guideline for GBS care plan template.

2.7.7 Caesarean section birth

All birthing women and people undergoing pre-labour Caesarean section with ruptured membranes must be offered GBS antibiotic prophylaxis (Benzylpenicillin 3g IV or alternative if allergic as per this guideline) on admission additional to the maternal antibiotics routinely administered pre-operatively at induction of anaesthetic (please refer to Surgical Procedure Prophylaxis (microguide.global)

N.B **Women who are being delivered by planned pre-labour Caesarean section with intact membranes do not require GBS prophylaxis at any gestation**.

2.8 Management in labour

Women and birthing people in labour or with ruptured membranes requiring a Caesarean section should receive the standard intravenous prophylactic antibiotic regime for GBS. There is no need to delay delivery, and this should proceed with a view to minimising the length of time of ROM and GBS exposure; however, should there be a delay in delivery that exceeds four hours, then the regular antibiotic regime should continue.

Antibiotic regime

Prophylaxis should be commenced once a woman is diagnosed as being in the active phase of labour using either:

Benzylpenicillin 3g IV stat, followed by 1.5g IV 4 hourly

Or **(if non-severe allergy to penicillin – see text below)**

Cefuroxime 1.5g IV stat, followed by 750mg IV 8 hourly

Or **(if SEVERE penicillin allergy**) Confirm by taking comprehensive history

Teicoplanin STAT
(400mg if <100kg booking weight, 600mg if ≥100kg booking weight)
(Repeat dosing is required after 12 hours if labour continues)

Clindamycin is no longer the antibiotic of choice for those people with a penicillin allergy, due to high levels of resistance of GBS in the UK (16%)[5]. The choice between cefuroxime or teicoplanin in penicillin allergic women rests on the severity of the penicillin allergy, with teicoplanin preferable in women with severe allergy (e.g. anaphylaxis, angioedema, respiratory distress or urticaria)[5].

- Fetal monitoring. There is no evidence regarding the need for continuous fetal monitoring in women at risk of GBS. For women who are known to be colonised with GBS, but have no additional risk factors (e.g. prematurity, pyrexia) and have no additional indications for continuous fetal monitoring, intermittent fetal auscultation is appropriate.

- Water birth. The evidence suggests that water birth is not contraindicated in women requiring GBS antibiotic prophylaxis[1]. The need for an intravenous cannula which should be kept clean and dry may be considered to preclude a water birth.

- Home birth. There is currently no facility for community midwives to offer intrapartum antibiotic prophylaxis for GBS (need for cannulation, administration of intravenous antibiotics, facilities for treatment of adverse drug reactions/anaphylaxis). Alternative drug regimens have unproven efficacy with regard to prevention of neonatal GBS sepsis. If women at risk of GBS wish to have a home birth they should be informed of these facts. They may choose to have a homebirth without antibiotic prophylaxis, and should be offered in writing the risks of neonatal GBS sepsis and additional risk factors that may be identified as outlined in the background to this guideline.

2.9 Neonatal management

All babies born to women identified as “at risk” of neonatal GBS infection need to be assessed by the paediatrician immediately after birth (NICE 2024) and assessed through NEWTT2 chart. The exception to this is of clinically well term babies born to GBS colonised women with no additional risk factors (e.g. pyrexia), who have received intrapartum antibiotics at least 4 hours prior to birth. Please refer to the Antibiotics for Neonatal Infection UHL Neonatal Guideline Trust ref: C54/2019.

Pregnant women and people with known GBS colonisation who have not received IAP at least 4 hours prior to birth should be advised that the baby should be very closely monitored for 12 hours after birth and discouraged from seeking very early discharge from the maternity hospital.

If maternal colonisation with GBS is only recognised after delivery, the management should depend on the age of the baby and any additional risk factors present.

Occasionally a genital tract swab or MSU taken antenatally or during labour will be subsequently

reported postnatally indicating maternal GBS colonisation. Management of the baby should depend on the age of the baby and any additional risk factors present.

Baby less than 48 hours old

Still in hospital
Inform ward and mother. Review of baby by paediatrician to be undertaken and documented.

Baby at home
Review the paediatric algorithm (appendix 1). If the algorithm suggests no active treatment or observation only, then the community midwife and GP should be informed to advise the mother and undertake review of the baby. This should be clearly documented in the health care record.

