Objective: To determine the influence of number and type of antidiabetes medications on adherence and glycemia of ambulatory type 2 diabetes patients in southwestern Nigeria. Methods: A cross-sectional study using pre-tested structured questionnaire among 176 consented patients recruited from the endocrinology clinics of two teaching hospitals between November, 2010 and January, 2011; and a retrospective review of case notes of the cohort for details of prescribed medications and blood glucose values. Descriptive statistics were used to summarize the data. Tests of proportions were evaluated using Chi-square or Fisher’s exact test as appropriate. The differences in mean fasting blood glucose (FBG) between and among categorical variables were compared using student t-test and ANOVA respectively, with p<0.05 considered significant. Results: Mean number of prescribed medications was 4.6±1.4. Almost two thirds 103 (60.6%) were placed on >4 medications. Adherence was better among patients on >4 medications compared to those on 4 medications (p=0.05). However, patients on >4 medications were mostly older adults (>60 years of age), and they were in the majority (66.7%) who had tertiary education compared to 33.3% of those on 4 medications who had tertiary education (p=0.02). Adherence rates to antidiabetes medications were in the ranking of oral antidiabetes medications (OAM) alone (50.0%) > insulin plus OAM (44.0%) > insulin alone (41.7%) with no significant difference (p=0.77). There was a significant difference in mean FBG among patients on >4 medications (172.1 ±61.1mg/dL) versus (198.8 ±83.8mg/dL) among those on 4 medications (p=0.02). Conclusion: Prescribing more than four medications is linked to improved adherence and glycemic outcome. However, age and educational background of patients are important factors that need to be considered when prescribing multiple medications for type 2 diabetes.

Keywords
Medication Adherence, Blood Glucose, Polypharmacy, Health Knowledge, Attitudes, Practice, Diabetes Mellitus, Type 2, Nigeria.