Survey (n = 12,000), a cross-sectional self-report survey which included the SF-12 Health Survey Version 2 (SF-12v2) to assess HRQoL. Differences between patients with and without asthma were identified using chi-square tests for categorical variables and t-tests for continuous variables. Multiple regression was used to assess the association of asthma with HRQoL while accounting for potential confounders, including age, gender, number of co-morbid conditions, possession of private health insurance, and cigarette smoking.

RESULTS: Seventy-six percent (n = 9108) of respondents were familiar with asthma. Physician diagnosis of asthma was reported by 4% of the sample (n = 415), and the remaining 96% (n = 11,585) served as the control group. Asthma patients were younger (36 vs. 41 years, p = 0.001), more likely to be female (61% vs. 50%, p < 0.001), have private health insurance (60% vs. 53%; p < 0.001), drink alcohol (68% vs. 60%, p < 0.01), and had more co-morbid conditions (0.73 vs. 0.32; p < 0.001). Relative to controls, asthma patients had lower MCS (42.41 vs. 46.39, p < 0.001), PCS (47.27 vs. 50.58, p = 0.001) and SF-6D health utility scores (0.63 vs. 0.65, p < 0.001). Asthma patients had lower utility scores. They also show similar absenteeism, greater presenteeism and social and economic factors associated with this valuation.

CONCLUSIONS: Asthma is associated with significant HRQoL burden, even after adjusting for covariates. This analysis may underestimate the burden of asthma, as undiagnosed asthma patients were likely included in the control group.

REFERENCES OF THE COPD ASSESSMENT TEST (CAT) ON ELECTRONIC PLATFORMS FOR WIDER USE AMONG PEOPLE DIAGNOSED WITH COPD

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OBJECTIVES: The COPD Assessment Test (CAT) is a short, validated questionnaire designed to measure the impact of Chronic Obstructive Pulmonary Disease (COPD) on the wellbeing and daily life of people living with COPD. The eight items pertain to COPD symptoms and impact on life, and are rated using a six-point scale, ranging from zero to five. From its original paper validation, the CAT has migrated to electronic platforms such as the web, tablet, smartphone devices, and hand-held devices. Usability testing studies have been conducted to test the migration of the CAT to these platforms. The results have proved that the migration does not alter the way in which the items are interpreted and how the questions are completed by people with COPD. More recently, the CAT has been developed for use as a smartphone app to increase accessibility for people with COPD.

METHODS: A qualitative study was conducted to test the usability of the app with ten people diagnosed with COPD. Participants completed the CAT using a smartphone app, and were then asked questions that probed on the usability of the questionnaire as a smartphone app. RESULTS: Due to the CAT being short and concise, the smartphone app works very well for hosting such a questionnaire. Navigating around the screen and selecting responses to the questions were completed with no major concerns for half of the patients. Others commented that the app version could benefit from the functionality of manually increasing the screen size, as this was not implemented before the usability testing was conducted, and is a common feature of smartphone apps. CONCLUSIONS: Although some further work is still required before the app is finalised, this study showed that the CAT has great potential for becoming accessible in many different electronic platforms.

BURDEN OF SMOKING ON QUALITY AND LIFE PRODUCTIVITY IN CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)

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OBJECTIVES: This study aimed to explore the impact of smoking on quality of life and productivity in Chronic Obstructive Pulmonary Disease (COPD).

METHODS: Data from the National Health and Wellness Survey (NHWS) were used for this study. Respondents aged 40+ reporting diagnosis with COPD, chronic bronchitis, or emphysema in the United States in 2009 and 2010 were included, using 2010 data for individuals completing the survey in both years. The smoking group included subjects diagnosed with COPD and who reported currently smoking (n = 1685). The former smoker group consisted of those diagnosed with COPD who reported not smoking in the last 11+ years (n = 1932). Health-related quality of life (HRQoL) was assessed with the physical (PCS) and mental component summary (MCS) scores from the SF-12v2, and the SF-6D. The Work Productivity and Activity Impairment scale (WPAI) assessed productivity, including absenteeism, presenteeism, and overall work and non-work activity impairment. Multivariate generalized linear models predicted HRQoL variables using maximum likelihood estimation and an identity function. This approach was also used to predict productivity impairment, with a negative binomial distribution and a log-link function. Covariates included age, race, gender, marital status, obesity, smoking status, employment status, perceived health status, and pre-term stage.

CONCLUSIONS: Subjects in the smoking group reported worse HRQoL compared to former smokers, with a greater impact on work and productivity. In the WPAI as absenteeism, presenteeism, activity impairment (52% vs. 49%, p = 0.004), work impairment (52% vs. 49%, p = 0.004), and work impairment (52% vs. 49%, p = 0.004).

