OBJECTIVES: To assess the epidemiologic and economic burden of diabetes mellitus (DM) from a large population-based study. METHODS: Lombardy Region includes 9.9 million individuals. Its DM population was identified through a data warehouse (DENALI), which matches with a probabilistic linkage demographic, clinical and economic data of different Healthcare Administrative databases. All individuals who during the year 2000 had an hospital discharge with a ICD-9 CM code (250.XX) and/or on two consecutive prescriptions of drugs for diabetes (ATC code A189) were included. CONFIDENCE INTERVALS: 95%. RESULTS: A total of 312,223 eligible subjects were identified. The study population (51% male) according to diagnosis rate were used. Relative population and per 10,000 inhabitants according to national census bureau.

Diabetes prevalence, mortality and healthcare costs (hospitalizations, drugs and outpatient services) were estimated to be related to DM per year in SUS. This corresponds to 47 hospitalizations per 10,000 inhabitants annually in the whole population and can reach up to 31.8 per 10,000 when considering the group aged 75+. Annual hospitalization costs were estimated to be Br$1,167,386.00 or $611,197.90 per 10,000 inhabitants (and Br$398,058.61/10,000 for 75+ population). When considering the expansion of self-reported cases according to diagnosis rate, it was estimate 1,153,816 hospitalizations (70,8 per 10,000) and a total annual cost of Br$1,778,392 (Br$25,000, 0.001).

CONCLUSIONS: DM and its complications are associated with a relevant economic burden to SUS, especially when considering the elderly population.

(PDB99) UNDERUSED DIABETES MONITORING SERVICES AND OUT-OF-POCKET HEALTH CARE COSTS AMONG AMERICANS WITH DIABETES MELLITUS:Zhao Y1, Shi L2, Edgken B3

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OBJECTIVES: Out-of-pocket (OOP) cost as a component of insurance benefit design has been found to be a barrier to medication adherence or use of preventive care. This study aimed to assess the association of OOP share of total healthcare expenditure (THE) with diabetes monitoring in the United States. METHODS: This cross-sectional study analyzed the household component data from the 2009 Medical Expenditure Panel Survey (MEPS). According to the American Diabetes Association guidelines, proper monitoring was defined as at least two A1c tests along with one eye exam and annual foot exam. The OOP share of annual self-paid healthcare expenses out of THE insurance coverage was categorized into any private, public only, and uninsured. Logistic regression models were employed to control for social-demographics, health status, and treatments among subpopulations with different insurance coverage. Estimates were weighted according to the National Health Interview Survey (NHIS) weight. RESULTS: Among 5,445 (WT=7,780,750) individuals with diabetes, 66.07% received proper monitoring. Well-monitored individuals had a lower OOP share (20.10% vs. 26.69%) than those that did not receive services. Individuals with private insurance, public insurance, and no insurance reported different OOP share: 21.79%, 15.65%, and 53.30%, respectively. The logistic regression indicated that individuals being on OOP share were less likely to receive proper monitoring among individuals with private insurance and no insurance (odds ratio (OR)=0.99, 95% confidence interval [95% CI]=0.981-0.999, OR=0.98, 95%CI=0.975-0.987, respectively). OOP share was not a significant factor in public insurance beneficiaries. Other risk factors included older age, race/ethnic minorities, use of oral antihyperglycemic medications and insulin, and worse health status. CONCLUSIONS: Nearly one-third Americans with diabetes did not receive proper diabetes monitoring in 2009. The OOP share was inversely associated with receiving proper monitoring, suggesting the OOP share should be a focus in the benefit design for preventive care, particularly among the privately insured.

(PDB100) HEALTH CARE UTILIZATION AND COST PATTERNS AMONG DIABETES PATIENTS PRIOR TO INITIATION WITH SAXAGLIPTIN AND OTHER (NON-INSULIN) ANTIDIABETIC MEDICATIONS IN US HEALTH PLAN Williams G1, Thayer S2, Fan Y3, Pararasuman S1

