

period. The episode ended if an inpatient visit was recorded. Hospitalisation costs were estimated according to age-group CMG-specific resource intensity weights.

**RESULTS:** Of 10,565 subjects, 10.1% were deemed to be treatment failure. For subjects without failure, mean treatment cost was \$69.95 (SD = 20.70) compared with \$515.81 (SD = 911.03). The results of multiple regression on log-transformed total costs using as independent variables the type of antibiotic initially prescribed, age group, gender, diagnosis and chronic disease score, suggest that age 75+, diagnosis of pneumonia (contrasted to bronchitis), and a chronic disease score of 4+ are associated with increased total cost. Use of cephalosporins, clarithromycin 500 and quinolones were associated with higher total cost than use of azithromycin 250mg. Use of clarithromycin 250, erythromycin, amoxicillin, other penicillins, trimethoprim-sulfas and other antibiotics were associated with lower total cost than use of azithromycin 250mg.

**CONCLUSIONS:** Total cost of treatment of LRTI in seniors is associated with older age, high disease score, and type of antibiotic used.

**PIN 13****THE IMPACT OF ANTIBIOTIC SELECTION ON TREATMENT OUTCOMES FOR ACUTE OTITIS MEDIA**

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Acute Otitis Media (AOM) is the most common medical condition in children and results in 30 million physician visits annually. Clinical practice guidelines call for use of well-established first-line antibiotics for treatment in spite of the introduction of several newer second-line antibiotics.

**OBJECTIVE:** This study sought to determine the impact of antibiotic prescribing at initial visit on the probability and frequency of AOM-related return visits among North Carolina Medicaid patients.

**METHODS:** We identified new episodes of AOM among continuously eligible patients below age 7 over a 1-year period ending August 2000. We matched prescriptions dispensed up to 3 days after the medical visit and we classified patients as having received first-line or second-line antibiotic, based on CDC practice guidelines. We identified return visits as those occurring within 30 days of the index visit. Using a two-part model we estimated two equations that modeled, first, the probability of a return visit and second, the log-transformed frequency of return visits among patients with a return visit, adjusting for clustering of errors at the provider level. Independent variables included treatment group, patient demographics, physician specialty, practice site, and seasonality.

**RESULTS:** A total of 52,556 recipients received an antibiotic prescription at an AOM-related index visit from 1,617 providers, 66% of whom were pediatricians. First-line antibiotics accounted for 65% of antibiotics

prescribed at index visit. The average annual antibiotic expenditure for patients dispensed first-line antibiotics at index visit was \$12 and \$42 for patients receiving second-line antibiotics. Patients receiving first-line antibiotics had a lower probability of (OR = 0.78, 95% CI [0.74, 0.82]) and fewer return visits (3%, p-value <0.001), as compared to patients receiving second-line antibiotics.

**CONCLUSIONS:** First-line antibiotics were associated with a lower probability and frequency of return visits as compared to second-line antibiotics. However, only 65% of initial visits resulted in a prescription for a first-line antibiotic. Given the better treatment outcomes and lower costs, considerable cost-saving potential exists if physicians were encouraged to prescribe first-line antibiotics more often for initial AOM visits.

**PIN 14****HEALTH RESOURCE UTILIZATION IN THE TREATMENT OF ACUTE BACTERIAL SINUSITIS**

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**OBJECTIVE:** To estimate the burden of illness of Acute Bacterial Sinusitis (ABS) to health care providers. Background: ABS is a common secondary infection, with roughly 20 million cases annually in the US. Thus, the treatment of ABS is associated with significant health resource utilizations.

**METHODS:** Using clinical trial data of drug therapies for ABS, the health resource utilization patterns such as Medical Doctor (MD) time, Registered Nurse and Physician Assistant (RN&PA) time, and Office Staff time (OS) spent on treatment-related call backs for the 10 day follow-up period, are examined by the economic value of this time is measured based on nationally reported wage rates for each category.

**RESULTS:** Of 792 patients that were valid for efficacy, the demographic information from the data shows mean age of 44.26 (SD 15.45), 64% female, 94% Caucasians, and 5% African Americans. Twenty-one percent of the patients called back in the 10-day follow-up period. For these patients with call back, 8.91 minutes (SD 7.37) was for MD time, 6.59 minutes (SD 8.85) of RN&PA time, and 4.24 minutes (SD 5.55) of OS time were recorded on average. Including the other 79% of patients who did not call back, the average time spent on the sum of all three categories was 4.11 minutes (SD 11.59). These numbers can be translated into the average follow-up wage cost for health care professions of \$2.15 (SD 5.75) per person with ABS. For 20 million cases, this number implies \$43 million total wage cost for the health care side.

**CONCLUSION:** ABS is so common that it causes a significant burden in terms of health care resource utilization. The burden is significant not only in terms of the initial physician visit, but also in terms of follow up visits and call-backs.