PDB104

SELF-REPORTED MENTAL HEALTH STATUS IN ADULTS WITH DIABETES AND COMORBID DEPRESSION

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OBJECTIVES: To investigate the marginal impact of depression on self-reported mental health status in adults with diabetes mellitus in the United States. **METHODS:** We pooled years 2009 and 2011 from the Medical Expenditure Panel Survey (MEPS) to create a retrospective cohort of adults diagnosed with diabetes, and those with comorbid diabetes and depression. Outcomes included responses from the Kessler Index (K6), six domains of non-specific mental health, and the mental component summary (MCS) of the Short-Form 12 (SF-12). Outcomes were estimated using multivariable regression analyses and adjusted for demographic and clinical characteristics. **RESULTS:** Compared with adults that had diabetes and no depression (N = 4,498), those with diabetes and depression (N = 742) had greater odds of feeling nervous all of the time (odds ratio (OR): 2.69; 95% CI: 2.03, 3.56); hopeless all of the time (OR: 2.66; 95% CI: 2.02, 3.52; restless all of the time (OR: 2.16; 95% CI: 1.60, 2.93); sad all of the time (OR: 1.97; 95% CI: 1.49, 2.61); feeling as though everything is an effort all of the time (OR: 2.44; 95% CI: 1.94, 3.09); and feeling worthless all of the time (OR: 2.24; 95% CI: 1.77, 2.84). The cohort with diabetes and depression had a lower average MCS score of -8.21 (95% CI: -9.26, -7.15) when compared to those with diabetes alone. **CONCLUSIONS:** Adults with diabetes and comorbid depression have lower self-reported mental health status scores compared to adults with diabetes and no depression. Health Care providers should be aware of the additional mental health burden depression can have on those with diabetes.

PDB105

APPLICABILITY OF THE NEW INSTRUMENT FOR ASSESSMENT OF HYPOGLYCEMIA SYMPTOMS IN DIABETES MELLITUS PATIENTS

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OBJECTIVES: Hypoglycemia is the major factor limiting intensive glycemic control and causing severe morbidity, mortality and reduced quality of life in DM patients. Comprehensive assessment of HS is worthwhile. The objective of this study was to test applicability and psychometric properties of HS assessment instrument – Comprehensive Symptom Profile-Diabetes Mellitus Hypoglycemia Module (CSP-DM-HypoGl). **METHODS:** 432 DM patients on basal-bolus insulin therapy were included in the study: mean age 62±8.4; male/female – 98/334; DM duration – 13±7 yrs; therapy duration – 5.1±4.3 yrs. Patients filled out CSP-DM-HypoGl and SF-36. The CSP-DM-HypoGl was developed to assess the severity of 29 HS in DM patients. It consists of numerical rating scales scored from "0" (no symptom) to "10" (most expressed symptom). Construct validity of CSP-DM-HypoGl was proved by factor analysis, "known-groups" comparison, correlation with SF-36 subscales. Cronbach alpha was used to estimate internal consistency. **RESULTS:** The CSP-DM-HypoGl was easily understood by and administered to patients: the proportion of missing values was less than 2% for all questions. Practicability of the CSP-DM-HypoGl was demonstrated: patients and physicians acknowledged its comprehensiveness. Physicians recognized the usefulness of the questionnaire to identify HS and to guide treatment strategy. Factor analysis found five underlining constructs for HS (explained 61% of the total variance) with Chronbach alphas varied from 0.8 to 0.87. "Known-group" comparison revealed that nocturnal problems and neurological HS were more pronounced in patients with severe or/and nocturnal hypoglycemia than with non-severe hypoglycemia (p<0.05). Nocturnal problems correlated more closely with SF-36 Physical functioning, Vitality and Role Emotional functioning; neurological HS – with Vitality and Social functioning (r=0.3-0.42, p<0.05). **CONCLUSIONS:** The CSP-DM-HypoGl is an appropriate and practical tool for comprehensive assessment of HS in DM patients. Monitoring of HS using CSP-DM-HypoGl may be recommended to enhance treatment benefits in DM patients after testing its sensitivity.

PDB106

RACIAL DISPARITIES IN TYPE 2 DIABETES MEDICATION ADHERENCE IN MEDICAID ADULTS WITH DEVELOPMENTAL DISABILITIES

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OBJECTIVES: The prevalence of diabetes mellitus is high among patients with developmental disabilities (cerebral palsy, autism, down's syndrome and cognitive disabilities). Developmentally disabled individuals with chronic diseases experience delays in detection of comorbidities, poor disease management and low quality of care. This study examines the racial health disparities in medication adherence and medication persistence in developmentally disabled adults with type 2 diabetes enrolled in Medicaid. **METHODS:** This was a retrospective cohort study based on a combination of the Health belief model and Aday Anderson's model of health care utilization. The dataset used for this study was the MarketScan® Multi-State Medicaid Database. Adults aged 18-64 years with a prior diagnosis of a developmental disability (cerebral palsy/autism/down's/cognitive disabilities) and a new diagnosis of type 2 diabetes enrolled in Medicaid from January 1, 2004 and December 31, 2006, were included. Adults were included if they had a continuous enrollment for at least 12 months and were excluded if they were dual eligible. Anti-diabetic medication adherence and diabetic medication persistence were measured using multivariate logistic regression and the Cox-proportional hazard regression respectively. **RESULTS:** The study population comprised of 1529 patients. After controlling for covariates, African Americans had 24% lower odds of adhering to anti-diabetic medications compared to Caucasians. (OR = 0.76, 95% CI = 0.59-0.98, p < 0.05). African Americans on the other hand, were more persistent in taking their anti-diabetic medications compared to Caucasians. (Hazard Ratio = 0.97, 95% CI =

0.87-1.07, p < 0.606). **CONCLUSIONS:** The needs of the developmentally disabled individuals are somewhat different than the needs of individuals without disabilities. Policy recommendations should focus on increasing the number of outpatient centers as well as primary caregivers who can understand the disease management needs of the patient and accordingly collaborate with other specialized health care professionals to enhance the overall quality of care for the patient.

