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OBJECTIVES: Glucagon-like peptide-1 (GLP-1) receptor agonists are indicated to improve glycemic control in adults with Type 2 diabetes mellitus. The maximum daily licensed dosages in the UK are 20μg and 1.8mg for exenatide and liraglutide respectively. In addition to factors such as glycaemic control, cost is an important consideration when selecting treatments. The aim of this analysis was to describe the real-world daily usage and cost of exenatide BID and liraglutide in the UK setting. **METHODS:** Data and study period: UK records between October 2008 and March 2011 from the IMS Dynamic Prescription database. This database captures data from pharmacy records (45% national coverage) of actual prescriptions dispensed, linked to individual patients (anonymised). Inclusion criteria: patients have filled a prescription for a GLP-1 receptor agonist at least twice during the study period; all key prescription fields are complete. The weighted average daily usage was calculated for each agent using the total volume of product dispensed and the number of patients filling prescriptions per month. Drug costs (British National Formulary 61, 2011) were applied to estimate average daily cost (ADC). Key assumptions: patients are not stockpiling or disposing of drug; each prescription equals one pack; patients are filling their prescriptions at the same pharmacy. **RESULTS:** Data was available for a total number of unique patients of 19,200 and 12,690 for exenatide BID and liraglutide (data available from July 2009) respectively. The average daily usage during the investigated time period was estimated to be 20.49μg for exenatide and 1.51mg for liraglutide, with an estimated ADC of £2.53 and £3.29 respectively. **CONCLUSIONS:** Based on the data described, GLP-1 receptor agonists are being dispensed in amounts within an acceptable range of the maximum daily licensed dosage. The ADC appears to be 30% higher for liraglutide with an estimated additional daily spend of £0.76.

PDB36

ESTIMATING THE AVERAGE ANNUAL COST OF TREATMENT WITH INSULIN FOR PATIENTS WITH TYPE 2 DIABETES MELLITUS

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OBJECTIVES: To estimate the average annual cost of treating patients with type 2 diabetes mellitus with insulin including: the cost of insulin, test strips for self-monitoring of blood glucose levels, and additional healthcare professional (HCP) time spent with patients following insulin initiation. The secondary objective was to describe insulin prescribing patterns in the UK. **METHODS:** For insulin and test strip costs a retrospective analysis of 2009/10 UK patient-level data was undertaken using Cegedim Strategic Data. Costs were applied using the BNF and MIMS. To estimate HCP resource use, 100 HCPs were surveyed on the number of contacts with insulin patients in the 3 years prior to and the 3 years post insulin initiation. Costs were applied using PSSRU 2010. **RESULTS:** A projected 24.5 million insulin items were prescribed to 400,000 patients, generating an estimated average annual insulin cost of £393 per patient. Long-acting and biphasic insulins together accounted for more than 75% of the total volume and costs of insulin prescribed; intermediate acting insulins accounted for 6% and 4% of the volume and costs respectively. A projected 4.5 million packs of test strips were prescribed to 360,000 patients, generating an estimated average annual cost of test strips of £180 per patient. Contact time across all HCPs peaked in the year following insulin initiation. There was an absolute increase of 8 contacts per patient in the 3 years post insulin initiation, representing an additional cost of £103 per patient. **CONCLUSIONS:** Insulin initiation increases the cost of care not only because of the insulin costs, but because of the package of resources that insulin requires. The estimated cost of insulin, insulin pens, needles and test strips is £609 per patient. The analysis suggests divergence from the NICE Clinical Guidelines 87 recommendation that first-line insulin therapy should be intermediate NPH insulin.

PDB37

INJECTION OF LONG-ACTING SOMATOSTATIN ANALOGS: A COST CONSEQUENCE ANALYSIS FOR THREE EUROPEAN COUNTRIES

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OBJECTIVES: Long-acting somatostatin analogs (SSA) with product-specific formulation and means of administration are injected periodically in acromegaly and neuroendocrine tumor (NET) patients. The ready-to-use device Somatuline Autogel/Depot® reduces drug administration time by 80%. Its prefilled syringe also avoids the risk of clogging reported for octreotide LAR. A simple decision-analytic model aimed at estimating cost savings due to these differences in administration was developed for the UK, France and Germany. **METHODS:** The decision tree simulated four scenarios for SSAs Somatuline Autogel/Depot® and Sandostatin LAR®, injected by either hospital- or community-based nurses. Injection success depended on clogging event occurrence. In the case of clogging, the first dose was assumed to be lost and a second injection performed. Administration costs were valued based on average hourly nurse wages in addition to country-specific retail drug costs. Several simulations were run depending on the baseline risk of clogging, administration time, and their respective relative reduction due to use of Somatuline Autogel/Depot®. **RESULTS:** Costs per successful injection were less for Somatuline Autogel/Depot®, ranging from EUR 13 to EUR 44, EUR 52 to EUR 150 and EUR 107 to EUR 127 respectively for France, Germany and the UK. As the prices for both long-acting SSAs were the same in France, cost savings came 100% from differences other than drug prices. For Germany and UK, the proportions of savings due to lower clogging and administration time was estimated around 32% and 20%, respectively. Based on low and high country-specific patient cohort size estimations for acromegaly and NETs, these costs savings per patient could lead to overall annual savings up to one million euros for France, six million euros for Germany, and four million euros for the UK. **CONCLUSIONS:** Widespread usage of the new pre-filled Somatuline device for injection of SSA might lead to substantial savings for healthcare providers across Europe.

