risk of death in people with type 2 diabetes injecting insulin. Concomitant metformin was associated with a halving of the risk of death in people treated with insulin plus metformin (1.39 (95% CI 1.10 to 1.76) in the insulin plus metformin group versus 2.51 (95% CI 2.10 to 3.01) in the insulin monotherapy group). The corresponding adjusted hazard ratio (aHR) for insulin dose (relating to an 80 IU/kg/day) was modelled as a time-dependent, continuous covariate. Weight-standardised daily prescribed insulin dose among subjects with fasting plasma glucose ≥8 mmol/L (200 mg/dL) was modelled as a time-dependent, continuous covariate.

Objectives: To assess ten year cardiovascular disease (CVD) risk in newly diagnosed type 2 diabetes mellitus patients in a public tertiary care hospital in North India and to assess the agreement between the risk scores. METHODS: This is a prospective, observational, questionnaire based study. Patients aged 18-70 years of either sex were recruited and data were collected by oral interview and clinical records of patients after obtaining informed consent from patients. Ten year CVD risk was calculated for 324 patients using FRISC and UKPDS Risk Engine. FRISC uses participant age, sex, total cholesterol, high-density lipoprotein cholesterol, smoking status, blood pressure and presence or absence of diabetes. UKPDS Risk Engine, a diabetes specific algorithm, uses HbA1c and ethnicity of the patient in addition, for assessing ten year CVD risk. RESULTS: Out of 324 patients, 274 (84.9%) were females and 50% (164) were ≥60 years of age. The mean HbA1c in the study population was 7.7% (95% CI 7.3-8.1%). Only 47% of participants received recommended therapy. Routine place of care, anti-diabetic medication use and cohort year were significant predictors but race/ethnicity was borderline significant.

PD20
THE IMPACT OF CONCOMITANT METFORMIN ON MORTALITY AND OTHER SERIOUS OUTCOMES IN PEOPLE WITH TYPE 2 DIABETES TREATED WITH INSULIN
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Objectives: To determine whether there was an association between insulin dose and all-cause mortality and other serious events in people with type 2 diabetes treated with insulin plus metformin, and to determine if concomitant metformin with insulin reduced the risk of adverse outcome versus insulin monotherapy.
Methods: For this retrospective cohort study, subjects with type 2 diabetes who progressed to treatment with insulin monotherapy or insulin plus metformin from 2000 onwards were identified from the UK Clinical Practice Research Datalink (CPRD). The risk of all-cause mortality and a combined endpoint of any incident major cardiovascular event (MACE), cancer, or death was compared using the Cox proportional hazards model. Weight-standardised daily prescribed insulin dose (IU/kg/day) was modelled as a time-dependent, continuous covariate. RESULTS: 13,240 subjects were identified. There were 1,840 deaths and 1,751 combined events (excluding those with a history of large vessel disease or cancer). The corresponding adjusted hazard ratio (aHR) for insulin dose (relating to an 80 IU/kg/day) was estimated with high risk, 23.1% as moderate risk, 26.2 as low risk and 31.5% as very low risk. The corresponding figures using UKPDS risk engine are 7%, 13.9%, 10.8% and 67.6%, respectively. Inter-rater agreement assessed using weighted Kappa statistic showed a poor agreement between both scoring systems with a k value of 0.18 (95% CI 0.12-0.23). CONCLUSIONS: Framingham risk score overestimated the ten year CVD risk compared to UKPDS Risk Engine. As till date, CVD risk score development was based on studies which were limited to European and American subjects. The aim of this study was to assess the prevalence and risk factors of type 2 diabetes mellitus patients in North India. Methods: It is a prospective observational study conducted at endocrinology clinic of a public tertiary care hospital in north India. Patients of either gender with greater than 18 years of age and having the diagnosis of T2DM were recruited in the study and every patient had undergone fundus photography examination as per AACE/ACE 2009 guidelines recommended by the AACE/ACE 2009 guidelines based on the A1C level category (6.5%-7.5%, 7.6%-9% or >9%). Univariate and multivariate logistic regression analyses were conducted to determine the likelihood of being on recommended treatment across race/ethnicity controlling for demographic, clinical, and health care access characteristics and cohort year. Results: 528 individuals (248 MAs and 280 NHWs) met inclusion criteria. Mean age was 48(SD=12), 54% female, 85% had health insurance coverage, 94% prescription drug coverage and 94% had a routine place for health care. Forty-seven percent of individuals were on recommended treatment of which 40% were MAs and 60% were NHWs. Race/ethnicity, income, insurance, institutionalization, health care access, anti-diabetic medication use and cohort year were included in the multivariate analysis. The final model showed routine place of care, anti-diabetic medication, and cohort year as statistically significantly<0.05. It found that, with borderline statistical significance, NHWs were found to have had worse outcomes compared to MAs. Conclusions: Only 47% of participants received recommended therapy. Routine place of care, anti-diabetic medication use and cohort year were significant predictors but race/ethnicity was borderline significant.

