diabetes metrics between pharmacies located in zip codes with high versus low Hispanic populations. Analyze prevalence, incidence, new patient age, therapy adherence, and medication changes, and infer disease progression. METHODS: Catalina Health™ receives a nationally representative sample of pharmacy data containing 40% of all US retail prescription volume and 130 million unique patient ID’s. The data is HIPAA compliant, updated daily, longitudinal, and not projected. Select age, gender, diagnosis (T2DM, IGT, IFG). LOGISTIC REGRESSION: quarter of 2007 in zip codes with low (<3%) or high (25%) Hispanic population based on US census data. Overall the high group averages 50% Hispanic. Use a 1 year look-back period, and follow the patient cohort for 4 years. Consider patient adherence when reporting of Days Covered (D/C) > 70%, Relative to the pharmacy’s zip code, and rural zip code designation. Patients in high Hispanic populations have 26% greater prevalence of diabetes (OR=1.26, p-value<0.0001), and 25% greater incidence (OR=1.25, p-value<0.0001). Additionally, they are 20% less likely to be adherent to therapy after 24 months (OR=0.80, p-value<0.0001), and 17% less likely after 48 months (OR=0.83, p-value<0.0005). CONCLUSIONS: High Hispanic populations have significantly higher incidence and prevalence of diabetes. They are also significantly less adherent to therapy. No differences are seen in age of new diabetes patients, inferred disease severity, or inferred disease progression. Culturally relevant diabetes education should be provided in US geographies with high Hispanic populations.

PDB84 LIBERALIZATION OF MEDICAL SAVINGS ACCOUNTS FOR OUTPATIENT TREATMENT AND HEALTH CARE UTILIZATION AMONG TYPE 2 DIABETES MELLITUS PATIENTS

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OBJECTIVES: To evaluate the cost of chronic diseases, Singapore allowed individuals to draw on their medical savings accounts to pay for protocol-driven outpatient treatment in October 2006. Previously, only inpatient care was covered. In this study, we evaluated the impact of the Medisave for Chronic Disease Management Program (CDMP) on hospitalization, and healthcare costs for Type 2 Diabetes Mellitus (T2DM) patients. METHODS: A retrospective longitudinal T2DM cohort study was conducted using the National Healthcare Group (NHG) diabetes registry (2006-2009). Singapore residents aged 21 years and above, with at least one diabetes-related consultation visit at a NHG primary care clinic in 2006 and 2007 were included. Enrollees and non-enrollees were propensity-score matched. Hospitalization risk, and total healthcare cost incurred in 2007, 2008 and 2009 were compared between groups. A difference-in-difference strategy and generalized estimating equation approach were used. We adjusted for baseline differences in socio-demographics, cardiovascular risk factors, diabetes-related complications, blood sugar control, and insulin use. RESULTS: There were 10,559 enrollees and 22,089 non-enrollees. Before matching, enrollees were younger; a larger share had hypertension, at least one diabetes-related complication, poor blood sugar control and used insulin. Relative to non-enrollees, the unadjusted hospitalization rates and health care cost of enrollees were significantly lower in the post-policy years. After adjusting for baseline differences between propensity-score matched sample of 881 enrollees and 881 unique non-enrollees, hospitalization risk for enrollees was significantly lower in 2007 (OR: 0.76, 95% CI: 0.63-0.89) and 2008 (OR: 0.76, 95% CI: 0.68-0.93). The difference in 2009 was statistically significant in 2009 (OR: 0.91, 95% CI: 0.79-1.05). While total healthcare cost was 13-14% lower for enrollees in 2007 and 2008, it was 3% (95% CI: -8% -16%) higher in 2009. CONCLUSIONS: By lowering out-of-pocket spending on T2DM outpatient treatment, the policy reduced hospitalization risk and total healthcare cost in the short-term but effects were not sustained.

