

usage downloaded from CSII pumps with General Practitioner (GP)-recorded insulin prescriptions given to a newly-diagnosed paediatric cohort. **METHODS:** Patients between 7 months and 15 years of age, newly diagnosed with T1D participated in this pragmatic, open, multicentre, parallel group, randomised, controlled trial. Total daily insulin usage (basal and bolus) recorded in the pumps from day 0 to day 365 was downloaded for patients initially randomised to CSII and analysed and compared to insulin usage recorded from their GP prescriptions. **RESULTS:** Pump data was available for 94/144 patients randomised to CSII (<5y: 21; 5 to <12y: 54; 12 to 15y: 19). Among these patients, data were available for a median of 198 days (range 28 to 343; mean 194). Mean prescribed insulin usage for these 94 patients was 70 U/day (95%CI: 58, 81) and compared well with the prescribed mean of 72 U/day (95%CI: 63, 82) for the whole 144-patient cohort. Mean recorded daily usage (min, max; 95%CI) for the three age groups was: (i) <5y: 12 U/day (2, 21; 9 to 14); (ii) 5 to <12y: 20 U/day (4, 36; 17 to 23); (iii) 12 to 15y: 37 U/day (9, 65; 32 to 42). **CONCLUSIONS:** Pump downloads provide an accurate record of insulin usage in paediatric populations with T1D. However, this study shows a large disparity between the quantities of insulin prescribed and insulin used. Reasons for this disparity might include: over-prescription, prescriptions not being collected and physical losses (e.g. spillage and priming of pumps). This may have implications when estimating drug utilisation costs.

#### PDB44

##### ASSESSMENT OF ANTIDIABETIC DRUGS IN FRANCE: WHAT IS THE BASIS FOR A REIMBURSEMENT RECOMMENDATION?

Dumet AF, Chavade D, Busin C, Fernandez J, Galbraith M, Grande M, d'Andon A  
The French National Authority for Health (HAS), Saint Denis la Plaine, France

**OBJECTIVES:** The French National Authority for Health (HAS) is responsible for health technology assessment, providing opinions for reimbursement purposes on drugs. Recommendations for reimbursement are based on the Clinical Benefit (CB) score with a 4-point scale from insufficient (no reimbursement) to important (highest level of reimbursement). According to the French legislation, the CB takes into account 5 criteria: disease severity, treatment aim, efficacy/side effects ratio (ranked on a 4-point scale), the drug's place in the therapeutic strategy and public health impact. We observed that antidiabetic drugs frequently have several CB scores as they're assessed by (sub)indication and therefore aimed to identify criteria driving the CB appraisals for antidiabetic indications. **METHODS:** A retrospective and descriptive study analysing of HAS appraisals for all new antidiabetic (sub) indications assessed between 2010 and 2015 was conducted. For each appraisal, information regarding CB criteria was collected. **RESULTS:** 89 antidiabetic indications (25 drugs) have been assessed with the following CB results: 37% important, 25% moderate, 6% low, 31% insufficient. For all assessments, the CB conclusions were: 80% important, 10% moderate, 3% low and 7% insufficient. The efficacy/side effects ranking was correlated to the CB score in 80% of the indications. When HAS concluded that the drug had no place in the therapeutic strategy, the CB was systematically insufficient. Other CB criteria were less decisive: severity of the disease was always important, treatment aims were always symptomatic and only one indication obtained a positive impact on public health. **CONCLUSIONS:** The percentage of insufficient CB in antidiabetic drugs appears to be higher than for all drugs assessment. However, all of these drugs are available as they obtained a favorable opinion for reimbursement in other (sub)indications, questioning the rationale for such a precise assessment. CB appraisal appears to be mostly driven by the efficacy/side effects ratio and the drug's place in therapeutic strategy.

#### DIABETES/ENDOCRINE DISORDERS – Patient-Reported Outcomes & Patient Preference Studies

#### PDB45

##### ADHERENCE ISSUES IN DIABETES TREATMENT: HOW CAN ACCEPTANCE MEASUREMENT HELP UNDERSTANDING PATIENTS' CONCERNS AND WORKING ON SOLUTIONS?

