associated with manually coded meters (model 1 and model 2) and autocalibrated meters (model 3 and on data) for medications, devices, and services in National health care systems in the Russian Federation. RESULTS: Annual direct costs per patient in the group of manually coded glucose meters were 1533 euro (model 1) and 1574 euro (model 2), and in the group of autocalibrated meters were 1594 euro (model 1) and 1982 euro (model 2) per 1 LYC, respectively (discounted at 3%). Budget impact analysis showed that use of autocalibrated meters (model 3) instead of manually coded (model 1 and model 2) leads to the annual cost savings of 33 euro and 53 euro per patient, respectively, (discounted at 3%). CONCLUSIONS: Obtained results show the potential economic benefits of using autocalibrated glucose meters instead of manually coded glucose meters to administrate blood glucose level as part of intensive glucose-lowering therapy from a pharmacoeconomic point of view.

PDB36 HEALTH ECONOMIC IMPACT OF BARIATURE SURGERY REVISTED: STRUCTURED REVIEW OF LITERATURE AND HEALTH TECHNOLOGY ASSESSMENTS

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OBJECTIVES: The costs of obesity are staggering, accounting for 2-6% of global health care costs. The health economic benefits of bariatric surgery while notable, are multi-faceted, resulting in heterogeneous reporting in the literature. To that end, we sought to highlight available evidence of the impact of bariatric surgery, and to 2) identify key gaps in current evidence that may influence uptake by health care systems. METHODS: Evidence of the health economic benefits of bariatric surgery was obtained from 107 academic articles, of which 13 were systematic reviews, published between 2010-March 2014 and archived in MEDLINE and PubMed. Additionally, HTAiWatch identified 10 HTAs, largely from North America and the EU that evaluated economic benefits. RESULTS: In all countries where evaluated, bariatric surgery was cost-effective compared to non-surgical therapy. The surgery was likely more cost-effective with higher patient BMI and with comorbidities, especially for BMI> 40kg/m², although estimates varied. Furthermore, resolution of underlying comorbidities resulting in reduced utilization of health care services, pharmaceutical utilization, and improved work productivity, among others, resulting in cost saving of 60-70% relative to standard care over a 3-year period. Importantly, time to break even was typically in the 4-7 years range, and was affected by patient BMI, type of surgery, and comorbidities. CONCLUSIONS: Although heterogeneous, reports of health economic benefits of bariatric surgery indicate an overall positive trend, largely in patients with type 2 diabetes, and employ standard clinical endpoints to demonstrate real world, long-term benefits.

PDB37 ASSOCIATION OF CHANGES IN BODY WEIGHT WITH HEALTH CARE COSTS AMONG PATIENTS WITH NEWLY-DIAGNOSED TYPE-2 DIABETES IN SWEDEN

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OBJECTIVES: Type 2 diabetes and excess weight incur large costs to health care systems, but the association between weight progression in diabetes and health care costs is unknown. We investigated those relations using real world data in a sample of newly diagnosed diabetes patients in Sweden by using repeated body mass index (BMI) measurement and health care resource utilization data

DATA: Patients with a BMI (kg/m²) at diagnosis and subsequent BMI measurements at 12, 24, 36, 48, and 60 months were identified from a previously conducted register study. Individuals were classified into three groups based on their BMI change over 5 years: increase (> 1 BMI unit increase), decrease (-1 BMI unit decrease), and stable (±1 BMI unit change). Each group was stratified by BMI at diagnosis (BMI< 25, 25–30, ≥30). Health care costs for each group were estimated by applying Swedish unit costs to the health care resource data extracted from electronic patient journals and a national patient register. RESULTS: The studied included 903 T2D patients (women, 43%; mean age, 62; mean HbA1c, 6.78%; BMI, typically in the 1.25-5 year range. Three key evidence gaps were identified: few studies conducted head-to-head comparisons, determine optimal patient populations, and employ standard clinical endpoints to demonstrate real world, long-term benefits.