CONCLUSIONS: Subjects in the smoking group reported worse HRQoL compared to former smokers, with a greater impact on work and productivity.
Chi: 0.333–1.068; p = 0.07) which approached significance. Also, palivizumab users incurred significantly lower all-cause costs compared to non-users ($6,206 vs. $7,490 p = 0.0002). In the 2010–2011 season, 317 palivizumab users and 217 non-users were identified. Palivizumab users had a similar effect on the likelihood of diagnoses of pneumonia (OR: 0.595, 95% CI: 0.278–1.272; p = 0.18) and bronchiolitis (OR: 0.621, 95% CI: 0.346–1.121. p = 0.10). Also, palivizumab users incurred significantly lower all-cause costs compared to non-users ($3,761 vs. $6,562, p < 0.0001).

CONCLUSIONS: When used in accordance with the 2009 American Academy of Pediatrics Policy Statement, palivizumab appeared to reduce episodes of pneumonia and bronchiolitis among children enough to reduce total program costs even though the reductions were not statistically significant.

PRS40 MEASUREMENT OF PRIMARY MEDICATION ADHERENCE AMONG CHILDREN WITH ASTHMA USING ADMINISTRATIVE CLAIMS DATA

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OBJECTIVES: Majority of the existing research on medication adherence has focused on secondary non-adherence, with only a few studies on primary medication non-adherence (PMN). PMN is defined as the failure of a patient to fill a new medication prescription by the healthcare provider. The main objective of this study was to formulate a comprehensive approach to capture PMN using commercial claims datasets and to test it among pediatric population with asthma. METHODS: This study utilized a retrospective longitudinal cohort study design involving Medicaid claims data. The study population consisted of asthma patients 16 years or younger continuing enrolment for the entire study period. The patients were defined as PMN cases if they were found to have presence of only one claim for asthma controller medication indicating failure to any subsequent refill. A multiple logistic regression model was built to assess the predicting factors of PMN.

RESULTS: There were 8892 patients who met the inclusion criteria for this study. Of the total 8,892 patients (67.7%) 16% were Hispanics, 58.5% females, and the mean age of the study population was 24.5. ICS were prescribed for 5.2% of Hispanic and 17.2% of non-Hispanic White patients.

OBJECTIVE: To compare characteristics of patients with diagnosed allergic rhinitis (AR) by quartiles of health care costs. METHODS: Patients 12-64 years of age with ≥2 AR diagnoses or ≥1 diagnosis and ≥1 AR-related prescription claim continuously covered for 12 months before and 12 months after an AR diagnosis (1/1/2008-3/31/2010) were identified from a privately-issued claims database (N = 14,000,000). The index date was defined as the most recent AR diagnosis date meeting the eligibility criteria, baseline period as 12 months before, and study period as 12 months after the index date. Descriptive analyses compared demographic characteristics, co-morbidities, healthcare resource utilization and costs (inflated to 2010 dollars) among patients in different quartiles of study period health care costs.

RESULTS: A total of 146,597 patients met the inclusion criteria. Health care costs per patient ranged from $0–$1,118 for the lowest quartile (Q1) to $6,349–$1,059,699 for the top quartile (Q4). Q4 patients were significantly older (age 46 vs. 44/3Q, 40Q, 36Q), had significantly higher proportion of women (66.5% vs. 62.6%, 56.7%, 43.9%), had more co-morbid conditions (e.g., sinusitis, asthma, depression, sleep apnea), and used significantly more medications (3.3 vs. 1.8, 1.3, 3.7) at baseline than patients in lower quartiles. During the study period, Q4 patients had significantly higher rates of inpatient visits (26.7% vs. 3.4%, 1.2, 0.6%), emergency department visits, outpatient/other days, and prescription drug use, as well as higher healthcare costs ($19,519 vs. $4,186, $1,798, $544), and they spent 75% of health care costs among AR patients. Q4 patients had the highest AR-related costs ($662 vs. $521, $345, $155) and accounted for 75% of health care costs among AR patients. Additionally, Q4 patients had the highest AR-related costs ($662 vs. $521, $345, $155) and accounted for 75% of health care costs among AR patients. Q4 patients had the highest AR-related costs ($662 vs. $521, $345, $155) and accounted for 40% of AR-related costs among AR patients.

CONCLUSIONS: Health care costs for patients with AR were highly variable, with patients in the top quartile responsible for the majority of costs. Higher cost AR patients were older, had higher proportions of co-morbid conditions and higher health care resource utilization than lower cost AR patients.

