Royal Hospital for Women (RHW)
BUSINESS RULE
COVER SHEET

Health
South Eastern Sydney
Local Health District

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NAME OF DOCUMENT	**Group B Streptococcus (GBS) Screening and Prophylaxis**
TYPE OF DOCUMENT	Clinical Business Rule
DOCUMENT NUMBER	RHW CLIN129
DATE OF PUBLICATION	14/4/2025
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FORMER REFERENCE(S)	Local Operating Procedure – Clinical Group B Streptococcus (GBS) Screening and Prophylaxis
EXECUTIVE SPONSOR	Maternity Service Clinical Co-Directors
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SUMMARY	Approximately 20% of women are asymptomatic carriers of GBS, a bacteria that is naturally occurring in the vagina, urethra and bowel. Either universal ‘antenatal culture-based’ screening or ‘risk-based’ screening are widely accepted. RHW recommends universal antenatal screening around 36 weeks gestation.
Key Words	Group B Streptococcus, GBS, screening, prophylaxis, EOGBS

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Within this document we will use the term woman, this is not to exclude those who give birth and do not identify as female. It is crucial to use the preferred language and terminology as described and guided by each individual person when providing care.

1 BACKGROUND

Group B Streptococcus (GBS) is a naturally occurring bacteria in the vagina, urethra and bowel in some women. Approximately 20% of women are asymptomatic carriers of GBS at any given time. During labour and birth there is a small chance that this bacterium can be passed to the neonate. International consensus has not been reached on the best approach to the prevention of neonatal early onset Group B streptococcus (EOGBS) sepsis, with either universal 'antenatal culture-based' screening or 'risk-based' screening widely accepted. RHW recommends universal 'antenatal culture-based' screening at 36 weeks gestation.

The aim of this CBR is to prevent EOGBS (0-6 days of age) sepsis in the neonate (NOTE: >7 days is classed as late-onset GBS (LOGBS))

2 RESPONSIBILITIES

2.1 Medical Staff: Provision of information regarding GBS and recommendation for screening, explanation of collection and prescribing of antibiotics in labour

2.2 **Midwifery Staff:** Provision of information regarding GBS and recommendation for screening, explanation of collection

3 PROCEDURE

3.1 Clinical Practice

Communication and Care Provision

Woman-centred care should underpin all interactions with the woman to ensure that her social, emotional, physical, psychological, spiritual and cultural needs and expectations are met.

Ensure that all care providers hold a culture of respect for each woman as an individual undergoing a significant and emotionally intense life experience, so that the woman is in control, is listened to and is cared for with compassion.

Detection and Screening

- Discuss GBS, screening, outcomes and potential use of antibiotics for positive results with the woman in antenatal clinic before 36 weeks gestation (see educational notes)
- Provide woman the Group B Streptococcus Factsheet
- Recommend combined LVS and perianal swab to screen for GBS:
    - Between 35-37 weeks gestation
    - With preterm pre-labour ruptured membranes[2]
    - With preterm labour
- Document discussion including provided evidence, risk and benefits and the woman's preferences
- Recommend treating GBS bacteriuria/urinary tract infection (UTI) with antibiotics at time of diagnosis and provide evidence regarding high likelihood of positive PCR test at term (70% predictive of positive result) therefore are not recommended to screen[12]
- Recommend women who have previously had an infant with EOGBS or late onset GBS (not simply colonisation) be treated as GBS positive and are not recommended to screen
- Perform Lower Vaginal Swab (LVS) (by the woman or by clinician) by inserting swab 2cm into vagina, followed by perianal swab if woman consents
    - Do not touch cotton end with fingers
    - Ensure cap fits firmly and make sure swab is correctly labelled
    - Ensure sensitivity testing for woman with penicillin allergy is clearly requested on pathology form
- Confirm and document the GBS status next antenatal visit in medical record and on antenatal card and discuss recommended management. Risks and benefits of Intrapartum Antibiotics Prophylaxis (IAP) should be discussed prior to labour if a woman is screened and found to be GBS positive

