

Obstetric Guideline 12

GROUP B STREPTOCOCCUS IN THE PERINATAL PERIOD

The information attached is the **summary** of the Centre for Disease Control guideline titled: **Prevention of Perinatal Group B Streptococcal Disease**, August 16th, 2002, as well as three treatment algorithms. For the electronic link to the complete guideline, see

<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5111a1.htm>

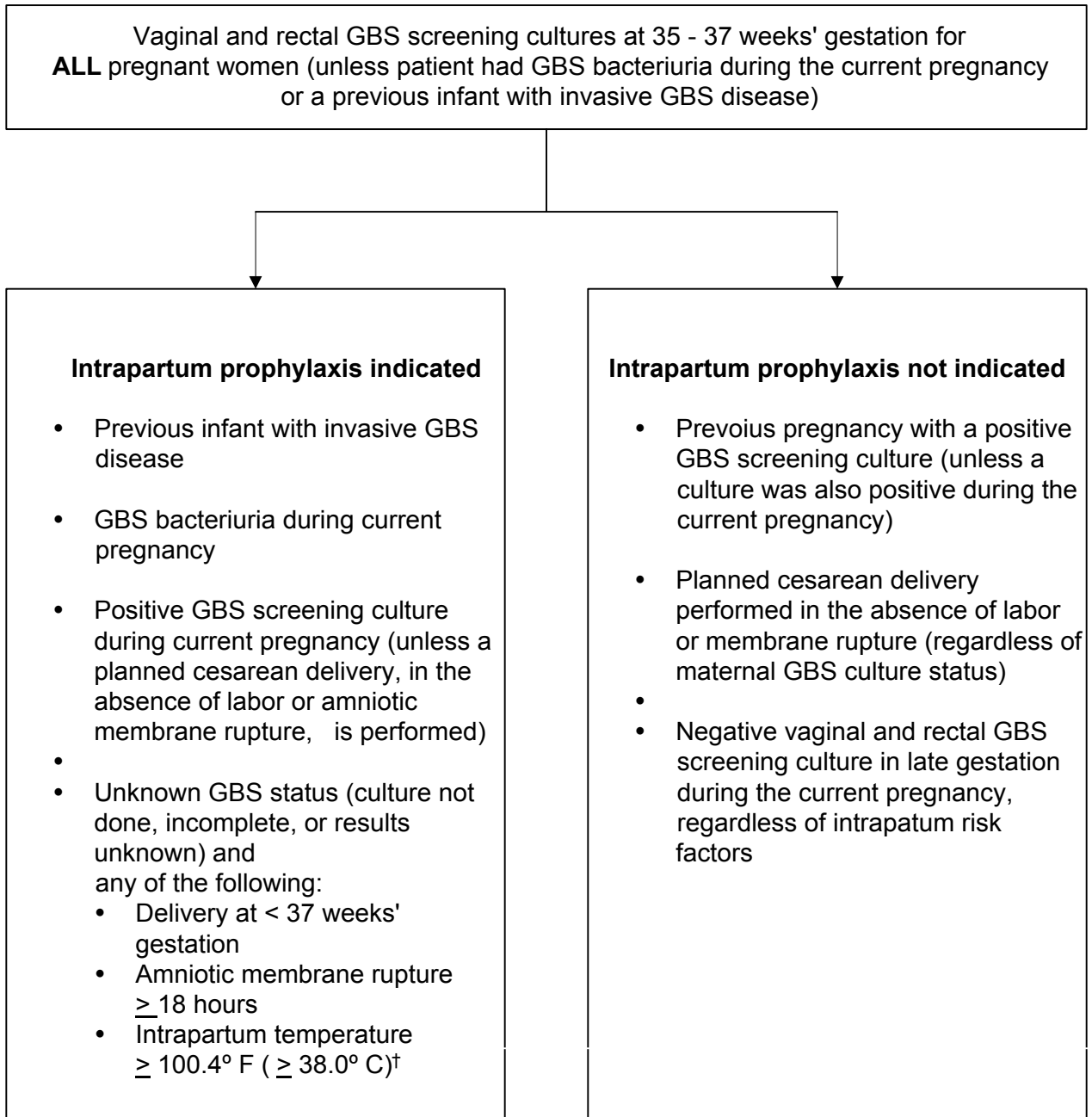
1. SUMMARY

Group B streptococcus (GBS) remains a leading cause of serious neonatal infection despite great progress in perinatal GBS disease prevention in the 1990s. In 1996, CDC, in collaboration with other agencies, published guidelines for the prevention of perinatal group B streptococcal disease (CDC. Prevention of perinatal group B streptococcal disease: a public health perspective. MMWR 1996;45[RR-7]:1--24). Data collected after the issuance of the 1996 guidelines prompted reevaluation of prevention strategies at a meeting of clinical and public health representatives in November 2001. This report replaces CDC's 1996 guidelines. The recommendations are based on available evidence and expert opinion where sufficient evidence was lacking. Although many of the recommendations in the 2002 guidelines are the same as those in 1996, they include some key changes:

- **Recommendation of universal prenatal screening for vaginal and rectal GBS colonization of all pregnant women at 35--37 weeks' gestation**, based on recent documentation in a large retrospective cohort study of a strong protective effect of this culture-based screening strategy relative to the risk-based strategy
- Updated prophylaxis regimens for women with penicillin allergy
- Detailed instruction on prenatal specimen collection and expanded methods of GBS culture processing, including instructions on antimicrobial susceptibility testing
- Recommendation against routine intrapartum antibiotic prophylaxis for GBS-colonized women undergoing planned cesarean deliveries who have not begun labor or had rupture of membranes
- A suggested algorithm for management of patients with threatened preterm delivery
- An updated algorithm for management of newborns exposed to intrapartum antibiotic prophylaxis

Although universal screening for GBS colonization is anticipated to result in further reductions in the burden of GBS disease, the need to monitor for potential adverse consequences of intrapartum antibiotic use, such as emergence of bacterial antimicrobial resistance or increased incidence or severity of non-GBS neonatal pathogens, continues, and intrapartum antibiotics are still viewed as an interim strategy until GBS vaccines achieve licensure.

Figure 1. Indications for intrapartum antibiotic prophylaxis to prevent perinatal GBS disease under a universal prenatal screen strategy based on combined vaginal and rectal cultures collected at 35-37 weeks' gestation from all pregnant women.



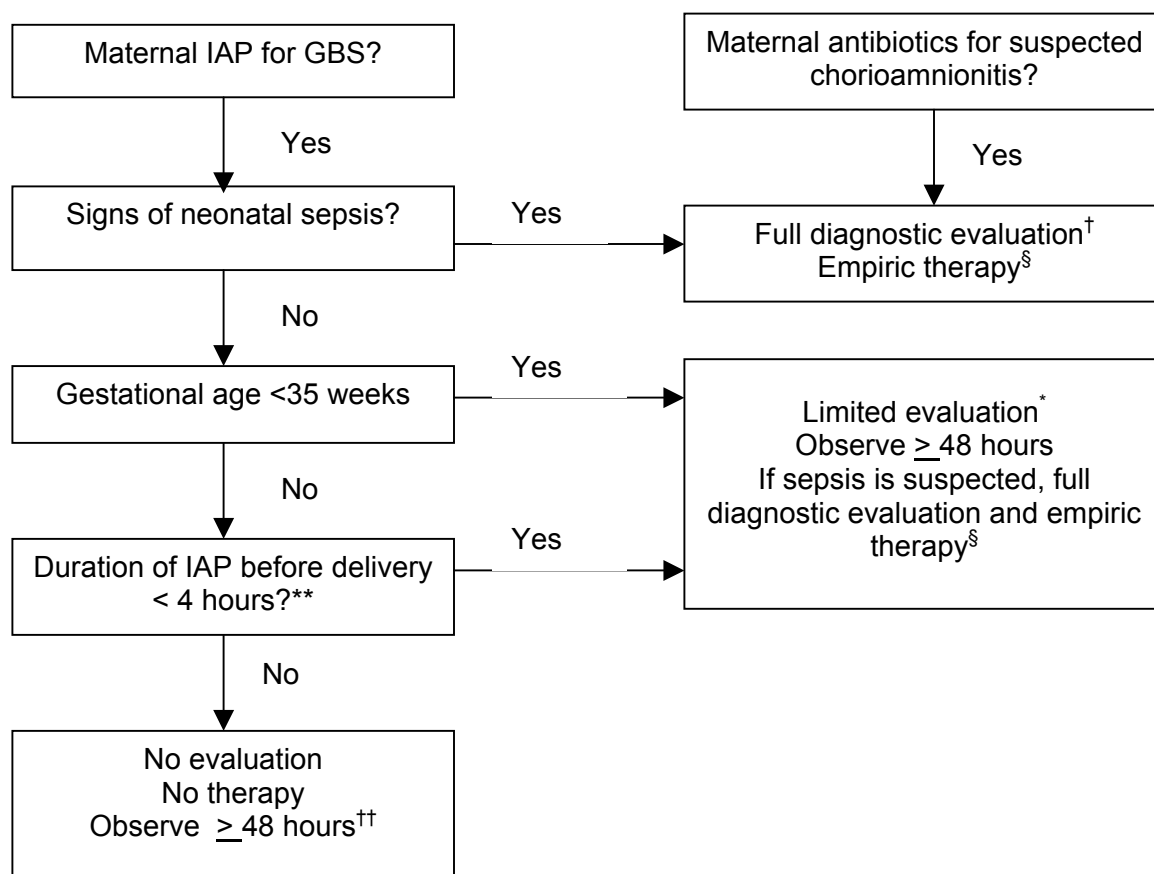
[†] If amnionitis is suspected, broad spectrum antibiotic therapy that includes an agent known to be active against GBS should replace GBS prophylaxis.

