follow-up this may not always be the most cost-effective alternative. In fact, economic evaluations have shown that incremental cost-effectiveness ratios (ICERs) of CRT-D may be substantially higher than for comparators. A recent study demonstrated that certain biomarkers may in fact reflect the increased susceptibility to SCD in patients with HF and this may further contribute to increase cost-effectiveness of the CRT-D interventions. The objective of this study was to explore the cost–effectiveness of a hypothetical perfect biomarker for risk assessment and subsequent treatment decision in implanting CRT-Ds in heart failure patients who comply with the current clinical guidelines and assess the societal value (headroom) of such test. **METHODS:** The study uses a decision analytical model. **RESULTS:** The use of a hypothetical perfect biomarker for implanting CRT-Ds in heart failure patients is a cost-effective healthcare intervention. The headroom (societal willingness to pay multiplied by incremental quality-adjusted life years) available for the hypothetical perfect biomarker ranged from €1,530 to €6,120 depending on the willingness to pay threshold. **CONCLUSIONS:** The use of a hypothetical perfect biomarker for implanting CRT-D is cost effective. Substantial cost can be saved by a better identification of patients with high-risk for SCD and for whom implantation of CRT-Ds reduces risks of death. However, further research of risk stratifying biomarkers test accuracy is needed to support and strengthen the results of this modeling study.

PMD89

LONG-TERM COST-EFFECTIVENESS OF TRANSANAL IRRIGATION IN PATIENTS WITH NEUROGENIC BOWEL DYSFUNCTION WHO HAVE FAILED STANDARD BOWEL CARE

Emmanuel A[1], Christensen P[2], Kumar G[3], Passananti V[1], Mealing S[4], Stoerling ZM[5], Andersen F[5], Soerensen J[5], Kirshblum S[6]
[1]*University College London Hospital, London, UK,* [2]*Aarhus University Hospital, Aarhus, Denmark,* [3]*ICON Health Economics, Oxford, UK,* [4]*ICON Health Economics and Epidemiology, Oxford, UK,* [5]*Coloplast A/S, Humlebaek, Denmark,* [6]*Rutgers New Jersey Medical School, Newark, NJ, USA*

OBJECTIVES: To investigate the long-term cost-effectiveness of initiating transanal irrigation* (TAI) as second-line management in patients with neurogenic bowel dysfunction (NBD) who have failed first-line standard bowel care (SBC). **METHODS:** A deterministic Markov decision model was developed to project the lifetime health economic outcomes, including quality-adjusted life expectancy (QALE), episodes of faecal incontinence (FI), urinary tract infections (UTIs), and stoma surgery when using TAI relative to continuing SBC. Patients could transition from TAI to (a) another round of first-line SBC, (b) third-line surgeries (sacral nerve stimulator, sacral anterior root stimulator, antegrade continence enema) or (c) stoma as the absorbing state. Transition probabilities and QALE estimates were based on real-world data collected at three clinics in UK from 2007-2014, in NBD patients due to spinal cord injury (SCI), multiple sclerosis, spina bifida, and cauda equina syndrome. Transition probabilities for failed SBC patients were collected from 2000-2007 prior to availability of TAI. Projected life-expectancy was based on published SCI population data. One-way sensitivity analyses were applied. **RESULTS:** The model predicts that a SCI patient diagnosed aged 30, with a life expectancy of 37 years using TAI, will experience a 36.1% reduction in FI, 28.7% reduction in UTIs, a 35.4% reduction in stoma surgery and improvement of 0.40 years of QALE, compared with patients continuing SBC. Lifetime cost-savings of £41,620 per patient was estimated for TAI versus SBC in a SCI patient, primarily due to avoided hospitalizations and stoma surgeries. Incremental cost can differ due to altered life-expectancy (and age of diagnosis) in the patient cohort. One-way sensitivity analyses indicated that the model was most sensitive to variation in utilities on TAI and SBC treatment. **CONCLUSIONS:** TAI is a cost-saving treatment strategy reducing risk of stoma surgery and improving QALE for NBD patients who have failed SBC. *Peristeen (Coloplast A/S).