PDB38

ECONOMIC EVALUATION OF RANIBIZUMAB IN THE TREATMENT OF VISUAL IMPAIRMENT DUE TO DIABETIC MACULAR EDEMA IN AUSTRIA

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OBJECTIVES: Diabetic macular edema (DME) is an ophthalmological complication of diabetes that may lead to visual impairment and blindness if left untreated, and even despite treatment with the current standard of care, laser coagulation. Currently, an estimated 2% of diabetics suffer from DME with vision loss. The aim of the study was to evaluate the cost-effectiveness of ranibizumab versus laser coagulation in the treatment of visual impairment due to DME. **METHODS:** A cost-effectiveness analysis was simulated using a Markov model adapted for Austria. The model is based on the PHIII-RESTORE trial. Outcome measures were 'Vision Years' and QALY. Costs are year 2010 values. Direct medical costs comprise all treatment costs due to diabetic macular edema. The cost of blindness was incorporated using data from an Austrian cost-of-illness-analysis. The model time horizon was lifetime. The analysis was performed from the perspective of the Austrian health care system according to the Austrian Guidelines for Health Economic Evaluations. **RESULTS:** The model assumes 7 injections of ranibizumab in the first year and 4 injections in the second year, as well as 2 treatments with laser coagulation in the first year and one treatment in the second year. Lifetime costs amount to €17,417 for ranibizumab and to €16,286 for laser coagulation. The ICER is €5354 (incremental QALYs gain with ranibizumab of 0.22). The number of vision years is 10.19 for ranibizumab and 8.57 for coagulation; the incremental cost per additional vision year gained is €701. **CONCLUSIONS:** The study suggests that in Austria, ranibizumab treatment for visual impairment resulting from DME is a cost-effective strategy versus the current standard of care, laser coagulation.

PDB39

COST-EFFECTIVENESS OF SAXAGLIPTIN COMPARED TO SITAGLIPTIN FOR THE TREATMENT OF PATIENTS WITH TYPE 2 DIABETES MELLITUS (T2DM)

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OBJECTIVES: Saxagliptin (Onglyza®) and sitagliptin (Januvia®) are DPP-4 inhibitors licensed for the treatment of T2DM. The two treatments have been investigated as an add-on to metformin in an 18-week, non-inferiority, RCT in 801 patients with T2DM who failed to achieve adequate glycaemic control on metformin alone. Results showed that the newer treatment, saxagliptin, was noninferior to sitagliptin, with a similar tolerability profile. Saxagliptin has a lower acquisition price, hence this analysis sought to assess cost effectiveness of saxagliptin+metformin versus sitagliptin+metformin using a cost utility analysis (CUA) framework from a UK healthcare perspective. **METHODS:** The CUA utilised a validated model using UKPDS risk equations to estimate long run micro/macro-vascular complications and mortality over a 40 year time horizon. Clinical parameters in the model included HbA_{1c} levels for treatment effect, weight gain and incidence of hypoglycaemic adverse events. Parameter estimates were obtained from a mixed treatment comparison (MTC) of saxagliptin and sitagliptin, which included the head-to-head study. Treatment costs were based upon UK published list prices. Established costs and disutilities associated with long-term diabetic outcomes were used, based upon a UKPDS sub study. Univariate/probabalistic sensitivity analysis was conducted. **RESULTS:** The annual drug cost per patient for saxagliptin was £411.93 versus £433.57 for sitagliptin. In the base case, total discounted healthcare costs over the 40 year time horizon were £9,907 with saxagliptin and £10,035 with sitagliptin, with the same discounted QALY outcomes (10.49). Saxagliptin was therefore cost saving in the base case analysis. This finding was consistent across a range of sensitivity analyses, with the exception of lower 95% credible intervals for saxagliptin efficacy which resulted in a small incremental cost for saxagliptin (£29). **CONCLUSIONS:** Saxagliptin and sitagliptin have been shown to have comparable therapeutic profiles in a head-to-head study and MTC, but lower healthcare costs driven by a 5% lower drug acquisition cost.

PDB40

ECONOMIC ANALYSIS OF DIABETES TREATMENT GOALS DEFINED BY POLISH DIABETES ASSOCIATION: HOW MUCH DOES COST-EFFECTIVE TREATMENT COST?

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OBJECTIVES: Clinical guidelines for diabetes management issued by Polish Diabetes Association (PDA) describe therapeutical goals in patients with diabetes. The aim of this analysis was to determine additional costs that may be incurred for treatment along with PDA recommendations (as compared with current treatment practice), so that the growth of treatment-related expenses would remain cost-effective in Polish setting. **METHODS:** Two hypothetical patients were defined: John and Peter, whose clinical characteristics correspond to those of newly diagnosed patients with diabetes mellitus type 2 (DM2) in Poland. Diabetes progression was modelled assuming that John is treated in line with current clinical practice and Peter is treated along with PDA recommendations (HbA1c, LDL, HDL, SBP are