be more efficacious than other GLP-1 analogues in reducing HbA1c (mean change -3.1 ± 0.7%). Mean BMI was 32 ± 5.6 kg/m². 6.0% of patients reported injection site reactions -minors reactions among patients on multiple OADs. The incidence of hypoglycemic events was not different between groups.

**PDB10** INDIRECT COMPARISON TO EVALUATE THE EFFICACY AND SAFETY OF DIFEPITIDYL PEPTIDASE-4 INHIBITORS (DPP4I) AND SODIUM-GLUCOSE TRANSPORTER-2 INHIBITORS (SGLT2I) ADDED TO INSULIN THERAPY IN TYPE 2 DIABETES

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**OBJECTIVES:** To determine the efficacy and safety of SGLT2i compared to DPP4i in patients with type 2 diabetes mellitus (T2DM) in the absence of head-to-head evidence. METHODS: A systematic review of the literature was conducted in MEDLINE, EMBASE, LILACS, the Cochrane Central Register of Controlled Trials, and ClinicalTrials.gov to June 2015. Selected studies were randomized controlled trials (RCTs) that compare DPP4i plus insulin (DPP4I/INS) or SGLT2i plus insulin (SGLT2i/INS) with placebo plus insulin (PCB/INS), as a common comparator, in patients with type 2 diabetes. The primary outcome was the change in HbA1c from baseline to the end of the intervention period. The secondary outcomes included the change in fasting plasma glucose, the change in body weight, and the event of hypoglycemia. Covariate-adjusted indirect comparison using meta-regression analyses was performed. RESULTS: We included 15 eligible RCTs comprising 6,980 patients, of which 9 were DPP4i studies and 5 were SGLT2i studies. Covariate-adjusted analyses showed that SGLT2i achieved greater HbA1c reduction (WMD -0.9 ± 0.2%) compared to DPP4i/INS with greater weight reduction (WMD -2.38 kg, 95% CI -3.18 to -1.58 kg) than DPP4I/INS without increasing the risk of hypoglycemia (RR 1.19, 95% CI 0.78 to 1.86). CONCLUSIONS: The addition of SGLT2i on top of pre-existing insulin therapy exhibits a better glycemic control and greater weight reduction than DPP4i in patients with inadequately controlled T2DM.

**PDB11** MULTIVARIATE SAFETY AND EFFICACY ANALYSIS OF PRESCRIBING INFORMATION FOR NEXT GENERATION SGLT-2 INHIBITORS IN TYPE 2 DIABETES TREATMENT

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**OBJECTIVES:** To evaluate the efficacy and safety (DPP-4i and SGLT-2) inhibitors demonstrate favorable efficacy profiles that include glycemic control and reductions in body weight but are associated with adverse events including ketoacidosis, urinal tract infections, candida vulvovaginitis, and hypoglycemia. This comparative safety analysis was designed to compare the safety of these two classes of pharmacological treatments in T2D patients. METHODS: We performed a multivariate meta-analysis that was conducted using clinical endpoints from product information labels (n=3, canagliflozin, dapagliflozin, empagliflozin) of available SGLT2-2 inhibitors. Covariates with 24-26 weeks, placebo-controlled endpoint data were included. Efficacy endpoints included change from baseline in hemoglobin A1c (%) and body weight (kg). The safety endpoints included percentage of patients reporting adverse events, including urinary tract infections, female genital mycotic infections, infections genital herpes, urinary tract infections, and hypoglycemia. RESULTS: No compound outperformed competitors in all predefined outcome measures after 24-26 weeks of treatment. Canagliflozin 300 mg + metformin reported the greatest reduction in body weight (-4.07 kg) and the greatest reduction in HbA1c (-1.06%). However, canagliflozin 300 mg + metformin (4.6%) reported the greatest incidence of hypoglycemia events and the greatest incidence of urinary tract infections (11.4%) after 26 weeks. CONCLUSIONS: Despite the robust efficacy profiles presented in this analysis, physicians should consider the potential adverse events associated with each SGLT-2 inhibitor before deciding on a treatment regimen. Diabetes treatment regimens are often highly individualized, and healthcare providers must weigh the benefits of any treatment with its attendant risks. Of special concern among SGLT-2 inhibitors is the recent FDA warning of increased risk for diabetic ketoacidosis associated with these compounds.

