prescription drugs for diabetes increased dramatically from $875.9 to $1026.3 during the study period, significantly from $232.5 in 2007 to $197.9 in 2010, while the total expenditure for diabetes medications increased to nearly 40% due to its perceived potential to improve glycemic outcomes and reduce complications. However, the financial burden of prescription drugs for diabetes is a vital part of diabetes management, and more efforts should be directed to patients with low family income in order to improve affordability of prescription drugs.

PD141 EXCESS HEALTH CARE EXPENDITURES ASSOCIATED WITH PRESENCE OF THYROID DISORDERS AMONG INDIVIDUALS WITH DIABETES: A COST-DECOMPOSITION ANALYSIS

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OBJECTIVES: To examine the relative contribution of predisposing, enabling, need, and external environment factors to the excess health care expenditures associated with thyroid disorders among individuals with diabetes, compared to individuals with diabetes and without thyroid disorders. METHODS: Cross-sectional study design with data on adults over 20 years of age with diabetes (N = 4,900) from two years (2009 and 2011) of the Medical Expenditure Panel Survey (MEPS) were used. Ordinary least squares regressions on log-transformed total expenditures were performed to estimate the excess expenditures associated with thyroid disorders, controlling for predisposing, enabling, external environment, lifestyle and need factors as defined framework of the Anderson Behavior and Healthcare Utilization Model. Post-regression Blinder-Oaxaca (BO) decomposition analysis was performed to examine the relative contribution of factors related to differences in health care expenditures between the two groups. RESULTS: Among individuals with diabetes, those with thyroid disorders had greater annual mean expenditures compared to those without thyroid disorders ($14,289 vs. $10,636, p < 0.001). After accounting for the predisposing, enabling, external environment, lifestyle and need factors, those with thyroid disorders had 15% greater health care expenditures compared to those without thyroid disorders. The BO decomposition analysis indicated that predisposing, enabling, external environment and need factors explained 63% of the excess health care expenditures among individuals with thyroid disorders. The excess health care expenditures between the two groups was predominantly explained by need-factors (43%). Precise role of cardiovascular diseases, depression, arthritis, and cancer explained the excess expenditures between the groups among the need-factors. CONCLUSIONS: Presence of thyroid disorders is associated with greater health care expenditures among individuals with diabetes compared to those without thyroid disorders. Future research should focus on understanding factors that contribute to the excess health care expenditures among individuals with thyroid disorders and diabetes.

PD143 DISABILITY ADJUSTED LIFE YEARS LOST DUE TO DIABETES IN FRANCE, ITALY, GERMANY, SPAIN AND THE UNITED KINGDOM: A BURDEN OF ILLNESS STUDY

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OBJECTIVES: To compare the burden of disease attributable to diabetes in Europe using the Global Burden of Disease (GBD) data. METHODS: DALYs lost to diabetes as the sum of years of life lost and years lived with disability were estimated by gender and age using country-specific epidemiological data and gender-group weights. Disability-adjusted life years (DALYs) were calculated as the sum of years of life lost and years lived with disability. The BO decomposition was used to estimate health loss due to diabetes for France, Germany, Italy, Spain and the UK. National statistical databases were used and in case necessary, community studies were used to derive the prevalence of diabetes by gender and age group which were then used to determine the number of people with diabetes. The BOD calculations were performed on a population level using country-specific prevalence data. All identified data were adapted to the Global Burden of Disease methodology (2010) to calculate the burden attributable to diabetes. No age weighting and discounting was applied. Sensitivity to different sources of variation was examined. RESULTS: Germany and Italy lost the largest number of DALYs due to diabetes with 5.9 and 5.8 per 1,000 inhabitants respectively, followed by Spain (4.4), France (3.7) and the UK (2.9). The highest burden was caused by mortality due to diabetes, with the exception of the UK, for which the burden due to disability of diabetes is estimated. This may be explained by the way of reporting death in the UK. Meatal DALYs lost were higher for women in Germany, Italy and Spain and showed to increase with age for all countries. Sensitivity analysis in variation in disability weights and uncertainty in epidemiological data showed to have effects on DALYs lost. CONCLUSIONS: In spite of data limitations, the estimates reported here show that DALY loss due to diabetes imposes a substantial burden on countries. Cross-national variation in disease epidemiology was the largest source of variation in the burden of diabetes between countries.

PD144 MATHEMATICAL SIMULATIONS OF ALGLOPIN-TI-PIOGLITAZONE-TREATED PATIENTS MEETING QUALITY ASSURANCE HBA1C THRESHOLD REQUIREMENTS


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OBJECTIVES: Alglupin-ti-pioglitazone (alo-pio) reduces HbA1c levels in treatment-naive Type 2 diabetes (T2DM) patients, or those inadequately controlled by monotherapy. This analysis was performed on alo-pio patients at or below target HbA1c thresholds suggested by the National Committee for Quality Assurance (NCQA) is unclear but may be important to accountable care organizations (ACOs). This analysis examined whether NCQA recognition, aligning with >40% of patients below 7%, >60% below 8%, and <15% above 9% HbA1c, is achievable. METHODS:...
Simulations estimated 1- and 3-year HbA1c progression for 1000 hypothetical T2DM patients (mean age 7 (SE 5.3) years post-diagnosis) to obtain the proportion meeting criteria for <7%, <8% and <9% thresholds by boosting the UK Prospective Diabetes Study (UKPDS) equation. UKPDS68 accounts for time, HbA1c in the prior year, drug treatment effect, and baseline A1c. Parameter values for duration of disease baseline HbA1c and treatment effect were selected from distributions around the mean, and mean values of the latter two were systematically varied to approximate different populations and effects. RESULTS: By 1 year, all 1000 patients with A1c ≤ 8% at baseline were in remission. By 3 years, all patients with A1c ≤ 9% at baseline were in remission. By 3 years, all patients with A1c ≤ 10% at baseline were in remission.

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