insurance coverage (OR, 1.768; CI, 1.745–1.792) were found to have higher odds of using ICSs when compared to uninsured and people from low income categories respectfully. Patients with increased severity had higher odds of using ICSs (OR, 1.552; CI, 1.537–1.568). The findings held true even after adjusting for other demographic factors.

CONCLUSIONS: Underuse of ICs continues to be a problem in asthma patients. This not only makes the control of disease difficult but shoots up the healthcare expenditure. The study was successful in finding our vulnerable populations that can be targeted for inhaled corticosteroids use. The importance of adherence to treatment and inhaled corticosteroids use are issues that need to be addressed.

THE IMPACT OF THE FDA’S RISK EVALUATION AND MITIGATION STRATEGIES (REMS) INITIATIVE ON PRESCRIPTION PATTERN FOR DRUGS APPROVED UNDER THE REMS PROGRAM AND RELEVANT NON-REMS COMPETITORS

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OBJECTIVES: To assess the impact of REMS approval on prescription pattern for three oral drugs used to treat common chronic conditions. We assessed relative impact on prescription volume for REMS-approved drugs against relevant competitors not requiring REMS. We described these trends over the 2006–2009 period including the 9/27/2007 implementation of the REMS initiation. METHODS: We paired two top prescribed drugs for the treatment of asthma (Advair/Singulair), diabetes (Actos and Avandia) and inhaled corticosteroids (Amberlux/Lunera). Each pairing included a REMS-approved drug (Advair, Actos and Ambien). We focused on the months leading to and following REMS approvals. For each pairing, volume of total prescriptions (TRx), new prescriptions (NRx) and prescription switches (SRx) were collected using the Verispan’s VONA database. Statistical analyses were performed using one-way ANOVA.

RESULTS: There were no significant changes (p > 0.05) in the volume of TRx, NRx and SRx for Advair or Actos prior to or following approval. However, Ambien TRx were significantly higher during and after the last quarter of 2008 compared to previous months (p = 0.008) while SRx were lower (p = 0.04). This increase did not come to the expense of Lunesta whose prescription volume stayed constant over the time period considered. CONCLUSIONS: The fear that additional safety requirements could be detrimental to drug prescriptions was not confirmed in our analyses. In fact, FDA requirement for REMS approval appeared to impact prescription volume favorably for one of the drugs considered. One possible explanation is the potential for increased interactions with providers thus the ability to better position the drug clinically. However, these trends were observed with less than a two-year period post-approval and only for a handful of drugs and conditions. Additionally, the differential impact of various REMS components such as medical guide and communication plan should be further investigated.

NATIONAL ALLERGIC DRUG UTILIZATION PATTERNS IN ADULTS WITH ALLERGIC RHINITIS: NATIONAL AMBULATORY CARE SURVEY RESULTS

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OBJECTIVES: To examine recent anti-allergic drug utilization patterns in adults with allergic rhinitis using National Ambulatory Care Survey data. METHODS: Data for this study was obtained from the 2006 and 2007 National Ambulatory Medical Care Survey (NAMCS) and National Hospital Ambulatory Medical Care Survey (NHAMCS) public use data files. Visits with a primary diagnosis of allergic rhinitis in adults (age ≥18 years) were identified. Descriptive weighted statistics was used to examine utilization patterns of various anti-allergic medications. A multivariate survey logistic was conducted to determine demographic and geographic variations associated with anti-allergic medication use in patients with allergic rhinitis.

RESULTS: Allergic rhinitis accounted for 18.6 million adult ambulatory care visits in the United States. The majority of the visits were made by females (61.4%), whites (84.8%), and involved specialties (59.9%). Anti-allergic medications were prescribed in 51.1% (95% CI 39.2%–71.0%) of the total diagnosed visits. Antihistamines were the most commonly prescribed anti-allergic medication (37.4%) (95% CI 32.4%–46.5%) followed by intranasal steroids (28.3%) (95% CI 23.2%–31.8%). Topical nasal antihistamines and decongestants (7.8%) (95% CI 2.7%–9.9%), leukotriene (6.3%) (95% CI 5.2%–6.8%), corticosteroids (3.4%) (95% CI 1.3%–4.3%), and oral decongestants (1.32%) (95% CI 0.4%–2.1%) were the least prescribed anti-allergic medications. The multivariate logistic regression revealed that geographic region of the office visits was significantly associated with medication use. Outpatient visits in the Midwest (Odd’s Ratio (OR) 5.16, 95% CI 1.50–17.67), South (OR 6.3, 95% CI 2.03–19.5), and West (OR 9.16, 95% CI 2.39–35.11) regions were more likely to be prescribed anti-allergic medications compared to those in the Northeast region.

