Streptococcus agalactiae **Invasive Disease (GBS)**

Organism: *Streptococcus agalactiae* Group B beta-hemolytic, gram positive cocci. **Only INVASIVE cases are reportable (bacteremia, meningitis, fetal demise).** This is a leading cause of a neonatal disease; however, ~75% of Alaska invasive cases are reported in adults (per AIP-CDC).

Incubation period: For infants, early onset disease occurs in approximately 1 to 6 days. Late-onset disease usually occurs within 3 to 4 weeks. Very late-onset disease has an onset beyond 3 months of age in preterm infants requiring prolonged hospitalization. Group B streptococcus may also cause invasive infections in adults with underlying medical conditions, such as, diabetes mellitus, chronic liver or renal disease, malignancy, or other immunocompromising conditions.

Infectious period: Source for neonate is maternal carriage in vagina/rectum that may wax and wane during pregnancy. Cultures are thought to be most predictive if taken within 35 to 37 weeks' gestation.

Transmission route: Transmitted to infants during the intrapartum period, especially to infants delivered at <37 weeks, and/or when rupture of membranes occurs >18 hours prior to delivery. Mode of transmission of disease in non-pregnant adults is unknown.

Treatment: *Invasive neonatal disease:* manage septic neonate per standard practice and consult esteemed neonatologists as needed. Also see CDC resources for sample algorithm for managing a neonate whose mother received antibiotics for threatened preterm delivery or suspected chorioamnionitis: http://www.cdc.gov/groupbstrep/guidelines/guidelines.html

Adult invasive disease: no specific treatment guidelines. Most adults affected have significant co-morbidities.

Information Needed for the Investigation

Verify the Diagnosis

Confirmed case: isolation of GBS from a normally sterile site, such as, blood, cerebrospinal fluid (CSF), pleural fluid, peritoneal fluid, bone, joint fluid or internal body site, or GBS isolated from the placenta and/or amniotic fluid with fetal demise. See ABCs case definition: http://www.cdc.gov/abcs/methodology/case-def-ascertain.html.

Determine the Extent of Illness

- AIP-CDC collects medical records on cases and reviews data at their quarterly surveillance meeting. SOE staff members attend these meetings.
- Depending on trends in early-onset disease, periodic in-depth reviews of cases and preventable status are undertaken.

Laboratory Specimens

- Request that any INVASIVE isolate be sent to CDC-AIP (phone 729-3400).

Contact and Control Measures

Refer to CDC guidelines for prevention: http://www.cdc.gov/groupbstrep/guidelines/index.html

- Screening or chemoprophylaxis of household contacts is NOT recommended.
- Treat mothers who carry infection according to established guidelines; this may include time-sensitive action needed by labor and delivery staff at the time of birth.

Hospital Considerations

- In the hospital setting, use Standard Precautions.
- Siegel JD, Rhinehart E, Jackson M, Chiarello L, and the Healthcare Infection Control Practices Advisory Committee. 2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings. Available at http://www.cdc.gov/hicpac/pdf/isolation/isolation2007.pdf

Reporting Requirements

- Report case upon receipt to CDC-AIP; fax to 729-3429.
- FTR: write up special investigations.
- AK-STARS Database: enter all *confirmed* cases.
- CDC (ABCs) Case Definition is used to define *confirmed* cases.

Alaska Division of Public Health

Prevention Promotion Protection

Streptococcus agalactiae Invasive Disease (GBS) Fact Sheet

What is group B strep?

Group B strep (streptococcus) is a type of bacteria that can cause serious illness and death in newborns. Until recent prevention efforts, hundreds of babies died from group B strep (GBS) every year. This type of bacteria can also cause illness in adults, especially the elderly, but it is most common in newborns.

Why do I need to get tested for group B strep during each pregnancy?

Group B strep (GBS) bacteria can be passed from a mom who carries the bacteria (tests positive) to her baby during labor. Since the bacteria aren't always present, you need to be tested for GBS *every* time you are pregnant regardless of testing results from a prior pregnancy. Around 35-37 weeks into your pregnancy, the doctor will swab your vagina and rectum and send the swabs to a lab to test for GBS.

What happens to babies born with the group B strep bacteria?

Group B strep is the most common cause of sepsis (blood infection) and meningitis (infection of the fluid and lining around the brain) in newborns. Most newborn disease happens within the first week of life, called "early onset" disease.

How can group B strep disease in babies be prevented?

Most early onset GBS disease in newborns can be prevented by giving antibiotics during labor to women who tested positive during their pregnancy. Any pregnant woman who has had a baby in the past with GBS disease, or who now has a urinary tract infection caused by GBS should get antibiotics during labor.

What if I'm allergic to some antibiotics?

Women who are allergic to some antibiotics, such as penicillin, can still get other types of antibiotics.

How does someone get group B strep?

Anyone can be a "carrier" for group B strep, which can be found in the gastrointestinal tract (guts) and may move into the vagina and/or rectum. It is not a sexually transmitted disease (STD). About 1in 4 women carry these bacteria. Most women would never have symptoms or know that they had these bacteria without a test during pregnancy.

If I know that I'm a group B strep carrier, why can't I just take some antibiotics now?

For women who are GBS carriers, antibiotics *before* labor are *not* a good way to get rid of GBS. Because they naturally live in the gastrointestinal tract, GBS bacteria often come back after antibiotic treatment. Antibiotics during labor are effective at protecting your baby because they greatly reduce the amount of bacteria the baby is exposed to during labor.

What do I need to do during pregnancy or labor if I'm group B strep positive?

Create a labor plan with your provider that includes getting antibiotics for GBS. When your water breaks or you go into labor, try to get to the hospital at least 4 hours before delivery to make sure there is time for the antibiotics to work. When you get to the hospital, remind the staff that you are GBS positive.

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Invasive, Group B (GAS) *Streptococcus agalactiae* Case Definition

Invasive group B Strep cases are not nationally notifiable, but are reportable in Alaska. The case definition used is that of the ABCs Program.

- Group B *Streptococcus* must be isolated from a normally sterile site, such as blood, cerebrospinal fluid (CSF), pleural fluid, peritoneal fluid, pericardial fluid, bone, joint/synovial fluid, or internal body site (e.g., lymph node, brain)
- Additionally, Group B *Streptococcus* isolated from the placenta and/or amniotic fluid with fetal demise

ABCs Case Definition

Confirmed:

Invasive group B streptococcal disease: isolation of Group B *Streptococcus* from a normally sterile site. Early onset cases occur at < 7 days of age and late onset occur between 7 and 89 days of age.