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ABSTRACT • Open Archive Cited in Scopus: 0

PDB104 OPTIMIZATION OF INSULIN DOSE IN HOSPITALIZED PATIENTS WITH RECURRENT HYPOGLYCEMIA: REAL WORLD EXPERIENCE

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Objectives: Lack of medication persistence with antidiabetic drug therapy increases risk of diabetes complications and hospitalizations. This study assessed the impact of type of initial antidiabetic medications, demographic and clinical factors on persistence among adult patients with type 2 diabetes (T2D). ***Methods:*** We identified adults aged over 26 years with T2D who initiated treatment with oral antidiabetic therapy using Optum's De-identified Clinformatics® Data Mart database [2007-2018]. Patients were required to have continuous enrollment >=12 months before and >=12 months after the index prescription. The initial treatment regimen was defined as all medications used in the 6-week period following the first antidiabetic medication to capture adjustments that are common in real world practice. Persistence was measured using time to discontinuation [time to a gap in all therapy >=60 days]. The primary independent variable of interest was the medication class(es) used as initial therapy. Demographic and clinical characteristics included age, gender, health insurance, prior healthcare utilization, diagnostic mix and prior use of non-diabetic medications. The association between initial therapy and patients' characteristics and the likelihood of discontinuation was estimated using Cox proportional hazards models. ***Results:*** A total of 229,485 patients meeting study criteria were identified. Patients initiating treatment using sulfonylurea monotherapy, thiazolidinedione (TZD) monotherapy, or combination therapy were 5.2%, 28.7%, and 19.9% significantly less likely to discontinue initial therapy than patients initiating treatment on metformin monotherapy. Patients who were older, had lower prior medical costs, and higher prior drug costs were significantly less likely to discontinue their initial therapy. Patients who received anti-infectives, autonomic drugs, central nervous agents, muscle relaxants, and respiratory agents were significantly more likely to discontinue while patients who received cardiovascular drugs and electrolytic agents were significantly less likely to discontinue. ***Conclusions:*** Patients initiating sulfonylurea, TZD, or combination therapy were significantly less likely to discontinue their initial treatment regimen.

Diabetes/Endocrine/Metabolic Disorders - Real World Data & Information Systems

PDB103
HOSPITAL VISITS AND EXPENSES FOR DIABETIC PATIENTS: IMPLICATIONS FOR HIERARCHICAL DIAGNOSIS AND TREATMENT REFORM IN CHINA

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Objectives: Diabetes has been chosen as the pilot disease of hierarchical diagnosis and treatment reform to solve the problems of high patient flows to large hospitals. Under this background, we aim to analyze diabetes patients' hospital visits, medical expenses and factors influencing whether seeking health services in primary health institutions (PHI). ***Methods:*** Data were collected from health insurance bureau of 12 cities between 2015 and 2017, which included 9,118,518 outpatient visits and 622,739 inpatient visits. We analyzed the health services seeking characteristics including the visits and expenses from both personal and macro perspectives. Binary logistic regression was conducted to analyze the influencing factors of whether seeking health services in PHI. ***Results:*** From the expenses perspective, the OOP cost was lowest in PHI no matter outpatient or inpatient services. In the reimbursement rate (RR), it was highest in third class hospitals (60.51%) and PHI (73.93%) for outpatients and inpatients respectively. In the per capita visits, it was highest in third class hospitals (7.23 times) for outpatients and in second class hospitals (11.22 times) for inpatients. From macro perspective, almost 50% of total expenditures and health insurance were used in second class hospitals. The percentage of visits in the second hospital was rising, while it was decreasing in PHI between 2015 and 2017. Diabetes patients were statistically using higher class hospitals rather than PHI during the last three years (P<0.05). ***Conclusions:*** The OOP cost borne by diabetes patients was lowest in PHI, but the RR was also lower in PHI for outpatient services. The role of second class hospitals in hierarchical diagnosis and treatment was on the rise considering the high visits, medical and insurance costs. It is crucial to further use the lever of medical insurance to encourage more appropriate health care seeking behavior in PHI among patients with chronic diseases.

