



<p>Team Name: Regional Perinatal</p> <p>Team Lead: Regional Director Public Health-Healthy Living and Director of Health Services - Portage District General Hospital</p> <p>Approved by: Executive Director - North</p>	<p>Reference Number: CLI.5810.SG.005</p> <p>Program Area: Obstetrics</p> <p>Policy Section: General</p>
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STANDARD GUIDELINE SUBJECT:

Group B Streptococcus (GBS) in Mothers and Infants

PURPOSE:

The purpose of this guideline is to reduce the risk of perinatal transmission of GBS and reduce infection to the fetus in utero and infection in the newborn infant and to reduce infant morbidity and mortality related to perinatal sepsis from all causes. This will be accomplished by the following:

- Identify and manage mothers at risk of Group B Streptococcus (GBS) infection according to the standards set by the Society of Obstetricians and Gynaecologists of Canada.
- Provide appropriate chemoprophylaxis to women with perinatal risk factors for GBS infection.
- Identify and manage infants at risk of GBS infection according to the standards set by the Canadian Paediatric Society.
- Observe and manage all newborn infants with risk factors with perinatal sepsis.
- Provide chemoprophylaxis for infants with risk factors for or signs and symptoms of infection.

DEFINITIONS:

PROM – Pre-Labour Rupture of Membranes

Prolonged Rupture of Membranes – Ruptured membranes greater than 18 hours

PROCEDURE:

Intrapartum Management:

- Intrapartum maternal chemoprophylaxis is the best strategy available currently to prevent early-onset GBS disease.
- Provide maternal intrapartum antibiotic prophylaxis (IAP) for women meeting **ANY** of the following criteria:
 - GBS maternal cultures are positive within 5 weeks of delivery
 - GBS maternal bacteriuria diagnosed at any time in the pregnancy
 - The woman had a previous neonate with GBS sepsis
 - GBS culture is unknown with an additional risk factor (maternal temperature greater than 38°C, prolonged rupture of membranes, less than 37 weeks gestational age)

- Women with a negative GBS culture obtained greater than 5 weeks prior to delivery are considered unknown
- Prior to administering antibiotics to the mother during labour, a combined maternal vaginal/anorectal culture for GBS must be obtained regardless of the gestational age unless a positive culture has previously been obtained.
- Provide maternal IAP according to the following guidelines:
 - Choice of Antibiotic: see Supporting Documents
 - IAP is administered throughout the course of labour until delivery (or until labour ceases).
 - Antibiotic of choice for GBS is Penicillin G since it has a narrow spectrum and therefore is less likely to lead to the development of antibiotic resistant organisms.
 - Mothers with intrapartum fever, especially in the context of prolonged rupture should be treated for chorioamnionitis and receive a broader spectrum antibiotic such as Ampicillin or a cephalosporin regardless of GBS status.
 - Isolated prolonged rupture of membranes in a GBS negative mother does not require IAP.
 - Labour that ceases (no delivery)
 - *With intact membranes* – discontinue antibiotics. Retreat any patient who is diagnosed as GBS positive when labour starts in spite of previous antibiotic treatment.
 - *With ruptured membranes* – continuation and choice of antibiotics is at the discretion of the health care provider.
 - If treatment is continued, it should include coverage for GBS with Amoxicillin or Penicillin G in non-allergic patients. In allergic patients, Erythromycin or Clindamycin is an alternative.
- Treatment is considered adequate if first dose is given greater than 4 hours prior to delivery AND all scheduled doses have been given. Especially with those antibiotics given every 4 hours it is imperative that the second dose is not delayed or omitted due to impending delivery. Delivery occurring very shortly (less than 30 minutes) after a missed second dose would still be considered adequate but longer delays might compromise GBS clearance and should be avoided.
- Treat mothers with anaphylaxis to Penicillin or cephalosporins with Clindamycin. A mother receiving Clindamycin for prophylaxis is considered as **inadequately** treated in relation to further management of the infant unless sensitivity to Clindamycin has been obtained.