If the paediatric algorithm suggests that a septic screen or antibiotic treatment is required then the baby should be readmitted to the postnatal ward as follows:

Inform neonatal SHO
Inform postnatal ward of readmission
Inform parents/community midwife of need for readmission

The paediatrician should review the baby upon its readmission and follow the paediatric algorithm. Findings and relevant management plans should be documented in the health care record and communicated to the parents and relevant health care professionals.

If you have any doubt regarding the correct management of a baby in these circumstances when you review the paediatric algorithm, please discuss with the neonatal SHO for advice.

Baby more than 48 hours old

Still in hospital
Inform ward and mother. Review of baby by paediatrician to be undertaken. This should be documented in the health care record.

Baby at home
The community midwife and GP should be informed to advise the mother and undertake review of the baby. The communication to relevant health care professionals should be documented in the health care record.

All of the above advice relates to clinically well babies. Unwell babies should receive urgent medical attention regardless of age, risk factors, and whether or not they are still in hospital.

Maternal Issues
Some of these microbiological specimens will have been taken postnatally because of clinical suspicion of infection. Both the woman and her community healthcare staff (GP, Community Midwife, etc) need to be informed due to the risk of endometritis, as well as the implications for subsequent pregnancies.

Treatment should only be recommended if accompanied by symptoms of endometritis and should

be as per the UHL antimicrobial guideline.

2.10 Parental advice

Women identified as 'at risk' of neonatal GBS infection should be advised of the signs of neonatal GBS infection prior to discharge home with their baby.

There are two types of neonatal GBS infection:

Early onset 90% of early onset neonatal GBS infection will occur in the first 24 hours[5]. Typical signs include grunting, lethargy, irritability, reluctance to feed, rapid/slow heart rate, low blood pressure, high/low temperature, rapid/slow breathing and cyanosis.

Late onset, this usually develops between 6 days and 1 month of age, but may occur up to 3 months of age. It often presents as meningitis. Approximately 50% of cases of late onset GBS are believed to be acquired perinatally, the remainder being acquired in the community[11].

Intrapartum antibiotic prophylaxis reduces the risk of early onset neonatal GBS infection by 80%[5]. There is no preventative treatment for late onset disease.
Women identified as 'at risk' of neonatal GBS infection should be advised of the signs of neonatal GBS infection and given a patient information leaflet prior to discharge home with their baby. Hand washing prior to handling a newborn baby is recommended for all newborn babies, not only those born to mothers colonised with GBS.

3. Education and Training:

None

4. Monitoring Compliance:

Babies <37 weeks

- Baby was assessed to determine whether NNU admission required
- Maternal antibiotic treatment given appropriately
- Baby had appropriate measures where antibiotics given
- Baby had appropriate measures where antibiotics NOT given

Babies ≥ 37 weeks

- Baby was assessed to determine whether NNU admission required
- Maternal antibiotic treatment given appropriately
- Baby had appropriate measures where antibiotics given
- Where antibiotics not given, risk factor assessment took place
- Baby had appropriate measures where antibiotics NOT given and additional risk factors present

