1% at (I + 26). The application of chronological series indicates that this decrease is significantly correlated to the effects of the intervention (p < 0.02). In addition, the costs of ATP decreased from $40 to $24.

CONCLUSIONS: 1) An important reduction of TIg prescribing was obtained after the introduction of new guidelines in our emergency department and is maintained 3 years later. 2) Rapid techniques are needed to identify extemporaneously patients who require TIg.

ECONOMIC ANALYSIS OF ANTIMICROBIAL AGENTS FOR HOSPITAL-ACQUIRED PNEUMONIA
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Hospital-acquired pneumonia (HAP) is associated with a high mortality rate and a substantial economic burden. Many clinical and economic studies do not differentiate between HAP in the intensive care unit (ICU) versus on the ward, even though they are associated with different pathogens, treatment approaches, mortality and costs. For nosocomial infections, the effectiveness of therapy is dependent on the pathogenic organism and susceptibility to prescribed antibiotics, factors that are specific to each individual institution.

OBJECTIVES: To develop decision analytic models for current and anticipated antimicrobial regimens for the initial treatment of ICU and non-ICU HAP, that incorporate site-specific pathogen and susceptibility profiles, from the hospital perspective.

METHODS: Two decision tree models were constructed, one for ICU and the other for non-ICU HAP. The probabilities for the decision analysis model were derived from a meta-analysis of randomized, controlled clinical trials and data from our hospital population. Antimicrobial susceptibilities were obtained from the literature and local data. The comparators included in the baseline analysis were cefotaxime (CFX), ceftazidime (CTZ), ceftriaxone (CTR), ciprofloxacin (CIP), imipenem (IMP), and cefazolin + gentamicin (C+G). Drug acquisition, pharmacy, nursing, and hospitalization costs were included in the analysis. Hospitalization costs were determined from local case-costing data. Outcomes were measured as success, failure, and death.

RESULTS: For ICU HAP, C+G dominated over IMP. The incremental cost-effectiveness ratios for CTZ and CIP were $66,087/success and $49,099/success, respectively. For non-ICU HAP, C+G dominated over CTR and CFX. The incremental ratio for CTZ was $142,500/success. Sensitivity analyses did not substantially alter the results.

CONCLUSIONS: Antimicrobial susceptibility is a clinically important determinant of efficacy that should be included in economic analyses of HAP and other infections.

INFLUENCE OF MOTIVATING FACTORS AND BARRIERS ON INFLUENZA VACCINATION IN AN EMPLOYED POPULATION
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OBJECTIVES: The purpose was to identify motivating factors and barriers on influenza vaccination.

METHODS: An employer site conducting an annual influenza vaccination program was selected for the study. Subjects were recruited on-site to participate in the 5-month study. The vaccinated group (VG) included subjects presenting for vaccination over a 3-week vaccination schedule in October 1998. During a subsequent 3-week period, volunteers not receiving vaccination (NVG) were recruited into the study. Health Belief surveys were administered at the time of recruitment, which included questions specifically inquiring about health beliefs. The Health Belief Model (HBM) was utilized to derive motivators, barriers, threats, and expectations regarding influenza vaccination and their influence on getting vaccinated. The influence of the motivating factors and barriers were rated on a 4-point rating scale (1 = none, 4 = a great deal).

RESULTS: Preliminary results of motivating factors and barriers on 1063 subjects (663 VG and 402 NVG) who completed the surveys are presented. “Avoid influenza” was reported most often as having a great deal of influence on getting vaccinated (86%, 524/606 subjects) followed by “transmit influenza” (53%, 307/575 subjects). Fear of injection and site pain (32%, 96/298 subjects) and inconvenience (32%, 96/297 subjects) were reported most often as having a great deal of influence as barriers to vaccination. Additional multivariate analyses incorporating all aspects of HBM are ongoing.

CONCLUSIONS: Perception of contracting and/or transmitting influenza were primary motivators for seeking vaccination. In the survey, there appear to be multiple barriers to vaccination. Communication strategies and noninvasive formulations of influenza vaccines may diminish these barriers and enhance vaccination rates.

ECONOMIC STUDY OF CEPHALOSPORINS IN THE TREATMENT OF MODERATE LOWER RESPIRATORY TRACT INFECTION
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The amount of antibiotics currently used in the hospital has reached 35% of total drug consumption. The extensive usage of antibiotics has not only brought drug resistance, but also increased the economic burden of patients. Controlling the abuse of antibiotics and how to
use antibiotics reasonably has become an urgent problem to be solved.

