OBJECTIVES: Hypoglycaemia, a common side effect of insulin therapy, can act as a barrier to optimal diabetes management and has a negative impact on patients’ quality of life. However, there are few data on the frequency of hypoglycaemic events outside clinical trials. METHODS: Type-1 (T1) and insulin-treated type-2 (T2) patients (n=392), T2O, T2BB, and other regimen, T2O diabetes patients > 15 years old were recruited via existing panels in Belgium to complete four questionnaires at weekly intervals. In addition to demographics, data on the frequency of severe hypoglycaemic events (NSHE), hypoglycaemia awareness and reporting of hypoglycaemia to physicians with a 7-day recall period. NSHE was symptoms of hypoglycaemia, with or without blood glucose measurement (BGm), or low BGm without symptoms, which the patient could manage without assistance. RESULTS: In total, 412 patients (44% T1, 56% T2O) completed 1148 patient-weeks. Mean insulin-treatment duration was 11 years, mean HbA1c 7.7%. Mean NSHE per patient-week were 2.3 in T1 patients, 0.3 in T2OBT, 0.7 in T2BB and 0.8 in T2O patients. Nocturnal NSHE accounted for 19% of T1 events, and 13% (T2OBT), 23% (T2BB) and 27% (T2O) of T2 events. Impaired awareness or unawareness of hypoglycaemia was reported by 72% of T1, 67% of T2OBT, 66% of T2BB and 74% of T2O patients. Overall, 60% of T1 patients and 46% of T2 patients rarely/never discuss hypoglycaemia with their GP/specialist. In addition, 10% of T1 patients and 13% of T2 patients stated that GPs/specialists did not ask them about their hypoglycaemia in routine appointments. CONCLUSIONS: NSHE are a common occurrence amongst insulin-treated patients in Belgium. As many patients do not often report their hypoglycaemia to their GP/specialist, the real-world rates of hypoglycaemia occurrence amongst insulin-treated patients in Belgium. As many patients do not often report their hypoglycaemia to their GP/specialist, the real-world rates may be underestimated. Many patients also reported an impaired or not often report their hypoglycaemia to their GP/specialist. In addition, 10% of T1 patients and 13% of T2 patients rarely/never discuss hypoglycaemia with their GP/specialist. In addition, 10% of T1 patients and 13% of T2 patients stated that GPs/specialists did not ask them about their hypoglycaemia in routine appointments. CONCLUSIONS: NSHE are a common occurrence amongst insulin-treated patients in Belgium. As many patients do not often report their hypoglycaemia to their GP/specialist, the real-world rates of hypoglycaemia occurrence amongst insulin-treated patients in Belgium. As many patients do not often report their hypoglycaemia to their GP/specialist, the real-world rates may be underestimated. Many patients also reported an impaired or unawareness of hypoglycaemia, which may increase the risk of hypoglycaemic events.

PDB20
TRENDS IN PREVALENCE, AWARENESS, TREATMENT, AND CONTROL OF DIABETES IN THE UNITED STATES, 1999-2010

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OBJECTIVES: To examine progress in treating and controlling diabetes among U.S. adults aged 20 years and older from 1999-2010. METHODS: Cross-sectional study of National Health and Nutrition Examination Surveys (NHANES) 1999-2010, representing the civilian, noninstitutionalized population of the U.S. Diabetes was defined as fasting plasma glucose of at least 126mg/dl, Hba1c of at least 6.5%, self-reported use of antidiabetic medications or insulin, self-reported awareness of diabetes, or both. Glycemic control was defined as Hba1c less than 7%. All survey periods were age-adjusted to the year 2000 U.S. population. RESULTS: Prevalence of diabetes increased from 8.5% (95% CI, 7.1-9.9%) in 1999-2000 to 11.1% (95% CI, 9.8-12.4%) in 2009-2010 (P<0.001). Glycemic Control increased from 38.1% (95%CL, 24.5-51.7%) in 1999-2000 to 56.7% (95%CI, 48.1-65.2%) in 2009-2010 (P<0.001) and Hba1c level among diabetics decreased from 8.1% in 1999-2000 to 7.7% in 2009-2010 (P<0.001). Improved Glycemic Control reflected improvements in treatment (78.4%, 95%CI, 68.2-88.5%; vs. 86.7% (95%CI, 82.4-91.0%) overtime (P<0.05), and proportion of patients who were treated and achieved glycemic control (38.1%; 95%CI, 30.8-45.2%) in 1999-2000 to 74.0% (95%CI, 66.7-80.4%) between 1999-2000, 2010 across age, race, and sex groups, but was lower among individuals aged 20 to 39 years versus 60 years or older (P<0.01), in Black vs white individuals (P<0.001), and in females (P<0.001). T2 diabetes was controlled in an estimated 56.7% of all patients with diabetes in NHANES 1999-2010, with most of the improvement between 1999-2000 and 2003-2004. Glycemic control was significantly lower among younger than older adults, Black vs white, and Hispanic vs white individuals.

PDB21
DISTRIBUTION OF PEOPLE WITH DIABETES ACCORDING TO BODY MASS INDEX CATEGORIES AMONG ADULTS IN CHINA: BASED ON LITERATURE REVIEW

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OBJECTIVES: To analyse the relationship between prevalence of diabetes and Body Mass Index (BMI) and the distribution of people with diabetes among different BMI categories in Chinese adults. Methods: Systematic review was conducted in China National Knowledge Infrastructure (CNKI) from 2006 to 2012. “Diabetes” and “BMI” were used as keywords. Inclusion criteria were studies that reported diabetes prevalence according to BMI categories. Exclusion criteria were studies that population were not adults or sample sizes were less than 1000. Weighted, normal, overweight and obesity were defined using the recommended Chinese BMI cut-off points of <18.5, 18.5-24, 24-28, ≥28. Nonlinear relationship was used to analyse the relationship between prevalence of diabetes and BMI. Prevalence of diabetes were adjusted from existing data which was conducted according to WHO’s BMI classification criteria (<18.5, 18.5-25, 25-30, >30) to meet Chinese BMI criteria, based on two national studies of Chinese adults from Yangtze and Chinese Center For Disease Control And Prevention (CDC). Numbers of people with diabetes among BMI categories were calculated based on Chinese population. Sensitivity analysis was conducted. RESULTS: Twenty-three articles were selected, 8 of them met the eligibility criteria. Prevalence of diabetes increased with BMI and exponential regression model fit best. Yang et al. reported the prevalence of diabetes were 4.5%, 7.6%, 12.8%, 18.5% according to WHO’s definition of underweight, normal, overweight and obesity respectively. The prevalence of diabetes were estimated to be 11.9%, 17.8%, 25.9%, 35.1%, 45.0% after adjustment by China’s BMI. Therefore, Chinese adults with diabetes were estimated to be 4.35 million, 35.13 million, 35.70 million and 19.36 million respectively. Sensitivity analysis showed the results were robust. CONCLUSIONS: China adults with diabetes increase exponentially with BMI. Approximately 55 million adults with diabetes are overweight and obesity in China. Body weight control should be a priority in the prevention and management of diabetes.