the incidence-based economic burden of asthma within lifetime horizon of around 16,193 billion VND. CONCLUSIONS: Understanding the economic impact of asthma on society is fundamental to plan and implement relevant medical policies. The high incidence-based economic burden of asthma of around 16,193 billion VND should be considered to conduct the health care policies in Vietnam.

PSR10 ECONOMIC BURDEN OF PEDIATRIC ATOPIC DERMATITIS IN ASIA-PACIFIC: A SYSTEMATIC REVIEW AND META-ANALYSIS

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OBJECTIVES: Atopic dermatitis (AD) is a chronic skin disease typically presenting in infancy. A literature review was conducted to identify pediatric AD cost estimates in Asia-Pacific (AP) countries. METHODS: An electronic literature search was conducted in 9 online databases and 3 Asian electronic databases to identify the studies and the data on cost and cost-effectiveness for pediatric AD. The data were used to produce a meta-analysis and to produce a cost-effectiveness analysis. RESULTS: Annual cost of treatment for AD was $19,897 in Malaysia, $16,431 in Indonesia, and $20,046 in Singapore. CONCLUSIONS: AD costs range from $576 to $1,097. Cost-effective AD prevention strategies should be considered to reduce this burden.

PSR11 BURDEN OF ATOPIC DERMATITIS IN INDONESIA, MALAYSIA, AND SINGAPORE: ESTIMATES FROM A MATHEMATICAL MODEL

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OBJECTIVES: Children with a family history of atopic disease receiving cow’s milk formula (CMF) are at high risk of atopic dermatitis (AD). Modeling techniques were used to estimate the economic impact of AD among urban high-risk children in Malaysia, Indonesia, and Singapore. METHODS: A cohort Markov model was developed to simulate the cumulative incidence and cost of AD in 3 cohorts (one per country) of urban, high-risk infants partially or completely fed with CMF in early infancy (months 0-4). AD incidence was based on the GINI study, the largest/prospective observational study of infant formula and AD in this population. AD treatment patterns and resource use assumptions were derived from expert opinions (n=8). Costing of resource use was based on the respective countries’ prices. Key model outputs included the overall costs of AD (converted to 2013 US$) and the mean cumulative probabilistic sensitivity analysis was used to generate 95% confidence intervals (CI) around study outcomes. RESULTS: The mean cumulative incidence of AD was 38% (95% CI: 22%, 57%), with a median age of diagnosis at 6 months. The mean overall estimated AD costs/child developing AD was $2,492 (95% CI: $1,887, $3,509) in Malaysia, $3,217 (95% CI: $2,339, $4,717) in Indonesia, and $4,753 (95% CI: $3,438, $6,961) in Singapore. On average, the costs for AD per child developing AD was $767 (95% CI: $501, $601) in Malaysia, $743 (95% CI: $605, $876) in Indonesia, and $1,097 (95% CI: $900, $1,303) in Singapore. Most of these costs were direct costs for physician visits and pharmacologic treatments. CONCLUSIONS: By age 6, the total cumulative AD-related costs among high-risk urban infants who were fed with CMF in early infancy are estimated to range from $2,492 to $4,743. Annual AD costs range from $576 to $1,097. Cost-effective AD prevention strategies should be considered to reduce this burden.

PSR12 COMPARISON OF HEALTH CARE UTILIZATION AND COSTS FOR PATIENTS WITH ATOPY SEVERITY AND HEALTH INSURANCE IN THAILAND: USING GENERALIZED LINEAR REGRESSION MODEL

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OBJECTIVES: To identify the major health care problem. Understanding current patterns of health care utilization is important. Several previous studies compared health care utilization and cost by severity and health insurance, however, they may not be able to compare directly. This study aimed to conduct a hare based regression and to compare outcomes between groups based on a proxy of severity (high vs. non-high risk of emergency department visit) and type of health insurance. Multivariable generalized linear regression model with log link function was used to determine the difference of average health care cost, while multivariable negative binomial regression model was used to determine difference of the number of hospitalization among patients of severity and health insurance. Costs were converted to $US using 30.59 Thai-baht per $1US. RESULTS: Among 1,982 patients included, the average age was 40.3±24.0 years with 60.7% male. A total of 1,936 patients were non-high-risk patients, while 46 patients were high-risk patients. There were 1,293 patients under insurance of public schemes (93.0%), while 265 patients under private insurance schemes (8%); and 26 patients under civil servant medical benefit schemes (CSMS). The average annual cost/patient was $598±871. In adjusted analyses, the health care cost of high-risk patients was $767 higher than that of non-high-risk patients (95% confidence interval (CI), $46-$96). The cost of patients under CSMS was $109 (95%CI; $105-$113) higher than that of patients under UCS. CONCLUSIONS: The health care costs in a cohort of patients with asthma were substantial and were higher in high-risk patients and patients under CSMS.