PMD90

REDUCTION OF COMPLICATIONS AND ASSOCIATED COSTS FOR TYPE 2 DIABETIC PATIENTS USING CONTINUOUS SUBCUTANEOUS INSULIN INFUSION IN THE UK

Roze S[1], Duteil E[2], Hallas N[3], de Portu S[4]
[1]*HEVA HEOR Sarl, Lyon, France,* [2]*HEVA-HEOR, Lyon, France,* [3]*Medtronic, watford, UK,* [4]*Medtronic International Sàrl, Tolochenaz, Switzerland*

OBJECTIVES: To assess the reduction of complications and costs with continuous subcutaneous insulin infusion (CSII) versus multiple daily injections (MDI) in uncontrolled type 2 diabetic patients (T2D) in the UK. **METHODS:** The incidence of diabetes-related complications was calculated based on the Core Diabetes Model. The population characteristics, the reduction of HbA1c, and insulin dose were based on the Opt2mise study (Reznik et al., Lancet 2014) (mean age 56 years (SD 9.6); mean diabetes duration 15 years (SD 0.75)). For a baseline HbA1c of 9.0%, the reduction in HbA1c was -1.1 % versus -0.4%, respectively, for CSII vs MDI. Costs were UK-specific and expressed in £2014. **RESULTS:** The diabetes-related complications were reduced with CSII. At 5 years, the incidence reduction in complications associated with eye diseases, renal diseases, ulcer/amputation and cardiovascular diseases were -24%, -26%, -19% and -10%, respectively, in favour of CSII. This equates to a cost reduction of 12% over 5 years per patient. End stage renal disease was delayed by 1 year, neuropathy by 1.08 years and amputation by 0.87 year, myocardial infarction and stroke by 0.81 and 0.71 year respectively. Insulin dose was reduced for patients on CSII from 122.1 IU to 96.5 IU per day with a cost saving of £2,169 per patient over 5 years. **CONCLUSIONS:** Improvements in HbA1c with a decrease in overall insulin requirements observed with CSII versus MDI, may offer important reductions in diabetes-related complications and associated costs in a UK setting for uncontrolled T2DM patients.

PMD91

COST-UTILITY ANALYSIS OF CONTINUOUS INFUSION PUMP WITH INTEGRATED MONITORING COMPARED WITH MULTIPLE DAILY INJECTION TREATMENT FOR PATIENTS 15-YEARS OR OLDER WITH TYPE 1 DIABETES MELLITUS IN COLOMBIA

Quitian H[1], Gomez AM[1], Garcia Peña AA[1], Arciniegas J[1], Iragorri N[1], Mantilla B[1], Gomez-Restrepo C[1], Rosselli D[2]
[1]*Pontificia Universidad Javeriana, Bogota, Colombia,* [2]*Pontificia Universidade Javeriana, Bogotá, Colombia*

OBJECTIVES: To estimate the incremental cost-utility ratio (ICUR) for the use of a continuous infusion pump with integrated monitoring (SAP) compared with the application of multiple daily injections (MDI) in adult (>15 year-old) patients with type 1 diabetes mellitus (DM1) in Colombia. **METHODS:** We designed an annual cycle Markov model, with transition probabilities obtained from a systematic review of the literature. Outcomes included in the search were ketoacidosis, severe hypoglycemia, microvascular complications (retinopathy, nephropathy, neuropathy), quality of life (expressed in quality-adjusted life years, QALYs, and obtained from Tufts database), as well as mortality. Other features of the model were: discount rate 3.5% for costs and QALYs, third party payer perspective (only direct medical costs), and a lifespan time horizon (up to 55 years). Threshold used was three times per capita gross domestic product (GDP), equivalent to € 17,547. Costs were estimated in 2014 Colombian pesos (1 euro = 2,660 COP), from base case scenarios (built by expert panels) and official tariff manuals. Univariate and probabilistic sensitivity analysis were performed. **RESULTS:** For the average patient, continuous infusion pump has a total expected cost of € 199,296, and generates 16.40 QALYs, while multiple daily injections would cost € 104737, and generate 14.48 QALYs (ICER € 49,302 per additional QALY gained). Sensitivity analysis shows that the only critical variable is the annual cost of continuous infusion pump treatment, which would have to be reduced by 40% to reach the cost-utility threshold. **CONCLUSIONS:** Under the assumptions of the model, treatment with continuous infusion pumps would not be cost-effective for the average adult DM1 patient in Colombia. Further analysis would be required, addressed to certain selected subgroups of patients.