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OBJECTIVES: Health care resource utilization and costs may be indicators of disease severity and overall health status. In observational studies, these factors could influence patients’ probability of receiving or benefitting from a particular treatment. We pre-computed index utilization and costs in diabetes patients initiating saxagliptin versus other non-insulin anti-diabetic regimens. METHODS: Individuals age >18 years and with evidence of T2DM (ICD-9-CM 250.00 or 250.02) were identified from a US health plan database. Patients with ≥1 pharmacy claim for saxagliptin (SAXA) between August 1, 2009 and December 31, 2010 were assigned to the SAXA cohort, and patients with ≥1 pharmacy claim (August 1, 2009-December 31, 2010) for other oral anti-diabetic medications or GLP-1 analogs were assigned to the Other cohort. Patients were required to be naive to SAXA or the Other regimen for 12 months prior to the index pharmacy claim. Utilization and costs were measured during a 12 month (pre-index) period before treatment initiation. RESULTS: Pre-index, the SAXA cohort (N=4763) had higher rates of all-cause ambulatory visits (14.7 vs. 13.9, p<0.001) and diabetes-related ambulatory visits (5.1 vs. 3.5, p<0.001). Merging different administrative databases matching with a probabilistic linkage demographic, clinical and economic data of different Healthcare Administrative databases. All individuals who during the year 2000 had an hospital discharge with a ICD-9 CM code (250.XX) and/or on two consecutive prescriptions of drugs for diabetes (ATC code A189) were included. CONFIDENCE INTERVALS: 95%. RESULTS: A total of 312,223 eligible subjects were identified. The study population (51% male) had a mean age of 66 (from 0.03 - 105.12 years) at the index date. Prevalence was 0.4% among subjects aged <45 years, 3.0% (46-55 years), 7.2% (56-65 years), 11.1% (66-75 years), 12.2% (76-85 years) and 26.1% (>85 years) of total population. Cost per patient/year were estimated, significantly (p<0.001) higher in men than women. Overall, 3,315/patient/year were spent on average: hospitalizations were the cost driver (54.2% of total cost). Drugs contributed to 31.5%, outpatient claims represented 14.5% of total costs. At 34% and VA respondents (VA-MS 34%, MH/SA 27%, VA-ADR 40%). HHA and SNF respondents reported a similar average maximum number of daily injections per patient (0.7 and 2.9, respectively). Whereas, almost half of the HHA respondents reported restrictions on the number of daily nurse-administered injections that can be delivered (14% also reported that their agencies restricted the types of insulin that nurses can administer), only 10% of the VA-ADR and none of the SNF respondents reported any restrictions on the number of injections (about 18% of VA (to the ADPs). Respondents reported restrictions on the type of insulin). CONCLUSIONS: Insulin treatment patterns and restrictions on T2D patients across varied settings, sometimes substantially. There is evidence that care, as well as care administered insulin injections, may be more restricted in home health-care than in institutional settings such as SNFs and VA facilities.

(PDB101) DIABETES MELLITUS IN BRAZILIAN PUBLIC HEALTH CARE SYSTEM (SUS) BETWEEN 2008-2010: Ros A3, Nita MP4, Comparini LB5, Rached R6, Rahul B3

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OBJECTIVES: To estimate the hospitalizations and its costs that can be attributed to diabetes mellitus (DM) among hospitalizations occurred in Brazilian Public Health-care System (SUS) between 2008-2010. METHODS: Number of hospitalization and associated costs for study period was obtained through a review of government administrative claims database (DATASUS). Hospitalizations with a first-listed diagnosis of diabetes were added to hospitalizations estimated to be due to diabetes by attributable risk methodology (ARM). ARM is based on the formula: RAPi/(RRi-1) / [P x (RRi-1) + P x (RRi-1) - 1], where RAPi is the fraction of population attributable risk for medical condition i and T2D prevalence rate of diabetes, P is the relative risk of medical condition i for people with diabetes compared to those without it (ADA, 2003). Diabetes prevalence was obtained from VIGITEL-2006, a nationwide random telephonic sampling (54,369 individuals). Self-reported data, a total of 866,727 hospitalizations were estimated to be related to DM per year in SUS. This corresponds to 47 hospitalizations per 10,000 inhabitants annually in the whole population and can reach up to 318 per 10,000 when considering the group aged 75+. Annual hospitalization costs were estimated to be Br$1,167,386.00 or $611,197.90 per 10,000 inhabitants (and Br$398,058.61/10,000 for 75+ population). When considering the expansion of self-reported cases according to diagnosis rate, it was estimate 1,153,816 hospitalizations (70.8 per 10,000) and a total annual cost of Br$1,778,392 (Br$25,000, 0.001).

CONCLUSIONS: DM and its complications are associated with a relevant economic burden to SUS, especially when considering the elderly population.