What is the concern?
In 2005, a newborn in Pierce County developed Group B Streptococcus (Streptococcus agalactiae) sepsis, despite the mother receiving antibiotic prophylaxis with erythromycin during labor. Group B Streptococcus (GBS) isolated from the baby demonstrated in vitro resistance to erythromycin and clindamycin but susceptibility to penicillin and vancomycin. To determine Pierce County level of resistance in GBS, three local hospital microbiology laboratories carried out antimicrobial susceptibility testing on a total of 132 GBS isolates from pregnant women during 2005. The pooled results showed a higher level of resistance than reported in United States literature:

- 31% were resistant to erythromycin;
- 27% were resistant to clindamycin; and
- 24% of isolates were resistant to both erythromycin and clindamycin.

What is the current recommendation?
GBS remains universally susceptible to penicillin in vitro; therefore, penicillin remains the drug of choice for non-allergic patients.

How should you treat the penicillin-allergic client?

1. Screen patient for risk
   Tacoma-Pierce County Health Department urges providers caring for GBS-positive pregnant women who report a penicillin allergy to do the following:
   - If possible, screen the patient for true penicillin allergy and risk for anaphylaxis.
   - Request antimicrobial susceptibility testing to include erythromycin and clindamycin, including a D-test for inducible clindamycin resistance if initially erythromycin resistant and clindamycin susceptible.

2. Select an appropriate intrapartum prophylactic agent based on susceptibility results and above recommendations.
   - Penicillin-allergic, not at high risk for anaphylaxis: CDC recommends cefazolin as the agent of choice because of its narrow spectrum of activity and ability to achieve high intraamniotic concentrations.
   - Penicillin-allergic, at high risk for anaphylaxis: CDC recommends testing of GBS isolates from prenatal screening for susceptibility to clindamycin and erythromycin. One of these agents should be in used for intrapartum GBS prophylaxis if the screening isolate is susceptible.
     - Note: Vancomycin should be reserved for clients when clindamycin or erythromycin are not options because of in vitro resistance or unknown susceptibility of a prenatal isolate. It is important to note there is increased vancomycin resistance among some gram-positive organisms in Pierce County.

For more information see:
Prevention of Perinatal Group B Streptococcal disease: Revised Guidelines from CDC, 2010, at www.cdc.gov/mmwr/preview/mmwrhtml/rr5910a1.htm?s_cid=rr5910a1_w;
Early Onset and Late Onset Neonatal Group B Streptococcal Disease-United States, 1996-2004, MMWR Weekly December 2, 2005/54(47); 1205-1208, at www.cdc.gov/mmwr/preview/mmwrhtml/mm5447a2
or call Tacoma-Pierce County Health Department
Communicable Disease: (243) 798-6410
24-Hour Disease Reporting Line: (253) 798-6534