



# POSITION STATEMENT

## Prevention of Group B Streptococcal Disease

The American College of Nurse-Midwives (ACNM) endorses the 2010 guidelines of the Centers for Disease Control and Prevention (CDC) for the prevention of Group B Streptococcal (GBS) disease in the newborn.<sup>1</sup>

ACNM strongly concurs that

- Obstetric interventions such as internal fetal monitoring, cervical ripening, labor induction, and membrane sweeping are not clearly demonstrated to affect rates of GBS disease in the newborn. Their use should be based on accepted guidelines for practice and not affected by the presence of a positive GBS culture.
- Indicated obstetric procedures should not be delayed so a woman can receive the recommended 4 hours of intrapartum antibiotic prophylaxis (IAP).
- Penicillin is the drug of choice for non-allergic women.
- Guidelines for alternative antibiotic regimens should be adhered to strictly.

ACNM recommends that the CDC guidelines for prevention of GBS be further strengthened in the following areas:

- Indications for treating GBS bacteriuria. The guidelines clarify the level at which laboratories should report the presence of GBS in the urine for purposes of determining need for IAP. However, the current language regarding the *treatment* of GBS bacteriuria during pregnancy indicates, “according to current standards of care for urinary tract infection during pregnancy.”<sup>1</sup> Clarifications on treatment are needed to eliminate confusion and resolve practice discrepancies.
- Management of GBS vaginal-rectal cultures that are more than 5 weeks old. The guidelines recommend that cultures be obtained between 35 and 37 weeks because of a high negative predictive value and reasonable positive predictive value within that time frame. But the guidelines do not include management recommendations if cultures were obtained outside of this timeframe. Clarification of whether cultures more than 5 weeks old should be ignored and the patient managed as if she had unknown GBS status is needed.
- Patient education materials on GBS should be clearly written, accessible and appropriate for all reading levels, and not based on fear.

ACNM recommends further research in the following areas:

- The strength of the relationship between maternal GBS bacteriuria and GBS disease in the newborn.

- The association between intrapartum interventions such as internal fetal monitoring, digital vaginal examinations after rupture of membranes, labor induction, cervical ripening, sweeping of the membranes, and subsequent early onset GBS disease.
- The reliability of patient-collected GBS cultures.
- The etiology of disparities in GBS disease between black and white newborns.
- Interventions targeting late-onset GBS disease in the newborn, possibly including the development of a GBS vaccine for adults or adolescents.
- Long term outcomes for infants exposed to the antibiotics currently recommended for IAP.
- Reliability of rapid testing for GBS.

Midwives and other maternity care providers are encouraged to

- Familiarize themselves with the current guidelines for the prevention of GBS disease in the newborn.
- Educate colleagues regarding the current guidelines for the prevention of GBS disease in the newborn.
- Practice evidence-based care, adhering to the recommendations of the CDC for the prevention of GBS disease in the newborn.
- Lead and/or participate in research investigations exploring the above recommendations for further research in the area of GBS disease prevention to improve health outcomes for women and infants.

### **Background**

Early-onset GBS disease is the leading infectious cause of neonatal morbidity and mortality in the United States. In the 1970s, prior to the use of IAP, GBS disease had a case-fatality ratio of 50 percent and an incidence rate of 1.7 per 1000 live births. The incidence of GBS disease declined dramatically as a result of the advent of implementing screening and IAP and declined further as recommendations for IAP were refined. In the late 2000s the incidence was 0.34-0.37 per 1000 live births, with a case fatality rate of 4%-6%. Despite these successes, it remains the leading cause of neonatal morbidity and mortality.<sup>1</sup>

In 1996, the CDC released GBS disease prevention guidelines recommending that IAP be based on risk factors for GBS disease in the newborn or on culture results. These guidelines were revised in 2002 to recommend universal culture screening for all women at 35-37 weeks gestation, with IAP offered to those women with positive cultures or unknown status with risk factors. Additional indications for IAP include women with GBS bacteruria, women who had a prior infant with GBS disease, and women in preterm labor (pending culture results). The 2010 revision, prepared by the CDC in collaboration with several professional organizations, including ACNM, clarifies certain points and strengthens or modifies others.

Concerns that the CDC's recommendations for universal screening and IAP would lead to increased antibiotic resistance among GBS strains have largely proven unfounded. GBS remains susceptible to penicillin and ampicillin, however, resistance to clindamycin and erythromycin is increasing making susceptibility testing with GBS cultures of paramount importance.<sup>2</sup> Other

concerns have been raised that the widespread implementation of IAP recommendations would lead to an increase in neonatal sepsis due to ampicillin-resistant, non-GBS organisms such as E. Coli. Such an increase has been observed in very low birthweight infants only, and trends are monitored on an ongoing basis via the CDC surveillance system.<sup>2</sup>

The 2010 CDC recommendations include the following:

- Labs should only report levels of GBS in urine at 10<sup>4</sup> or greater.
- IAP is not needed for women undergoing planned cesarean, but they should continue to be screened at 35-37 weeks in the event that labor starts spontaneously.
- New recommendations for the use of rapid nucleic acid amplification testing (NAAT) intrapartum for women with unknown GBS status at the onset of term labor.
- Algorithms for preterm labor and preterm, prelabor rupture of membranes are now separated, and existing preterm labor recommendations are clarified.
- Changes to specimen processing recommendations that include use of NAAT.
- High risk for anaphylaxis includes the development of hives, angioedema, or an anaphylactic reaction following administration of Penicillin.
- Changes to the recommended dose of Penicillin G (now 5 million units intravenously followed by 2.5-3 million units every 4 hours).
- Changes to the recommended evaluation of asymptomatic newborns.

## REFERENCES

1. Centers for Disease Control and Prevention. Prevention of perinatal group B streptococcal disease. *MMWR*. 2010;59(RR10):1-32.
2. Edwards MS. Issues of antimicrobial resistance in Group B Streptococcus in the era of intrapartum antibiotic prophylaxis. *Semin Pediatr Infect Dis*. 2006;17(3):149-152.

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Source: Division of Standards and Practice: Clinical Standards and Documents Section  
Approved by the ACNM Board of Directors: June 2012  
Replaces ACNM Clinical Bulletin: Treatment of GBS