Figure 2. Recommended regimens for intrapartum antimicrobial prophylaxis for perinatal GBS disease prevention*

Recommended	Penicillin G, 5 million units IV initial dose, then 2.5 million units IV every 4 hours until delivery
Alternative	Ampicillin, 2 g IV initial dose, then 1 g IV every 4 hours until delivery
If penicillin allergic [†]	
<ul style="list-style-type: none"> • Patients not at high risk for anaphylaxis 	Cefazolin, 2 g IV initial dose, then 1 g IV every 8 hours until delivery
<ul style="list-style-type: none"> • Patients at high risk for anaphylaxis [§] GBS susceptible to clindamycin and erythromycin[¶] 	Clindamycin, 900 mg IV every 8 hours until delivery OR Erythromycin, 500 mg IV every 6 hours until delivery
<ul style="list-style-type: none"> • GBS resistant to clindamycin or erythromycin or susceptibility unknown 	Vancomycin,** 1 g IV every 12 hours until delivery

* Broader-spectrum agents, including an agent active against GBS, may be necessary for treatment of chorioamnionitis.
[†] History of Penicillin allergy should be assessed to determine whether a high risk for anaphylaxis is present. Penicillin-allergic patients at high risk for anaphylaxis are those who have experienced immediate hyper-sensitivity to penicillin including a history of penicillin-related anaphylaxis; other high risk patients are those with asthma or other diseases that would make anaphylaxis more dangerous or difficult to treat, such as persons being treated with beta-adrenergic-blocking agents.
[§] If laboratory facilities are adequate, clindamycin and erythromycin susceptibility testing should be performed on prenatal GBS isolates from penicillin-allergic women at high risk for anaphylaxis.
[¶] Resistance to erythromycin is often but not always associated with clindamycin resistance. If a strain is resistant to erythromycin but appears susceptible to clindamycin, it may still have inducible resistance to clindamycin.
** Cefazolin is preferred over vancomycin for women with a history of penicillin allergy other than immediate hypersensitivity reactions, and pharmacologic data suggest it achieves effective intraamniotic concentrations. Vancomycin should be reserved for penicillin-allergic women at high risk for anaphylaxis.

Figure 3. Sample algorithm for management of a newborn whose mother received intrapartum antimicrobial agents for prevention of early-onset group B streptococcal disease* or suspected chorioamnionitis. This algorithm is not an exclusive course of management. Variations that incorporate individual circumstances or institutional preferences may be appropriate.



* If no maternal intrapartum prophylaxis for GBS was administered despite an indication being present, data are insufficient on which to recommend a single management strategy.

† Includes complete blood cell count and differential, blood culture and chest radiograph if respiratory abnormalities are present. When signs of sepsis are present, a lumbar puncture if feasible, should be performed.

§ Duration of therapy varies depending on results of blood culture, cerebrospinal fluid findings, if obtained and the clinical course of the infant. If laboratory results and clinical course do not indicate bacterial infection, duration may be as short as 48 hours.

¶ CBC with differential and blood culture.

** Applies only to penicillin ampicillin, or cefazolin and assumes recommended dosing regimens.

†† A healthy-appearing infant who was ≥ 38 weeks' gestation at delivery and whose mother received ≥ 4 hours of intrapartum prophylaxis before delivery may be discharged home after 24 hours if other discharge criteria have been met and a person able to fully comply with instructions for home observation will be present. If any one of these conditions is not met, the infant should be observed in the hospital for at least 48 hours and until criteria for discharge are achieved.