THE IMPACT OF ASTHMA ON LOSS OF PRODUCTIVITY AND MEDICAL COSTS

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OBJECTIVES: The objective was to evaluate the direct and indirect costs of asthma in working US adults. METHODS: Asthma patients with ≥1 asthma diagnosis or ≥2 asthma prescriptions in 2003 and 2005 in the Thomson Reuters MarketScan® Commercial Database and Health and Productivity Management Database were extracted. Patients were 18–64 years old, had full-time employment, were employed for at least 6 months, had short-term disability (STD) or workers’ compensation (WC) and were continuously enrolled 12-month post-enrollment index date (first asthma diagnosis or asthma medication claim). Those with emphysema or COPD were excluded. The controls had no asthma claim and met the same inclusion and exclusion criteria. An index date was assigned to controls by adding a number to January 2003 that was randomly drawn from a pool of days between January 2003 and index date for each asthma patient. Propensity score techniques were used to match asthma patients to controls based on baseline demographic and clinical characteristics. RESULTS: A total of 13,379 asthma patients were matched to 13,379 controls comprising of 3,452 patients with absence eligibility, 8,497 with STD eligibility and 8,264 with WC eligibility in each of the asthma and control group. Most baseline characteristics after matching were very similar. Asthma patients had $1,988 higher direct medical costs than matched controls ($p<0.001) during the 12-month follow up. They experienced 2.1 more WC days ($p<0.001), 2.2 more STD days ($p<0.001) and 1.3 more WC days ($p<0.001) than controls. This translated into $166 ($p=0.041), $248 ($p<0.001) and $59 ($p=0.009) more in indirect costs respectively. CONCLUSIONS: Asthma patients experience significantly greater work loss and medical costs than patients without asthma. Asthma treatments can potentially benefit in reducing absenteeism and costs.

ANALYSIS OF OUTCOMES AND COSTS FOR PERSISTENT ASTHMA PATIENTS TREATED WITH BECLOMETASONE DPI OR FLUTICASONE PROPIONATE

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OBJECTIVES: Examining outcomes and costs for persistent asthma patients initiated on beclomethasone dipropionate (BD) or fluticasone propionate (FP), METHODS: Medstat’s Commercial Claims and Encounter Database (July 1, 2002 – June 30, 2007) was utilized. Patients who initiated therapy with BD or FP (first use = index date) and met the following criteria: a) no receipt of other study medication in the 1 year post-period, b) persistent asthma in the 1 year pre-period, c) age 5–64, d) no diagnosis of COPD, and e) continuous insurance coverage from 1 year pre to 1 year post-period were included. Multivariate regressions (N=13,968) examined the probability of an ER visit or hospitalization, probability of reaching alternative adherence thresholds and annual costs. RESULTS: Receipt of BD, compared to FP, was associated with a 17% reduction in the odds of an ER visit (OR=0.834, 95% CI 0.751–0.925), 30% reduction in the odds of an asthma-related ER visit (OR=0.697, 95% CI 0.571–0.852), as well as a significant increase in the odds of obtaining a medication possession ratio (MPR) of at least 90% (OR=1.324; 95% CI 1.17–1.48) or 75% (OR=1.311; 95% CI 1.072–1.604). Total medical costs ($5,063 vs $5,777, p=0.0042), drug costs ($2236 vs $258, p=0.0001) and ER costs ($185 vs $249, p<0.0001) were significantly lower among the BD cohort. Asthma-related outpatient ($191 vs $224, p<0.0001) and ER costs ($28 vs $45, p=0.001) were significantly lower in the BD group while asthma-related inpatient ($59 vs $101, p<0.0001) and drug costs ($451 vs $540, p<0.0001) were significa-

POSITIVITY EFFECTIVENESS OF STEPPED CARE VERSUS REPEAT CARE IN SMOKING CESSATION

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OBJECTIVES: Smoking is the leading avoidable cause of premature morbidity and mortality in the United States, attributable to over 400,000 annual deaths and $167 billion in health care costs. Nicotine addiction remains a key barrier to smoking cessation. Smoking is a repeated intervention and multiple quit attempts are needed. Stepped care is possibly a viable intensive approach for achieving long-term smoking cessation. This study uses modeling techniques to predict outcomes of a current study of stepped care in smoking cessation. It is expected that, though more costly, increments in cost-effectiveness of stepped care will fall well short of accepted thresholds. METHODS: A simulation model was created in TreeAge to replicate the Step Care study. Both arms receive pharmacotherapy and counseling; these therapies intensify in the step care arm. Various data sources were used to estimate transition probabilities and costs. The model was run 1,000 times to produce estimates of cost-effectiveness of the stepped care regimen relative to repeat therapy in producing point-prevalent cessation. RESULTS: As expected, the model produced a favorable incremental cost-effectiveness ratio (ICER) for stepped care relative to repeat care ($941/quit). Step care and Recycle arms produced mean costs of $740 (95% CI: $340–$840) and $665 (95% CI: $320–$740), respectively. On average, 31% of step care patients achieve point-prevalent cessation at study end, compared to only 23% of patients in the recycle. In the simulation, 37% of step care patients required each step of therapy; in the recycle arm, an average 2.2 quit attempts were made with patch therapy. CONCLUSIONS: The results of the Step Care simulation study indicate that the stepped care program is an effective program in smoking cessation efforts. The population represented in the Step Care study is a difficult-to-treat population—predominantly low-income smokers with high rates of nicotine dependence. Treatment guidelines suggest this population to be appropriate for more intensive intervention.