A COST EFFICIENCY MODEL FOR COMPARING ON-DEMAND TREATMENT COSTS IN HEREDITARY ANGIOEDEMA

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OBJECTIVES: To evaluate objective, subjective, and customizable cost estimation formulas to compare per-attack treatment costs of four recently FDA-approved Hereditary Angioedema (HAE) products. METHODS: Products developed for small orphan diseases are known to generate high healthcare costs. HAE product costs are predictably costly. Comparing treatment costs among new HAE therapies is complicated by differences in disease populations such as hereditary angioedema (HAE) products. For re-dosing. For products having more than one published re-dosing frequency, we selected the most conservative approach. These estimation formulas address three theoretical patient weight categories: 50-kg or 12 lbs, 60-kg or 130 lbs, and 70-kg or 154 lbs. A weighted percentage of the cost of vials or syringes required for initial dosing. A weighted percentage of the cost of local acquisition costs for any of the HAE products, according to the quantity of vials or syringes required for initial dosing. A weighted percentage of the cost of local acquisition costs for any of the HAE products, according to the quantity of vials or syringes required for initial dosing.

RESULTS: Formulas were developed that allow insertion of local institutional cost estimates in HAE products, according to the quantity of vials or syringes required for initial dosing. A weighted percentage of the cost of vials or syringes required for initial dosing. A weighted percentage of the cost of vials or syringes required for initial dosing. A weighted percentage of the cost of local acquisition costs for any of the HAE products, according to the quantity of vials or syringes required for initial dosing. A weighted percentage of the cost of local acquisition costs for any of the HAE products, according to the quantity of vials or syringes required for initial dosing.

CONCLUSIONS: The estimated cost of treating HAE is significant. This cost estimation model can be used to provide a more accurate estimate of the cost of treating HAE patients. The estimated cost of treating HAE is significant. This cost estimation model can be used to provide a more accurate estimate of the cost of treating HAE patients. The estimated cost of treating HAE is significant. This cost estimation model can be used to provide a more accurate estimate of the cost of treating HAE patients. The estimated cost of treating HAE is significant. This cost estimation model can be used to provide a more accurate estimate of the cost of treating HAE patients.
patients. As the results were mainly driven by the lower rates of severe exacerbations in the tiotropium arm, this highlights the importance of exacerbations when assessing cost-effectiveness in moderate to very severe COPD. Overall, a broader range of evidence parameters should be considered in economic modelling of COPD.

PRS25
COST-EFFECTIVENESS ANALYSIS OF REFRACTORY ASTHMA TREATMENT STRATEGIES: A DECISION TREE ANALYSIS
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OBJECTIVES: Patients with severe refractory asthma experience persistent symptoms despite adhering to guideline-based therapies, and they utilize a disproportionate share of healthcare resources. Several new treatments are available to improve symptoms and quality of life in patients with refractory asthma. The objective of this study was to determine the cost-effectiveness of adding bronchial thermoplasty to current standard of care in patients with severe refractory asthma, including biologic therapies and follow-on bronchial thermoplasty. METHODS: A decision tree analytic model to investigate the comparative effect of two biologic therapies and follow-on bronchial thermoplasty on asthma exacerbation-related costs and utilities. Endpoint of interest was ER visits, hospitalizations, death, and direct healthcare costs. Base-case inputs were taken from prior literature or assumed as necessary. We used a U.S. healthcare perspective, a hypothetical cohort of 10,000 adult refractory asthma patients, an annual cycle, and 10-year time horizon to construct our model. RESULTS: Among patients who respond to biologic treatment, the addition of bronchial thermoplasty was not cost-effective. Mepolizumab without bronchial thermoplasty was the most cost-effective option for biologics responders, with a 10-year per-patient cost of $116,776 and 5.46 QALYs gained (ICER $21,388). Among patients who do not respond to biologic treatment, bronchial thermoplasty was a cost effective treatment option ($83,160/QALY). Sensitivity analysis showed the hour- and cost-effectiveness of adding bronchial thermoplasty to biologic responders’ therapy; however, in biologic non-responders, bronchial thermoplasty remains a cost effective add-on to treatment option. Future studies should incorporate long-term efficacy inputs of bronchial thermoplasty and real-world mepolizumab costs to address assumptions necessary due to limited data currently available for these newer therapies.

