

Concurrent Session A2-1

**Differences in Medication Non-Adherence and Glycemic Control  
Among Black and White Adult HMO Patients with Diabetes**

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**Background:** Diabetes mellitus is a leading contributor to health disparities in the U.S. Medication non-adherence may contribute to observed disparities in glycemic control. The purpose of this study was to determine whether racial differences in medication adherence explain disparities in glycemic control in an HMO.

**Methods:** We used a longitudinal repeated measures design to model the relationship between medication adherence, assessed using prescribing and pharmacy claims data, and adjusted HbA1c levels over time. Our setting was a multi-specialty group practice serving people in and around Boston, Massachusetts. We identified 2,250 (black=599, white=1651) adult diabetes patients between 01/01/93 and 12/31/01 who were newly treated on oral hypoglycemic. Our primary aim was to estimate average HbA1c (log transformed) over a minimum 12 months following initiation of hypoglycemic therapy, where the key covariates of interest were black race, oral medication adherence in the previous quarter, and interactions between these variables.

**Results:** At initiation of hypoglycemic therapy, black patients had higher HbA1c values compared to whites (9.8 vs. 8.9;  $p < 0.05$ ). In random effects models, the effect of black race on adjusted HbA1c was only slightly attenuated when medication adherence was accounted for in the model and race remained a large and statistically significant predictor of HbA1c. Even among the subset of patients with good adherence (i.e., =80%), black race was associated with higher average HbA1c post adjustment.

**Conclusions:** Black patients had higher HbA1c levels at initiation of treatment and remained at higher risk of poor HbA1c control over time. Higher risk of poor control even among blacks with good medication adherence suggests that therapeutic dosing may be inadequate in this population. Our findings indicate that early, aggressive treatment of hyperglycemia and increased self-management support may be required to reduce racial disparities in glycemic control in this setting.