PMD92

COST-UTILITY OF HEXAMINOLEVULINATE BLUE LIGHT CYSTOSCOPY (HAL) ASSISTED TRANSURETHRAL RESECTION OF THE BLADDER TUMOUR (TURB) COMPARED TO TURB WITH WHITE LIGHT CYSTOSCOPY (WLC) ALONE IN PATIENTS WITH NON-MUSCLE INVASIVE BLADDER CANCER (NIMBC) IN POLAND

Jablonowski Z[1], Konecki T[1], Ziobro M[2], Haldas M[2], Wolski Z[3], Marteau F[4], Sosnowski M[1]
[1]*Medical University of Lodz, Lodz, Poland,* [2]*HTA Consulting, Cracow, Poland,* [3]*Collegium Medicum Nicolaus Copernicus University, Bydgoszcz, Poland,* [4]*IPSEN Pharma, Boulogne-Billancourt, France*

OBJECTIVES: To evaluate cost-utility of HAL assisted TURB in comparison to TURB with WLC alone in patients with previously diagnosed NIMBC in Poland. **METHODS:** Analysis was performed in 2014, from a public payer's perspective with a lifetime horizon. "HAL cost-effectiveness model in non-muscle invasive bladder cancer (NIMBC)" by Pharmerit Ltd. was adapted to Polish settings. The model consists of two parts: a short-term decision tree to assess outcomes of TURB and a Markov cohort model developed in order to examine long-term outcomes. Clinical efficacy of HAL was based on a systematic review of randomized clinical trials. Data concerning course of disease and standard of care in Poland were based on available observational studies, expert opinion and guidelines. Difference in utilization of resources between HAL assisted TURB and TURB with WLC alone was estimated on the basis of expert survey. Unit costs of drugs and medical procedures were based on Ministry of Health (MoH) and National Health Fund tariffs. Costs and effects were discounted at rates of 5% and 3.5%, respectively. The cost-effectiveness threshold was set to 119,577 PLN according to MoH requirements. Probabilistic sensitivity analyses (PSA) were conducted to assess the probability that HAL is cost-effective in Polish settings. **RESULTS:** The difference in health outcomes between HAL assisted TURB and TURB with WLC alone was 0.034 QALY in favor of HAL. HAL assisted TURB was approximately 172 PLN more expensive than TURB with WLC alone. Incremental cost per QALY equaled 4,997 PLN. PSA indicated that HAL was cost-effective with probability of 95.9% and dominant with probability of 44.6%. **CONCLUSIONS:** Use of HAL to assist TURB is cost-effective in Poland when compared with TURB with WLC alone.

PMD93

HEALTH-ECONOMIC ANALYSIS OF THE USE OF SENSOR-AUGMENTED PUMP (SAP) THERAPY IN THE NETHERLANDS COMPARED TO INSULIN PUMP THERAPY ALONE (CSII), IN TYPE 1 DIABETIC PATIENTS

Roze S[1], Duteil E[2], De Brouwer BF[3], de Portu S[4]
[1]*HEVA HEOR Sarl, Lyon, France,* [2]*HEVA-HEOR, Lyon, France,* [3]*Medtronic Trading NL BV, Heerlen, The Netherlands,* [4]*Medtronic International Sàrl, Tolochenaz, Switzerland*

OBJECTIVES: To assess the cost-effectiveness and to project the clinical benefits of sensor augmented pump (SAP) compared to continuous subcutaneous insulin infusion therapy alone (CSII), in type 1 diabetic patients (T1D), in Netherlands. **METHODS:** The Core Diabetes Model was used to project the incidence of diabetes-related complications, based on a meta-analysis from Pickup comparing SAP vs CSII. In the Pickup meta-analysis, 70% sensor usage in a population with baseline HbA1c of 8.0% led to a reduction of -0.42% versus -0.10% HbA1c, for SAP and CSII respectively. The simulated population had a mean age of 27 years with a mean diabetes duration of 13 years. The quality of life was adjusted for a reduced fear of hypoglycaemic event in the SAP arm. A discount rate of 4% and 1.5% for respectively economic and clinical outcomes was applied. Several sensitivity analysis were conducted on key parameters. **RESULTS:** The incremental cost-effectiveness ratio (ICER) was 22,335 € per Quality Adjusted Life Year gained (QALY) based on a societal perspective. The improvement in discounted QALY was 1.768 years in favor of SAP. SAP additional related costs were partially offset by the savings due to the reduction in diabetes long-term complications and lower frequency of SMBG. Reduction in the incidence (%) and delay of onset of diabetes complications (years) were achieved with SAP compared to CSII alone, such as neuropathy (13% 1.3 years), first ulcer (5% 1.19 years) and stroke (4% 0.81 years). The acceptability curve showed that the likelihood to be cost-effective at a willingness to pay of 80,000 €/QALY was 100%. **CONCLUSIONS:** These results indicate that accordingly to commonly accepted threshold SAP compared to CSII alone can be considered as very good value for money in the Dutch setting. Extensive sensitivity analysis on key drivers confirmed the robustness of results.