

Household SES was defined based on income, education and occupation. Neighborhood SES was defined by the percent of households living in poverty in the child's school district. Utilizing sampling weights and accounting for sample design, log-binomial regression models were fitted to estimate the association between neighborhood SES and obesity prevalence and to test whether this association varied by household SES. Predicted probabilities of overweight/obesity were estimated for each combination of household and neighborhood SES. **Results:** In adjusted models, low neighborhood SES was associated with increased prevalence of overweight/obesity (RR:1.84, 95%CI 1.48, 2.29). This association varied significantly by household SES (p-value of the interaction = 0.002). The multiplicative interaction indicated that having low neighborhood SES was associated with increased probability of overweight/obesity among children from high SES-households (Prevalence Ratio (PR)_{neighborhood SES}:1.87, 95%CI 1.51,2.30) but having low neighborhood SES did was not associated with additionally increased probability of obesity for children from low SES-household (PR_{neighborhood SES}:1.10, 95%CI 0.92,1.32). Children with either low SES-households or low neighborhood SES had the highest predicted probabilities of overweight/obesity, but the effects were not multiplicative. **Conclusions:** There is statistical evidence of interaction between the two dimensions of SES. However, lower SES in either of them is enough to place children at high risk of overweight or obesity. Higher levels in one dimension do not mitigate the association between low resources on the other dimension and childhood overweight/obesity.

PDB63 MULTIMORBIDITY AND FIVE-YEAR TREND IN DIABETES CARE MANAGEMENT (DCM) AMONG ADULTS WITH DIABETES

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Objectives: A high prevalence of multimorbidity (co-occurrence of more than one chronic condition, excluding diabetes) is reported in adults with diabetes. Multimorbidity can negatively affect DCM due to competing demands and prioritization of clinical management. The objective of this study is to examine the associations of multimorbidity to DCM and assess changes in DCM over a five-year period. **Methods:** We used a pooled cross-sectional design with two independent cross-sections (2011 and 2015) of the Medical Expenditure Panel Survey, representative of the noninstitutionalized population in the US. Adults (age ≥ 18 years) with professional diagnosed diabetes and who completed Diabetes Care Survey (DCS) (N = 4,291; N 2011 = 2,116; N 2015 = 2,175) were included. DCS is a self-administered paper-based survey that queried DCM practices in the last 12 months (HbA1c test, blood cholesterol test, feet checked for soreness and irritation, dilated-pupil eye-examination, and flu vaccination). Unadjusted, adjusted, and stratified logistic regressions were used to achieve the study objectives. Adjusted analyses controlled for biological, socio-economic, healthcare access, health status, and behavioral characteristics. All analyses accounted for the complex survey design. **Results:** 85.1% reported multimorbidity; adults with multimorbidity had poor physical, mental health, had higher rates of chronic pain, obesity, and physical inactivity. Adjusted analyses indicated that adults with multimorbidity were more likely to participate in all DCM recommendations except foot examination (example: HbA1c AOR = 1.68, 95% CI: 1.26, 2.24; Cholesterol level AOR = 1.71, 95% CI: 1.21, 2.41) compared to those without multimorbidity. Trend analysis showed no statistically significant differences in the DCM patterns for those with multimorbidity. **Conclusions:** Eight in 10 adults with diabetes reported multimorbidity. Those with multimorbidity were more likely to receive recommended DCM services, which can be explained by "the surveillance hypothesis" (i.e. more likely to access health services).



PDB64 THERAPEUTIC INERTIA IN THE TREATMENT OF PATIENTS WITH TYPE 2 DIABETES IN A CARDIOVASCULAR RISK MANAGEMENT COHORT FROM THE CARIBBEAN REGION OF COLOMBIA

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Objectives: To estimate the therapeutic inertia in the treatment of patients with type 2 diabetes (DMT2) in a cardiovascular risk management cohort from the Caribbean region of Colombia **Methods:** Retrospective cohort study. A total of 128,263 patients enrolled to a cardiovascular prevention program between June 2015 to December 2018 was considered as the population. Patients ≥ 18 years with antidiabetic drugs dispensed were included. Therapeutic inertia was defined as the failure to initiate or intensify antidiabetic therapy in a timely manner according to the clinical practice guideline (CPG) in Colombia. Date of diagnosis was defined as the first record of HbA1c $\geq 6.5\%$. Inertia at diagnosis was defined as no appropriated treatment in a 1-month period after date of diagnosis (monotherapy if HbA1c $< 8\%$ or combined therapy if HbA1c $\geq 8\%$). Inertia at follow-up was defined as no intensification of therapy between 3-6 months after diagnosis in patients with failure in the initial treatment (HbA1c $> 7\%$) **Results:** A total of 4,411 patients were identified with a mean (SD) HbA1c of $8.8\% \pm 12.9$ and 1,965(44.5%) had complicated DMT2 at