Management of Symptomatic Infants:

- Treat **symptomatic** infants regardless of GBS status or adequacy of IAP. Consider the influence of intrapartum risk factors such as prolonged rupture of membranes, maternal temperature or chorioamnionitis in the decision to investigate and treat. Signs and symptoms of infection are often non-specific and may include but are not limited to:
 - Respiratory distress
 - Hypotension, metabolic acidosis, poor perfusion
 - Need for extensive or prolonged resuscitation at delivery
 - Lethargy
 - Seizures
 - Poor feeding
 - Abdominal distension
 - Temperature instability
- Perform septic work up, including:
 - Complete blood count (CBC) (if not already done)
 - Blood culture
 - Lumbar puncture (at the discretion of healthcare provider)
 - Chest X-Ray (if respiratory symptoms)

Note: a suprapubic aspiration is no longer recommended as part of a septic work up for ruling out sepsis at the time of delivery, unless a urinary tract infection is suspected.

- Provide Ampicillin and Gentamycin IV or IM. Dosages are calculated according to infant weight and gestational age as per Pediatric Regional Parenteral Drug Monograph Manual.
- Determine choice and duration of antibiotics based on:
 - Evolution of signs and symptoms
 - Culture results
 - Review of chest x-ray

Management of Asymptomatic (well) Infants:

- Refer to Treatment Algorithm (see Supporting Documents) to determine which investigations are required.
 - The concept of “adequate” and “inadequate” antibiotic coverage applies to the prevention of GBS sepsis only. Maternal antibiotic administration for the prevention of sepsis due to other organisms has not been studied.
- Ensure any infant at increased risk for infection has a minimum hospital stay of 24 hours AND is observed for signs and symptoms of infection every 4 hours for a minimum of 24 hours. Observation includes assessment for any symptoms (noted above) as well as heart rate, respiratory rate and temperature. Infants at increased risk for infection include:
 - Infants whose mother had a temperature of 38°C or greater in labour (regardless of antibiotic treatment).
 - Infants born to a mother with inadequate treatment for maternal GBS colonization.
 - Infants born to GBS unknown mothers who had prolonged rupture of membranes and were inadequately treated.
 - Spontaneous labour at less than 37 weeks gestation, regardless of antibiotic treatment.
- Perform a CBC with differential if indicated. Results are considered abnormal if:
 - Total WBC is less than $5.0 \times 10^9/L$ (manage as symptomatic)
 - Other abnormalities of the CBC may require physician notification, but are not necessarily associated with infection, correlation with clinical condition is required (see Supporting Documents).
- Infants who are initially well and then develop symptoms of infection should receive prompt investigation and treatment.
 - Consider a 48 hour hospital stay for infants with any of the above risk factors who reside in remote communities with limited access to physician follow-up or any situation where close follow-up cannot be ensured.

IMPORTANT POINTS TO CONSIDER:

Newborn infants are at significant risk of morbidity and mortality due to vertical transmission of infectious diseases. Although expectant mothers cannot be screened for all potential infectious diseases, the care giver needs to assess the perinatal risk factors for infectious disease transmission to the fetus while in utero, and be vigilant for signs of sepsis in the newborn. Although any organism can produce neonatal sepsis, attention has been focused on the pathogen, Group B Streptococcus (GBS) as the leading cause of perinatal infections. Intrapartum maternal chemoprophylaxis is the best strategy to reduce vertical transmission of GBS and prevent early onset neonatal GBS disease. Treatment based on routine screening or on the basis of risk factors alone is acceptable.

SUPPORTING DOCUMENTS: (as necessary)

[CLI.5810.SG.005.SD.01](#) Maternal Antibiotic Coverage

[CLI.5810.SG.005.SD.02](#) Abnormalities of the CBC requiring Urgent Physician Notification

[CLI.5810.SG.005.SD.03](#) Algorithm for the Management of Newborns at Risk for Neonatal Sepsis

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