The instruments: Total Symptom Scores (TSS; item-scale correlations ≥0.40). Internal consistency was strong (D-ABS TSS α =0.92; D-MIQ worries of Hypoglycemia α = 0.70; VN 0.90). Test-retest reliability for the assessment of HS frequency and severity (D-ABS M Qi of Hypoglycaemia ICC =0.66; D-MIQ Worrries of Hypoglycaemia ICC =0.65 WN ICC =0.92).

Conclusions: The D-ABS and D-MIQ are psychometrically valid surveys for the assessment of symptoms and impacts for T2DM. The surveys developed in this study can be used for the assessment of HS frequency and severity (D-ABS), MC, and MT, and weight impact (D-MIQ) in T2DM patients. The combination of psychometric validity and assessment time reduction make the D-ABS and D-MIQ a viable means for in-trial and clinical assessment of HS and impacts.

PDB57 PaTIENTS’ PREREFERENCE FOR ATTRIBUTES OF TYPE 2 DIABETES MEDICATIONS: A CONCEPT ANALYSIS

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OBJECTIVES: Sodium-glucose co-transporter 2 inhibitors (SGLT2i) are a novel class of drugs to treat patients with Type 2 Diabetes Mellitus (T2DM). The attributes of the SGLT2i differ from those of other medications. Therefore, patients’ preferences for each of these attributes are of potential interest to patients, physicians, and payers.

METHODS: A discrete choice experiment was conducted with patients with T2DM from the UK to examine 7 attributes of T2DM medications: efficacy (defined as reduction in blood glucose levels), urinary tract infection/genital infection side-effects, weight change, gastrointestinal/nausea side-effects, hypoglycaemic events, blood pressure, and cardiovascular risk. Patients were presented with 20 total choices between 2 hypothetical T2DM medications, each described medians of the 7 attributes. Partial utilities were estimated using random effects multi-logit models, and relative importance (RI) values were calculated for each of the attributes. Data were analyzed for the overall sample, and by medication and gender subgroups. One hundred patients with T2DM completed the survey (51% male; mean age =62.9, SD =11.1 years; mean BMI =32.7, SD =6.5; 50.0% taking ≥2 T2DM medications). The four most important attributes to patients were: risk of hypoglycaemic events (relative importance (RI) = 24.7%), weight change associated with the medication (RI = 20.6%), risk of gastrointestinal/nausea side-effects (RI = 18.0%), and efficacy (RI =18.0%). The remaining attributes were of lesser importance: risk of urinary tract infection/genital infection side-effects (RI =9.9%), cardiovascular side-effects (RI =4.3%), and blood pressure changes (RI =3.9%). Additional results for subgroup analyses will be presented.

Conclusions: Patients with T2DM consistently assign higher relative importance to changes associated with a medication, the risk of gastrointestinal/nausea side-effects, and the efficacy of a medication to be attributes of approximately equivalent importance for T2DM medications. Prescribing physicians should consider these characteristics of medications as they may contribute to patients’ overall satisfaction with their diabetes therapy.

PDB58 THE PSYCHOMETRIC PERFORMANCE OF THE EQ-5D, SF-6D AND DIABETES HEALTH PROFILE (DHP-18) IN TYPE 2 DIABETES

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OBJECTIVES: Generic preference-based measures such as EQ-5D and SF-6D and condition specific measures such as the Diabetes Health Profile-18 (DHP-18) are used in the assessment of health related quality of life in diabetes. The aim of this study was to examine the psychometric acceptability, validity and responsiveness of these measures in a type 2 diabetes population. Methods: Acceptability was assessed by calculating missing data rates. We investigated the convergent validity of the measures using correlations, known group validity across a variety of clinical indicators using ANOVA, and agreement between the measures using Intra Class Correlation coefficients (ICC) and Bland Altman plots. Responsiveness to change over time was assessed using standardised response mean, and floor/ceiling effects tests. A UK longitudinal sample of 1613 people with Type 2 diabetes was used for the analysis. Results: Overall rates of missing data were less than 5% indicating acceptability to respondents. Across both time points, the DHP-18 dimensions were moderately correlated with the EQ-5D and SF-6D indicating construct validity. All three measures significantly discriminated between those reporting and not reporting co-morbid health problems. In terms of agreement, the ICC between the preference based measures was high, and Bland Altman plots indicated that agreement is higher at the less severe end of the scale. The EQ-5D displays evidence of a ceiling effect, and for patients self reporting change in health, SF-6D statistics indicate that the sensitivity to change across time is low for all measures. Conclusions: There is evidence for the psychometric validity of the generic preference based measures EQ-5D and SF-6D and the condition specific DHP-18 to measure outcomes in diabetes. However evidence for the responsiveness of the measures is less clear. The inclusion of both generic and condition specific measures in trials may increase the accuracy of outcomes assessment in type 2 diabetes.