PDB107

RELATIONSHIPS BETWEEN SOCIO-DEMOGRAPHICS AND HEALTH RELATED QUALITY OF LIFE AMONG DIABETES PATIENTS IN THE UNITED STATES

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OBJECTIVES: Earlier studies (Zang et al. 2008) in the field of diabetes identified that there is a significant relationship between the time before diagnosis and health insurance in the United States. Another study (Zang et al. 2012) among US habitants showed that the type of insurance is also significantly related to poor glycemic control. Our study aimed to identify whether there is a relationship between socio-demographics (e.g. insurance type) and Health Related Quality of Life (HRQoL) among diabetes patients in the United States. Specifically, our study aimed to evaluate the relationship between HRQoL and age, gender, household income, employment and insurance type. **METHODS:** A cross-sectional survey of diabetes patients (n = 1480) living in the United States. Each patient completed a comprehensive questionnaire, which included the EQ-5D-5L instrument and accompanying VAS. In addition to the EQ-5D-5L instruments patients were also asked a series of questions to identify their socio-demographic background. By means of logistic linear regression modeling the health utility scores derived from the EQ-5D-5L instrument are linked to the socio-demographic background of the diabetes patients. **RESULTS:** The tested socio-demographics are significantly related to HRQoL (p <0,0001). Yet, together they explained only 10% of the variation in HRQoL score (R² = 0,10). Insurance by Medicaid (β-value: -0,16) and employment (β-value: 0,13) were both significantly related to HRQoL (p <0,0001). Household income (p = 0,253), insurance by Medicare (p = 0,16), gender (p = 0,12), level of education (p= 0,04), and age (p=0,013) all were less significantly related to HRQoL. **CONCLUSIONS:** The study reconfirms the relationship between insurance, employment and health outcomes among diabetes patients in the United States. Previous studies showed that these affect the access to care and the diabetes management, but these are also likely to influence health outcomes in terms of HRQoL.

PDB108

THE USEFULNESS OF PATIENT TREATMENT SATISFACTION QUESTIONNAIRE (PTSQ) IN DIABETES MELLITUS (DM) PATIENTS

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OBJECTIVES: Treatment satisfaction is an important factor of quality of care, especially in treating chronic diseases such as DM. The goal of study was to test usefulness of the new tool for assessing treatment satisfaction – Patient Treatment Satisfaction Questionnaire (PTSQ) in the population of type 2 DM (T2DM) patients. **METHODS:** 500 patients with T2DM on different basal-bolus insulin treatment were included in the study: mean age 61.8; male/female – 122/378; DM duration – 12.8 years; mean duration of insulin therapy – 5.1±4.3 yrs. 64.4% of patients exhibited hypoglycemia. PTSQ consists of five numerical rating scales, scored from 0 (extremely dissatisfied) to 10 (extremely satisfied): 4 core items – general treatment satisfaction, treatment effectiveness, convenience and coping, and one additional item – side effects burden. Patients filled out the PTSQ and SF-36 during routine check-up. The construct validity of the PTSQ was proved by "known-group" comparison and correlations with SF-36 subscales. Cronbach alpha was used to estimate internal consistency. **RESULTS:** Items of the PTSQ were easy for the patients to read and understand. Patients needed 3-5 min to answer it, usually without assistance. The proportion of missing values for all items was less than 2.5%. The instrument found high acceptance reflected by only 1% of refusals. Patients with severe hypoglycemia were less satisfied with treatment than those without hypoglycemia (p<0.05). Patient-reported treatment effectiveness and convenience were lower in patients on human NPH insulin than in those on ultrashort analogues of insulin in combination with long operating basal insulin (p<0.05). Reliability of the tool appeared to be satisfactory: Chronbach's alpha coefficient = 0.91. As a whole, treatment satisfaction was high-rated by patients (84.4%); 1.4% of patients were extremely dissatisfied with ongoing insulin therapy. **CONCLUSIONS:** Thus, the PTSQ is a useful instrument to evaluate treatment satisfaction in the population of DM patients.

PDB109

EVALUATING THE RELATIONSHIP BETWEEN BODY MASS INDEX (BMI) AND HEALTH-RELATED QUALITY OF LIFE (HRQOL) OF PATIENTS WITH DIABETES

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OBJECTIVES: Only a few studies have reported how Body Mass Index (BMI) relates to the Health-Related Quality of Life (HRQoL) of diabetic patients in the US, and results of these studies are mixed. This study assessed the relationship between BMI and HRQoL using the US 2006-2010 Medical Expenditure Panel Survey (MEPS) database. **METHODS:** Eligible patients were ≥18 years, with a diabetes diagnosis (CCC-250) and on at least one oral antidiabetic medication. HRQoL was calculated using SF-12 scores: 1) Physical Component Summary [PCS-12] and 2) Mental Component Summary [MCS-12]. In the general population, these scores have a mean of 50 and a standard deviation of 10, with higher scores correlating with better HRQoL (physical and mental health respectively). The main independent variable was BMI, categorized as normal weight BMI: 18.0-24.9; overweight BMI: 25.0-29.9; obese BMI: 30.0-40.0; and morbidly obese BMI: >40.0 kg/m². Multivariate