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CDC updates guidelines on prevention of perinatal GBS

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The Centers for Disease Control and Prevention (CDC) has revised its guidelines for the prevention of perinatal group B streptococcal (GBS) disease (*MMWR*. 2010;59 [No. RR-10]), www.cdc.gov/mmwr/preview/mmwrhtml/rr5910a1.htm?s_cid=rr5910a1_w.

The 2010 guidelines, which have been endorsed by the Academy, reaffirm the major prevention strategy — universal antenatal GBS screening and intrapartum antibiotic prophylaxis (IAP) for GBS-positive women. The guidelines also include:

- new recommendations for laboratory methods to identify GBS colonization during pregnancy;
- algorithms for screening and intrapartum prophylaxis for women with preterm labor or premature rupture of membranes (ROM);
- updated prophylaxis recommendations for women with a penicillin allergy;
- clarification of adequate IAP; and
- a revised algorithm for the management of newborns (see figure next page).

The CDC initially published guidelines for the prevention of perinatal GBS disease in 1996 and revised the guidelines in 2002. Following publication and implementation of the first guidelines, early-onset GBS disease in neonates has declined by an estimated 80%. However, GBS remains the leading cause of early-onset neonatal sepsis. The new guidelines are based on an evaluation and synthesis of research generated after 2002.

In the 2010 guidelines, the indications for maternal IAP remain unchanged from 2002 and include: 1) GBS positive at 35-37 weeks' gestation, 2) GBS status unknown with one or more risk factors (less than 37 weeks' gestation, ROM for 18 or more hours or intrapartum temperature of 100.4 degrees Fahrenheit or higher [38 degrees Celsius]), 3) GBS bacteriuria during current pregnancy, or 4) history of a previous

infant with GBS disease.

When a Caesarean delivery is planned and occurs before onset of labor with intact amniotic membranes, IAP is not recommended.

When IAP is recommended, it is considered adequate if penicillin, ampicillin or cefazolin is given at the proper doses for four or more hours prior to delivery. Penicillin and ampicillin rapidly achieve therapeutic levels in the fetal circulation and require three hours to achieve therapeutic levels in amniotic fluid. Cefazolin has similar pharmacokinetics and is the preferred agent for IAP in penicillin allergic women with no history of anaphylaxis, angioedema, respiratory distress or urticaria. Duration of IAP shorter than four hours and all other antimicrobial regimens, including clindamycin and vancomycin, are considered as inadequate IAP because no data regarding efficacy are available.

The 2010 guidelines for the management of the newborn broaden the scope to apply to all neonates and aim to increase clarity of the recommendations and decrease unnecessary laboratory evaluations and empirical antibiotics for low-risk infants. The management of neonates continues to be based on clinical signs, the presence of maternal risk factors and likely efficacy of IAP (or maternal antimicrobial treatment in the case of clinical chorioamnionitis) in preventing early-onset disease.

The revised infant management algorithm, which will be published in 2011 as an AAP policy statement, is derived from recent data summarized in the published CDC document regarding the epidemiology of GBS disease and the usefulness of a "limited evaluation" of healthy-appearing neonates.

Pediatricians and practitioners caring for newborns are encouraged to read the full document for detailed instructions regarding neonatal management.