Intrapartum

- Recommend management of Prelabour rupture of membranes at term, considering the GBS carriage of a woman as per RHW CBR- Rupture of Membranes- Prelabour at term- Assessment and Management (appendix.1)
- Recommend IAP for a woman who has:
    - Consented to IAP
    - Positive GBS vaginal/perianal screening culture within 5-6 weeks of labour, including woman with planned caesarean if labour has commenced and/or rupture of membranes (ROM)
    - GBS bacteriuria/UTI during any trimester of the current pregnancy
    - Previous GBS infected neonate
- Administer IAP, ideally starting ≥4 hours prior to birth, until birth as per Quick reference guide to finding Antimicrobials on eTG

- Recommend IAP commence prior to Artificial Rupture of Membranes (ARM) or once in established labour (whichever comes first) for woman who are GBS positive and having an induction of labour
- Inform women that IAP is not recommended for a woman:
    - with a negative GBS result within 5 weeks of birth
    - Having an elective caesarean section in the absence of ROM or labour. Usual antibiotic prophylaxis for caesarean section is recommended
    - with a history of GBS colonisation in a previous pregnancy but who has screened negative in this pregnancy
- Consider risk factors for EOGBS and discuss with woman if GBS negative/unknown and clinical picture changes (see education notes)

Follow up for Neonate

- Refer to Group B Streptococcus (GBS) – Monitoring and Management of the Neonate Documentation

3.2 Documentation

- Antenatal card
- Medical record
- Medication Administration Record

3.3 Education Notes

- International consensus has not been reached due to the limited high-level evidence on the best approach to screening and prevention of neonatal EOGBS[3,10]
- GBS carriage is thought to fluctuate over time, and culture results have been shown to be less predictive of carrier status if more than 5 weeks have elapsed since sample collection. A GBS screen is therefore considered valid for approximately 5 weeks and is recommended to be repeated if >5-week interval[2,3]
- Vaginal-rectal swabbing increases the number of GBS positive women detected compared to vaginal swabbing alone. However, research indicates that the detection rate is not significantly different between vaginal-perianal and vaginal rectal, whilst vaginal-perianal has been shown to cause less discomfort to a woman[3]
- Known GBS bacteriuria/urinary tract infection (UTI) during current pregnancy is treated as GBS bacteriuria and is commonly associated with heavy genital tract colonisation[1]
- EOGBS sepsis is a significant cause of perinatal morbidity and mortality with an incidence of 1:2000 births and a mortality rate of 4-6%[3]
- Preterm neonates are four times more likely to develop EOGBS sepsis than term neonates[1]
- If untreated, 0.4% (1:250) of neonates birthed to women known to be GBS positive will develop neonatal sepsis [2]

- Clinical risk factors for EOGBS sepsis include: [3,6]
  - Previous neonate with EOGBS sepsis
  - GBS bacteriuria/UTI during the current pregnancy
  - Positive maternal culture for GBS in current pregnancy
  - Clinical diagnosis chorioamnionitis
  - Other twin with current EOGBS
  - An unknown maternal culture result or no screening in pregnancy AND any of the following present-
    - Preterm labour ≤37 weeks
    - Ruptured membranes ≥18 hours
    - Maternal fever ≥38 degrees during labour
- IAP reduces GBS colonisation by 80%, minimising EOGBS sepsis. In Australia, IAP has led to a decline in the incidence of EOGBS sepsis in the past decade. The incidence of late onset GBS sepsis (7-89 days after birth) remains unchanged[2]
- Adequate IAP is defined as antibiotics > 4 hours prior to delivery [3]
- Resistance to penicillin is rarely seen. Local data suggests up to 12% of GBS is resistant to clindamycin, and 13% resistant to erythromycin [2,4]
- The efficacy of penicillin administered intrapartum for the prevention of EOGBS sepsis was demonstrated in clinical trials. Penicillin has a narrower spectrum of antimicrobial activity and therefore might be less likely to select for resistant organisms. The dosage of penicillin used for intrapartum GBS prophylaxis is aimed at achieving adequate levels in the fetal circulation and amniotic fluid rapidly while avoiding potentially neurotoxic serum levels in the mother or fetus[4]
- Penicillin administered to a woman with no history of β-lactam allergy has a risk of anaphylaxis of 4/10,000 to 4/100,000. Mortality is rare in a fully medically staffed hospital setting[2]. Any morbidity associated with anaphylaxis is greatly offset by reduction in incidence of neonatal and maternal sepsis[4]. Refer to eTG for antimicrobial choice.
- The efficacy of alternatives to penicillin that have been used to prevent EOGBS sepsis among neonates born to penicillin-allergic women (including cefazolin, clindamycin, and vancomycin) has not been measured in controlled trials. Cefazolin has a relatively narrow spectrum of activity, similar pharmacokinetics and dynamics to penicillin, and achieves high intra-amniotic concentrations. In contrast, data on the ability of clindamycin, erythromycin and vancomycin to reach bactericidal levels in the fetal circulation and amniotic fluid are limited. Available data suggest that erythromycin and clindamycin provided to pregnant women do not reach fetal tissues reliably [4]
- If the woman has clinical chorioamnionitis, sepsis or fever in labour when GBS is known to be negative, appropriate work-up and treatment should be instigated as per Sepsis in Pregnancy and Postpartum CBR

