OBJECTIVE: Diabetic peripheral neuropathy (DPN) is a debilitating complication of diabetes and causes sensory symptoms that impact health and functionality. The purpose of this study was to test the hypothesis that there was a direct association between the symptoms associated with DPN (SDPN), as measured by a new instrument the Neuropathy Total Symptom Score (NTSS-6 [self-administered]), and health-related utility as measured by the EQ5Dmax. The NTSS-6 provides a score of 0 to 3.66 in each of six domains. The score (range 0 to 21.96) is simply the overall mean (SD) EQ5Dindex was 0.65 (0.33), and mean NTSS-6 score was 64 years (IQR 55–73); 58% were male and the mean age of respondents was 64 years (IQR 55–73); 58% were male and the mean duration of diabetes was 14 years (IQR 5–18). Of the 604 patients, 24% reported having no neuropathic symptoms. The overall mean (SD) EQ5Dmax was 0.65 (0.33), and mean NTSS-6 score 6.2 (median and IQR 4.33, 1.0–10.33). In univariate and multivariate analysis were applied. This is a preliminary analysis of the first 604 returns. RESULTS: The mean age of respondents was 64 years (IQR 55–73); 58% were male and the mean duration of diabetes was 14 years (IQR 5–18). Of the 604 patients, 24% reported having no neuropathic symptoms. The overall mean (SD) EQ5Dmax was 0.65 (0.33), and mean NTSS-6 score 6.2 (median and IQR 4.33, 1.0–10.33). In univariate analysis there was a direct association between the two instruments (correlation coefficient 0.57). Modeling the EQ5Dmax in multiple linear regression analysis to account for confounding, the NTSS-6 score was found to remain directly associated with utility, whereby an increase of one unit on the NTSS-6 resulted in as reduction in the EQ5Dmax of 0.029 units (p < 0.001). CONCLUSIONS: DPN, as measured by the NTSS-6, were directly associated with health-related utility. After accounting for confounding factors, a unit change in the NTSS-6 was equivalent to a change in utility that is considered to be clinically meaningful.

DEVELOPMENT OF A SCALE FOR DIABETIC PATIENT PROFILING BASED ON PATIENT ATTITUDE TOWARDS INSULIN
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OBJECTIVE: To develop self-report questionnaires for physician use in the evaluation of diabetic patient reluctant to start or step up insulin regimens. METHODS: An Advisory Committee (AC) was set up. It consisted of 3 diabetologists/endocrinologists, 1 behavioural psychiatrist and 2 general practitioners. Three patient focus groups were formed from a pool of 23 type-1 and 2 diabetic patients. Interviewees were asked to list fears, constraints and benefits associated with insulinization, injection and insulin regimen step-up. After analysis of the focus groups, a list of detailed concepts and two test questionnaires were developed and independently validated by the AC with content validity and item validity in relation to a self-reported measure of adherence. Twenty items were retained based on correlation with validity criteria and clinical relevance in the following domains: Lifestyle, Attitudes and Beliefs, Help from Others, Talking with Health care Team, and Difficulties Taking Medicines. A post hoc cut point dichotomizing responses into “present” and “absent” was selected for each item. The Barrier Total Index (B1), the number of “barrier-present” items, had an observed range from 0 to 18, a mean of 4.2 (±3.4), and good reliability (Cronbach’s alpha = 0.77). The validity of the B1 with a self-reported of a missed dose of medicine in the past week was excellent. Patients who “missed” had a mean of 6 barriers vs. 2.6 for those who did not (p < 0.0001). CONCLUSION: The ASK Adherence Barrier Survey appears to be a useful tool to identify barriers to adherence in chronic diseases. The survey can facilitate discussion of adherence and identify opportunities to implement barrier-specific interventions.

PERCEIVED HEALTH CARE INFORMATION ON DIABETES: MEASUREMENT OF PATIENT SATISFACTION
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Patient knowledge on own disease is recognised as key factor to reach therapeutic goals. OBJECTIVE: To develop a questionnaire exploring patient preference on SBGM systems; to measure patient satisfaction on medical information delivered by the hospital health care personnel. METHODS: 454 NIDDM patients,
between 40 and 80, were recruited by 40 diabetes clinics. A pilot test-retest validity testing was performed on the same 10 respondents following 2 weeks interval. Ten self-assessment items were developed for exploring preference on home glucometers; 3 items were developed for the following domains: needs for better understanding on diabetes (yes/no); blood glucose self-monitoring period (<6 months, >6 <18 months, >18 months <3 years, >3 <6 years, >6 years); access to diabetes clinics (regularly scheduled—yes/no). The Pearson chi-square statistic for two-way tables was used to test the association between variables; alpha level of 0.05 was used in all analyses. RESULTS: Patients were comparable for sex within each class of age (p = 0.670 / 40–50 years; p = 0.152 / 50–60 years; p = 0.371 / 60–70 years; p = 0.370 / 70–80 years). Unsatisfied (u) and satisfied (s) patients on general information on diabetes respectively decreased and grew with increasing age: 60.98% (u), 39.02% (s)/ 40–50 years; 52.14 % (u), 47.86% (s)/ 50–60 years; 45.77% (u), 54.23% (s)/ 60–70 years; 41.67% (u), 58.33% (s)/ 70–80 years (p = 0.03) without correlating to SBGM period (p = 0.690). Frequency of accesses to diabetes clinics increases with age from 40 to 80 (p = 0.004).