diagnosis. Of these, 1,090 (55.4%) were treated only with Metformin. Inertia at diagnosis was observed in 1,875 patients (42.5%; IC 95% 41.0 - 43.9). At follow-up, 1,340 (30.3%) patients had failure to the initial treatment (HbA1c: $7.8\% \pm 4.4$). Of these, 241 (17.9%) had no intensification in their pharmacological treatment. Inertia at follow-up was observed in 1,776 patients (40.2%; 95% CI 38.8 - 41.7). Prevalence of inertia at diagnosis and follow-up was 17.1% (95% CI 16.0 - 18.2%) and 82.7% (95% CI 81.6% - 83.8%) of patients had inertia either at diagnosis or follow-up. **Conclusions:** Therapeutic inertia was highly prevalent in our study. This should be considered in the evaluation of the effectiveness of current delivery of healthcare in this population

PDB65 EPIDEMIOLOGICAL DISEASE BURDEN OF NON-INSULIN-DEPENDENT DIABETES WITH COMPLICATIONS BASED ON ROUTINELY COLLECTED HEALTH INSURANCE CLAIMS DATA

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Objectives: The risk of developing complications increases with years lived with type-2 diabetes and age leading to further deterioration in quality of life. The aim of our study was to determine the epidemiological disease burden of non-insulin-dependent diabetes with complications. **Methods:** Data were derived from the financial database of the Hungarian National Health Insurance Fund Administration (NHIFA), for the year 2018. Data analysed included annual patient numbers, case numbers and prevalence of care utilisation per 100,000 population according to age groups and sex. The following health insurance treatment categories were included into our study: general practice care, home care, in- and outpatient care, medical imaging, laboratory diagnostics, drugs and medical aids. Patients with non-insulin-dependent diabetes with complications were identified with the following code of the International Classification of Diseases 10th revision: E11B0. **Results:** The highest national patient numbers were in general practice care: 97,017 men, 109,758 women, in total 206,775 patients, followed by use of pharmaceuticals (66,568 men, 72,841 women, in total 139,409 patients), and outpatient care (62,595 men, 67,946 women, in total 130,541 patients). Based on patient numbers in general practice care, prevalence in 100,000 among men was 2,076.7 patients, among women 2,149.3, in total 2,114.6 patients. Patients above age 55 accounted for 87.73%, those above 65 accounted for 64.69% and patients aged above 75 accounted for 32.46% of patient numbers including all forms of care. Regarding sex, in general practice care 46.9% were men, 53.1% were women, while in the use of pharmaceuticals 47.8% were men and 52.2% were women. **Conclusions:** Regarding patients' sex, there was no difference between men and women at the onset of the disease. Age was found to have a significant impact upon prevalence of diabetes with complications.



PDB66 DEFINING DIABETES MELLITUS USING ADMINISTRATIVE CLAIMS DATA

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Objectives: The Center for Biologics Evaluation and Research Biologics Effectiveness and Safety (BEST) Initiative sought to develop administrative claims-based definitions, referred to as *algorithms*, for populations of interest. These algorithms will be used in epidemiologic studies to evaluate biologics' safety. The objective of this study was to develop algorithms for diabetes mellitus (DM) as a study covariate, study population, and outcome. **Methods:** Authors conducted a literature review using PubMed. Findings were leveraged to develop initial algorithms that were mapped from the International Classification of Diseases, Ninth Revision, Clinical Modification to the Tenth Revision via forward-backward mapping using General Equivalence Mappings. Clinical subject matter experts reviewed draft algorithms. Each algorithm was characterized in the IBM® MarketScan® Research Databases via the IBM MarketScan Treatment Pathways tool or ad hoc programming. Descriptive statistics of patients identified by each algorithm were generated for 2014-2017. **Results:** The annual number of individuals who met the general (any) DM "Covariate" criteria ranged from 76.8 to 78.8 individuals/1,000 enrolled/year, with a higher proportion of males than females. Among a cohort of 71,039,547 patients, 109,342 (0.2%) and 1,141,553 (1.6%) met the "Population" criteria for type 1 DM (T1DM) and type II DM (T2DM), respectively. Males represented 52.6% and 51.1% of those with T1DM and T2DM, respectively. **Results:** from individual queries of codes in the "Outcome" iteration suggest that the number of individuals identified by T2DM codes was highest (3,500,744), followed by T1DM (354,579), other diabetes (270,337), and secondary diabetes (109,150). **Conclusions:** Forward-backward mapping was used to develop three new algorithms for DM. Though not validated, these algorithms were applied to generate statistics on the frequency of reporting for each iteration between 2014 and 2017. This effort should support subsequent epidemiologic studies on the safety and effectiveness of biologics among an at-risk population in the United States.

