developed with a time horizon of 40 years. Transition probabilities for macrovascular and microvascular complications were drawn from the UKPDS 68 Outcomes equations. Direct costs and quality of life (EQ5D) were derived from published sources and the HODaR database respectively; costs and benefits were discounted annually at 3.5%. This model was adapted for Type 2 patients switched from NPH to glargine identified from the THIN database, a UK primary care database including 2,335,667 active patients recorded over 15 years from 211 practices. Analysis was conducted on a total of 181 patients with data for the 12 month period prior to and post switch to glargine; the primary outcome measure was Hba1c change. **RESULTS:** The median age at switch from NPH was 71 with mean duration of T2DM of 9.2 years. Baseline HbA1c was 8.79% and patients switching to glargine showed a significant reduction in HbA1c of 0.67%($p = 0.00384$) between switch to glargine and 12 months post glargine initiation. Incorporating this into a simulated cohort of 10,000 patients followed over a 40 year time horizon translated into 150 fewer cardiovascular events. Average cost per patient was ≤4338 and ≤3370 for glargine and NPH respectively, providing discounted quality adjusted life years (QALYs) of 4.96 and 4.86 respectively; resulting in a discounted incremental cost effectiveness ratio (ICER) of ≤9200 per QALY. **CONCLUSION:** Based on UK real life observational data, switching to basal insulin in type 2 DM patients from NPH to glargine is cost-effective; with a corresponding ICER within accepted thresholds for cost-effective treatments.

PDB19

THE RELATIVE COST EFFECTIVENESS OF INSULIN GLARGINE VERSUS NPH INSULIN USING UK REAL LIFE DATA IN TYPE 1 DIABETES MELLITUS

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OBJECTIVES: The purpose of this study was to evaluate the cost effectiveness (cost utility) of insulin glargine in the UK for people with Type 1 diabetes mellitus (T1DM) using observational data in patients continuing on NPH versus those switching from NPH to insulin glargine. **METHODS:** A discrete event simulation model was developed with a time horizon of 40 years. Transition probabilities for progression to microvascular complications were derived from the DCCT (Diabetes Control and Complications Trial) with cardiovascular events modelled via the Framingham equations. Direct costs and quality of life (EQ5D) were derived from published sources and the HODaR database respectively; costs and benefits were discounted annually at 3.5%. The model was adapted to the profile of T1DM patients switched from NPH to glargine identified via the THIN database (The Health Improvement Network), a UK primary care database including 2,335,667 active patients recorded over 15 years. Analysis was conducted on a total of 466 patients with data for the 12 month period prior to, and post switch; the primary outcome measure of Hba1c change. **RESULTS:** The median age of patients switched from NPH to glargine was 33 years with mean duration of T1DM of 8.1 years. Baseline HbA1c was 8.71% and patients switching to glargine showed a reduction in HbA1c of 0.27% between switch and 12-months post initiation. Over 40 years, in a simulated cohort of 10,000 there were 523 fewer fatal microvascular complications and, on average, 1 less microvascular complication per patient in those receiving glargine compared to NPH. The discounted incremental cost effectiveness ratio (ICER) was £6527 per quality adjusted life year (QALY) gained. **CONCLUSION:** Based on UK real life observational data, switching to basal insulin in type 1 DM patients from NPH to glargine is cost-effective; with a corresponding ICER well within accepted thresholds for cost-effective treatments.

PDB20

COMPARISON OF ROSIGLITAZONE VERSUS PIOGLITAZONE INTRODUCTION AND ASSOCIATED HEALTH CARE UTILIZATION IN TYPE 2 DIABETES MEDICAID ENROLLEES

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OBJECTIVES: Outcomes in type 2 diabetes patients can differ based on the antidiabetic medication that is used. Thiazolidinediones (TZD) are a newer class of agents used for type 2 diabetes treatment. Previously, no study has compared health care utilization associated with the two TZDs on the market. The objective of this study was to compare health care utilization between two TZDs used by Medicaid-enrolled patients with type 2 diabetes. **METHODS:** This was a retrospective data analysis comparing cohorts of patients with type 2 diabetes starting a new antidiabetic medication for hospitalizations, emergency room visits, outpatient visits, and health care costs. A total of 660 patients starting rosiglitazone between July 1, 2001 to June, 30, 2002 were compared to 1045 patients staring pioglitazone during the same period. The patients were followed up for 30 months to examine the difference in health care utilization over time. Multivariate regression techniques were employed for comparisons between different antidiabetic therapies. **RESULTS:** Multivariate analysis showed that rosiglitazone group was associated with almost 12% decrease in the mean number of hospitalizations, and 10 % decrease in the mean number of emergency room visits, and a 7.3% decrease in total health care costs as compared to the pioglitazone group (all $p < 0.05$). **CONCLUSION:** Introduction of rosiglitazone was associated with decreased number of hospitalizations, emergency room visits, and total health care costs compared to pioglitazone. The utilization of oral antidiabetic agents, with documented clinical and economic benefits, should continue to be advocated to reduce avoidable medical care utilization, and improve patient outcomes in this population.

DIABETES—Health Care Use & Policy Studies

PDB21

PRICE AND UTILIZATION OF ORAL ANTI-DIABETIC MEDICATIONS FROM 1991 TO 2005 IN U.S. MEDICAID PROGRAMS

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OBJECTIVES: Diabetes is the sixth leading cause of death in the United States, and its prevalence has been increasing. The annual cost of this illness to society reached close to $100 billion in 1999. The objective of this study is to analyze the trends of price and utilization of oral anti-diabetic medications in U.S. state Medicaid programs. **METHODS:** Oral anti-diabetic drugs include first- and second-generation sulfonylureas, α-glucosidase inhibitors, biguanides, thiazolidinediones, meglitinides, and combination drugs. Data were taken from the national Medicaid pharmacy claims databases for 1991 to 2005, provided by the Centers for Medicare & Medicaid Services. Descriptive time-series analysis was used to assess quarterly prescription numbers, amount of reimbursement, and cost per prescription. **RESULTS:**