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 primary asthma diagnosis, or ≥ 1 asthma diagnosis any level and ≥ 1 asthma prescription, or ≥ 2 asthma diagnoses any level between January 2003 and December 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 8 months, had short-term disability (STD) or workers’ compensation (WC), and were continuously enrolled 12-month pre/post the 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 3,433 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 employed more STD 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: With a more extensive inclusion and exclusion criteria, the matched comparison would provide lower total costs and lead to better consequences under most tested assumptions. 6

AN ECONOMIC EVALUATION OF A PHARMACOLOGICAL INTERVENTION USING VARENCLINE AS THERAPY FOR SMOKING CESSATION
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OBJECTIVES: Evaluating the cost-effectiveness and cost-utility of a pharmacological intervention for smoking cessation comparing varencline, bupropion, nicotine replacement therapy (NRT) and unaided cessation in Colombia. METHODS: A full economic evaluation was made using the BENESCO (Benefits of Smoking Cessation On Costs) simulator, which is a set of 9 microsimulation models that simulate a cohort of smokers with different characteristics and motivations to quit, using different strategies. The model was inputted demographic and epidemiological data corresponding to the Colombian adult population. A systematic review was made to identify the effectiveness of varencline and the alternative interventions. This review was complemented by consulting available data sources in Colombia in order to estimate disease burden for lung cancer, chronic obstructive pulmonary disease, coronary heart disease and stroke. The cost of attending these diseases was estimated from a third-party perspective using HMO and health care provider records. The medicaments’ cost corresponded to the average of a survey of prices regarding a set of pharmaceutical vendors representative of the market. It was assumed that unaided cessation involved no cost for the third-party. The clinical and economic results of the four intervention options were projected using the BENESCO model at 2, 5, 10 and 20 year time-horizons; such projections were used to calculate incremental cost-effectiveness (ICER) and cost-utility (ICUR) ratios. Future clinical and economic outcomes were discounted at a 3% annual rate; all costs were assessed in USD2007. RESULTS: Varencline dominated NRT and bupropion considering all time-horizons. Compared to varencline treatment, cessation dominance was found in 20-year and lifetime projections; in 10-year projections it was found an ICUR = USD$11,711 for QALY gained and ICER = USD$24,349 per life year gained; however, varencline was not cost-effective when evaluating 2–3 year projections. CONCLUSIONS: Varencline is the most cost-effective of the interventions currently available in Colombia.