Wiederkehr S<sup>1</sup>, De Bock E<sup>2</sup>, Chekroun M<sup>3</sup>, Arnould B<sup>2</sup>

<sup>1</sup>Mapi, Patient Centered Sciences, Lyon, France, <sup>2</sup>Mapi, Patient Centered Outcomes, Lyon, France, <sup>3</sup>Carecity, Paris, France

**OBJECTIVES:** Patients with diabetes are required to take long-term treatments to treat their chronic disease and avoid complications. However lack of adherence is very common and represents major barriers to treatment efficiency. Measuring patient acceptance of their medication help understand and predict patients' medication-taking behavior. The objectives of this study are to evaluate the level of acceptance to medication in type 1 and type 2 diabetic patients (T1D/T2D) in real life; to identify issues and to define priorities for action. **METHODS:** Observational, cross-sectional study conducted in Europe using Carecity Online Community. Adult diabetic patients were invited to complete an online questionnaire including a validated patient reported outcome measure: the 25-item Acceptance by the Patients of their Treatment (ACCEPT®). It includes one general acceptance dimension (Acceptance/General) and five multi-item treatment-attribute specific dimensions (Acceptance/Medication Inconvenience, Acceptance/Long-term Treatment, Acceptance/Regimen Constraints, Acceptance/Side effects, Acceptance/Effectiveness) scored from 0-100 (lowest to highest acceptance). Patients were categorized according to their main treatment class: Oral Anti-Diabetic (OAD) versus Insulin. **RESULTS:** 267 T1D and 946 T2D were included. T1D patients showed a significantly higher mean Acceptance/General score compared to T2D patients (67.04 ± 29.50 vs 51.21 ± 32.24, p < 0.0001); T2D patients showed significantly higher scores than T1D patients for Acceptance/Treatment Inconvenience, Long Term and Regimen Constraints. Patients taking OAD had a significantly lower mean General/Acceptance score compared to those taking insulin, but higher Acceptance/Medication Inconvenience, Long Term, Regimen Constraints and Side Effects mean scores. Acceptance/General was highly correlated with Acceptance/Effectiveness (R = 0.61, p < 0.001). Having difficulty accepting treatment for the future was the main reported issue. **CONCLUSIONS:** Treatment acceptance is not satisfactory in

diabetes. Diabetic patients treatment acceptance is primarily driven by perceived effectiveness. Long-term treatment is their major concern. These findings give indications about T1D and T2D patients' priorities and unmet needs.

#### PDB46

##### ADHERENCE TO ORAL ANTIDIABETIC MEDICATION IN TYPE 2 DIABETES MELLITUS CLIENTS IN THE VOLTA REGION OF GHANA

Sefah IA<sup>1</sup>, Okotah A<sup>2</sup>

<sup>1</sup>GHANA HEALTH SERVICE, KETA, Ghana, <sup>2</sup>JOHN SNOW INC, ACCRA, Ghana

**OBJECTIVES:** This study sought to assess adherence to oral anti-diabetes mellitus medications and associated factors among clients reporting to four randomly selected Hospitals in the Volta region of Ghana. **METHODS:** A cross-sectional study was conducted among type 2 diabetes mellitus clients who attended the Diabetes Clinic of four randomly selected Hospitals in the Volta region of Ghana between the months of January 2015 to March 2015. Adherence prevalence was assessed using the eight (8)-item Morisky Medication Adherence scale. Study participants were interviewed using a structure questionnaire to, among other things, determine the commonest self-reported reason (s) of non adherence. Data generated were analyzed using SPSS version 21. Cross-tabulation analysis was performed between the adherence levels and the indicators generated from the questionnaire. Multiple logistic regression was further performed between adherence level and the statistically significant variables. **RESULTS:** Adherence prevalence rate to oral anti-diabetes in Type 2 Diabetes Mellitus was found to be 47.75%. The odds of adherence was about twice more likely in respondents with fasting blood glucose of 1–6mmol/L (OR = 1.9, 95% CI 1.128 – 3.232, p-value 0.02) compared to those having fasting blood glucose of above 10mmol/L while the odds of adherence among respondents with tertiary education was about 3-fold (OR=2.888, 95% CI 1.394 – 5.982, p-value 0.004) compared to those with no formal education. The commonest self-reported reason for non-adherence was forgetfulness. **CONCLUSIONS:** Adherence to oral anti-diabetes in type 2 diabetes mellitus was found to be suboptimal and was independently predicted by the levels of hyperglycaemia and education of respondents. Management of type 2 diabetes mellitus with oral anti-diabetes must include strategies to identify non-adherent clients for adherence counseling before modification of therapy in ensuring good glycaemic control and prevention of the more costly management of its complications.

