association with the probability of seeing an endocrinologist: rates of specialist visits are a large factor in the age of T2D initiation. This could be related to a patient’s insulin and those with another endocrine disorder are more likely to see a specialist (p<0.001). In contrast, the newly diagnosed and patients followed by a general practitioner (GP) present lower probabilities of specialist visits (p<0.001). Moreover, the primary care practitioner visits where the density of endocrinologists is large in the patients’ neighbourhood, while it decreases with the distance (in kilometres) from the patients’ house to the endocrinologist’s office. Finally, the chances of seeing an endocrinologist rise with increasing BMI and the test for a visit rises.

CONCLUSIONS: Our results are consistent with previous literature showing evidence of the existence of a substitution effect between GPs and specialists in diabetes care. We show that financial barriers exist even in a population of patients receiving national health insurance coverage.

OBJECTIVES: The relationship between resource utilisation and patient phenotype was characterized. This study aimed to: (i) confirm the relationship between key risk factors associated with weight gain (WG) and the occurrence of hyperglycaemia in T2D patients managed with metformin plus sulphonylurea (M+S) and any associated impact on hospital resource utilisation. METHODS: The study was a retrospective observational cohort study using the Hospital Episode Statistics (HES) database. The association between financial factors at baseline (therapy escalation from metformin to M+S) with WG (> 2 kg weight increase over 12 months) will characterize this cohort. In addition, over 12 months following therapy escalation was assessed using logistic regression. Hospitalisation associated with increasing body mass index (BMI) and hyperglycaemia was also assessed. RESULTS: A total of 11,071 patients met the study inclusion/exclusion criteria. WG was observed in 28.3% of patients associated with baseline age (OR=0.99), female gender (OR=0.87), baseline weight (OR=1.003) and HbA1c (OR=1.06). Hyperglycaemia occurred in 1.3% of patients and was significantly associated with diabetes (OR=1.04), baseline HbA1c (OR=0.86) and prior complications status (OR=1.92). Hospitalisation occurred in 10% of patients and was significantly associated with BMI (OR=1.02) but not hyperglycaemia. The mean number of hospital admissions over the follow-up period was 1.7, 1.8, 2.2, and 2.9 for patients in the normal, overweight, obese and morbidly obese categories respectively. CONCLUSIONS: This real-world observational analysis suggests there are identifiable phenotypic characteristics predictive of WG and hyperglycaemia. This study also shows a general relationship between increasing BMI and hospitalisation that may not be adequately captured in widely used vascular risk equations such as UKPDS in which BMI has minimal influence on risk. Consequently, the value of diabetes management strategies that minimise WG may be underestimated.

PB165 AN OBSERVATIONAL STUDY OF DIABETES-ASSOCIATED SECONDARY HEALTH CARE UTILISATION IN PATIENTS WITH TYPE 2 DIABETES PRESCRIBED DUAL COMBINATION THERAPY WITH ORAL ANTI-HYPERGLYCAEMIC AGENTS IN THE UK

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OBJECTIVES: The primary objective was to assess the impact of using ‘metformin plus sulphonylureas’ (Met+S) in comparison with ‘metformin plus other oral anti-hyperglycaemic agents’ (Met+OHA) in patients with Type 2 Diabetes (T2D) on diabetes-associated secondary health care utilisation in the UK. The secondary objectives included investigating individual components of the primary objective.

METHODS: This retrospective cohort study used data from the Clinical Practice Research Datalink (CPRD) linked to Hospital Episodes Statistics. Adults (≥60 years) with Type 2 Diabetes were included if they were prescribed Met-SU or Met+OHA following metformin therapy were identified during the period April 2003–March 2012 and comprised the two study cohorts. Propensity scores were estimated and Met+SU patients caliper matched to Met+OHA patients to balance the covariates (including HbA1c and duration of diabetes at baseline). Diabetes-associated secondary health care utilisation (inpatient admissions and outpatient visits) were measured from >6 months post-initiation of dual therapy until treatment change or end of follow-up. Outcomes were calculated as rate ratios (RR), adjusted for over dispersion using negative binomial regression and propensity score for covariates. RESULTS: 14,416 patients in total were identified and in the directly matched analysis, 1,704 patients were included in each cohort. For the primary objective, the Met-SU cohort had a numerically higher rate of diabetes-related secondary health care utilisation than Met+OHA (adjusted RR 1.12, 95% confidence interval [95%CI]: 0.97-1.29). For the secondary endpoints examining individual components, the adjusted RR for Met-SU cohort for inpatient admissions was 1.34 (95%CI 0.92–1.96) and 1.19 (95%CI: 0.95–1.26) for outpatient visits. Macrovascular complications, accounting for 68.7% of inpatient admissions, occurred at a significantly higher rate in the Met-SU cohort than Met+OHA patients (RR 1.15, 95%CI: 1.03–1.29). The combination therapy with metformin plus sulphonylureas is associated with a directionally higher rate of secondary health care utilisation than metformin plus other oral anti-hyperglycaemic agents.

PB166 COST OF SEVERE HYPOGLYCAEMIA IN HOSPITALIZED PATIENTS IN POLAND- IS IT FINANCED AND REPORTED IN A RIGHT WAY?