PDB104
OPTIMIZATION OF INSULIN DOSE IN HOSPITALIZED PATIENTS WITH RECURRENT HYPOGLYCEMIA: REAL WORLD EXPERIENCE

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Objectives: To develop a protocol in the management of hospitalized diabetic patients who experience recurrent hypoglycemia and to evaluate its impact during post interventional phase. ***Methods:*** In this prospective, interventional, non randomized study, diabetes management protocol was developed according to ADA guidelines. All Type II diabetic patients admitted in a Quaternary Care Centre in South India in the age group more than or equal to 18 years of either sex irrespective of comorbidities and medications were included in the study and those with gestational diabetes or hyperglycemia without a history of diabetes were excluded. Blood glucose measurement was done by point-of-care testing. The impact of protocol in reducing recurrent hypoglycemic events were analyzed and compared the data of pre intervention with post intervention using chi square method with p less than 0.05 to be significant ***Results:*** Pre intervention data showed 85 recurrent hypoglycemic events (15.8%) in 535 diabetic patients and in post intervention phase,57 (14.3%) events were observed in 400 patients. There was statistically significant reduction in the severity of hypoglycemia (23.5% vs 6.4%, P=0.035) , incidence in patients with normal diet (73.3% vs 43.2%, p=0.00) and an increase in referral to specialist(30.6% vs 43.2%, P=0.000) and regular monitoring (47.1% vs 94.4%, P=0.001) after implementing the protocol. ***Conclusions:*** Development and implementation of a diabetes management protocol, significantly reduces the incidence and severity of hypoglycemia. Adherence to protocol, regular monitoring, proper feed and early referral to specialists may help to reduce the recurrent hypoglycemic episodes.

PDB105
STUDY OF INTERRUPTED TIME SERIES TO DETERMINE THE EFFECT OF POLICY IN PATIENTS WITH T2DM USING SGLT2 IN TWO HEALTH MAINTENANCE ORGANIZATION IN COLOMBIA

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Objectives: Determine if the inclusion in the prescription behavior of the medications from the group of sodium-glucose cotransporter inhibitors type 2 (SGLT2) as monotherapy to the Health benefits plan (PBS) due to Resolution 5857 of 2018 of Colombia will change the prescription behavior ***Methods:*** A database with prescriptions of SGLT2 medications was taken from two Health Maintenance Organization (HMO) in Bogota, Colombia for the 2017 - 2019 period. We made an interrupted time series analysis for comparing the medicines of monotherapy group included in PBS against a control group (SGLT2/Metformin) not included in the policy. Statistical significance tests were applied in the monthly prescription rates to explain the behavior during the study period and a moving average auto-regression model was done. The database was provided by the integral pharmaceutical manager based on the dispensations generated for the HMO ***Results:*** From the database provided 8,762 patients with prescription medications from the SGLT2 group were identified. The average monthly prescription rate prior to the inclusion of SGLT2 monotherapy to PBS was 4.3 and 1.8 for the HMOs. After 32.2 and 10.3 respectively. No significant differences were found with the control group before the policy measure. However, the subsequent variation coefficient for SGLT2 was 4.64 (CI 4.15 - 5.11 95%) for HMO 1 and 1.10 (CI 0.98 - 1.22 95%) for HMO 2 versus the control group of 0.29 (CI 0.21 - 0.37 95%) for HMO1 and 0.14 (0.11 - 0.16 95%) for HMO 2. ***Conclusions:*** The results suggest that implementation of the policy has a positive impact on users, concerning the access of technologies that were not previously covered in PBS. However, historical behavior does not allow to estimate the future impact of the policy.

PDB106
ESTABLISHMENT OF HEMOGLOBIN A1C PREDICTION MODEL IN PATIENTS TYPE 2 DIABETES MELLITUSESTABLISHMENT OF HEMOGLOBIN A1C PREDICTION MODEL IN PATIENTS WITH TYPE 2 DIABETES MELLITUS

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Objectives: To study the risk probability of influencing blood glucose control in patients with type 2 diabetes mellitus (T2DM) in the real world and establish a Nomogram that can predict the patients' HbA1c control compliance, so as to improve the compliance rate of HbA1c control. ***Methods:*** From March 2018 to October 2019, a registration study was conducted in a third-grade grade a hospital, and all information of 720 T2DM patients was collected, including demographic characteristics, blood glucose status, hypoglycemic treatment information, exercise and diet status, medication compliance, etc. In March 2018 to June 2019, collecting 503 cases of training set is used to establish model, in June 2018 to October 2019 collected 217 cases of validation set is used to validate model, using logistic regression analysis for variable selection, and AIC method was used to construct the prediction model. Setting up the logistics of regression model with the AUC value evaluation model of degree of differentiation, the evaluation model to predict consistency, calibration diagram and draw Nomogram prediction model. All statistical analyses were performed using Empower Stats. ***Results:*** After screening, 9 independent variables were used to establish the prediction model. Two logistics regression prediction models suitable for different clinical conditions were established, in which the AUC value of model 1 in the validation group was 0.828.The AUC value of model 2 was 0.801 in the validation group. The calibration diagram shows that the predictive power of model 1 and model 2 is good. ***Conclusions:*** Combined with clinically available indicators, the two predictive models and Nomogram can make accurate predictions of glycated