we sought to determine the prevalence of PIMs for older adults in Emilia-Romagna, Italy, using the updated Maio criteria. We also evaluated patient and general prac-
titioner (GP) characteristics related to inappropriate prescribing. METHODS: Older adults (≥65) in 2012 were evaluated in a one-year retrospective study using adminis-
terative health care data. The 2011 Maio criteria includes 25 medications reimbursed
by the Italian National Health Service. In the 2012 study, the researchers identified in the region that prescribed at least one PIM, of which older (≥65) and male GPs,
and solo practice GPs were more likely to prescribe PIMs to their older patients.
CONCLUSIONS: The high prevalence of PIM exposure among older adults is a
substantial issue in the region. Knowing how patient and GP characteristics relate
and exposure may improve the design and targeting of initiatives for improving
design and targeting of initiatives for improving prescribing safety in this population.

PI88
TESTING FOR CHILDREN WITH PHARYNGITIS: IMPROVING TRENDS TOWARDS
APPROPRIATE ANTIBIOTIC USE
Johnson RJ, (Contact)1
Truven Health Analytics, Bethesda, MD, USA
OBJECTIVES: Overuse of antibiotics in children is a growing concern in the US. One of the important HEDIS quality measures used to compare performance of health plans in the appropriate antibiotic prescribing is the PDC by ICS. We aimed to deter-
mine if physician behavior had changed over time. METHODS: Patients aged 2-12 diagnosed with pharyngitis (ICD-9-CM 463.46, 463.47) with at least one antibiotic prescription in the seven-day period from three days prior to index through three days post-index was calculated. A higher rate represents better performance (i.e.,
appropriate testing. Rates were examined overall and by age group. RESULTS: In fiscal year (FY) 2009, 68.9% of eligible patients had evidence of a streptococcus test.
Appropriate testing rates were highest for patients aged 5-7 and 8-10 (76.1% and 75.1%, respectively) and lowest for those aged 14-16 and 17-18 (62.0% and 59.9%, respectively). The rate of appropriate testing grew slightly in FY2010 to 70.2% with very similar age group trends. In FY2011, the overall rate grew by nearly 6% to 74.3%. Age group trends continued, with 80.3% of patients aged 5-7 and
78.3% of patients aged 8-10 appropriately tested. In FY2012 the overall rate grew to
76.0%, with patients aged 5-7 and 8-10 continuing to have the highest rate of testing (81.1% and 80.8%, respectively) and those aged 14-16 and 17-18 the low-
est rate (71.6% and 67.0%, respectively). CONCLUSIONS: The rate of appropriate testing for antibiotic use in children with pharyngitis increased by 10% between FY2009 and FY2012. Analysis of the trend is moving in the right direction, significant
respiratory-related disorders

RESPIRATORY-RELATED DISORDERS – Clinical Outcomes Studies

PSR1
THE ASSOCIATION BETWEEN Tiotropium USE AND CARDIAC ARRHYTHMIA
HOSPITALIZATION IN PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY
DISEASE USING A SELF-CONTROLLED CASE SERIES DESIGN
Dickhout RM, Lee FY, Lee TA1
1Center of Pharmaceutical Outcomes Research, Naresuan University, Muang, Phitsanulok, Thailand, 2Pharmacist North America LLC, Bethesda, MD, USA, 3University of Illinois at Chicago, Chicago, IL, USA
OBJECTIVES: Tiotropium is widely used in patients with chronic obstructive pul-
monary disease (COPD), and is effective in reducing the risk of COPD exacerba-
tions. However, controversies exist around its safety, especially with regard to
cardiac arrhythmia. This study aimed to evaluate the risk of tiotropium for cardiac
arrhythmia hospitalization. METHODS: A self-controlled case series was under-
taken using the IMS LifeLink Health Plan Claims Databases. COPD patients aged
45 years or older hospitalized with cardiac arrhythmia during the observation
period, from 2008 to 2011, were included. The exposure periods were defined for
each patient as the dispensing periods of tiotropium plus an additional following
30 days as the wash-out period. The remaining time within the observation period
in which patients were not using tiotropium were the unexposed periods. The inci-
dence rate ratio (IRR) of cardiac arrhythmia hospitalization was calculated by com-
paring exposed and unexposed periods using multivariable conditional Poisson regression. RESULTS: Based on 108 COPD patients with cardiac arrhythmia hos-
pitalizations were included. Among those, 14,398 patients (16.7%) received tiotro-
pium. The average age of the cohort at the beginning of the observation period was
73.2 years old. There was no significant difference between patients prescribed tiotropium and those who were not prescribed tiotropium in the historically significant terms of age, smoking duration, and body mass index. The IRR of tiotropium on cardiac arrhythmia hospitalization was 1.18 [95% confidence interval (CI) 1.12 – 1.24]. The IRR was the highest in the first 14 days of initiation of tiotropium [IRR 1.94, 95% CI 1.71 – 2.21] and slightly decreased after 15 days [IRR 1.52, 95% CI 1.36 – 1.70]. The overall risk for cardiac arrhythmia hospitalization associated with tiotropium was significantly increased compared with the general population. The risk was highest in the first 14 days of initiation of tiotropium and decreased overtime. Patients initiating tiotropium should be closely monitored for cardiac arrhythmia.