CONCLUSIONS: Patient perceived dissatisfaction with general information on diabetes decreases with age and is independent of SBGM period. Further studies have to be performed to evaluate if a better perceived knowledge of the disease can improve adherence to the treatment and clinical outcomes.

**TREATMENT SATISFACTION IN SUBJECTS WITH TYPE-2 DIABETES RECEIVING INSULIN GLARGINE**

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OBJECTIVES: To assess treatment satisfaction (TS) in a large population of Type-2 diabetes subjects (T2DM) treated with insulin glargine (GLAR). METHODS: The 24-week, multinational ATLANTUS study investigated TS with GLAR initiation and titration (target FBG ≤5.5 mmol/L) according to two algorithms (Alg): Alg1 was physician based; Alg2 involved subject self-titration. TS were assessed using the Diabetes Treatment Satisfaction Questionnaire status (DTSQs) and change (DTSQC). Since blood glucose (BG) controls and stability (MODD, MAGE, 8-point BG profiles) improved significantly, relationships with TS were explored. RESULTS: TS was evaluated in a group of subjects from the eight countries in which the questionnaire was validated, with 1289 subjects at baseline and 1023 subjects at endpoint. Mean baseline DTSQs scores were comparable between Alg. (26.5 vs. 26.1) with significant improvements at endpoint (both +4.99; p < 0.001). Perceived hyperglycaemia significantly decreased (p < 0.001) with both Alg. TS evolution over time (DTSQC) improved by +13.6 with both Alg. Perceived hyperglycaemia decreased in the DTSQC. There were significant (p < 0.0001) correlations between fasting BG, mean 8-point BG and evolution of TS scores and perceived hyperglycaemia. Evolution of perceived hyperglycaemia was also associated with movements towards BG stability (MAGE: p < 0.0001; MODD: p = 0.0004). A similar pattern of results was seen in the Type-1 population.

CONCLUSIONS: This study provides one of the largest assessments of TS to date and shows that aggressive titration of GLAR is associated with significantly improved TS. Self-titration was associated with greater improvements in perceived hyperglycaemia versus physician-based titration. Perceived overall TS, hyperglycaemia and hypoglycaemia at endpoint were all correlated with movements towards BG control and stability, providing potential explanation as to why subjects feel better with GLAR than their prior therapy.

**ANXIETY AND DEPRESSION IN WET AGE-RELATED MACULAR DEGENERATION (ARMD)**

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OBJECTIVE: To study the relationship of ARMD severity to anxiety and depression in three European countries: France, Germany and Italy. METHODS: Patients with wet ARMD were included in a retrospective cross-sectional survey. Sociodemographic and medical data were collected during a visit by a retina specialist. Anxiety and depression were assessed with the Hospital Anxiety and Depression Scale (HADS). Two thresholds were used to dichotomize visual acuity (VA): 20/40 for the best eye (BE) and 20/200 for the worst eye (WE). Comparisons with general population matched on age and gender were possible for the German patients (Hinz, 2004). Analysis of variance was performed to estimate the effect of each eye adjusted on age, gender and country. RESULTS: A total of 360 patients were included. The patients (40% male) averaged 77 years of age and 2.3 years of disease duration. VA was 0.49 LogMAR on the BE the day of the visit. In the German population, ARMD patient anxiety score was higher than the general population both in male (5.4 vs. 4.7) and female (7.7 vs. 5.7). Some associations were found between the severity of the disease and the depression score (BE P < 0.004) and (WE P < 0.12) while no association was found on the anxiety score. The prevalence of severe depression according to HADS was 0% in the less severe (BE > 20/40; WE > 20/200) but 7.6% in the most severe group (BE < 20/40; WE < 20/200). CONCLUSION: Associations were found between ARMD and depression and anxiety as measured by the HADS. The severe depression prevalence rate increases when both eyes are affected by the disease.

**USE OF NEURAL NETWORKS TO PREDICT NIGHT INTRA-OCULAR PRESSURE (IOP) PEAK CONTROL BY PROSTAGLANDIN ANALOGUES**

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OBJECTIVE: The control of daily IOP variations is a key driver of visual field protection. IOP is rarely measured during the night in clinical trials. A model was used to predict nocturnal IOP peaks from daytime measurements. METHODS: Two clinical trials documenting IOP every 4 hours over several days were pooled. Nocturnal IOP peak was defined as the maximum value observed at midnight and 4 AM and was related to diurnal measures (taken at 8:00, 12:00, 16:00 and 20:00). We employed neural networks that included linear, radial basis, and multi-layer perceptron (MLP) selected to minimize error and take into account diversity. The probability of a nocturnal IOP peak > 17.5 mmHg was estimated. The neural network model was then applied to data from a trial comparing timolol, travoprost and latanoprost over 1 year. Drug comparisons were made using a mixed linear model. RESULTS: 440 pairs of day and night IOP measures were identified. A MLP (2:7:1) model was selected based on sensitivity and specificity which were both close to one. The analysis of the MLP output showed afternoo IOPs were stronger predictors of night peaks than morning IOPs. Applying