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OBJECTIVES: Hypoglycaemia is common in diabetic patients, often as a side effect of a treatment. Its occurrence can influence patients’ professional life and generate extra direct costs to the health care system. Severe requiring another person’s assistance) hypoglycaemic events (SHEs), especially leading to hospitalisation, are associated with the highest burden and for that reason their real frequency and costs should be calculated properly. The aim of the study was to assess the accuracy of reporting of hypoglycaemia to the National Health Fund in Poland. METHODS: A combination of prospective and retrospective designs was applied. A detailed retrospective analysis of 117 hospitalised patients’ case histories was performed from the period of February-March 2013. In addition, prospectively, in March and April 2013. OBSERVATIONS: In the period of February-March 2013, 42 patients were reported in the hypoglycaemia DRG group compared to a broader diabetes/hyperglycaemia DRG group, where the financing level is higher. A financial difference equal to 7,082 EUR was generated due to more favourable classification of these cases. The retrospective and prospective observed hypoglycaemia occurrence were experience based on the patient’s self-report, where only one was coded as hypoglycaemia. It has generated 2,247 EUR difference. Even with this financially more favourable, (still clinically justified but less precise) coding hypoglycaemic patients generated income equivalent to 75,628 EUR in reimbursements and 10,563 EUR in prospective payment. CONCLUSIONS: Our study provided a direct proof of
Additional research is required to understand the best methods to reach these management solutions being deployed in Europe. Analysis of current European initiatives implementing digital health management systems on the internet.

Thaung Y.M., Toh MPHS, Lee L.J. Endocrinologists in monitoring consumption of medicines by each patient. The pharmacotherapies has shown that the CIS is an effective tool and can support 1261 women; from them 12 child) "Pharmacotherapy" (371 - insulin therapy, 1727 - lins and 169 oral hypoglycemic preparations are registered. However, incomplete data-provider. Data was mostly collected 5 or more years ago (except for the commercial and governmental data-providers). Data was retrieved by means of physicians' statements; patient surveys with voluntary disclosure, diagnostic tests (such as the glucose tolerance test and the oral glucose tolerance test), and medical records), and (raw) secondary data of pharmacy prescriptions with physician diagnoses. Besides differences in diagnostic criteria, reasons for deviation among sources include: the sample size and making adjustments to improve representativeness. In the future, we plan to analyze secondarily data; differentiation of type II from type I diabetes mellitus, and (not) considering undiagnosed or untreated cases. While accessing the data of publications and of the commercial providers requires a payment, health insurance data is not freely available in Germany (yet). The governmental data-provider is accessible without restrictions and free of charge. CONCLUSIONS: The need for accurate population-level data and access to it is highlighted by the present case-study. Sources for prevalence data in diabetes mellitus type II were characterized by a variety of differences in the methods applied to derive (the) data, leading to deviating estimates.

EXAMINING THE ECONOMIC BENEFITS OF LIFESTYLE INTERVENTION IN SEGMENTS OF A PREDIABETIC POPULATION

Storm M., Dall T., Seniema AP., Su W., Blanchard Y.

OBJECTIVES: Published studies have shown that lifestyle intervention in adults with prediabetes can improve health outcomes and reduce or delay onset of type 2 diabetes, improve health in general, and achieve higher net economic benefits and higher levels of employment and productivity. This study examined patient characteristics that help predict future medical expenditures avoided and economic benefits to society associated with lifestyle intervention. METHODS: A Markov-based simulation model utilizing Monte Carlo simulation was used to simulate patient health and economic outcomes over ten years with and without a lifestyle intervention. The population examined was a nationally representative sample (n=2,897) of US adults with prediabetes from the 2005-2010 National Health and Nutrition Examination Survey who meet the American Diabetes Association’s screening criteria for diabetes. Prediction equations for diabetes and sequelae, medical expenditures, economic outcomes, mortality, and quality of life came from the published trials and studies, such as the UK Prospective Diabetes Study. The analysis simulated body weight and hemoglobin A1c benefits reported in the 10-year follow-up results from the lifestyle arm of the Diabetes Prevention Program and Outcomes Study (DPP/OS). OLS regression was subsequently used to analyze the initial patient characteristics and their relationship to subsequent outcomes.

RESULTS: Simulated outcomes suggest that age, sex, racial/ethnic, and HbA1c at time of intervention are strongly predictive of successful lifestyle intervention (medical expenditures and societal benefit). Intervention impact on medical savings generally increased with age through age 65, while total economic benefits of the intervention increased through age 65. Women had $4,200 in higher medical savings than men. Obese participants had $3,000 higher medical savings than non-obese participants. CONCLUSIONS: The expected economic benefit of lifestyle intervention varies systematically by patient characteristics. Patients age 55-64 experienced the most robust savings, while patients age 45-54 experienced the largest societal economic impact.

EFFICACY OF THE AUTOMATED TARGET GLUCOSE CONTROL: A SYSTEMATIC REVIEW

Yeo IU

Objective: South Korea

OBJECTIVES: Tight glucose control in critically ill patients is difficult and labor intensive, resulting in poor efficacy of glycemic control and increased hypoglycemia rate. The purpose of this study was to evaluate the safety and effectiveness of the automated target glucose control using computer-based insulin algo-