Metabolic syndrome was associated with greater SABR use in the previous quarter.

HEALTH CARE UTILIZATION AND COST OF COPD IN A MEDICARE POPULATION: THE ROLE OF CO-MORBID CONDITIONS

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OBJECTIVES: Comorbidities in patients with chronic obstructive pulmonary disease (COPD) are associated with higher mortality, hospitalization, and poor quality of life. The objectives of this study were to characterize a comprehensive comorbidity profile among COPD patients, and to explore the impact of comorbidities on medical utilization and cost in a low-income Medicare population.

METHODS: This retrospective cohort study analyzed medical claims from the Maryland Medicaid database. We employed a 1:2 case-control design to select 1388 COPD patients aged 40 to 64 years with at least 24 months of continuous enrollment and 2776 demographically-matched controls without COPD. Logistic regressions were performed to calculate odds ratios that compared differences in the prevalence of comorbidities, including 17 conditions defined by the Charlson Comorbid Index (CCI) and 8 additional conditions known to coexist with COPD. Generalized linear models were performed to estimate the average medical utilization and cost by specific comorbidity. RESULTS: Medicaid COPD patients had more comorbidities compared with non-COPD controls (CCI 2.99 vs. 1.77; p < 0.001), and were more likely to have myocardial infarctions, congestive heart failure, cerebrovascular disease, peptic ulcer, mild liver disease, hyper tension, sleep apnea, tobacco use, and edema. COPD patients on average had 16 more medical claims (81.4 vs. 65.4, p < 0.001) and incurred $1871 higher medical cost per year than non-COPD controls ($7636 vs. $5172, p < 0.001). Ten out of the 17 conditions defined by the CCI as well as hypertension, tobacco use, and edema were associated with the excess medical utilization and cost in COPD patients. Depression was associated with excess medical utilization but not cost. CONCLUSIONS: Medicaid COPD patients have a higher burden of comorbidities, which translate into higher medical utilization and cost. Effective disease management and treatment protocols are needed to reduce co-morbidity burden.

USE OF HEALTH CARE SERVICES IN PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) TREATED WITH Budesonide/Formoterol Via Dry Powder Inhaler (BUD/FM DPI) Versus Tiotropium DPI

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OBJECTIVES: To assess real-world effectiveness of BUD/FM DPI versus tiotropium DPI in COPD patients. METHODS: Data from the Quebec health care databases were used to construct a matched cohort of COPD patients aged 440 years newly treated with BUD/FM DPI or tiotropium DPI from 2003–2007. Patients were matched on age, sex, COPD exacerbations (short-course prescription of oral corticosteroids [OCSs], emergent visit or hospitalization [EVD] events or hospitalizations for COPD; e2 events occurring within 15 days counted as 1 exacerbation), and use of short-acting inhaled β2-agonists (SBAs) and ipratropium in the year before therapy began. The number of exacerbations, EVD visits, and hospitalizations for COPD; claims for OCSs; and the average weight of SBAs and ipratropium were compared for BUD/FM DPI versus tiotropium DPI users for a 1-year post-therapy period. Poisson and linear regression models were used to produce adjusted rate ratios (RR) and mean differences (MD). RESULTS: Of 981 BUD/FM DPI and 981 tiotropium DPI users in the cohort, 78% were aged ≥65 years and 53% were men. No significant differences were seen for COPD exacerbations (RR = 0.94; 95% CI, 0.77–1.15), EVD visits for COPD (RR = 0.80; 95% CI, 0.54–1.20), and claims for OCS prescriptions (RR = 0.93; 95% CI, 0.72–1.21) between BUD/FM DPI and tiotropium DPI users in the year after the start of therapy. However, BUD/FM DPI users had significantly fewer hospitalizations for COPD (RR = 0.65; 95% CI, 0.44–0.97), used less SBAs (MD = −0.48; 95% CI, 0.67 to −0.28), and used more ipratropium (MD = 0.33; 95% CI, 0.21–0.50). CONCLUSIONS: These findings showed that patients using BUD/FM DPI were significantly less likely to have COPD exacerbations leading to a hospitalization, but a propensity score matched tiotropium users to require emergency care or OCS therapy in the year after initiation of therapy.

OUTCOMES ASSOCIATED WITH TIOTROPiUM USE IN COPD PATIENTS

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OBJECTIVES: To date, there is mixed evidence on the safety and effectiveness of tiotropium. Our objective was to evaluate the comparative effectiveness of regimens containing tiotropium versus other medication regimens for chronic obstructive pul-

monary disease (COPD) in real-world clinical settings. METHODS: We conducted a cohort study on two separate cohorts with a diagnosis of COPD in the VA health care system. Patients with a COPD diagnosis prescribed tiotropium and patients in a historic cohort prior to the introduction of tiotropium were selected for comparison using propensity scores, with the base case including scores from 0.1 to 0.4. Outcomes identified during follow-up were all-cause mortality, COPD exacerbations, and COPD hospitalizations. Exposure to COPD medication regimens was defined in a time-varying manner and Cox proportional hazards regression were employed to evaluate substantial burden of comorbidities, the regimen of tiotropium plus inhaled corticosteroids plus long-acting β2-agonists was associated with 40% reduced risk of death (HR = 0.60 [95% CI 0.45, 0.79]) compared to inhaled corticosteroids plus long-acting β2-agonists. This combination was also associated with reduced hospitalization (HR = 0.84 [0.73, 0.97]) and COPD hospitalizations (HR = 0.78 [0.62, 0.98]). Tiotropium in combination with other medica tion regimens was associated with increased risk of events compared to inhaled corticosteroids plus long-acting β2-agonists. CONCLUSIONS: When used with inhaled corticosteroids and long-acting β2-agonists, tiotropium use was associated with a decreased risk of mortality compared to treatment with inhaled corticosteroids and long-acting β2-agonists. However, this result was not consistent in other mediation regimens that included tiotropium.