PDB38 ECONOMIC IMPACT OF SMOKING STATUS ON HEALTH CARE COSTS IN PATIENTS WITH TYPE 2 DIABETES: A RETROSPECTIVE NESTED CASE-CONTROL ECONOMIC STUDY IN ROUTINE CLINICAL PRACTICE

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OBJECTIVES: Smoking in diabetics is associated with a worse prognosis and vascular complications. The available evidence on health care resource utilization and associated costs in diabetics who smoke is limited or nonexistent. Thus, the objective was to compare health care resource utilization and costs according to smoking status in patients with type 2 diabetes in clinical practice. METHODS: A retrospective cohort nested case-control study was designed. Cases were current smokers, while two types of controls (former smokers matched and never smokers) were matched by age, sex, duration of diabetes, and burden of comorbidity using data from electronic medical records. Non-institutionalized diabetics, both genders, age >18 years, seen consecutively over a 5-year period before the index date were enrolled. Perspective of both the National Health System and the Society were chosen and costs of health care resource utilization and loss of productivity due to sick leave were compared among groups using a linear general model with covariates. RESULTS: A total of 2,490 records were analyzed: 498 from cases, 996 from former smokers, and 996 from never smokers. Mean age was 63.4 years (64.9% male). Smokers had higher HbA1c (7.4% vs. 7.2% and 7.2%, respectively, p = 0.013) and a lower degree of metabolic control (49.3% vs. 54.7% and 55%, p = 0.036). Smokers had higher average annual costs ($13,410) than former smokers ($9,880) and never smokers ($7,185), p<0.001. Mean health care cost saving per patient was associated with elapsed time of quitting smoking from ≤950 in subjects quitting smoking 2-year to 1173.5-year more, or no smoking. Inclusion of smoking in the analysis of baseline characteristics showed that smokers had a lower metabolic control, higher health care resource utilization, and more sick leave, resulting in higher health care costs and lost productivity compared with both former and never diabetic smokers. Health care cost savings was associated with elapsed time from quitting smoking.

PDB39 EVALUATION OF POTENTIAL WASTE OF GROWTH HORMONE ACROSS AVAILABLE GROWTH HORMONE PEN DEVICES AND AN ELECTRONIC GROWTH HORMONE DELIVERY DEVICE

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OBJECTIVES: The aim of this analysis was to estimate the potential GH waste per patient with pen devices and the easypod® device, and to quantify the potential economic impact of waste of use per patient from patient and payer perspectives. METHODS: A Waste Calculator Model was developed to examine GH waste. All somatropin products available in pen or electronic devices were included. The user may define distribution across cartridge sizes. The mechanical/priming loss applied to each product was based upon each product’s prescribing information and/or instructions for use. The base case model utilizes a US patient daily dose of 1.4 mg. The model assumes that the easypod® dose adjustment feature is activated by the user (82%). Model assumes that 42.6% of caregivers overlooked the remaining amount left in the cartridge (eg waste) if less than a full dose. Annual amount of waste (mg, cartridges, dollars) per patient and per population (based on US national market) is reported. Results: Annual amount of waste per patient was lowest for easypod®. The expected annual amount of waste ranged from 0 to 38.9 mg per patient, which is translated into approximately 342 cartridges or about $162,000 per year. The results in GH waste fluctuated depending upon daily dose, cartridge size, and dose spread assumptions. CONCLUSIONS: The expected annual amount of GH waste evaluated in this Waste Calculator was lowest with easypod®. Cost of GH waste can be an important consideration when evaluating GH delivery devices.

PDB40 BENEFIT OF POSITIVE AIRWAY PRESSURE (PAP) THERAPY IN SLEEP APNEA (SA) PATIENTS WITH TYPE II DIABETES MELLITUS (T2DM) AN ECONOMIC RETROSPECTIVE COMPARATIVE COHORT ANALYSIS BASED ON A STATUTORY HEALTH INSURANCE DATABASE

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OBJECTIVES: It is estimated that the prevalence of moderate-to-severe SA (apnoea-hypopnoea index ≥15/h) is 10%. Patients with T2DM have a particularly high incidence of SA. T2DM and SA influence the development and progression of each other. Therefore, we have investigated the economic impact of PAP therapy on all-cause mortality and cost of illness (COI) in Germany from a statutory health insurance (SHI) perspective. METHODS: A total of 4-5 million individuals covered by SHI were included. The German SHI database was analyzed for the years 2011-2014. Patients included were in patients with T2DM. This subgroup of patients was followed for 3 years after initiation of PAP therapy. RESULTS: Total COI was higher in the PAP group versus CG in year 1 (€8,105 vs. €7,037, p<0.001). After 2 years follow-up, COI in the PAP group decreased, but remained higher versus CG (€6,842 vs €6,625, p<0.001). After 3 years, PAP group COI