PSR2
COMPARATIVE COSTS AND EFFECTIVENESS OF ASTHMA CONTROLLER
THERAPIES AFTER DISCHARGE FROM AN ASTHMA-RELATED
HOSPITALIZATION
Sadat-Ali M, Fitz Gerald M, Murra C1, De Vera M1, Zaflari Z2, Lynd L2
1Department of British Columbia, Vancouver, BC, Canada, 2University of British Columbia, Vancouver, BC, Canada
OBJECTIVES: Patients with asthma exacerbations requiring inpatient care com-
pare a sub-group at high risk of adverse asthma-related outcomes. The quality of
care in these individuals can thus have substantial impact on the burden of
asthma. The purpose of this study was to provide a broad picture on the out-
comes associated with different treatment strategies after discharge from an
asthma-related hospitalization. METHODS: Using administrative health data
of British Columbia, Canada (1997-2012), we created a cohort of individuals
discharged from an episode of asthma-related hospitalization. Exposure was assessed at the inpatient level during which receiving controller treatment, monotherapy with inhaled corticosteroids (ICS), or combination ther-
apy with ICS plus long-acting beta agonists (LABA). Safety (re-admission), adher-
ance (proportion of days covered [PDC] with controller medications, and health
resource use (asthma-related costs) outcomes were ascertained in the next 365
days. Generalized propensity scores were calculated to achieve balance in the
distribution of potential confounders across exposure groups. RESULTS: The final
cohort included 1,864, 848; and 954 post-discharge periods, respectively, for no
treatment, ICS-only, and ICS+LABA groups. Asthma-related admissions were
significantly lower in the ICS-only groups compared with no treatment group
(38 vs. 50; P = 0.001), as well as between ICS+LABA and ICS-only groups (28 vs. 39; P = 0.001). There were no differences in costs across the three groups. CONCLUSIONS: Initiation of controller medications in the post-discharge period was associated with sig-
nificant reductions in the rate of adverse asthma-related outcomes. Further study is necessary to better understand the potential for these medications to influence patient outcomes in the long term.

PSR3
WEB-BASED SURVEY ON SMOKING CESSATION BEHAVIORS OF CURRENT
AND FORMER SMOKERS IN JAPAN
Miyashita Y1, Negishi S, Goto H, Suzuki K1
1University of Tokyo, Graduate School of Pharmaceutical Sciences, Tokyo, Japan, 2Tokyo Univ.
Faculty of Pharmacy, Tokyo, Japan, 3Kyoto University, Kyoto, Japan, 4Fizer Japan Inc., Tokyo, Japan
OBJECTIVES: To investigate smoking cessation behaviors in Japanese current smok-
ers (CS) and former smokers (FS). An online survey was used to survey men and
women ≥20 years of age who were CS or FS was conducted. CS were those who
smoked any number of cigarettes at the time of the survey (24-27 June 2013). FS
were those who had smoked any number of cigarettes in the past but did not con-
sider themselves smokers at the time of the survey. Clinical and socio-demographic characteristics (age, gender, level of education, and level of nicotine dependence [Fagerstrom Test for Nicotine Dependence]) as well as smoking and smoking ces-
sation behaviors were assessed through a web-based questionnaire. We set primary
outcome measures as the number of past quit attempts and the time to relapse
(duration of smoking abstinence). Secondary outcome measures included methods
used to achieve smoking cessation and reasons for trying to quit. RESULTS: A total of
1261 eligible Japanese subjects were included in the survey (CS, n = 631, FS, n = 630). Mean age and gender distribution were broadly similar between the groups.
However, there were significant differences (p < 0.05) related to (i) participants who
had attempted to quit smoking, one single quit attempt was the most common for
both CS and FS (19.0 vs. 39.0%). The estimated median time to relapse was 105 days (FS and CS combined). Unaided smoking cessation was the most common method both for CS and FS (78.2 vs. 63.4%). CONCLUSIONS: Our observations did not reflect the actual smoking cessation behaviors in a Japanese population, and could be combined with other data in economic evaluation models of smoking cessation interventions in Japan to identify appropriate measures to reduce the prevalence of smoking.

PSR4
PREVALENCE OF INFLAMMATION-RELATED MULTIMORBIDITY AMONG
MEDICAID BENEFICIARIES WITH CHRONIC OBSTRUCTIVE PULMONARY
DISEASE
Aimea MB1, Rust G2, Sambamoothri U1
1West Virginia University, Morgantown, WV, USA, 2Morehouse School of Medicine, Atlanta, GA, USA
OBJECTIVES: Chronic Obstructive Pulmonary Disease (COPD) is associated with
elivated levels of pulmonary and systemic inflammatory markers which may lead to
high prevalence of inflammation-related conditions. This study examines the prevalence and demographic predictors of inflammation-related multimorbidity among Medicaid beneficiaries with COPD. METHODS: Observational retrospec-
tive cohort study using multiple years (2005-2008) of data from Medicaid Analytic Repository (MAR) claims files of California (CA), New York (NY), Texas (TX). Individuals with COPD (n = 37,151) were identified using ICD-9-CM codes for chronic bronchitis (491.xx), emphysema (492.xx), or unspecified chronic airway disease (493.xx). A total of 45,6% had a diagnosis of one or more inflammation-related conditions (such as cardiac disease, depression, diabetes mellitus, hypertension, hyperlipidemia and mus-
culoskeletal disorders). This variable was categorized into: (i) both physical/mental illness (IF_PHY/MI), (ii) physical illness only (IF_PHY/no MI), (iii) mental illness only (IF_MI/no PHY), and (iv) no diagnosed condition (IF_NO). Unaided smoking cessation was the most common method both for CS and FS (78.2 vs. 63.4%). CONCLUSIONS: Our observations did not reflect the actual smoking cessation behaviors in a Japanese population, and could be combined with other data in economic evaluation models of smoking cessation interventions in Japan to identify appropriate measures to reduce the prevalence of smoking.