INTRODUCTION: Good T2DM management requires not only good control of blood glucose, but also blood pressure and serum lipid levels. Although data from the Swedish National Diabetes Registry indicates that more patients have attained recommended levels of these biomarkers over time compared to model results, there are still more than 50% of patients not meeting all of these goals.

OBJECTIVES: Assess the cost-effectiveness of intensifying therapy to achieve Swedish-specific treatment goals for Hba1C, systolic blood pressure (SBP), and LDL versus usual care for patients newly diagnosed with T2DM and younger than 65 years of age.

METHODS: We used the Simulation. A probabilistic sensitivity analysis was conducted to assess the clinical and economical impact of transferring type 2 diabetes patients to insulin detemir plus OADs.

RESULTS: The incremental utility gain in within trial analyses was 0.018. The estimated cost of transferring T2DM patients to insulin detemir plus OADs increases costs by €2,012 per patient per year, but is associated with a 13.7% increase in life-time quality-adjusted life-years (QALYs).

CONCLUSIONS: Therapy conversion to insulin detemir plus OADs improves life expectancy by 0.018 years and quality-adjusted life years (QALY) by 0.018 years lost to death and 0.67 years gained due to life-time QoL improvements.

OBJECTIVES: This study estimated the effect of weight reduction on long-term outcomes and associated direct medical costs for patients newly diagnosed with T2DM over more than fifteen years. METHODS: The life-times of 500 cohorts of 1000 patients with characteristics based on the Swedish National Diabetes Register using the Economic and Health Outcomes (ECHO)-T2DM model. All patients were assumed to increase weight over time (0.23 kg per year) however the rate of weight increase was reduced to 0.05 kg per year and a 0.7 kg differential was maintained. The effect of weight on T2DM complications was modeled using weight equations from the UK Prospective Diabetes Study, wherein weight is only a direct determinant of the risk of congestive heart failure (CHF). The risks of stroke and myocardial infarction are affected only indirectly via their link with CHF, and mortality risk is affected only indirectly via macrovascular event history. Weight change was assumed to impact QALYs by an amount reported in the T2DM-specific CODE-2 study. Pharmacotherapy was administered according to Swedish recommendations and Swedish cost data was used for medical events and pharmacotherapy. RESULTS: A weight loss of 5 kg resulted in cost-savings of SEK 654 (€69) over an average of 17.1 years, mainly attributable to reductions in CHF incidence. Life years increased marginally; QALYs, however, increased more substantially (0.18). CONCLUSIONS: At a relatively conservative willingness-to-pay threshold of SEK 250,000 (€26,540), an intervention that resulted in a one-time weight loss of 5 kg would be welfare improving at a cost of up to SEK 45,654 (€4,846) over 17.1 years. As this simulation conservatively excluded a number of other benefits of weight loss (e.g., effects via improved lipids, blood pressure and reduced risk of other weight-related illnesses), the true economic value is likely greater.

RESULTS: The incremental utility gain in within trial analyses was 0.018. The estimated cost of transferring T2DM patients to insulin detemir plus OADs increases costs by €2,012 per patient per year, but is associated with a 13.7% increase in life-time quality-adjusted life-years (QALYs).

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OBJECTIVES: To estimate the long-term cost-effectiveness of transferring type 2 diabetes patients to an insulin detemir regimen therapy from a Neutral Protamine Hagedorn (NPH) insulin regimen in the Portuguese routine clinical practice.

METHODS: A computer simulation model "CORE Diabetes Model" was used to make long-term projections of clinical outcomes and direct medical costs based on program simulations from the European cohort in the PREdictIVE trial. Therapy conversion to insulin detemir was associated with a reduction in glycosylated haemoglobin (HbA1c) by 0.2% (p < 0.05), mean body weight was reduced by 0.7 kg (p < 0.01) and the incidence of total hypoglycaemia decreased from 11.7 to 3.0 episodes per patient-year (p < 0.01). The mean cost of the intervention was SEK 6,233 (€690) per life-year gained and the incremental cost-effectiveness ratio per life-year gained was SEK 45,654 (€4,846) per QALY gain.

CONCLUSIONS: Therapy conversion to insulin detemir plus OADs improves life expectancy by 0.018 years and quality-adjusted life years (QALY) by 0.018 years lost to death and 0.67 years gained due to life-time QoL improvements.

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