PRS27
COST-EFFECTIVENESS ANALYSIS OF SMOKING CESSATION INTERVENTIONS IN JAPAN USING THE DISCRETE EVENT SIMULATION MODEL
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BACKGROUNDs: Smoking cessation medications have been shown to yield higher success rates and sustained abstinance when compared to unassisted quit attempts. Although unassisted smoking cessation is still common in Japan, various treatment options are available. Although smoking cessation medications can be covered by the Japanese health insurance system. This analysis examines the cost-effectiveness of different smoking cessation interventions in Japan. METHODS: A discrete event simulation model was developed to simulate smoking cessation interventions in Japan. The model was validated based on data from a survey of smoking cessation interventions in Japan. The model was run for a 1-year time horizon with a percent difference of 10.16% per patient. The budget impact costs were $265.27 and for tiotropium bromide monotherapy was $242.30 in one year in both cases. RESULTS: Annual cost of glycopyrronium bromide monotherapy was $286.27 and for tiotropium bromide monotherapy was $242.30 in one year horizon 10.16 percent difference in costs. It was estimated that in the first year were $287,409,746.74 and 6262,527,500.25 for tiotropium bromide monotherapy and glycopyrronium bromide monotherapy respectively, with a 1.5% of glycopyrronium. Glycopyrronium bromide monotherapy is less costly than tiotropium bromide monotherapy which shows us that it is possible to achieve cost savings with at least the same clinical benefit from the perspective of the Mexican public health system, in specific from IMSS. IMSS ( Mexican Social Security) CONCLUSIONS: (NAFO National Council of Population) (Exchange rate 14.55 MXN)

PRS29
LOSS OF PRODUCTIVITY COSTS ATTRIBUTABLE TO BEING OVERWEIGHT OR OBSESE IN WORKING ASTHMA PATIENTS IN THE US
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OBJECTIVES: To estimate annual loss of productivity costs attributable to being overweight or having obesity in working US adults with asthma patients. METHODS: This study applied a cross-sectional design using the 2008-2012 Medical Expenditure Panel Survey (MEPS). Asthma patients (18-64 years old) were identified by self-reported diagnosis, Clinical Classification Codes of 128, or ICD-9-CM code of 493. To investigate the impact of being overweight, patients were categorized as normal weight (18.5 ≤ BMI < 25), overweight (25 ≤ BMI < 30), and obese (BMI ≥ 30). Productivity loss costs, which were measured based on missed work days due to illness or injury for over the past 12 months, were estimated using a two-part model to adjust for patients with zero costs. To estimate the productivity loss costs attributable to being overweight or obese, each group of costs was estimated by assuming everybody was overweight or obese. The model was then run, where if everybody was normal, and the mean difference between the two estimated costs was calculated. All costs were converted to 2013 US dollars using the Consumer Price Index (CPI). RESULTS: Among a total of 5,931 working adults with asthma, prevalence of overweight was 28.9%, overweight 31.4%, and obese 39.9%. Among asthmatics, average productivity loss costs for normal, overweight and obesity in asthma patients were $360(95%CI:297-$423), $461(95%CI:374-$548), and $735(95%CI:460-$886) per person per year respectively. Among patients with asthma who had loss of productivity costs, those with obesity had 1.33 times greater productivity loss costs than normal-weight patients. Thus, the productivity loss costs attributable to being overweight or obesity in working asthma patients were estimated at $459(95%CI:284-$525) or $959(95%CI:818-$1196. Taken together, these results demonstrate that the loss of productivity costs among US asthma patients is substantial, which is only further amplified by the presence of obesity. This study highlights the importance of obesity control in order to reduce burden of asthma treatment and enhance productivity.

PRS30
ECONOMIC BURDEN OF CHRONIC SPONTANEOUS URTICARIA AND PSORIASIS: PATIENTS PERSPECTIVE FROM EUROPE & US
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OBJECTIVES: Chronic urticaria (or chronic hives) can be indolent or episodic (chronal). CSU patients have a similar or even higher economic burden than PsO patients in both EU and US patient population. This analysis of patient reported data show that CSU has a similar or even higher economic burden than PsO patients in both EU and US patient population.

PRS32
MINIMIZATION ANALYSIS AND BUDGET IMPACT OF GLYCOPHYRRON BROMIDE VERSUS TIOTPRIMOBROMIDE AS A MAINTENANCE BRONCHIAL THERMOPLASTY IN PATIENTS WITH MODERATE TO SEVERE CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)
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OBJECTIVES: To perform a cost minimization analysis and budget impact of glycopyrronium bromide monotherapy versus tiotropium bromide monotherapy as a maintenance treatment in adult patients with moderate to severe chronic obstructive pulmonary disease (COPD). RESULTS: From the perspective of the Mexican public health care system. METHODS: Using data from GLOW 5 study, it was established the equivalence of safety and efficacy of glycopyrronium bromide monotherapy and tiotropium bromide monotherapy, so it is evaluated the annual costs of each therapy to establish the cost-effectiveness of glycopyrronium bromide monotherapy. COPD drug cost was estimated for one year in the cost-minimization analysis, using local prices for public healthcare institutions (IMSS). It was developed a 5 year horizon budget impact from the perspective of the Mexican public health care system with an annual discount rate of 5%. The total population used for the budget impact was calculated according to the CONAFO’s Mexican population projection with 40 years or over, the results estimated the cost of COPD in Mexico (PHATNO study and US-groep Glycopyrronium bromide is always chosen as the first choice for a quit attempt, it would save JPY 206,100 and prolong 0.08QALY per smoker over a lifetime horizon, compared to current mix of strategies. The greatest cost saving was observed for the smokers aged from 40 to <50 years. CONCLUSIONS: Increased utilization of smoking cessation pharmacotherapy to support quit attempts is estimated to be cost-saving, as well as to improve health outcomes of the many smokers who want to quit.