Early-onset group B strep: New guidance includes changes in dosing, assessment
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The AAP has updated guidance for early-onset and late-onset group B streptococcal (GBS) disease that includes several major changes to neonatal practice. The clinical report and a separate update on maternal management from the American College of Obstetricians and Gynecologists (ACOG) replace the consensus GBS prevention guidance published in 2010 by the Centers for Disease Control and Prevention (CDC).


Collaborative approach

GBS remains the most common single bacterial cause of neonatal early-onset sepsis. The CDC first published consensus guidelines on the prevention of perinatal GBS disease in 1996 in collaboration with the AAP, ACOG and other organizations.

The guidelines were updated in 2002 and 2010, recommending a universal antenatal culture-based approach and administration of intrapartum antibiotic prophylaxis (IAP) to prevent invasive neonatal GBS early-onset disease. With implementation of the approach, the national incidence of GBS early-onset disease declined from 1.8 cases per 1,000 live births in 1990 to 0.23 cases per 1,000 live births in 2015.

New data have emerged on the microbiology, epidemiology and clinical management of perinatal GBS infection. In 2017, the CDC approached the AAP and ACOG with a proposal to review and revise the 2010 GBS guidelines. CDC priorities required that the professional organizations assume primary leadership for this review. Members of COFN and COID collaborated with the ACOG Committee on Obstetric Practice to develop separate but aligned publications.

AAP guidance

The AAP GBS clinical report, endorsed by ACOG, updates information on national GBS microbiology and epidemiology, and recommendations for identification and management of newborns at risk for this disease.


In addition, the AAP GBS report provides updated recommendations for management of GBS late-onset disease and for definitive treatment of GBS early- and late-onset disease.

Following are highlights of the AAP recommendations:

- Risk assessment for early-onset GBS disease should follow the general principles established in the AAP clinical reports on management of neonates with suspected or proven early-onset bacterial
sepsis. These principles include separate consideration of infants born at 35 weeks' gestation and those born at <35 weeks’ gestation.

- For the purpose of neonatal management, the administration of intrapartum penicillin G, ampicillin or cefazolin can provide adequate IAP against neonatal early-onset GBS disease.
- Clindamycin and vancomycin should be administered to women at high risk of anaphylaxis to beta-lactam antibiotics as recommended by the ACOG. There is insufficient evidence to consider these antibiotics to provide fully adequate IAP for the purpose of neonatal risk assessment.
- Early-onset GBS infection is diagnosed by blood or cerebrospinal fluid culture. Laboratory tests such as the complete blood cell count and C-reactive protein do not perform well in predicting early-onset infection, particularly among those with low baseline risk of infection.
- Evaluation for late-onset GBS disease is based on clinical signs of illness in the infant, and diagnosis is based on the isolation of group B streptococci from normally sterile sites. Adequate IAP does not protect infants from late-onset GBS disease.
- Empirical antibiotic therapy for early- and late-onset GBS disease differs by postnatal age at the time of evaluation. Penicillin G is the preferred antibiotic for definitive treatment of GBS disease in infants; ampicillin is an acceptable alternative.

ACOG guidance

Revised ACOG guidelines continue to endorse GBS prevention strategies based on universal maternal antenatal vaginal-rectal culture-based screening and the use of IAP during labor for GBS-colonized and other at-risk women.

Notable aspects of the guidance include the following:

- The optimal window for antenatal GBS screening has been changed to 36 0/7 to 37 6/7 weeks’ gestation instead of beginning at 35 0/7 weeks’ gestation. The correlation between antenatal GBS colonization results and colonization status at the time of delivery decreases significantly when the culture-to-birth interval is longer than five weeks; therefore, moving antenatal culture timing to 36-37 weeks optimizes the value of the screening result up to 41 weeks’ gestation.
- It is recommended that GBS IAP be administered to the following: all laboring women with GBS colonization detected by antenatal culture; those with GBS bacteriuria detected during the pregnancy; those who previously delivered a newborn with GBS disease; and women with unknown GBS status who present with preterm labor or preterm, prelabor rupture of membranes (ROM) prior to 37 weeks’ gestation.
- Women who present at >37 weeks’ gestation with unknown status should be administered GBS IAP if risk factors develop (duration of ROM 18 hours or intrapartum temperature of 100.4°F [38°C]). Additionally, women with known GBS colonization in a prior pregnancy may be offered IAP if status is unknown at >37 weeks’ gestation given that such women have increased risk of colonization in the current pregnancy.
- Penicillin G remains the recommended antibiotic for GBS IAP; ampicillin is an acceptable alternative.
For women with reported allergy to penicillin, recommendations are provided for the use of cefazolin, clindamycin or vancomycin under certain circumstances depending on the nature of the allergy and the antibiotic susceptibility of the colonizing GBS isolate.

- Pregnant women with reported penicillin allergy are encouraged to seek formal allergy testing because most women who have a reported penicillin allergy are, in fact, penicillin tolerant.

*Dr. Puopolo is a lead author of the clinical report and a member of the AAP Committee on Fetus and Newborn.*