5. Supporting References:

1. Heath PT, Balfour G, Weisner AM et al. Group B Streptococcal disease in UK and Irish infants younger than 90 days. Lancet 2004; 363: 292-4.
2. Royal College of Obstetricians and Gynaecologists and London School of Hygiene and Tropical Medicine. The prevention of early-onset neonatal Group B Streptococcal disease in UK obstetric units. An Audit of reported practice in England, Scotland, Wales and Northern Ireland. 2007.
3. Colbourn T, Gilbert R. An overview of the natural history of early onset group B streptococcal disease in the UK. Early Human Dev 2007; 83; 149-56.
4. Jones N, Oliver K, Jones Y, Haines A, Crook D. Carriage of group B streptococcus in pregnant women fro Oxford, UK. J Clin Path 2006; 59: 363-66.
5. Royal College of Obstetricians and Gynaecologists. Prevention of early onset neonatal Group B Streptococcal disease. Green Top Guideline, 2017.
6. http://www.gbss.org.uk/
7. Cheng P-J, Cheuh H-Y, Liu C-M et al. Risk factors for recurrence of group B streptococcus colonization in a subsequent pregnancy. Obstet Gynecol 2008; 111: 704-9.
8. Larsen JW, Sever JL. Group B Streptococcus and pregnancy: a review. Am J Obstet Gynecol 2008; 198: 440-50.
9. Hannah M, Ohlsson A, Wang E et al. Maternal Colonisation with Group B Streptococcus and pre labour rupture of membranes at term: the role of induction of labour. Am J Obstet Gynecol 1997; 177: 780-785.
10. Kenyon SL, Taylor DJ, Tarnow-Mordi W; ORACLE Collaborative Group. Broad-spectrum antibiotics for preterm, prelabour rupture of the membranes: the ORACLE I randomised trial. Lancet 2001; 357: 979-988.
11. Heath PT, Schuchat. Perinatal group B streptococcal disease. Best Pract Res Clin Obstet Gynaecol 2007; 21: 411-24.
12. Heath PT, Balfour G, Weisner AM, et al.; PHLS Group B Streptococcus Working Group. Group B streptococcal disease in UK and Irish infants younger than 90 days. Lancet 2004;363:292–4.
13. Oddie S, Embleton ND. Risk factors for early onset neonatal group B streptococcal sepsis: case–control study. BMJ 2002;325:308
14. Laboratory surveillance of pyogenic and non pyogenic streptococcal bacterium in England ; 2022 update health protection report volume 17 number 14 21/11/2023
15. NICE NG 195 March 2024 https://www.nice.org.uk/guidance/ng195/neonatal-infection-antibiotics-for-prevention-and-treatment-pdf

6. Key Words:

GBS, Group B Streptococcus Infection, Pregnancy, Carrier

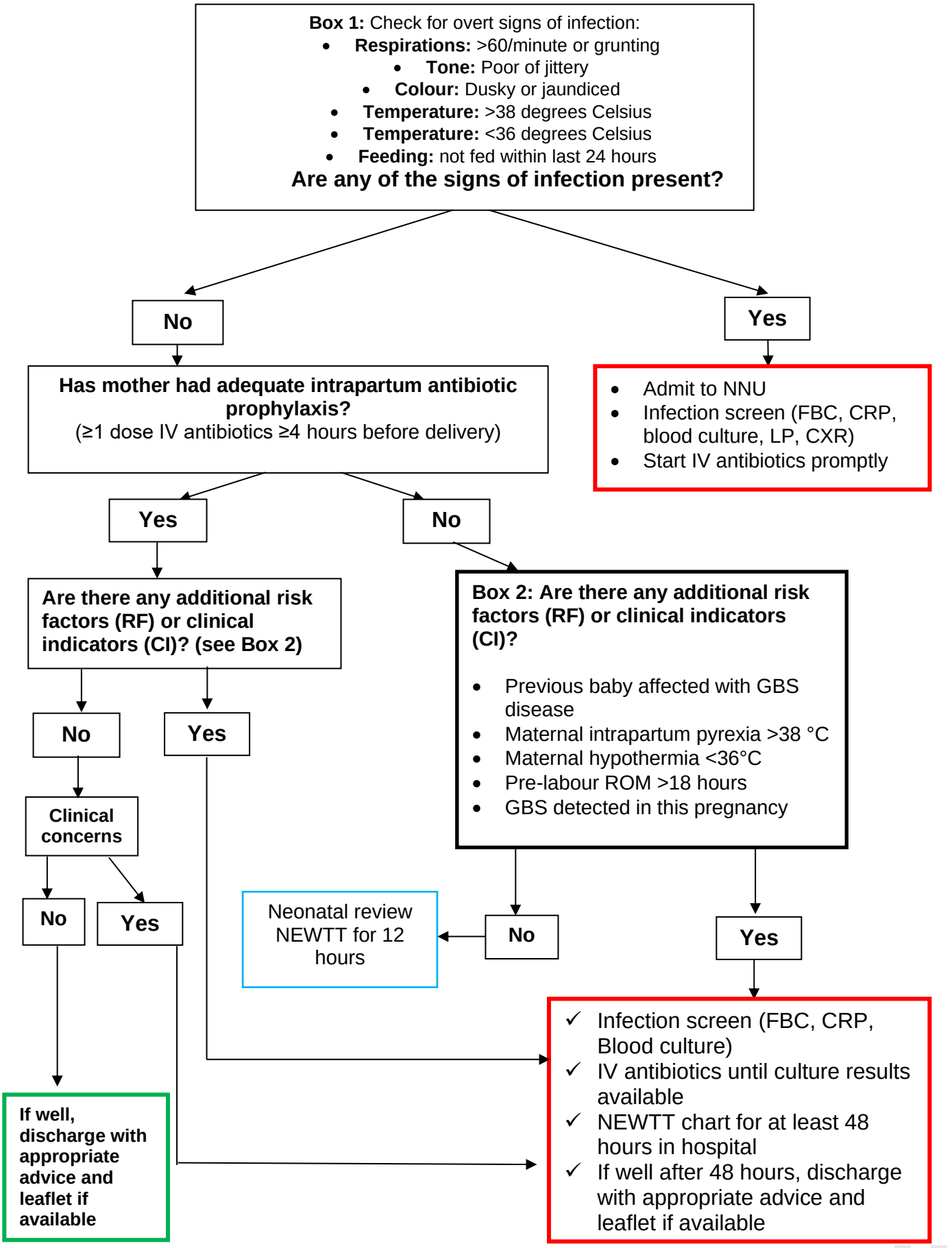
The Trust recognises the diversity of the local community it serves. Our aim therefore is to provide a safe environment free from discrimination and treat all individuals fairly with dignity and appropriately according to their needs.
As part of its development, this policy and its impact on equality have been reviewed and no detriment was identified.

