variables, existing complications and treatment status) are used to estimate the transition probabilities for different events with HbA1c acting as the key variable in the model. Patient behaviour was also incorporated in the cost-effectiveness model by updating HbA1c and other variables in time based on the patient's behaviour. Furthermore, the model is capable of performing probabilistic sensitivity analysis allowing us to capture the effects of parameter uncertainty and report the likelihood of results. A number of cost-effectiveness analyses were performed and the trade-offs between costs and QALYs are presented for different treatment/interventions. Screening strategies were also evaluated by comparing the cost savings and improvements in life expectancy.

CONCLUSIONS: The flexible individual patient level discrete event simulation model developed enables cost-effectiveness evaluations of a number of treatments and interventions for Type-1 diabetes. The model allows tracking the history of each of the patients and this enables identification of different sub-groups for targeted interventions.

DIABETES/ENDOCRINE DISORDERS – Patient-Reported Outcomes & Patient Preference Studies

PD863
COMPARING MEDICATION ADHERENCE, PERSISTENCE AND DISCONTINUATION RATES TO PREGABALIN AND DULOXETINE AMONG TYPE 2 DIABETIC PATIENTS
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OBJECTIVES: To compare medication adherence, persistence and discontinuation rates to medications used to treat painful diabetic peripheral neuropathy (PDPN) in type 2 diabetic patients. METHODS: A retrospective cohort analysis of Texas Medical and inpatient pharmacy claims of type 2 diabetic patients who were on either pregabalin or duloxetine. Data were extracted from June 2003 to October 2009. Eligible patients must have been on oral antidiabetic (OAD) medications at least 6 months prior to the index date and have continuous eligibility for at least 12 months post-index. Cohorts were constructed through propensity score matching with up to 1:1 matching differences in demographics and pre-index medication use. The outcome variables were medication possession ratio (MPR), persistence and discontinuation rates. Sensitivity analyses were conducted for both persistence and discontinuation rates. RESULTS: The two study cohorts included 652 pregabalin and 652 duloxetine patients with an overall mean age of 51.9 ± 7.9. Mean MPR of pregabalin (80.8%) was higher compared to duloxetine (76.2%) (p = 0.002). The proportion of adherent patients (MPR ≥ 80%) on duloxetine (72.1%) was higher compared to pregabalin (40.2%); X2 = 134.74, p < 0.001. Mean persistence for duloxetine (222 days ± 180.5) was significantly longer compared to pregabalin (165.1 days ± 128.3) when a 60-day gap period was used; t = 7.96, p < 0.001. Results of sensitivity analysis using 30, 90 and 120 days gap periods were robust. Also, the proportion of patients on duloxetine (65.5%) who discontinued their medication was lower compared to pregabalin (79.8%) when a 90-day gap period was used (X2 = 38.94, p < 0.001). Results of sensitivity analysis using 120 day gap periods were also robust. CONCLUSIONS: Type 2 diabetes patients on duloxetine had significantly higher medication adherence and persistence and discontinuation rates. Sensitivity analyses were conducted for both persistence and discontinuation rates while controlling for baseline differences in demographics and pre-index medication use. The outcome variables were medication possession ratio (MPR), persistence and discontinuation rates. Sensitivity analyses were conducted for both persistence and discontinuation rates.

PD684
THE ECONOMIC IMPACT OF INCREASING THE LEVEL OF DRUG ADHERENCE IN DIABETIC PATIENTS AT THE MEXICAN INSTITUTE OF SOCIAL SECURITY (IMSS)
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OBJECTIVES: The lack of adherence to diabetic drugs may reduce the effectiveness of the treatment increasing the hospitalization rates and costs. The purpose of this study is to estimate the economic savings derived from comparing different diabetic drug adherence scenarios at the Mexican Institute of Social Security (IMSS). METHODS: For patients with non-complicated diabetes mellitus, 19 pharmacological treatment patterns and their distribution were identified by a panel of experts from primary medical units and general and specialized hospitals. The total population of diabetic patients at IMSS in the year 2010 was obtained from the diabetes registry; the percentage of patients under pharmacological treatment came from the institutional health survey of 2010. Four drug adherence scenarios derived from institutional studies were considered. As all-coupled hospitalization rates and diabetic drug adherence and non-adherent patients were derived from the institutional literature due to the lack of national estimations. The annual total costs included the pharmacological and all-coupled hospitalization estimates for each treatment pattern. The exchange rate was $12.34 pesos per dollar. RESULTS: The medication combination was the highest prescribed pharmacological treatment at the Institute (26.6%) followed by metformin-insulin NPH (11.8%) and metformin (11.2%). The diabetic drug adherence baseline scenario was 16%; this was compared with three scenarios of 17.2%, 27% and 54.2% respectively. The annual prescription claims data of type 2 diabetic patients between 18 and 64 years of age was obtained. The economic savings increases as the level of compliance scales up. This can be attributed to the cost reductions compared to non-adherent patients mainly due to hospitalization. In the year 2010, savings varied from USD$4.8 million to USD$47.01 million. CONCLUSIONS: Health policies that aim to increase adherence to diabetic drugs among patients are needed at the institution in order to avoid unnecessary costs mainly among non-adherent patients.