OBJECTIVES: Tobacco smoke is a strong risk factor for chronic obstructive pulmonary disease (COPD), and over 300 million people are estimated to smoke in China. This study examined characteristics and treatment patterns of COPD-diagnosed patients attempting to quit smoking in urban China. METHODS: National Health and Wellness Survey (NHWS) 2010 and 2012 China data were analyzed. NHWS is a mixed-mode, probability, multi-center, cross-sectional survey of adults ≥18 years stratified by age and gender to represent the demographic composition of urban China. Inclusion criteria comprised self-reported diagnosis with COPD and current smokers ‘trying to quit’ or non-smokers ‘in the process of quitting’. Sociodemographic, health behaviors, Charlson comorbidity index (CCI) scores (indicating degree of mortality risk), and smoking treatment utilization patterns were assessed. Descriptive statistics included percentages/frequencies for categorical variables and means/standard deviations for continuous variables. RESULTS: Among 1,421 respondents diagnosed with COPD, 35.5% (n=505) were smokers, among which 43.8% (n=221) were currently attempting to quit. Quit attempters were on average 41.1 years old (SD=12.4), male (57.5%), employed (86.9%), 34.8% were overweight/obese, and they had been diagnosed with COPD an average 6.9 years (SD=7.7), with 25.3% reporting moderate/severe COPD. Mean CCI was 2.53, 57.5% drank alcohol regularly, and 30.3% exercised frequently. Many reported smoking as the main cause of their COPD (57.5%). Very few (11.9%) patients took short-acting beta-agonists, perhaps due to the international sanctions that affected the country in recent years. Low availability of inhalers at public facilities affects those patients who depend on them. CONCLUSIONS: Among COPD patients attempting to quit smoking in urban China, few utilized prescription cessation treatments. Given the significant unmet need and low prescription of smokers with COPD, effective smoking cessation programs are needed.

PSR27

ACCESS TO ASTHMA MEDICATIONS IN TEHRAH, IRAN

Ghiasi G1, Rashidian A2, Keberiae A3, Dorkoosh FA4, Salamzadeh J2

1TUMS, Tehran, Iran, 2Tehran University of Medical Sciences, Tehran, Iran, 3Shahid Beheshti University of Medical Sciences, Tehran, Iran

OBJECTIVES: Asthma is a chronic disease afflicting more than 300 million people throughout the world. Our aim was to examine the availability, pricing and affordability of asthma medications, perhaps due to the international sanctions that affected the country in recent years. Low availability of inhalers at public facilities affects those patients who depend on them. Our aim was to examine the availability, pricing and affordability of asthma medications in Tehran, Iran.\n
Methods: Utilizing recommendations developed of the World Health Organization and Health Action International on measuring medicine prices, availability, affordability and price components. Data was collected from a random selection of 30 public sector facilities and 90 private sector retail pharmacies in 22 districts of Tehran in September, 2012.

RESULTS: Inhaled Corticosteroids was found in over 25% of the pharmacies. The availability of oral corticosteroids and short acting beta agonists was poor in all in all districts of Tehran. Low availability of most commonly prescribed medicines (beta-agonist and corticosteroids sprays) were affordable as the cost of one month utilization was about 0.3 in one month. It is also noteworthy that the availability of asthma medications were limited and ranged from less than 5% (for the imported sprays) to about 44.3%. Current smoking was reported by 82.8%, with 14.9% smoking daily. Smoking cessation prescription use was reported by 12.7% (n=28), among whom varenicline tartrate was used by 57.1% (n=16) for an average 20.9 months. Prescription medications were commonly received from urban/city (50%) or county (35.7%) hospitals.

CONCLUSIONS: Among COPD patients attempting to quit smoking in urban China, few utilized prescription cessation treatments. Given the significant unmet need and low prescription of smokers with COPD, effective smoking cessation programs are needed.

PSR28

ECONOMIC IMPACT OF LEVALBUTEROL VERSUS ALBUTEROL IN LOW-INCOME POPULATION

Yuan L1, Liu 2

1South Carolina College of Pharmacy – USC Campus, Columbia, SC, USA

OBJECTIVES: Short-acting (β2-agonists - albuterol and levalbuterol) are widely prescribed to prevent asthma exacerbations. However, there are significant cost differences between the two medications. The objective of this study is, therefore, to examine the economic impact of levalbuterol versus albuterol on total health care expenditure in a high-risk, low income asthma population. METHODS: A retrospective cohort study was conducted among asthmatic patients aged 2-69 years old who received levalbuterol or albuterol in the South Carolina Medicaid database between January 2001 and December 2012. Expenditures were inflated to 2011 dollars using the gross domestic product deflator, and adjusted using generalized linear models with a gamma distribution and log-link function. Propensity score matching was performed to minimize the possible relation related to unbalanced groups. RESULTS: A total of 9,370 asthma patients were included in the cohort (levalbuterol: 1,652; albuterol: 7,718). The annual spending on levalbuterol was approximately 5 times more than albuterol ($272 vs $ 56.0, p <.001). After adjustment for age, sex, race, year of index date, length of asthma, and proportions of days covered by asthma medications, levalbuterol group demonstrated lower asthma-related expenses than albuterol group. Specifically, length of asthma, and proportions of days covered by asthma medications remained when using the propensity score matching method.\n
CONCLUSIONS: More than 10% of the total asthma care cost in low-income asthma population was associated with lower asthma-related costs on ED visits, hospitalizations or out-patient facilities. These cost savings, however, failed to off the high cost of acquiring levalbuterol, suggesting that levalbuterol did not generate greater economic impact than albuterol on low-income asthma population.