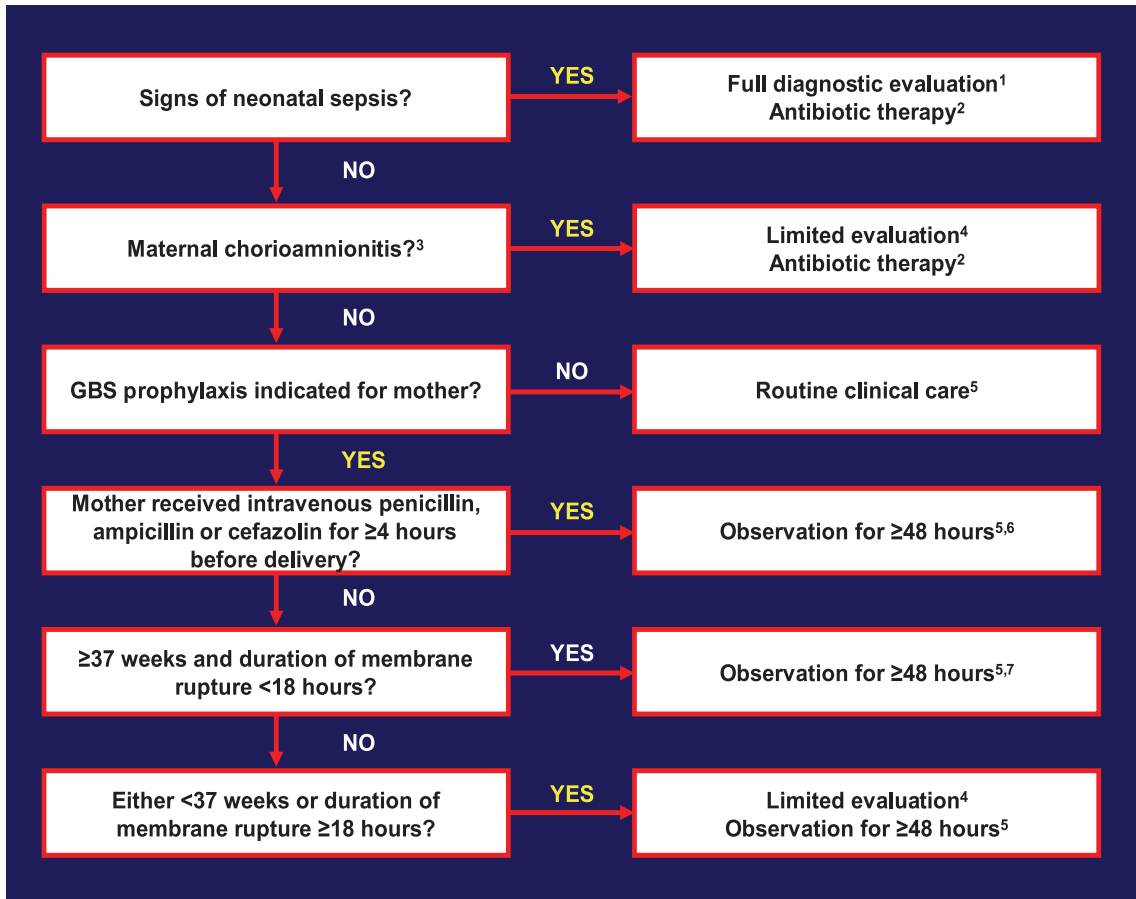
Dr. Byington



Dr. Baker

Dr. Byington is vice chair of the AAP Committee on Infectious Diseases (COID). Dr. Baker is an ex-officio member of COID and associate editor of the AAP Red Book.

Secondary prevention of early-onset group B streptococcal disease among newborns



1. Full diagnostic evaluation includes a blood culture, a complete blood count (CBC) including white blood cell differential and platelet counts, chest radiograph (if respiratory abnormalities are present), and lumbar puncture (if patient is stable enough to tolerate procedure and sepsis is suspected).

2. Antibiotic therapy should be directed toward the most common causes of neonatal sepsis, including intravenous ampicillin for GBS and coverage for other organisms (including *Escherichia coli* and other gram-negative pathogens) and should take into account local antibiotic resistance patterns.

3. Consultation with obstetric providers is important to determine the level of clinical suspicion for chorioamnionitis. Chorioamnionitis is diagnosed clinically and some of the signs are nonspecific.

4. Limited evaluation includes blood culture (at birth) and CBC with differential and platelets (at birth and/or at 6–12 hours of life).

5. If signs of sepsis develop, a full diagnostic evaluation should be conducted and antibiotic therapy initiated.

6. If ≥ 37 weeks' gestation, observation may occur at home after 24 hours if other discharge criteria have been met, access to medical care is readily available and a person who is able to comply fully with instructions for home observation will be present. If any of these conditions is not met, the infant should be observed in the hospital for at least 48 hours and until discharge criteria are achieved.

7. Some experts recommend a CBC with differential and platelets at age 6–12 hours.

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