and two-dimensional PDE to examine how the epicenter moves in space and time under different assumptions about the speed and direction of poultry. ODE Simulations showed that by reducing 95% of the initial susceptible poultry population or by culling all infected poultry birds within one day disease outbreak could control lead in a local setting. Results further elucidated that cleaning the environment is also a feasible and useful control measure, but culling wild birds and destroying their habitat are ineffective control measures. We noticed from the PDE models that the diffusion rate of the (w) has very little impact on the spread speed (1.69–1.74 km/day) where as (d) has shown substantial raise of spread speed (2–7.8 km/day) depending on the transmission direction indicating significant role of migration. Finally, we assumed that epicenter progresses dominantly along the convection direction of the domestic poultry and the disease spread to other direction via random diffusion. Mathematical modeling could prove effective in answering epidemiological issues.

**INITIAL THERAPIES FOR ACUTE OTITIS EXTERNA IN THE LOUISIANA MEDICAID POPULATION**

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**OBJECTIVE:** Determine the initial therapy choices for newly-diagnosed episodes of acute otitis externa (AOE) in the Louisiana Medicaid population. **METHODS:** Louisiana Medicaid claims were retrospectively analyzed for the period of January 1, 2004, through December 31, 2005. Recipients aged 1–64 who had a paid medical claim (index claim) with a diagnosis of AOE (ICD-9-CM codes 380.10 or 380.12) were identified in the dataset. Additional inclusion criteria included a paid pharmacy claim for an oral antibiotic or an otic preparation within five days of the index claim. Recipients were excluded if they had multiple insurance, dual antibiotic or additional numbing agent therapy, concomitant infections, or concomitant infections. Recipients were also excluded if they had a medical claim for an AOE diagnosis or a prescription claim for an antibiotic or steroid during a 30-day washout period prior to the index claim. The initial pharmacy claims were grouped into five drug categories, and physicians were grouped as pediatricians, general practitioners, and other physicians. **RESULTS:** There were 32,059 recipients who met the initial eligibility criteria. After exclusions, a sample of 8090 recipients remained. The initial drug therapies prescribed for these recipients included topical fluoroquinolone antibiotic-steroid combination drugs (n = 2290), topical non-fluoroquinolone antibiotic-steroid combination drugs (n = 2006), otic antibiotics (n = 1406), oral antibiotics (n = 1507), and other otic preparations including acidifying agents, numbing agents, and combinations (n = 881). **CONCLUSION:** Topical fluoroquinolone or non-fluoroquinolone antibiotic-steroid combinations were the most frequently prescribed medications, together representing 53% of the initial therapy choices for AOE. These were followed by oral antibiotics (19%), otic antibiotics (17%), and other otic preparations (11%). Pediatricians prescribed fluoroquinolone containing combinations more frequently than general practitioners, who tended to prescribe non-fluoroquinolone containing combinations most frequently.

**A PICTURE OF DEMOGRAPHIC DISPARITIES IN THE RECEIPT OF ANTIRETROVIRAL THERAPY AMONG HIV PATIENTS IN THE 2000–2005 NATIONAL AMBULATORY MEDICAL CARE SURVEYS (NAMCS)**

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**OBJECTIVE:** Despite numerous advances in antiretroviral therapy (ART) for HIV patients over the past decade, many patients fail to receive appropriate ART. This study sought to identify demographic factors associated with failure to receive guideline-concordant ART. **METHODS:** Data was extracted from the 2000–2005 NAMCS. HIV patients were defined as those that received at least one antiretroviral during an ambulatory care visit. Data collected included patient age, gender, race, ethnicity, geographic region, insurance status, and medications. Antiretroviral regimens were evaluated for appropriateness according to antiretroviral guidelines published by the Department of Health and Human Services. Appropriate and inappropriate regimens were compared using the Chi-square or Fisher’s Exact test. **RESULTS:** Antiretroviral therapy was mentioned in 107 of 156,627 visits. These patients had a median (25th–75th percentile) age of 45 (38–54) years, 66% were male, 64% were white, and 42% had Medicaid/SCHIP. Only 58% of patient visits documented appropriate ART. These consisted of two nucleoside reverse transcriptase inhibitors (NRTIs) plus one non-nucleoside reverse transcriptase inhibitor (NNRTI) (36%), two NRTIs plus two protease inhibitors (PIs) (26%), or two NNRTIs plus PI (11%). Inappropriate monotherapy was commonly reported: NRTI (30%), PI (16%), or NNRTI (12%) monotherapy. Patients were less likely to receive appropriate therapy if they were ≥ 50 years of age (23% vs. 49%, p = 0.003) or had Medicare (5% vs. 23%, p = 0.005). All Asian patients in the surveys received inappropriate therapy (p = 0.007 vs. non-Asians). Comparisons of appropriate ART use among females vs. males (30% vs. 47%, p = 0.007 vs. non-Asians). Comparisons of appropriate ART use among females vs. males (30% vs. 47%, p = 0.08) and whites vs. non-whites (63% vs. 67%, p = 0.6); failed to achieve statistical significance. However, the post-hoc power for these statistics was only 42% and 6%, respectively. **CONCLUSION:** Nearly half of patients in the 2000–2005 NAMCS received suboptimal HIV therapy. Asian patients, Medicare patients, and those patients over the age of 50 years were significantly less likely to receive guideline-endorsed therapies.
Mental Health—Clinical Outcomes Studies