**PDB12** EFFICACY AND SAFETY BARIATRIC SURGERY VS. CLINICAL TREATMENT IN CONTROL OF LEVELS GLYCEMIC AND REMISSION DIABETES MELLITUS TYPE II IN PATIENTS OVER 60 YEARS study. Zanghellini F1, Buehler AM2, Pereira Td2

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**OBJECTIVES:** To evaluate the results on the efficacy and safety of bariatric surgery vs. clinical treatment in control of levels glycemic and remission diabetes mellitus type II in patients over 60 years old. METHODS: A retrospective, cross-sectional, multicenter study was conducted in patients over 60 who underwent bariatric surgery in the department of bariatric surgery of the University Hospital of Fribourg between January 2010 and December 2014. All patients were included. RESULTS: Significant differences were observed in the control of levels glycemic and remission diabetes mellitus type II, with improvements in the surgery group. CONCLUSIONS: Bariatric surgery showed to be effective and safe in reducing glycated hemoglobin levels, fasting blood glucose levels as well as the augmenting the chances of remission of type II diabetes in obese patients. The study was limited by the relatively small number of studies available and was designed to identify areas that may require further investigation. Future research should focus on observed differences in patient characteristics, which may have affected the findings as such, the findings should be interpreted with some caution.

**PDB13** A CROSS-SECTIONAL STUDY ON INSULIN TREATMENTS AND GLYCEMIC CONTROL IN TYPE 2 DIABETES IN FRANCE, ITALY, GERMANY AND SPAIN

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**OBJECTIVES:** To evaluate the cross-sectional profile of patients with T2DM treated with insulin analogues in terms of glycemic control. The objectives of this study was to realize a snapshot of characteristics and glycemic control of patients with T2DM treated with insulin in five European countries. METHODS: T2DM patients, over 40 years old, treated by insulin (basal, basal-bolus or short-acting) in each country, were identified in hospital and general practice databases. Data on use of insulin were obtained from patients' charts. The main endpoints of this study were the specific characteristics of patients and the glycemic control of patients treated with insulin. RESULTS: Significant differences were observed among countries, these results show that, despite having been treated with insulin for at least 18 months, a sizeable proportion of patients exhibit a suboptimal glycemic control.
Prevalence and incidence rates of AD use were calculated for each calendar year and stratified by class therapy and age group. Sub-analyses by cardiovascular co-medications and treatment strategy and pharmacy cost analysis were performed. RESULTS: Overall, the prevalence rate decreases from 22.0%-17.5% 2010-2014 (p<0.001). Proportion of subjects treated with monotherapy increases over the study period (33.9%-38.6% 2010-2014). Insulin, increases the proportion of users of metformin (18.2%- 23.7% 2010-2014; p<0.001), while the proportion of users of sulfonylureas decreased (11.0%-7.2% 2010-2014; p<0.001). Overall about 90% of elderly diabetic patients are treated with drugs for cardiovascular prevention. The largest increase during the study period occurred in subjects aged 65-74 years (54.8%-62.1% 2010-2014; p<0.001). On the other hand the trend was downward both in the 75-84 and in ≥85 age groups (37.3%- 32.9% 2010-2014; 7.6%-5.0% 2010-2014 respectively). The per/patient/yearly drug costs was 29.34% 2010-2014; 77.1% 2014; 63.0% 2014. The results confirm the negative trends observed in other population in the use of AD drugs among elderly diabetic patients. Specific trend in drug utilization patterns showed a downward trend towards treatment in older adults. Safety concerns in the elderly regarding polypharmacy such as presence of multi-morbidity and hypoglycemic episodes could also have contributed to such a trend.

PDB15 CARDIOVASCULAR OUTCOMES OF ANTIDIABETIC THERAPY - RESULTS OF A LITERATURE SEARCH
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OBJECTIVES: Diabetes mellitus type 2 (T2DM) is associated with an elevated risk of macrovascular and microvascular complications. For this reason the cause of morbidity and mortality in the T2DM population. In 2008, the Food and Drug Administration (FDA) has provided guidance for industry on how to demonstrate that new antidiabetes drugs for T2DM are not associated with an unacceptable increase in cardiovascular disease (CVD) risk compared to traditional therapies. The objective of this study is to analyze the cardiovascular risk associated with type 2 diabetes mellitus (T2DM) treatment shown in literature. METHODS: A total of 48,479, 67,751, 348,572 and 23,723,285 patients from the Netherlands (NL), Italy (IT), Spain (ES) and UK, respectively, were included in the current analysis.Methods were used for the treatment duration of the outcome studies, a targeted literature research was conducted in PubMed in 2015, using the search terms Diabetes Mellitus, Type 2/ drug therapy/ epidemiology/ cardiovascular outcomes. Studies included were categorized regarding study design, patient-inclusion criteria, endpoints, included treatment groups and the follow-up period. The results of the outcome studies in T2DM with cardiovascular condition that have reported results so far could demonstrate a significant risk reduction for macrovascular events in the primary endpoint. CONCLUSIONS: Cardiovascular outcome studies of new antidiabetes are important to analyze safety of therapies as well as long-term conditions and unmet need in T2DM. Especially the results of the ongoing studies are bound to fill the gap stressed by marketing-authorization and reimbursement agencies.

