call-back for other reasons, to call-back/second prescription. Regardless of the drug prescribed, the utility to the physician of a given outcome is the same.

RESULTS: Fewer call-backs and repeat visits pursuant to moxifloxacin resulted in the highest expected value (0.90), compared to levofloxacin (0.89) and Amoxicillin (0.87), when the lowest utility was 0.25. A sensitivity analysis showed consistent results, with 0.86 for Moxifloxacin, 0.85 for Levofloxacin and 0.82 for Amoxicillin when the lowest utility was zero. When the lowest utility was 0.75, all drugs yielded 0.96.

CONCLUSION: Physicians who seek to reduce events of call-backs, repeat visits and second prescriptions may favor certain antibiotic regimens, such as Moxifloxacin, for the treatment of acute sinusitis. This is more relevant when physicians put a higher premium on reduced events, that is when the spread in utilities is larger (0.25 and 1.00), than when the spread is smaller (0.75 and 1.00).

INFECTION—Health Policy Presentations

PHYSICIAN PRESCRIBING PATTERNS FOR PEDIATRIC OTITIS MEDIA IN AMBULATORY PATIENTS
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OBJECTIVES: Appropriate use of antibiotics is a major healthcare issue in view of increasing worldwide bacterial resistance to antibiotics. Treatment of otitis media is the most frequent reason for administering antibiotics to children in the United States. This study examined physicians’ prescribing pattern(s) for otitis media in children and compared them with therapeutic guidelines issued by the American Academy of Pediatrics, Family Physicians, and Otolaryngology, for appropriateness.

METHODS: Appropriateness of antibiotics was estimated across patient and physician factors. Patient factors such as age, sex, race, geographical location and payment source were compared with physician variables such as specialty, practice settings, geographical location and referral status for prescribing appropriateness. Data from the (1997) National Ambulatory Medical Care Survey (NAMCS) were utilized. Patients of age less than or equal to 12 years with a principal diagnosis of otitis media were analyzed using multiple linear and binomial logit regression models. Appropriate antibiotics were defined as those that are recommended by the guidelines. The dosage of antibiotics was confirmed by IMS Health Inc. and the advice of a practicing otolaryngologist.

RESULTS: Pediatricians and otolaryngologists prescribed more appropriate and less expensive antibiotics such as amoxicillin, ampicillin and sulfamethoxazole (R2 = 0.144). Internists and family practice physicians prescribed more expensive second line antibiotics (R2 = 0.178). There was no relation between the physician’s specialty and patient’s age for inappropriate antibiotics prescribing (R2 = 0.345). The probability of appropriate prescribing was higher for a pediatrician from the northeast and midwest than for a physician from the south (R2 = 0.167). Appropriate prescribing was not influenced by whether the patient was referred (R2 = 0.436).

CONCLUSIONS: Physician’s specialty influences antibiotics prescribing for otitis media. Otolaryngologists and pediatricians appear to prescribe appropriately, while general practice physicians may not be prescribing the appropriate, less expensive antibiotics.

SECOND-LINE THERAPY FOR OUTPATIENT TREATMENT FOR COMMUNITY-ACQUIRED PNEUMONIA
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In the USA, macrolides are the dominant choice for initial outpatient treatment for community-acquired pneumonia (CAP). However, there is no consensus on second-line therapy. Cephalosporins, quinolones, beta-lactams and other macrolides are all commonly prescribed.

OBJECTIVE: To compare outcomes for different second-line treatment strategies in outpatient treatment of CAP.

METHODS: We employed a previously developed and validated probabilistic model to calculate treatment failure rates for adult CAP with no major comorbidities. We considered four choices for second-line therapy following initial treatment with the macrolide azithromycin (AZI): cefuroxime (CEF), levofloxacin (LEV), amoxicillin-clavulanate (AMC) and clarithromycin (CLA). Distribution of causative pathogens was based on literature. We used surveillance data for the USA from the 1999–2000 PROTEKT study, and applied pharmacokinetic/pharmacodynamic breakpoints to determine resistance levels for streptococcus pneumoniae (SP) and haemophilus influenzae (HI). Intracellular organisms were assumed 100% susceptible to CLA, LEV but resistant to CEF, AMC. Other bacteria were assumed 50% susceptible to all four drugs. We used published estimates of pathogen-specific rates of spontaneous resolution. We assumed 20% of initial treatment failures and 100% of second-line treatment failures were hospitalized. We estimated that 90% of susceptible organisms would respond to treatment.

RESULTS: In SP, the most common cause of CAP, there was substantial cross-resistance between AZI and the second-line drugs, except for LEV. For example, SP was 86.6% susceptible to CEF when it was susceptible to AZI, but only 16.3% susceptible to CEF when resistant to AZI. The model estimated that in 59.5% of cases the initial treatment with AZI would be successful and 5.9% would be hospitalized following initial treatment failure. An additional 5.2% would be hospitalized if treated with LEV, 9.1% with AMC, 13.3% with CEF and 19.3% with CLA.