- There is limited evidence suggesting potential benefits of probiotics (lactobacilli) in third trimester to reduce incidence of GBS at birth (whether choosing to screen or not)[11]
- Other strategies to reduce maternal colonization and vertical transmission have been studied, including intramuscular intrapartum antibiotic prophylaxis, antenatal (oral or intramuscular) antibiotics, and chlorhexidine vaginal wipes or douches; none of these have proven to be as effective as intrapartum IV penicillin in preventing EOGBS sepsis [3,7,8]
- 17-25% of women who screen positive between 35-37 weeks will be GBS negative at the time of their labour and birth[6]
- 5-7% of women who screened negative between 35-37 weeks will be GBS positive at the time of their labour and birth[6]
- Of babies born to GBS colonised women, 30-50% become colonised with GBS at birth However, without prophylactic interventions such as IAP, the incidence of EOGBS is estimated between 0.4 - 4 per 1000 births[2, 14]
- Approximately 60% of confirmed cases of neonatal EOGBS sepsis occur among neonates born to women who tested negative for GBS culture at 35-37 weeks gestation[13]

3.4 Related Policies/procedures

- Group B Streptococcus Infection - Monitoring and Management of a Neonate
- Rupture of Membranes (PPROM)- Preterm Prelabour- Assessment and Management
- Rupture of Membranes- Prelabour at term- Assessment and Management
- Sepsis in Pregnancy and Postpartum
- Management if Threatened Preterm Labour – GL2022_006
- Maternity - Maternal Group B Streptococcus (GBS) and minimisation of neonatal early-onset GBS sepsis. GL2017_002 NSW Ministry of Health

3.5 References

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4 ABORIGINAL HEALTH IMPACT STATEMENT DOCUMENTATION

- Considerations for culturally safe and appropriate care provision have been made in the development of this Business Rule and will be accounted for in its implementation.
- When clinical risks are identified for an Aboriginal and/or Torres Strait Islander woman or family, they may require additional supports. This may include Aboriginal

health professionals such as Aboriginal Liaison Officers, health workers or other culturally specific services

5 CULTURAL SUPPORT

- For a Culturally and Linguistically Diverse CALD woman, notify the nominated cross-cultural health worker during Monday to Friday business hours
- If the woman is from a non-English speaking background, call the interpreter service: NSW Ministry of Health Policy Directive PD2017_044-Interpreters Standard Procedures for Working with Health Care Interpreters.