SENSORY SYSTEMS DISORDERS – Clinical Outcomes Studies

PSSS

COMPARING THE EFFICACY OF ANTI-VASCULAR ENDOTHELIAL GROWTH FACTOR DRUGS FOR TREATMENT OF AGE-RELATED MACULAR DEGENERATION: A CLINICAL LITERATURE REVIEW AND META-ANALYSIS

Zhao R, Su W, Carlson A

University of Minnesota, Minneapolis, MN, USA

OBJECTIVES: Given the efficacy of four anti-VEGF (vascular endothelial growth factor) drugs for treatment of neovascular age-related macular degeneration (AMD). METHODS: PubMed and clinicaltrials.gov databases were searched to identify studies on four anti-VEGF drugs: ranibizumab, bevacizumab, aflibercept, and pegaptanib. Light randomized controlled trials were selected. Fixed-effect model was used to pool the data to determine Mantel-Haenszel adjusted relative risk. The primary outcome was relative risk (RR) of losing 15 or more letters of visual acuity at one year follow-up. The second outcome was RR of gaining at least 15 letters of visual acuity at one year follow-up. RESULTS: Ranibizumab 0.3 mg or ranibizumab 0.5 mg significantly reduced the risk of losing 15 or more letters of visual acuity compared to sham (RR: 0.15 and 0.13 respectively, p<0.05). RR of visual acuity gain of 15 or more letters was 3.3 for ranibizumab (95% CI: 1.27-7.30). CONCLUSIONS: All four anti-VEGF drugs reduced the risk of visual acuity loss in patients with AMD. Ranibizumab 0.5 mg is associated with more visual acuity gain than ranibizumab 0.3 mg. However, there is no direct evidence that the treatment is better than the other. More studies are needed to compare the efficacy and safety between these drugs.

PSSS1

PHARMACOLOGICAL TREATMENTS IN PREGNANT WOMEN WITH PSORIASIS

Lin HC1, Hussnici JT1, Moustafa FR2, Al-Yousif K1, Ali R1, Khairallah R3, Feldman SR2

1Indiana University, Bloomington, IN, USA, 2Wake Forest University, Winston-Salem, NC, USA, 3University of Vista California, USA

OBJECTIVES: Psoriasis treatment in pregnant women requires weighing the risks and benefits to both mother and fetus. Little is known about how psoriasis is treated during pregnancy.\n
METHODS: The Truven 2003-2007 MarketScan™ Medicaid database was used. Pregnant women with psoriasis were identified by inpatient and outpatient records. The investigators created an algorithm to identify eligible patients who filled prescriptions for their gestational period and created a claims database to identify drug use during pregnancies. The prevalence of drug use was determined by the proportion of prescriptions. The top 10 most popular prescriptions as well as medications were identified based on the proportion overall and by trimester of pregnancy. Use of topical corticosteroids were revealed by drug potency. RESULTS: Based on the algorithm created by the investigators, 974 pregnant women with psoriasis were identified, and 386 (39.3%) of them filled psoriasis drugs and saw a physician for psoriasis before pregnancy. The most common medications prescribed most patients were topical corticosteroids (n=122, 31.6%). Of those patients given topical corticosteroids, the majority were low to mid-potency (53.5%). Steroids are required to access to psoriasis medications at the times of financial hardship and international sanctions affecting the ability of the importers and producers to provide medicines.

CONCLUSIONS: This study revealed the prevalence of psoriasis medications used in pregnant women with psoriasis, which could provide information on the risks and benefits of psoriasis treatment in pregnant women who were weighed. In general, dermatologists use corticosteroids in line with treatment recommendations for pregnant women. However, there were some treatments prescribed that were not suitable for pregnant women. Care should be ensured to safe treatments for pregnant women.

PSSS2

THE ECONOMIC BURDEN AND THEIR PREDICTORS IN PRESCHOOL CHILDREN WITH DENTAL CARIES IN URBAN BEIJING

Zhang Y1, Yang L2

1Peking University, Beijing, Beijing, China, 2Peking University, Beijing, China

OBJECTIVES: Dental caries is associated with poor quality life and higher health care cost. This study aimed to assess the cost of treatment of dental caries of preschool children (3 to 6 years old) and to characterize predictors of these costs. METHODS: 194 preschool children were selected by random sampling from a local Beijing urban district. Health examination and dietary caries surveys were performed in stomatological Hospital of Peking University and questionnaires were distributed to all tested preschool children’s parents. All information of children’s dental caries and dietary habits were recorded. RESULTS: There were no significant differences between the treatment costs of school children and those of non-school children. Among 194 dental caries children (mean age 4.8 years) stratified by gender and age, there were no significant differences in the frequency of dental caries and dietary habits.\n
CONCLUSIONS: There were no significant differences between bevacizumab 1.25 mg and ranibizumab 0.5 mg in terms of visual acuity loss or gain (RR: 1.17 and 1.04 respectively, p=0.46 and 0.69 respectively). Aflibercept 0.5 mg have comparable efficacy as ranibizumab 0.5 mg. Pegaptanib reduced the risk of losing 15 letters or more versus sham (RR: 0.67, p<0.05). The RR of gaining 15 or more letters visual acuity was 3.3 for ranibizumab (95% CI: 1.27-7.30). CONCLUSIONS: All four anti-VEGF drugs reduced the risk of visual acuity loss in patients with AMD. Ranibizumab 0.5 mg is associated with more visual acuity gain than ranibizumab 0.3 mg. However, there is no direct evidence that the treatment is better than the other. More studies are needed to compare the efficacy and safety between these drugs.