PDB85 EFFECTIVENESS OF COMMUNITY-HOSPITAL-INTEGRATED DIABETES MANAGEMENT SYSTEM IN SHANGHAI MINHANG DISTRICT

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OBJECTIVES: The objective was to measure the effectiveness of the information system based community-hospital-integrated diabetes management system in Shanghai Minhag district, as well as to analyze the factors influencing the effectiveness of the system. METHODS: The study was based on the information system from the community-hospital-integrated diabetes management program established in Shanghai Minhag district since 2007. The effectiveness of community-hospital-integrated diabetes management system was evaluated. Logistic regression model was employed to analyze the influencing factors. RESULTS: There were 43,709 diabetes patients managed during the study period from October 2008 to September 2009, including Type1 diabetes (T1DM), Type2 diabetes (T2DM), impaired fasting glucose (IFG) patients and impaired glucose tolerance (IGT) patients. Among the patients who had at least two follow-up visits during the study period, 2.95% IGT patients and 2.34% of IFG patients turned into diagnosed diabetes status. Within one-year diabetes management, the percentage of patients with ideal blood sugar rose from 20.58% to 28.10% according to fasting plasma glucose (FPG) test results. The percentage of patients who monitored blood sugar regularly rose from 77.90% to 83.27%. The percentage of patients who did not exercise reduced from 46.24% to 45.31%. The percentage of patients who monitored diet completely according to doctor’s suggestion rose from 80.85% to 82.21%. Regression analysis showed that over 50 years old, taking heavy exercises, attending group follow-ups and door-to-door follow-ups (compared to outpatient follow-up visit) were the factors with positive impact on maintaining ideal blood sugar level. Over 7-year disease duration, overweight, and obesity had negative impact on blood sugar maintenance. Patients with at least one complication were both relatively low under the community-hospital-integrated diabetes management system in Shanghai Minhag district. The performances in blood sugar control and self-management have been improved during one-year study period. Effectiveness of group follow-up and door-to-door follow-up are superior to that of out-patient follow-up visit.

PDB86 EVALUATION OF PHARMACISTS TIME AND THERAPY MANAGEMENT FOR PATIENTS WITH TYPE 2 DIABETES SERVED BY A RURAL FREE CLINIC

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OBJECTIVES: To evaluate the time spent by pharmacists on therapy management of patients with type 2 diabetes mellitus (T2DM). METHODS: Data from 95 patients continuously enrolled in a newly established pharmacist service were analyzed. Patients were ≥18 years of age, qualified for free care based on income and lack of insurance, and had a diagnosis of DM. Under a collaborative agreement, pharmacists provided T2DM for clinic patients. The amount of time pharmacists spent with patients was tracked through T2DM CPT codes. Number and type of interventions were captured by drug class. Clinical impact was measured by changes from baseline hemoglobin A1c (HbA1c) levels, blood pressure, and lipid levels. Economic impact was calculated using published cost estimates for pharmacy achieving a ≥1% decrease in HbA1c levels. RESULTS: Coding information was captured for 481 patient encounters. Most visits (80.5%) were 30–45 minutes, and included education, counseling, and medication changes. There were 1,159 interventions documented, with 517 different current medications. Increasing a dose was the most common modification (50%), followed by adding an additional medication (28.4%). Insulin was the class most often adjusted or initiated (50% adjustments, 50% new starts), followed by antihypertensive agents (19.1% adjustments, 12.8% new starts). Compared to baseline, 35.7% of patients achieved HbA1c goal of ≤7% (P=0.001), or triglycerides ≤150mg/dl (P=0.0009). Approximately 71% of patients had a ≥1% decrease in HbA1c. Given an expected annual savings of 81,118/patient, this would equate to a total savings of ≈472,000/partnership study. One study showed pharmacists time spent on T2DM and showed positive clinical and economic outcomes in a rural free clinic.

PDB87 REAL-WORLD RETROSPECTIVE ANALYSIS OF DEMOGRAPHIC CHARACTERISTICS AND PREVALENCE OF DIABETES IN SHANGHAI MINHANG DISTRICT

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OBJECTIVES: The objective was to examine the demographic characteristics and prevalence of diabetes in Shanghai Minhag district. METHODS: The study was based on the information system from the community-hospital-integrated diabetes management program established since 2007. The program screened for diabetes and community health education, built up an information system of Electronic Health Record (EHR), and conducted various forms of follow-up visits and disease management with different time spans according to patients’ diabetes situation. RESULTS: There were 43,709 diabetes patients managed during the study period from October 2008 to September 2009. Type1 diabetes (T1DM), Type2 diabetes (T2DM), impaired glucose tolerance (IGT), and impaired fasting glucose (IFG) patients accounted for 0.97%, 92.11%, 5.08%, and 1.83%, respectively. The average diabetes duration was 7.27 ± 6.06 years and the mean age was 64.98 ± 7.77 years to 83.27%. The percentage of patients who did not exercise reduced from 25% to 17% and the percentage of patients whose blood sugar rose from 20.59% to 28.10% according to fasting plasma glucose (FPG) test results. The percentage of patients who monitored blood sugar regularly rose from 77.90% to 83.27%. The percentage of patients who did not exercise reduced from 46.24% to 45.31%. The percentage of patients who monitored diet completely according to doctor’s suggestion rose from 80.85% to 82.21%. Regression analysis showed that over 50 years old, taking heavy exercises, attending group follow-ups and door-to-door follow-ups (compared to outpatient follow-up visit) were the factors with positive impact on maintaining ideal blood sugar level. Over 7-year disease duration, overweight, and obesity had negative impact on blood sugar maintenance. Patients with at least one complication were both relatively low under the community-hospital-integrated diabetes management system in Shanghai Minhag district. The performances in blood sugar control and self-management have been improved during one-year study period. Effectiveness of group follow-up and door-to-door follow-up are superior to that of out-patient follow-up visit.