PDB59 CONTENT VALIDITY OF A NEW PATIENT-REPORTED OUTCOME INSTRUMENT TO ASSESS HYPOGLYCEMIA: THE HYPOGLYCEMIA PERSPECTIVES QUESTIONNAIRE

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OBJECTIVES: Intensive glycemic control can increase the risk of hypoglycemia episodes among patients with type 2 diabetes mellitus (T2DM). However, the existing instruments for the assessment of hypoglycemia focus on its acute consequences (i.e., treatment with gluco- sulin or sultpynolurine). The goal of this study was to establish the content validity of a new patient-reported outcome (PRO) instrument assessing multiple dimensions of the patient’s experience of hypoglycemia – the Hypoglycaemia Perspectives Questionnaire (HPQ). Method: We included concept elicitation interviews with key stakeholders (i.e., hypoglycemia perspectives to be assessed in the instrument), item generation, and cognitive interviewing (to assess patient understanding of the HPQ) phases. The concept evaluation phase included interviews with 19 T2D patients (mean age = 54.9 ± 14.7 years, 61% male, 57% Caucasian) and 4 key opinion leaders, and a targeted examination of the literature. Two phases of cognitive interviews were conducted with T2D patients (Phase I: n = 6; Phase II: n = 5; 55% male; 45 ± 50 years old, 82% Caucasian), changes to the HPQ were made in between phases. In phase elicitation and cognitive interviews, respondents were asked to prioritize the various attributes of hypoglycemia and rate their importance. The HPQ was then modulated using a semi-structured interview guide. Results: Key concepts emerging from the concept evaluation phase included: frequency and severity of events, emotional response to a hypoglycemia event, symptom concern, importance of compensatory behaviors, personal control, worry, functional impact, and awareness of symptoms. Tremer (79% of patients), dizziness (68%), and sweating (63%) were the most commonly reported symptoms. Items were generated to assess the key dimensions of hypoglycemia. The HPQ, instructions, items, and response options were generally understood and only minor changes were made to the instrument. Conclusions: The HPQ is a PRO instrument that can be used in studies of T2D patients. It provides a comprehensive assessment of the patient’s perspectives on hypoglycemia that goes beyond existing instruments. Once the items are finalized via psychometric testing, the HPQ may be used to evaluate the burden of hypoglycemia.
hypoglycemia were 60, 189, and 695 per event separately. CONCLUSIONS: Hypoglycemia is common acute side effect in treatment of T2DM patients, which associated with considerable health and economic burden to patients and their family.

**PD62**

**TYPE 2 DIABETES IN RUSSIA: PREVALENCE, RISK FACTORS, AND BURDEN**

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**OBJECTIVES:** Although the prevalence of type 2 diabetes (T2D) is dramatically increasing worldwide, data on the prevalence, prevalence of those at risk, and the burden of these patients in Russia is lacking. METHODS: The data source for the current study was the 1st National Russia Health and Wellness Survey (NHWs), a cross-sectional patient-reported health survey of adults in Russia (N=10,039). Respondents who reported a diagnosis of T2D were compared with non-T2D controls on health status (measured using the SF-12v2), work productivity (measured using the WPAI:GH questionnaire), and number of monthly mild-to-moderate hypos in Germany. CONCLUSIONS: An oral T2D treatment that has no associated weight gain would be most preferred in both Sweden and Germany.

**PD65**

**IMPAIRMENT OF WORK PRODUCTIVITY AND DAILY ACTIVITIES IN TURKISH PATIENTS WITH TYPE 2 DIABETES MELLITUS**

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**OBJECTIVES:** An update of health economics analysis of type 2 diabetes mellitus (T2DM) in adult population in Turkey was performed. The objectives of the analysis were to determine the direct cost components caused by T2DM and its complications and also the loss of work productivity in T2DM. In this presentation, data on work productivity are reported. METHODS: Forty centers were selected from the list of 156 T2DM centers which were distributed all over Turkey. These centers were representative of the country, since they were selected by two-stage cluster sampling. Data on work productivity were collected via “Work Productivity and Activity Impairment Questionnaire: General Health V2.0 (WPAI:GH)”.

