size and dose spread assumptions. **CONCLUSION:** Cost of GH waste can be an important consideration when evaluating GH devices.

PDB18

COMPARISON OF RESOURCES UTILIZATION (RU) AND COST IN DRUG NAÏVE TYPE 2 DIABETES (T2D) PATIENTS TREATED WITH ROSIGLITAZONE (RSG) VS. SULFONYLUREA (SU) MONOTHERAPY

Duh MS[1], Gosselin A[2], Beaulieu N[1], Arana LM[1], Arondekar B[3]
[1]Analysis Group, Inc, Boston, MA, USA, [2]Groupe d'Analyse, Ltée, Montréal, QC, Canada, [3]GlaxoSmithKline, Philadelphia, PA, USA

OBJECTIVE: The objective of this study was to compare RU and costs for drug naïve patients treated with RSG versus SU first-line monotherapy using real-world claims data. **METHODS:** Based on medical, pharmacy, and disability insurance claims data between October 2001 and December 2004, patients with a diagnosis T2D who were newly initiated on an OAD, ≥18 years old, and had ≥60 days of uninterrupted treatment were analyzed. Frequency of inpatient and outpatient visits and average direct (inpatient, outpatient, and pharmacy) and indirect (work-loss) costs were compared between the RSG and SU groups. **RESULTS:** A total of 3377 RSG and 11,778 SU patients met the inclusion criteria with RSG patients being younger (63.8 vs. 66.9 years, $p < 0.001$) with less co-morbidities (Charlson co-morbidity index 0.95 vs. 1.23, $p < 0.001$) at baseline. During treatment, RSG patients incurred fewer inpatient visits (0.47 vs. 0.77 visits per patient per year (PPPY), $p < 0.001$), outpatient visits (17.0 vs. 17.9 visits PPPY, $p < 0.001$), and hospital days (1.6 vs. 2.9 days PPPY, $p < 0.001$) than SU patients. The total direct medical cost was lower in the RSG group ($1065 vs. $1315 per patient per month (PPPM), $p < 0.001$) than the SU group, including lower inpatient and outpatient cost ($717 vs. $1046 PPPM, $p < 0.001$) but higher pharmacy cost ($348 vs. $270 PPPM, $p < 0.001$). After taking into account the indirect work-loss cost, the total direct and indirect cost was significantly lower in the RSG group ($1103 vs. $1355 PPPM, $p < 0.001$). Multivariate analysis controlling for age, gender, co-morbidities, and other covariates confirmed that the RSG group was associated with a significantly lower total cost than the SU group (cost difference: $92.75 PPPM, $p = 0.012$). **CONCLUSION:** This observational study of over 15,000 patients initiated on first-line monotherapy shows that RSG patients incur significantly lower resource utilization and costs than SU patients, outweighing higher pharmacy cost.

PDB19

ECONOMIC EVALUATION OF SOMATROPIN (NORDITROPIN) FOR THE TREATMENT OF SHORT CHILDREN BORN SMALL FOR GESTATIONAL AGE (SGA)

Christensen T[1], Buckland AG[2], Bentley A[2], Djuurhus C[1], Wing C[2]
[1]Novo Nordisk A/S, Bagsværd, Denmark, [2]Abacus International, Bicester, UK

OBJECTIVE: Current treatment options for short children born small for gestational age (SGA) are limited; however, the growth hormone somatropin (Norditropin) has been shown to normalise height in childhood and adolescence compared to no treatment. The aim of this study was to establish whether somatropin (Norditropin) was a cost-effective treatment option for short children born SGA compared to no treatment. **METHODS:** A decision tree model was used to calculate the relative costs and health benefits associated with somatropin (Norditropin) treatment vs no treatment over the lifetime of short children born SGA. The analysis was undertaken from a UK National Health Service (NHS) perspective; unit costs (GBP; 2007) were sourced from relevant UK health care providers. Clinical effectiveness data were taken from a long-term, multi-centre, double-blind, randomised clinical trial comparing the effects of somatropin (Norditropin) to no treatment. Utility data was derived from a recent UK-based study which assessed the relationship between short stature and HRQoL. Sensitivity analyses were conducted to assess the degree of uncertainty surrounding the data. **RESULTS:** Over a patient's lifetime, somatropin (Norditropin) (0.033 mg/kg/day) was associated with an additional 2.74 quality-adjusted life years (QALYs) and an incremental cost of GBP73,545 compared with no treatment. As a result, somatropin (Norditropin) was associated with an incremental cost per QALY of GBP26,794 compared with no treatment. Probabilistic sensitivity analysis, in which all parameters within the model were varied, showed that there was a high probability that somatropin (Norditropin) was cost effective compared to no treatment, based on a willingness to pay threshold of GBP30,000 per QALY. **CONCLUSION:** Based on a willingness to pay threshold of GBP30,000 per QALY, somatropin (Norditropin) is a cost-effective treatment strategy for short children born SGA, providing substantial incremental health benefits at an additional cost.

PDB20

COST-EFFECTIVENESS OF INSULIN DETEMIR COMPARED TO NPH INSULIN FOR TYPE 1 DIABETES MELLITUS (T1DM) IN THE CANADIAN PAYER SETTING: MODELING ANALYSIS USING A RANDOMIZED CONTROLLED TRIAL

Minshall ME[1], Tunis SL[1], Conner C[2], McCormick JI[3], Kapor J[4], Groleau D[4]
[1]IMS Health, Noblesville, IN, USA, [2]Novo Nordisk, Princeton, NJ, USA, [3]McKesson Phase 4 Solutions, Toronto, ON, Canada, [4]Novo Nordisk, Mississauga, ON, Canada

OBJECTIVE: Insulin detemir represents a class of long-acting soluble insulin analogues intended to address basal insulin requirements for patients with diabetes. Because direct acquisition costs of newer medications are higher than older insulin treatments, payers are interested in their long-term value. This study was conducted to quantify the long-term cost-effectiveness of insulin detemir compared to intermediate-acting NPH insulin for the treatment of T1DM in Canada. **METHODS:** The CORE Diabetes Model was used to project lifetime clinical and economic outcomes for T1DM patients on insulin detemir versus NPH insulin. A slight advantage for insulin detemir in HbA1c (–0.12%) and significant reductions in major (69%) and minor (25%) hypoglycemic events were modeled. These clinical assumptions, as well as cohort characteristics (baseline age and HbA1c of 27 and 8.9%, respectively), transition probabilities, utilities, dis-utilities, direct treatment and complication costs (from a Canadian provincial payer perspective) were derived from recent published literature and on-line sources. Both clinical and economic outcomes were discounted at 5% per annum. **RESULTS:** Average total direct costs per patient were CAN$88,403 for insulin detemir and CAN$76,551 for NPH using a lifetime horizon. A 61% reduction in major hypoglycemic events costs for detemir (CAN$765) vs. NPH (CAN$1965) were observed. Quality-adjusted life years (QALYs) increased by 0.344 years (discounted) with detemir and were largely due to decreased hypoglycemic events. The resulting incremental cost-effectiveness ratio (ICER) for detemir vs. NPH was CAN$34,418/QALY. **CONCLUSION:** The ICER obtained in this analysis provides evidence for the long-term cost-effectiveness of insulin detemir compared to NPH in T1DM and is consistent with current Canadian standards. The overall value of detemir was driven primarily by its favorable impact upon