Sept 2000	**Guideline originally written by P McParland, Consultant Obstetrician**
August 2008	**Review by P McParland, Consultant Obstetrician and E Boyle, Consultant Neonatologist**
Sept 2011	**Review by E Boyle, Consultant Neonatologist**
Nov 2014	**Review by Y Jeve, C. Roy**

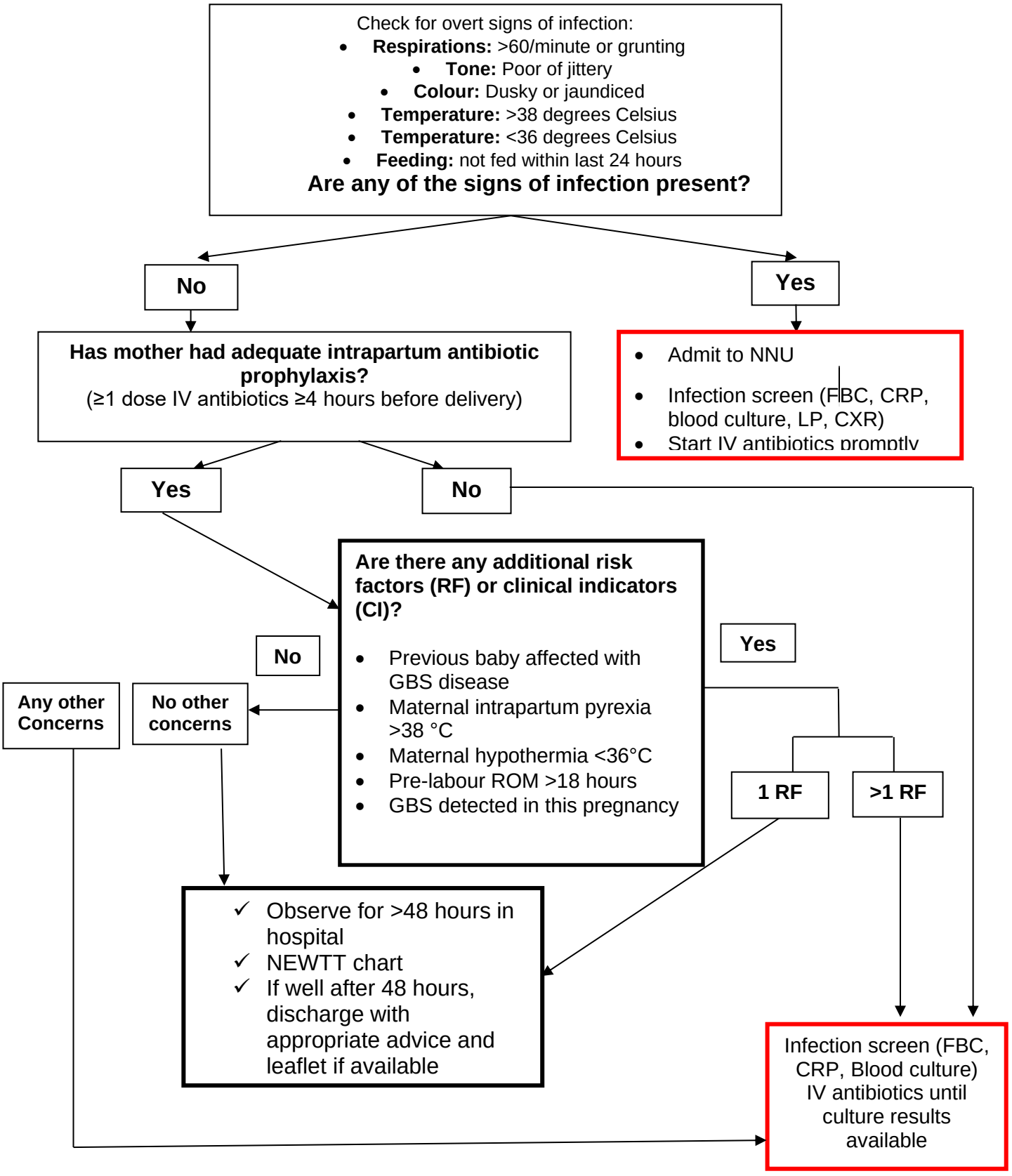
DEVELOPMENT AND APPROVAL RECORD FOR THIS DOCUMENT

Guideline lead: P McParland - Consultant Obstetrician			Executive lead; Chief Medical Officer
Date	**Issue Number**	**Reviewed By**	**Description Of Changes (If Any)**
Feb 2017	V3	N Ling, Consultant Obstetrician	Updated to fit with new Pyrexia in Labour guideline
November 2019	V4	P McParland and L Matthews	Algorithm made clearer . GBS prophylaxis in preterm labour updated. History taking re penicillin allergy strengthened
June 2021	V4.1	H Ulyett	Added actions to take if unable to contact a woman with positive result, especially if found towards end of pregnancy.
March 2023	V5	P McParland V Kairamkonda	Updated neonatal algorithm to incorporate NICE https://www.nice.org.uk/guidance/ng195/chapter/Recommendations
April - September 2024	V6	Neonatal guidelines group: April 2024 Neonatal Governance group: April 2025 G Twist – Specialist midwife Maternity guidelines group	Updated neonatal management Background - Updated Newborn GBS infections data 2.1 Screening - Added statement regarding re-screening previously positive people 2.7 Care plans for pregnant women and people identified as 'at risk' – Antibiotic prophylaxis, adequate cover changed from at least 2 hours before birth to at least 4 hours before birth. 2.7.1 Once the birthing woman or person begins to experience contractions, or is in the active phase of labour (the cervix is >3 cms dilated), or the membranes have ruptured. The regular antibiotic regime should then be commenced and continue until the baby/babies are born. Once commenced, this regimen should be followed during the course of IOL or labour until birth, irrelevant of gestational changes. 