Estimating the Magnitude of Oral Antipsychotic Drug-Drug Interactions

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Objective: To estimate the number of patients with potential major, moderate or minor/moderate drug-drug interactions (DDIs) between oral antipsychotics and coprescribed drugs within a managed care population (MCP). Methods: Literature and drug information resources were used to identify and classify clinical severity of potential antipsychotic DDIs based on cytochrome P450 metabolism of antipsychotics and coprescribed drugs. PHARMetrics pharmacy claims for one year (June 2004 - July 2005) from individuals with antipsychotic claims (including oral risperidone, olanzapine, quetiapine, ziprasidone, aripiprazole, clozapine, oral haloperidol and perphenazine) were evaluated. Patients with ≥10 days of overlap with a potentially interacting drug of severity grade 1 (major), 2 (moderate) or 4 (major/moderate) were identified. Drug Facts & Comparisons severity grading scale was used to determine drugs that met these criteria. Results were extrapolated to provide a population-based prediction of the risk for potential DDIs. Recent national market-share (MS) data (IMS prescription audit 4Q06) for each antipsychotic were multiplied by the percentage of potential projected interactions to determine the number of patients at risk for DDIs in a cohort of 10,000 patients prescribed antipsychotics. Results: Of the 73,562 patients who met study inclusion criteria, 8551 (11.6%) patients had at least one potential DDI of severity grade 1, 2 or 4. Depending on the antipsychotic dispensed, percentage of potential DDIs ranged from 0% to 26.8%. Applied to a cohort of 10,000 patients, over 1162 (11.6%) patients could potentially experience a grade 1, 2 or 4 DDI. Oral risperidone (26.8% MS) had the highest potential for DDIs (n = 676) and quetiapine (30.4% MS) had the second highest potential for DDIs (n = 137). Ziprasidone (5.7% MS) had no potential P450 DDI interactions of severity grade 1, 2 or 4. Conclusion: Prevalence of potentially serious DDIs due to interactions with cytochrome P450 metabolic activity is high in patients being treated with antipsychotics.

Statistical Analysis of Significant Variables in Dealing with Drug Abuse Inpatients

Cerrito PB, Harrison KB

University of Louisville, Louisville, KY, USA

Objective: To examine a sample of patients admitted to hospitals with drug abuse for some inpatient treatment in order to look for trends that may lead to a better understanding of the data and of which groups seem to be most at risk for this ailment. Methods: Data were taken from a ten percent sample of the National Inpatient Sample from 2004. A data sample of 7903 inpatients from 2004 was organized, plotted, graphed, and put into tables in order to best understand the patterns and variances. Logistic regression models were created to compare variables and help to predict age and mortality of the inpatients. The data were preprocessed to include only the most frequently occurring diagnosis and procedure codes. Results: Frequency of cases of drug abuse showed spikes near the ages of 40 and 80, with the African Americans and males dominant at the 40 spike and the Caucasians and males at the 80 spike. Code variables for rehabilitation, blood transfusion, respiratory intubation, hypertension, heart disease, congestive heart failure, urinary tract infection, cardiac dysrhythmias, pulmonary disease, fluid disorder, CT head scan, gastrointestinal endoscopy, psychiatric therapy, physical

Abstracts

BENCHMARKING SCHIZOPHRENIA WITH A FOCUS ON PHARMACOTHERAPY AND METABOLIC SYNDROME

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Objective: The objectives of this analysis were to: Identify a population of schizophrenia patients treated within a commercial managed care environment. Describe and compare the prevalence of conditions associated with metabolic syndrome in patients treated with antipsychotics agents. Methods: Using integrated medical and pharmacy claims data (obtained from the IMS/Pharmetrics Patient-centric Database), patients were included in this analysis based on the presence of a diagnosis of schizophrenia (ICD-9 code 295.4) in 2005. Clinical and economic information related to the treatment of schizophrenia were captured using Episode Treatment Group™ (ETG™) episode-building software. Results: In 2005, 8594 schizophrenia patients were identified; within this population, the average age was 45.7 years and 46% was male. Co-morbid conditions included bipolar disorders (in 23.7% of patients), anxiety disorder (12.7%), substance dependence (11.7%), and depression (7.9%). Overall (among the entire identified patient population), 75.6% of patients used antipsychotics; 57.4% used only atypical agents, 9.1% used only conventional agents and 9.1% used both. Overall, 48.6% of patients had at least one of the following conditions, considered markers for metabolic syndrome: diabetes, hyperlipidemia, hypertension, or obesity. Among patients treated with antipsychotics, prevalence of these conditions was lowest in those treated only with atypical agents (46.5% with at least one condition), higher in patients treated only with conventional agents (55.5% with at least one condition), and highest in patients with use of both classes of antipsychotic agents. Conclusion: The schizophrenia population observed in this analysis reflected a lower prevalence of presumed metabolic syndrome in groups treated with atypical antipsychotic agents. This observation contradicts other research. This disparity may be attributable to differences in patient demographics or other confounding factors, but nonetheless warrants further study.

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