

Mexican race is negatively associated with number of doctor visits ( $P < 0.024$ ). **CONCLUSIONS:** The CHIS database offers an opportunity to investigate the occurrence of ER and doctor visits among children with asthma by race and ethnicity. This study shows that Mexican children are more likely to have an ER visit and less likely to have a doctor visit compared to White children.

PRSI I

#### A CASE STUDY EVALUATING MALAYSIAN COMMUNITY PHARMACISTS' PROFESSIONAL PRACTICES AND SERVICES

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**OBJECTIVES:** To evaluate the professional practices and services of the Malaysian community pharmacists, using a 'simulated client' interview method. The interview was carried at two community pharmacists in the state of Penang. **METHODS:** The simulated client (PhD student at the School of Pharmacy, Universiti Sains Malaysia) visited two community pharmacists "Pharmacy A" and "Pharmacy B" and asked for medications for his and his son's "viral fever symptoms" respectively. The details were documented in a form developed by the researchers. **RESULTS:** The findings suggested a poor professional behavior and dispensing practices among both the pharmacies studied. Although, both of them asked the duration of the symptoms, they did not ask the age of the patient (s), presence of blood in sputum, previous history of presenting medical complaints, past medical history, drug history and smoking status. The nature of the sputum was asked only by the pharmacists at pharmacy B. The pharmacy A dispensed Tab. Clarithromycin 500 mg, Tab. Paracetamol 500 mg, and Azithromycin powder for suspension 200 mg/5 ml for his son's viral fever symptoms. The pharmacy B dispensed Tab. Cefuroxime 250 mg, Amoxicillin + clavulanic acid powder for suspension 125 mg + 31.25 mg/5 ml, Linctus Dextromethorphan + Pro-methacine + Pseudo-ephedrine + Paraben sebagai pengawet, and Tab. Green oats + Sea Buckthorn + Stinging Nettle + Tongkat Ali + Damiana. The cost of prescription was RM 56.50 (US\$ 16.14) for pharmacy A and RM 129 (US\$ 45.15) at pharmacy B. **CONCLUSIONS:** Our findings suggested the need for continuing pharmacy education (CPE) programs for the community pharmacists in the country and need for curriculum changes incorporating more topics related to community pharmacy practice. Though our survey included only two community pharmacies, it can serve as a pilot study for future in depth survey encompassing various regions in Malaysia.

#### SENSORY SYSTEMS DISORDERS – Clinical Outcomes Studies

PSSI

#### EPIDEMIOLOGY AND COMORBIDITIES OF PATIENTS WITH PSORIASIS IN TAIWAN

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**OBJECTIVES:** Psoriasis is a chronic immune-mediated inflammatory disorder and is associated with concurrence of other complex disorders. This study aims to describe the epidemiology of psoriasis and the prevalence of comorbidities in patients with psoriasis in Taiwan. **METHODS:** Patients who had at least one outpatient visit or admission diagnosed with ICD-9-CM code 696.0-1 in the Taiwan National Health Insurance (NHI) claims database during 2006 were identified as psoriasis cases. The cases were further classified into moderate to severe psoriasis (sPsO) for those who had previously received systemic therapy and mild psoriasis (mPsO) for those who had not. The cases were matched with controls in a 1:4 ratio from one million beneficiaries in the NHI dataset representing the Taiwan population. Matching variables included age, gender and residential area. Prevalence of comorbidities was assessed using prevalence relative risk (RR) based upon a Cox proportional regression model. **RESULTS:** The prevalence of psoriasis in the overall population was 2.35% ( $n = 53,761$ ). Mean age (SD) was 46.2 ( $\pm 18.6$ ) and 60% were male. Of the 53,761 psoriasis cases, 17.2% ( $n = 9,265$ ) were the sPsO type. sPsO patients had a significantly increased prevalence ratio (RR; [95% confidence interval]) for hypertension (1.33; [1.26, 1.40]), diabetes (1.52; [1.42, 1.63]), hyperglyceridemia (1.56; [1.44, 1.69]), heart disease (1.24; [1.14, 1.34]), depression (1.44; [1.23, 1.69]), hepatitis B (1.95; [1.44, 2.65]) and hepatitis C (2.19; [1.49, 3.22]). Increased risk of these comorbidities was also observed in mPsO patients compared to controls, but with a smaller magnitude compared to sPsO. **CONCLUSIONS:** Psoriasis was associated with a significantly increased risk of comorbidities, especially for those patients with moderate to severe disease. These health consequences should be taken into consideration when evaluating the burdens of psoriasis and designing effective treatment plans.