**RESULTS:** A total of 657 patients were included in the analysis. The percentage of patients, who had a job, at the time of the study conducted, was 14.0%. This figure was lower in patients with ophthalmic complications (8.7% vs. 15.9%; p = 0.020) and with cardiovascular complications (4.1% vs. 15.7%; p < 0.002). Mean scores of absenteeism, presenteeism, and overall work productivity were 23.5 ± 3.76, 15.2 ± 18.85, and 38.6 ± 37.8, respectively. Overall impairment score of daily activities was 31.3 ± 29.2. Patients with metabolic complications and cardiovascular complications had reported more impairment (for metabolic complications 32.4% vs. 19.4%; p < 0.11, for cardiovascular complications 41.1% vs. 21.1%; p < 0.10). Overall impairment score of daily activities was 31.3 ± 29.2.

**PD66**

**QUANTIFYING THE IMPACT OF POOR GLYCAEMIC CONTROL COMPARED WITH GUIDELINES IN THE TREATMENT OF TYPE 2 DIABETES IN UK CLINICAL PRACTICE**

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**OBJECTIVES:** Cardiovascular disease is the major cause of death in patients with type 2 diabetes (T2DM) and long-term follow-up from UKPDS showed improved glycemic control was associated with risk reduction for both myocardial infarction and death. The objective of this study was to quantify the expected difference in long-term outcomes associated with blood glucose treated to target compared with levels observed in clinical practice. METHODS: Data from UK primary care (THIN) were used to obtain the demographic and health characteristics of patients initiating monotherapy, dual therapy, and insulin-based therapy between 2005 and 2009. The Cardiff Type 2 Diabetes Model was initiated with cohort profiles consistent with those subjects initiating monotherapy, and HbA1c change over time was implemented under three scenarios: (1) HbA1c maintained at 6.5%; (2) therapy escalation occurring at a threshold of 7.5%, and (3) therapy escalation occurring at a threshold of 7.5% and (3) therapy escalation occurring at a threshold of 7.5%, and (3) therapy escalation occurring at a threshold of 7.5%, and (3) therapy escalation occurring at a threshold of 7.5%, and (3) therapy escalation occurring at a threshold of 7.5%, and (3) therapy escalation occurring at a threshold of 7.5%. 0.001; and for cardiovascular complications 37.7% vs. 30.2%; p = 0.039. CONCLUSIONS: DM is a disease that significantly impairs the opportunity to have a job, and also impairs the work productivity and daily activities of patients. This impairment is correlated with the presence of systemic complications. Thus, prevention or effective treatment of complications in DM is crucial to improve the social and economic consequences of the disease.

**DIABETES/ENDOCRINE DISORDERS - Health Care Use & Policy Studies**

**PD68**

**THE AVOIDANCE OF WEIGHT GAIN IS IMPORTANT FOR ORAL TYPE 2 DIABETES TREATMENTS IN SWEDEN AND GERMANY: A PATIENT PREFERENCE STUDY**

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**OBJECTIVE:** To quantify patient preferences for outcomes associated with oral type 2 diabetes mellitus (T2DM) treatments. METHODS: Adults in Sweden and Germany with a self-reported physician diagnosis of T2DM and currently receiving on oral anti-diabetic completed a web-enabled choice-format conjoint survey consisting of a series of choices between pairs of hypothetical medication profiles. Each profile had different attributes within a pre-defined range, i.e., blood glucose control, A1c, number of monthly mild-to-moderate hypoglycemic events (hypos), one severe hypo per year (yes or no), weight gain per year, number of pills and frequency of administration, and monthly cost to the patient. Choice questions were based on an experimental design with known statistical properties. The survey was pretested with 25 patients using open-ended interviews. Bivariate probit analysis was used to estimate probabilities for choosing how to make the medication choices, and conditional on that choice, preferences for treatment outcomes. RESULTS: A total of 188 respondents in Sweden and 195 in Germany completed the survey. Regarding the relative importance of the attributes over the ranges included in both countries, weight gain was the most important outcome followed by blood glucose control, for a once daily treatment. However, avoiding a 5 kg weight gain was 1.5 times more important in Sweden and 2.3 times more important in Germany than achieving moderate blood-glucose control. This implies that blood glucose control was relatively more important to Swedish patients than German patients. Avoiding one severe hypo per year was the third most important outcome in Sweden and fourth in Germany. In terms of the least important outcome, it was number of pills taken once a day in Sweden and number of monthly mild-to-moderate hypos in Germany. CONCLUSIONS: An oral T2DM treatment that has no associated weight gain would be most preferred in both Sweden and Germany.