PSR13 MISSING DATA ANALYSIS IN LONGITUDINAL STUDIES: FINDINGS FROM A QUALITY OF LIFE STUDY IN MALAYSIAN TUBERCULOSIS PATIENTS

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OBJECTIVES: This study aims to propose an appropriate statistical method to analyse the longitudinal health-related quality of life (HRQoL) data. METHODS: This was a longitudinal HRQoL study conducted among new smear positive pulmonary tuberculosis (PTB) patients diagnosed at the chest clinic of Penang General Hospital between March 2010 and February 2011. Each eligible patient was followed up to complete the SF-36v2 questionnaire (either in Malay, Mandarin, Tamil or English) at the start of the treatment and at the end of the treatment. The mean physical component summary (PCS) and mental component summary (MCS) scores, ranging from 47–53, were considered as the questions and imputed by using linear mixed model and linear mixed model was used to analyse the data. RESULTS: A total of 216 patients completed the questionnaire at the start of their treatment. Out of these, 197 patients remained eligible at the second follow-ups, respectively. Throughout the treatment, the mean PCS and MCS scores for the patients were less than 47. In repeated measures ANOVA analysis, level of education, diabetes, being alcoholic and cough with sputum were the significant predictors of PCS, whereas, age of the patients was the significant variance in the MCS scores. In linear mixed model, ethnicity, marital status, being a smoker, productive cough and ≥ 3 TB-related symptoms were the significant predictors of MCS. CONCLUSIONS: Similar to previous works, measures such as severity, hypertension, being a smoker, monthly income ≥ 1000 MYR and ≥ 3 TB-related symptoms significantly explained variance in the MCS scores. The study’s findings indicated compromised health among the study participants even at the end of treatment. According to different methods obtained from the start of the treatment and the last follow-up the intensive care required in applying repeated measures ANOVA, linear mixed model was preferred to analyse this data.

PSR14 HEALTH CARE UTILIZATION AND COST OF MANAGEMENT IN PATIENTS WITH STEVENS-JOHNSON SYNDROME AND TOXIC EPIDERMAL NECROLYSIS IN THAILAND

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OBJECTIVES: Exploring the proportion of patients with Stevens-Johnson syndrome (SJS) and Toxic Epidermal Necrolysis (TEN) who were admitted with SJS/TEN from 2002 to 2007 were included. The cost was determined using the ratio of cost-to-charge of the hospital for each year. The cost was converted to 2013 value by consumer price index. The cost was converted to US$ using $2.97 Thai-baht per 1 US$. RESULTS: A total of 157 patients were included with 56.1% male. Average age of the patients was 45.3±23.0 years. Of those patients, 118 patients were primarily diagnosed as SJS/TEN, while 39 patients were secondarily diagnosed as SJS/TEN. About 146 patients (93.0%) were diagnosed as SJS and the rest of them were diagnosed as TEN. The average length of stay (LOS) was 10.1±3.1 days for all patients. The LOS for primarily diagnosed patients was 6.8±4.8 days, while the LOS for secondarily diagnosed patients was 20.2±22.5 days. Most of patients (93.0%) were treated with systemic corticosteroids. Prednisolone was commonly used as an oral medication, while dexamethasone was usually used as an inject medication. The average cost of managing SJS/TEN for all patients was $1,012±2,563. The median cost was $342 (min-max: $11,-$346). The average cost for primarily diagnosed patients was $515±749, while that for secondarily diagnosed patients was $2,536±7,413. CONCLUSIONS: Health care utilization and cost of managing SJS/TEN in Thailand were substantial. Policy makers may consider allocating resources to support the development of strategies to minimize preventable SJS/TEN.

PSR15 COST-BENEFIT ANALYSIS OF BACTERIAL LYSTES FOR CRONIC OBSTRUCTIVE PULMONARY DISEASE IN CHINA

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