OBJECTIVE: The purpose of this study was to evaluate the efficacy and cost of ceftriaxone, cefotaxime, and cefuroxime therapy in patients with moderate lower respiratory tract infection.

METHODS: 150 patients with moderate lower respiratory tract infection were randomized to receive ceftriaxone (1g .d), cefotaxime (1g b.i.d), and cefuroxime (0.75g t.i.d). Evaluation of clinical efficacy depended on whether or not clinical findings subsiding eradication of the initially susceptible and normal outcome of laboratory tests were obtained 7 days after therapy. In the cost analysis we have taken the following costs into account: drug cost, check-up cost, bed cost, administration cost, treatment of adverse events, and lost income of patients.

RESULTS: 107 patients were analyzed. The effectiveness rates of ceftriaxone, cefotaxime, and cefuroxime arms are 86.21 (25/29), 85.37 (35/41), and 75.68% (31/38), respectively, with no significant difference (p > 0.05), but their costs are 2931.97 ± 161.84, 3749.52 ± 215.98, and 3340.56 ± 221.26 yuan (RMB), respectively, with significant difference (p < 0.05).

CONCLUSION: Our pharmacoeconomic analysis demonstrated that of all the three drugs ceftriaxone had the best cost-effectiveness, and was a better choice for the treatment of moderate lower respiratory tract infection.

**Determination of the Cost-Effectiveness of a Tuberculosis Prevention Program Along the US/Mexico Border Using Markov Process Modeling Within a Prevention Effectiveness Framework**

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OBJECTIVE: A prevention effectiveness analysis framework was used to estimate the cost-effectiveness of a tuberculosis prevention program compared to no program along the US/Mexico border. The prevention program used prophylactic isoniazid therapy in patients who tested positive for tuberculosis infection. This analysis evaluated the cost-effectiveness of the tuberculosis prevention from the county government perspective and was modeled over two time periods, 5 and 15 years post-preventive therapy initiation.

METHODS: The outcome of interest, cases of active tuberculosis averted, was calculated through a Monte Carlo simulated Markov process model. Costs were calculated using hospital discharge and actual tuberculosis prevention and active treatment program data. Average and incremental cost-effectiveness ratios were calculated for the tuberculosis prevention program scenario. Cost-effective-ness ratios were calculated separately with the inclusion or exclusion of the tuberculosis contagion costs.

RESULTS: The results indicate that the tuberculosis prevention program provides cost-savings to the county. Baseline incremental cost-effectiveness ratios, for the 5 and 15 year analyses, demonstrated substantial cost savings ($–1023 and $4971 per case averted, respectively). Sensitivity analyses were performed across key transitional probabilities and discount rates. Results of sensitivity analyses indicate that as the rate of hospitalization for tuberculosis decreased and compliance with the preventive therapy decreased, cost-effectiveness ratios increased to $2015 and $877 per case averted, respectively, for the 5-year preventive treatment scenario. However, when the tuberculosis contagion consequences of not having the tuberculosis prevention program were considered, the cost-effectiveness and cost-savings were once again realized.

CONCLUSION: The results indicate that rather than incurring costs to avert active tuberculosis cases, having the tuberculosis prevention program results in cost-savings.

**The Cost of Influenza in the Emergency Room and Hospital**

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Influenza is a common disease that is often perceived as self-limiting and mainly treated at home. However, for a portion of influenza sufferers the disease may warrant a visit to the emergency room (ER) or hospitalization.

OBJECTIVE: The purpose of this study is to estimate the resources consumed and associated costs of treating influenza patients in the ER and hospital.

METHODS: Patient-level clinic and cost data were measured for the study population identified in the Premier Decision Support Services (DSS) databases. Data were analyzed retrospectively from January 1, 1997 to June 30, 1998 for patients with a diagnosis code for influenza using International Classification of Diseases, Ninth Revision-Clinical Modification (ICD-9) coding. Individual medication data were collected for a subset of the subjects in 1997 and all subjects in 1998. Data were summarized using means (±SE) and multivariate analyses of variance (α = 0.05) were performed to determine if observed differences in mean costs across demographic variables were statistically significant.

RESULTS: Of the 1362 patients who met inclusion criteria, 333 (24.4%) required an inpatient hospital stay for influenza. The average total cost and charge per patient for ER only visits were approximately $142 and $218, respectively. The average total cost and charge per hospitalized patient were approximately $3251 and $5938, respectively. Other cost and demographic data are further detailed in the study.