PRS43 ETHNIC DISPARITIES IN THE INHALED CORTICOSTEROID PRESCRIPTION PATTERNS FOR CHRONIC OBSTRUCTIVE PULMONARY DISEASE

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OBJECTIVES: Inhaled corticosteroids (ICS) are widely used in the management of chronic obstructive pulmonary disease (COPD). Prior research suggests that COPD patients’ access to ICS may vary by ethnicity. The objectives of the study were to determine the influence of ethnicity in the prescription of Hispanic and non-Hispanic White patients taking ICS for COPD and to determine the independent predictors of taking an ICS prescription in COPD patients. METHODS: The US Medical Expenditure Panel Survey (MEPS) 2007 dataset was utilized to compare ICS prescription patterns among patients with COPD. The sample size was restricted to Hispanic and non-Hispanic White patients with ICN-9CM codes for COPD between January 1 and December 31, 2007. Proportion of patients receiving ICS prescriptions within the defined timeframe was compared by ethnicity in chi-square analysis. Multivariate logistic regression was used to determine significant predictors of receiving an ICS prescription.

RESULTS: Among 1057 COPD patients included in the analysis, 16% were Hispanics, 58.5% females, and the mean age of the study population was 45.8±24.5. ICS were prescribed for 5.2% of Hispanic and 17.2% of non-Hispanic White patients (p = 0.02). Non-Hispanic White patients with COPD had 9.37 (95% CI: 1.39; 73.28) higher odds of receiving ICS prescription than Hispanic patients independent of age, marital status, education, smoking status, and health insurance. Among other risk factors, only smoking was predictive of receiving a prescription for ICS (OR: 1.80; 95% CI: 1.03; 3.11), independent of other factors. CONCLUSIONS: Hispanic COPD patients had substantially lower odds of receiving an ICS prescription. This disparity in ICS prescription patterns may translate into suboptimal COPD management despite the increase in the prevalence of health care among this growing minority population. The differences and potential disparities in ICS use between Hispanic and non-Hispanic White COPD patients warrant further investigation.

PRS42 DISPARITIES IN HEALTH CARE RESOURCES USE AMONG ASTHMA PATIENTS IN BRAZIL

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OBJECTIVES: The prevalence, policies and disease control programs for Asthma vary considerably across the country. The aim of this study is the evaluation of inequities in utilization of healthcare resources in Asthma diagnosis, treatment and follow up by using a national household survey. METHODS: We used data from 2008 Health Supplement of the National Household Sample Survey (PNAD) conducted by the Brazilian Institute of Geography and Statistics (IBGE, 358,868 subjects). The study population was restricted to individuals aged 14 years or older with a self-reported medical diagnosis of asthma (bronchitis, comprising 7,509 subjects. The outcomes were presence of hospital admission and physician visit in the last year, and use of chronic medication. The outcomes were analyzed by socio-demographic variables. Statistical analysis comprised logistic regressions for association measures, and p < 0.05 for results independence, being significant p < 0.005. All analysis considered complex plan sampling. RESULTS: In one year, among the diagnosed asthma and bronchitis patients, 84.0% had physician visit and 12.6% had hospital admission. Also, 16% reported use of chronic medication. The frequency of hospital admission decreased with the increasing of age (OR: 0.85 p < 0.001) and of household head educational level (OR: 0.88 p < 0.001). Also, hospital admission varied significantly across the Brazilian regions (16.0% in North and Northeast to 9.8% in South). Also, higher socioeconomic status was associated with higher probability of physician visit and hospital admission. CONCLUSIONS: Patients with greater use of physician visit and medication had lower frequencies of hospital admission. Considering the regional disparities, it is imperative to implement effective national asthma management approaches aimed at the appropriate target populations.

PRS44 EDUCATION PLAYS A VITAL ROLE IN THE ATTITUDE TOWARD THE USAGE OF PROTECTIVE METHODS AND RESULTING LESSER MORbidITIES AMONG AGATE WORKERS

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OBJECTIVES: To assess the awareness among Agate worker about silicosis, preventative methods, and usage of preventative methods and factors affecting the their usage. METHODS: It is a cross-sectional study among agate workers in Khambar region of Gujarat State in India. The Khambar region is known for the household agate industry, and many of workers are poorly educated and are at risk of deadly silicosis disease due to exposure of silica dust. An interview was conducted. This study was conducted to assess the awareness level about silicosis, awareness about the protective methods, worker attitude toward health, and prevalence of actual use of protective methods to avoid silica exposure. The study was based on questionnaire-based structured interview and cross-sectional data analysis. The analysis of the results suggests that majority of the workers (55%) were aware about the silicosis, harmful effect of silica-dust exposure (72%), protective methods to avoid silica-dust exposure (80%), but only minority of the workers (22%) are actually using the protective methods. Further investigation reveals the more educated workers are more likely to use the easily available protective methods than the less educated or illiterate workers, though the awareness about of the silicosis and protective