CONCLUSIONS: Anti-allergic medications are a public health concern as it results in drug resistance and substantial health care costs. Little is known about how health insurance status is related with the prescribing of antibiotics at the adult primary care. We aim to assess the relationship between broad-spectrum antibiotic prescribing and patients’ insurance status in treatment of acute respiratory tract infections (ARI) in adult primary care using a national representative sample. METHODS: We analyzed 2006 National Ambulatory Medicare Care Survey, for adult aged 18 years or older cared for ARTI. Those patients with a concomitant diagnosis with other common outpatient infections that might be
treated with antibiotics were excluded. Analysis was restricted to those patient visits controlled for age, gender, race and ethnicity, physician specialty, and comorbidities. RESULTS: Of 851 adults patients care for ARTI, 38% were prescribed one or more broad-spectrum antibiotics. In multivariate regression analysis, compared to those with private insurance, those with Medicaid, a public insurance program for low-income Americans, was associated with lower likelihood of prescribing of broad-spectrum antibiotics (adjusted odds ratio (OR) 0.496, p = 0.003), so were those without health insurance (adjusted OR 0.499, p = 0.028), and those with Medicare, a public insurance program for the elderly or disabled adults (adjusted OR 0.666, p = 0.016). CONCLUSIONS: In the case of ARTI, those with private insurance were substantially more likely to be prescribed with broad-spectrum antibiotics, where the society may be better off if such overuse of antibiotics could be reduced.

PRS45
INTEGRATED EDUCATIONAL PROJECT WITH INDIVIDUAL FEEDBACK FROM CLAIMS DATA LEADS TO IMPROVED ANTIBIOTIC PRESCRIPTION AND RESISTANCE DECREASE
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OBJECTIVES: Increasing antibiotics costs and resistance led to establishment of educational project S-MedDial under guarantee of the General Health Insurance Fund and related professional associations. The project evaluates prescription habits in respiratory infections, monitors antibiotics resistance and provides individual feedback to practitioners. Introduction of new indexes and summary quality bar from selected respiratory infections, monitors antibiotics resistance and provides individual feedback from practitioners.
RESULTS: In the last round of the project the antibiotic prescription was analyzed for 97 doctors in 7 Slovak regions based on the retrospective claims data from September 2007 to March 2008 and compared with previous season data. Individual feedback was provided to practitioners during regional meetings together with expert presentations and educational leaflets. RESULTS: Every second child with respiratory infection was treated with antibiotics. The most frequent drugs in DDD were macrolides (22.6%), followed by beta-lactamase sensitive penicillins (19.5%) and intravenous cephalosporines (18.4%). Best pediatricians (20% of the group) were significantly different compared to the rest in majority of the quality bar indexes: less patients treated with ATB (31% vs. 51%); lower proportion of ATB in treatment (in EUR: 51% vs. 73%, in DDD: 28% vs. 51%); lower ATB costs per patient (-15%); lower aminopenicillins usage in acute tonsillopharyngitis (6% vs. 16%); lower ATB ratio in acute sinusitis (43% vs. 57%); however high ratio of macrolides was the problem across all groups. Higher prescription quality and lower ATB costs correlated together. There was significant decrease of ATB costs induced by one pediatrician during six years of the project (-50%). CONCLUSIONS: S-MedDial project represents an option for increase of antibiotics prescription quality using the prescribing practitioners’ education. Analysis of prescription habits is suitable not only for cost control but also for antibiotics prescription implications on resistance trends. Long-term integrated educational program leads to prescription habits change and better quality of care.

PRS46
TEN YEAR TRENDS IN PRESCRIPTION OF CHRONIC OBSTRUCTIVE PULMONARY MEDICATION AMONG ADULTS FROM 1996 TO 2005
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OBJECTIVES: Many guidelines were released during the past decade which tried to explain appropriate drug use for patients diagnosed with COPD. Medication use in COPD is also associated with issues related to adherence and side effects. The purpose of this study was to determine trends in prescription of COPD drugs in ambulatory setting and assess the rate of change in different drug classes. METHODS: We combined National Ambulatory Care Settings (NAMCS) and National Hospital Ambulatory Care Settings (NHAMCS) data from year 1996 to 2005. For trend analysis, data were stratified in 2-year periods. All adult visits with only primary diagnosis of COPD (ICD-9-CM: 491, 492, 496) were included in analysis and drug categories were identified using National Drug Codes. Descriptive analysis was carried out to determine patterns in drug prescription across years and four separate multivariate logistic models, dependent variable being drug class and independent variable being year, were specified using National Drug Codes. RESULTS: Drug prescription was less costly than reliever medication. The choice of risk adjustment was by propensity score matching, $2,195 by generalized linear model, and $2,997 by instrumental variable approach. The difference was statistically significant. CONCLUSIONS: COPD medication was less costly than reliever medication. The choice of risk adjustment was important. The technique that controlled for both observed and unobserved biases (instrumental variable technique) provided a difference of almost 30% higher than the other techniques.