PDB17 FACTORS ASSOCIATED WITH T2DM TREATMENT CHOICE ACROSS EUROPE
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OBJECTIVES: To explore demographic and clinical factors associated with choice of type 2 diabetes mellitus (T2DM) treatment at time of treatment intensification. METHODS: For T2DM patients from the Netherlands (NL), Italy (IT), Spain (ES) and UK, data from four large observational datasets, N unexpectedly high risk for drug choices were used for the treatment outcomes. Of the outcome studies in T2DM with cardiovascular condition that have reported results so far could demonstrate a significant risk reduction for macrovascular events in the primary endpoint. CONCLUSIONS: Cardiovascular outcome studies of new antidiabetes are important to analyze safety of therapies as well as long-term conditions and unmet need in T2DM. Especially the results of the ongoing studies are bound to fill the gap stressed by marketing-authorization and reimbursement agencies.

PDB18 TRENDS IN PREVALENCE AND INCIDENCE RATES OF TYPE 2 DIABETES MELLITUS IN MEDICARE POPULATION
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OBJECTIVES: The present review found very limited evidence regarding the association between socioeconomic status and diabetes complications. The available evidence suggest that diabetic peripheral neuropathy and eye related complications are high in low SES patients, suggesting that low SES patients with low SES to prevent long term complications in Indian T2DM patients. More observational studies are required to be conducted in the future in this context.

PDB19 IMPACT OF SOCIOECONOMIC STATUS ON THE PREVALENCE OF COMPLICATIONS IN TYPE 2 DIABETES IN INDIAN POPULATION: A SYSTEMATIC REVIEW
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OBJECTIVES: India as said to be the diabetic capital of the world. This systematic review was aimed to determine the association between socioeconomic status and complications associated with Type 2 Diabetes Mellitus. METHODS: Literature search was conducted in databases such as PubMed, EMBASE and the Cochrane library without any restrictions. References of the included studies were screened for eligibility. Observational studies focusing on association between SES and T2DM patients. The quality of the studies was assessed using the Newcastle-Ottawa scale. Two authors independently performed the study selection, data extraction and the quality assessment process. A third author resolved the study. RESULTS: A total of 440 studies were retrieved by the database search, of which only 4 studies were included in the final review. One study reported that T2DM population with SES groups showed the same annual prevalence rate of the total T2DM in the two groups. A second observational study showed that the prevalence rate decreases from 22.0% to 17.5% in 2013, whereas the overall annual incidence rate decreased from 4.6% in 2008 to 2.79% in 2013. T2DM prevalence and incidence rates were higher among women, every year. Patients aged 80-84 had the highest prevalence rate in 2008 (30.40%) and 2011 (36.16%), whereas in 2012 (37.46%) and 2013 (38.57%), patients aged 85-89 had the highest prevalence rates. From 2008 to 2013, there was a steady growth in the prevalence rates among patients older than 75 in 2008, the highest T2DM incidence was observed in the Virgin Islands (9,885 per 100,000 person-years). In 2013, the highest incidence of T2DM was in New Jersey (6,143 per 100,000 person-years). CONCLUSIONS: From 2008 to 2013, T2DM prevalence increased and incidence were men. More likely to be diagnosed with T2DM compared to women.

PDB20 THE ASSOCIATION OF WAIST CIRCUMFERENCE WITH GLYCAEMIC CONTROL IN DIABETIC PATIENTS IN AN ASIAN POPULATION
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OBJECTIVES: The aim of the study was to explore the association of waist circumference with glycaemic control in Malaysian patients with type 2 diabetes. METHODS: We utilised data of type 2 diabetes patients followed up in Malaysian public sector primary care clinics contained in the National Diabetes Registry in the year 2012. The variable of interest was glycaemic control, defined as HbA1c< 6.5%. Multiple logistic regression was used to explore the association between glycaemic control and waist circumference, which was adjusted for age, sex, duration of diabetes, systolic blood pressure, total cholesterol, use of insulin and other medications. RESULTS: A total of 98,825 patients with type 2 diabetes were included in the study. The mean age of patients was 59.9 years (SD: 10.9) and 38.9% were males. The mean duration of diabetes was 6.8 years (SD: 5.0) and 76% of patients had HbA1c ≥ 6.5%. The mean waist circumference was 94.0 cm (SD: 11.8) for men and 90.7 cm (SD: 11.8) for female; while 78.3% of the patients had waist circumference above the cut-off (≥ 90 cm for men and ≥ 80 cm for women). Larger waist circumference was found to be significantly associated with HbA1c ≥ 6.5% (adj. OR 1.009; p<0.001; 95% confidence interval [CI] 1.007–1.011) after adjusting for confounding factors. CONCLUSIONS: Analysis showed that glycaemic control was poorer in patients with higher waist circumference than in patients with lower waist circumference.

PDB21 FACTORS ASSOCIATED WITH THE RISK OF DIABETES-RELATED EVENTS: A RETROSPECTIVE ANALYSIS
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