#### PDB47

##### PREVALENCE OF AND BARRIERS TO MEDICATION ADHERENCE AMONG PATIENTS WITH UNCONTROLLED DIABETES MELLITUS IN PRIMARY HEALTHCARE CENTERS IN QATAR: A QUANTITATIVE ANALYSIS

Awaisu A<sup>1</sup>, Jaam M<sup>1</sup>, Mohamed Ibrahim M<sup>1</sup>, Kheir N<sup>1</sup>, Diab M<sup>1</sup>, Hadi MA<sup>2</sup>

<sup>1</sup>Qatar University College of Pharmacy, Doha, Qatar, <sup>2</sup>University of Leeds, Leeds, UK

**OBJECTIVES:** The prevalence of microvascular and macrovascular complications among patients with diabetes is high. These complications are often associated with poor medication adherence and poorly controlled diabetes. The objective of this study was to determine the rate of and barriers to medication adherence among patients with uncontrolled diabetes in Qatar. **METHODS:** A cross-sectional study was conducted among patients with uncontrolled diabetes attending two primary healthcare clinics in Qatar from October 2016 to January 2017. An interviewer-administered questionnaire comprising three sections was utilized in the study: patients' characteristics, Adherence to Refill and Medications Scale in Diabetes (ARMS-D), and barriers to medication adherence. ARMS-D is a validated instrument that is used to determine the level of medication adherence in patients with diabetes. Descriptive and inferential statistics were used for data analysis. **RESULTS:** Of 260 patients included in the analysis, 191 (74%) were nonadherent to their diabetes medications (ARMS-D score greater than 11). The majority of barriers to medication adherence were reported by nonadherent patients and forgetfulness was the most commonly reported barrier. Furthermore, higher levels of nonadherence were reported among patients who were younger than 65 years old and those who were illiterate. **CONCLUSIONS:** The high rate of medication non-adherence observed among patients with uncontrolled diabetes in primary healthcare setting calls for urgent interventions. However, in-depth understanding of barriers to medication adherence often requires qualitative research approach as these barriers are very complex and multifactorial in nature.

#### PDB48

##### USING DIABETES SELF-MANAGEMENT QUESTIONNAIRE (DSMQ) TO ASSESS DIABETES SELF-CARE ACTIVITIES FOR DIABETES PATIENTS IN KING FAHAD UNIVERSITY HOSPITAL - SAUDI ARABIA

Alshayban DM

Imam AbdulRahman bin Faisal University, Dammam, Saudi Arabia

**OBJECTIVES:** The study main objectives was to assess the diabetes self-care associated with glycemic control **METHODS:** we used a 16 item questionnaire that has been developed by Schmitt et al to assess self-care activities associated with glycaemic control in King Fahad University hospital in Dammam. This instrument contains four subscales, 'Glucose Management' (GM), 'Dietary Control' (DC), 'Physical Activity' (PA), and 'Health-Care Use' (HU), as well as a 'Sum Scale' (SS). We assessed socio-demographic and medical characteristics using survey and medical record data, including: age, sex, self-reported race/ethnicity, educational attainment. The statistical analyses were performed using SPSS. **RESULTS:** Among 30 eligible respondents, 56% were aged above 60, 32% were aged between 41 and 60 years. 60% were women and 40% were men. 28% with intermediate education, 20% graduated from universities. Age, education and working status showed statistical significance in dietary control at 0.01, 0.03, 0.012 respectively. obesity statistically correlated with using health care use and the insulin therapy show significant relationship with glucose management. **CONCLUSIONS:** Age had an positive influence on patients' dietary control which may present that older patients showed higher rates of dietary control than younger patients. Another factor affecting dietary control is level of education which indicates more educated patients were associated with increased dietary control. In this research, it was found out that there was a relationship