REACH Notes

Recent Developments to Promote Judicious Antibiotic Prescribing

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NATIONAL UPDATE ON MACROLIDE RESISTANCE IN CHILDREN

A recent report describes 913 invasive pneumococcal isolates collected from children < 5 years old through the CDC Active Bacterial Core Surveillance Program from 1995-1999.

Macrolide prescriptions increased 320% from 1995 (0.7 million prescriptions) to 1999 (3.1 million) in children < 5 years old. Increased use of azithromycin accounted for nearly all of this increase.

Children < 5 years old had the highest macrolide resistance (30.6%) among invasive pneumococci isolates.

Macrolide resistance is increasing the fastest in children < 5 years old and accounted for the increase in macrolide resistance seen in the United States over the 5-year period

Macrolide-resistant strains were highly resistant to other antibiotics. Of the predominant erythromycin-resistant pneumococcal type, 81% were not susceptible to penicillin, 88% were not susceptible to trimethoprim-sulfamethoxazole, and 61% were not susceptible to 3rd generation cephalosporins.

Key Points:

1) Children are often prescribed azithromycin despite rapidly rising resistance in the U.S.

2) Selection of macrolide resistant strains also selects for multi-resistant strains.

3) Reduction in azithromycin use and use of the pneumococcal vaccine may help prevent disease due to these resistant isolates.

4) First-line therapy for otitis media is still amoxicillin. Physicians should be aware of likely macrolide resistance when selecting antibiotics for otitis media and pneumonia.

* Hyde TM, Gay K, Stephens DS, et al. Macrolide resistance among invasive *Streptococcus pneumoniae* isolates. JAMA 2001; 286(15): 1857-62.