#### SENSORY SYSTEMS DISORDERS – Cost Studies

PSS2

#### COMPARISON OF COSTING METHODS: COST TO CHARGE RATIO AND DIAGNOSIS RELATED GROUP USING STEVENS-JOHNSON SYNDROME AND TOXIC EPIDERMAL NECROLYSIS AS A CASE STUDY

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**OBJECTIVES:** Several methods have been to estimate costs in economic evaluation studies. Different methods may give different values. The magnitudes of difference of estimates based on cost-to-charge ratio and diagnosis related group (DRG) methods were not much investigated. This study aimed to assess the differences of estimates of direct medical cost calculated by cost-to-charge ratio and DRG method using Stevens-Johnson syndrome (SJS) and Toxic epidermal necrolysis (TEN) as a case study. **METHODS:** This study was undertaken with retrospective cohort approach using electronic databases of a hospital located in the northern part of Thailand. We included patients who came to the hospital between January 1, 2003 and December 31, 2007 and were coded with International Classification of Disease 10th Edition (ICD-10) of L51.1 (SJS) or L51.2 (TEN). We used cost-to-charge ratio and DRG methods to estimate direct medical cost of SJS/TEN. All cost estimates were converted to reference year (2008) using Thai consumer price index in health product sectors. **RESULTS:** One hundred and fifty-four patients were included. Mean age was 45.3 years. Fifty-six percent were male and 93% were SJS patients. The mean and median direct medical cost estimated by cost-to-charge ratio was US\$918 and US\$308, respectively. The mean and median values estimated by DRG were much lower with cost of US\$554 and US\$264, respectively. The mean estimate based on cost-to-charge ratio was higher than that of DRG by US\$364 or 1.65 times. **CONCLUSIONS:** The cost estimates using cost-to-charge ratio and DRG are different. Selection of cost estimations may impact the cost estimates and cost-effectiveness results. Researchers should consider the perspective of study while choosing the method used for estimating costs.

PSS3

#### THE ECONOMIC BURDENS FOR PATIENTS WITH PSORIASIS IN TAIWAN

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**OBJECTIVES:** Psoriasis is a chronic autoimmune disease that affects approximately 2.4% of the Taiwanese population. However, little is known about its economic burdens. This study estimated those burdens for patients with psoriasis in Taiwan. **METHODS:** Patients who had at least one outpatient visit or admission diagnosed with ICD-9-CM code 696.0-1 in the Taiwan National Health Insurance (NHI) claims database during 2006 were identified as psoriasis cases. They were further classified into moderate to severe psoriasis (sPsO) for those who had previously received systemic therapy and mild psoriasis (mPsO) for those who had not. The cases were matched with controls in a 1:4 ratio by age, gender and residential area from a representative NHI dataset. Differences in health-care utilization between cases and controls were assumed to be attributable to psoriasis. NHI costs were assessed based on a two-part model: a logistic regression to predict the probability of use of services and a generalized linear model to predict utilization for users of services. Out-of-pocket costs, transportation costs, and productivity loss from patients and caregivers were calculated based on face-to-face patient interviews ( $n = 327$ ) during July 2009 to March 2010. All costs were reported in 2009 New Taiwan dollars (1 US\$ = 31.91 NT\$). **RESULTS:** The case-control analysis showed that the NHI cost for patients with sPsO and mPsO was 2.34 times and 1.58 times the cost of controls, respectively. The total cost due to sPsO was NT\$56,885 per patient (70%, 18%, and 12% for NHI cost, patient out-of-pocket cost, and productivity loss, respectively). For mPsO, the total cost was NT\$28,573 (56%, 33%, and 11% for NHI cost, patient out-of-pocket cost and productivity loss, respectively). Total direct and indirect costs of psoriasis are estimated to be NT\$1.80 billion annually. **CONCLUSIONS:** Psoriasis is associated with a significant economic disease burden in Taiwan.

PSS4

#### BURDEN OF DISEASE IN PATIENTS WITH GLAUCOMA IN CHINA: RESULTS FROM 2009 NATIONAL HEALTH AND WELLNESS SURVEY

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**OBJECTIVES:** To assess comorbidity, quality of life (QOL), work/productivity loss, and medical resource utilization in patients suffer from glaucoma. **METHODS:** Patients' self-reported data were collected from 2009 National Health and Wellness Survey (NHWS). Survey samples represented major urban areas in China. QOL was measured by the physical component score (PCS) and mental component score (MCS) of the Short Form-12 (SF-12) (mean score of 50 for general population). Loss of work/productivity was measured by the validated Work Productivity and Activity Impairment (WPAI) instrument. Medical resource utilization (MRU) was measured by health-care provider, emergency room (ER) visits and hospitalization in the past 6 months. Comparisons were made between respondents who were diagnosed glaucoma versus respondents without glaucoma (non-glaucoma group). Since glaucoma typically affects adult population, respondents with age 35 and above were included in the analysis. **RESULTS:** Of the 7949 survey respondents with age 35 and above, 85