6 NATIONAL STANDARDS

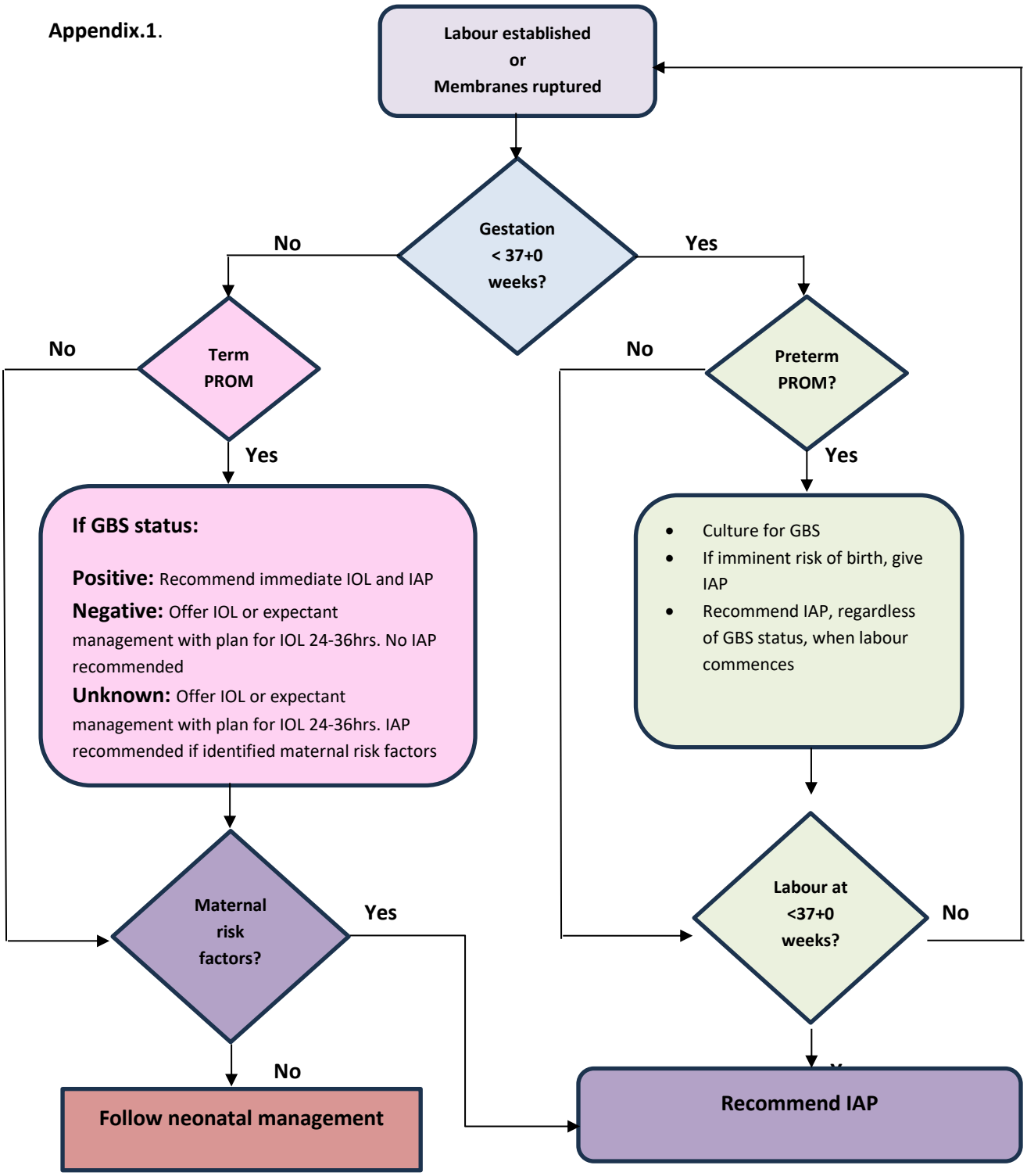
- Standard 1 – Clinical Governance
- Standard 2 – Partnering with consumers
- Standard 3 – Preventing and Controlling Infections
- Standard 4 – Medication Safety
- Standard 5 – Comprehensive Care
- Standard 6 – Communicating for Safety
- Standard 8 – Recognising and Responding to Acute Deterioration

7 REVISION AND APPROVAL HISTORY

Date	Revision No.	Author and Approval
16/05/2005		Approved Quality Council 16/5/05
19/05/2005		Maternity Services Clinical Committee
18/06/2013		Reviewed and endorsed Maternity Services LOPs group Previous title Group B Streptococcus: Guideline for Intrapartum Management
20/06/2013		Approved Quality & Patient Safety Committee
August 2014		Addition to educational notes
14/02/2017		Reviewed and endorsed Maternity Services LOPs group

July 2017		Amendment following new MoH Policy Directive
16/03/2017		Approved Quality & Patient Care Committee
2/02/2020		Reviewed and endorsed Maternity Services LOPs group
18/06/2020		Approved Quality & Patient Safety Committee
December 2024	V6	Reviewed and endorsed Maternity Services CBR Committee. Update to template. Inclusion of care of GBS negative and unknown women with prolonged rupture of membranes.
31/03/2025	V6	BRGC

Appendix.1.



Maternal risk factors for EOGBSD

- GBS colonisation in current pregnancy
- GBS bacteriuria in current pregnancy
- Preterm labour (< 37+0)
- Previous baby with EOGBS
- ROM > 18 hours
- Intrapartum temperature ≥ 38 degrees (not attributed to neuraxial analgesia)