PD21
STATUS OF RETINOPATHY IN TYPE 2 DIABETES MELLITUS PATIENTS OF NORTH INDIAN POPULATION
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Objectives: The aim of the study was to assess the prevalence and risk factors of retinopathy in type 2 diabetes mellitus patients of North India. Methods: It is a prospective observational study conducted at endocrinology clinic of a public tertiary care hospital in north India. Patients of either gender with greater than 18 years of age and having the diagnosis of T2DM were recruited in the study and every patient had undergone fundus photography examination as per AACE/ACE 2009 guidelines recommended by the AACE/ACE 2009 guidelines based on the A1C level category (6.5%-7.5%, 7.6%-9% or >9%). Univariate and multivariate logistic regression analyses were conducted to determine the likelihood of being on recommended treatment across race/ethnicity controlling for demographic, clinical, and health care access characteristics and cohort year. Results: 528 individuals (248 MAs and 280 NHWs) met inclusion criteria. Mean age was 48(SD=12), 54% female, 85% had health insurance coverage, 94% prescription drug coverage and 94% had a routine place for health care. Forty-seven percent of individuals were on recommended treatment of which 40% were MAs and 60% were NHWs. Race/ethnicity, income, insurance, institutionalization, health care access, anti-diabetic medication use and cohort year were included in the multivariate analysis. The final model showed routine place of care, anti-diabetic medication, and cohort year as statistically significantly<0.05. It found that, with borderline statistical significance, NHWs were found to have had worse outcomes compared to MAs. Conclusions: Only 47% of participants received recommended therapy. Routine place of care, anti-diabetic medication use and cohort year were significant predictors but race/ethnicity was borderline significant.

PD23
CHANGES IN PATIENT CHARACTERISTICS AND TREATMENT PATTERNS AMONG PATIENTS WITH TYPE 2 DIABETES IN THE UNITED STATES FROM 2006-2013
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Objectives: Type 2 diabetes continues to be a growing health concern, affecting an estimated 37 million of the world’s population. The objective of this analysis is to review epidemiologic and treatment pattern trends among US adults with T2D. Methods: This analysis was based on cross-sectional data from the National Health and Wellness Survey (NHWS) from 2006 (n=62,834) through 2013 (n=75,000). A stratified random sampling based on gender, age, and race/ethnicity was used to ensure representativeness to the adult population, based on the US Census Bureau. Descriptive analyses were conducted by each year to determine changes in major outcomes, including prevalence of diabetes and risk factors. Results: The overall prevalence of T2D fluctuated slightly from 2006 to 2013, ranging from 9.2% to 10.2% over time. While the mean age at diagnosis for T2D patients has been consistently in the late fifties, from 2006 to 2013 the mean age at diagnosis has decreased by 1.5 years overall (49.9 to 48.4 years). Though the majority of patients are non-Hispanic White, there has been a slow increase in the proportion of patients who are African-American or Hispanic (24.5% in 2005 vs 26.3% in 2013). The proportion of patients who are using an oral medication, insulin, or insulin-insulin injectable has steadily increased (80.4% in 2006 to 82.5% in 2013). Mean years from diagnosis to using insulin has steadily increased, as well as usage of newer classes of medications such as GLP-1 (1.9% in 2006 to 4.2% in 2013). Knowledge of HbA1c has increased steadily from 2006 to 2013. Conclusions: While some trends of US adult T2D patients have remained steady, since 2006 there has been slower diagnosis, more Non-White patients, increases in treatment, and greater HbA1c awareness.

PD24
PREVALENCE AND ECONOMIC BURDEN OF DIABETES IN AFRICA
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Objectives: Rising rates of diabetes in Africa have triggered increased demand for affordable medical solutions. This analysis sought to quantify the burden of diabetes in Africa, and identify regions where disease burden creates opportunity for pharmaceutical, medical device and other interventions. In 2013, the International Diabetes Federation was used to estimate the prevalence of diabetes mellitus and the mean national expenditure in 53 African countries. A systematic literature search was conducted to identify current disease management protocols and practice in Africa. Results: In 2013, there were an estimated 33.2 million