2.8 Women and birthing people in labour or with ruptured membranes requiring a Caesarean section should receive the standard intravenous prophylactic antibiotic regime for GBS. There is no need to delay delivery, and this should proceed with a view to minimising the length of time of ROM and GBS exposure; however, should there be a delay in delivery that exceeds four hours, then the regular antibiotic regime should continue. Clarified oral ABX to be commenced if pre-term SROM and unable to take erythromycin, oral amoxicillin 500mg TDS should be prescribed If GBS carriage is detected AN, added statement - If GBS is reported as sensitive to penicillin, it can be presumed to be sensitive to amoxicillin and cephalexin. If neither is appropriate, discuss with microbiology or treat as per sensitivities Sign post to the Surgical Procedure Prophylaxis (microguide.global) in cases of caesarean section for routine ABX prophylaxis at induction of anaesthetic.

Appendix 1: Neonatal algorithm for the management of the TERM infant (term at onset of labour/IOL/SROM) at increased risk for GBS sepsis (please also refer to Antibiotics for Neonatal Infection UHL Neonatal Guideline for risk factors



Appendix 2: Neonatal algorithm for the management of the PRE-TERM <37 weeks gestation infant (pre-term at onset of labour/IOL/SROM) at increased risk for GBS sepsis (please also refer to Antibiotics for Neonatal Infection UHL Neonatal Guideline for risk factors



Title: Group B Streptococcus management in pregnancy and the newborn
V: 6 Approved by: UHL Women's Quality & Safety Board & UHL AWP: October 2024 Next Review: October 2025
Trust Ref No: C97/2008