

Concurrent Session A2–2

Racial/ethnic Differences in Hypertension Medication Adherence and Blood Pressure Control

Vicki Fung, BA, Kaiser Permanente, Division of Research;
Jie Huang, PhD, Kaiser Permanente, Division of Research;
Richard Brand, PhD, University of California, San Francisco;
Bruce Fireman, MA, Kaiser Permanente, Division of Research;
Joseph P. Newhouse, PhD, Harvard University;
Joseph V. Selby, MD, MPH, Kaiser Permanente, Division of Research;
John Hsu, MD, MBA, MSCE, Kaiser Permanente, Division of Research

Objective: We examined racial/ethnic differences in hypertension (HTN) treatment adherence and blood pressure control.

Methods: The study included 84,929 continuously enrolled integrated delivery system members, who were in the HTN disease registry, and dispensed at least one HTN prescription in 2002. We defined elevated systolic blood pressure as SBP>140 mmHg, and HTN drug use by the proportion of days covered (PDC) for a given drug regimen (single, two-, three-, or four-drug regimen) in the 90-days prior to the last SBP measurement in 2003. Adherence to the regimen was defined as PDC>80%. We had race/ethnicity information for 92% of subjects: 9.2% were Asian, 5.1% Black, 7.3% Hispanic, and 69.2% White. We used multivariate regression to examine associations between race/ethnicity, adherence, and SBP, and adjusted for age, gender, neighborhood socioeconomic status, comorbidity (DxCG), chronic conditions, drug cost-sharing, medical center, number of drugs in the HTN regimen, and month of the SBP measurement.

Results: In unadjusted comparisons, Black subjects were most likely to have multi-drug HTN regimens (60.2%) and elevated SBP (41.0%), compared with Asian, Hispanic, and White subjects. In adjusted analyses, subjects of Asian, Black and Hispanic race/ethnicity were significantly less likely to be adherent to their HTN treatment compared with White subjects (e.g., Black subjects: OR=0.78 [95%CI: 0.72-0.85]). Black subjects had higher odds of having elevated SBP (OR=1.24 [1.15-1.33]) compared with White subjects; Asians had lower odds (OR=0.87 [0.82-0.92]), and Hispanics did not significantly differ (OR=1.06 [1.00-1.12]). Greater HTN drug use (higher PDC) was significantly associated with lower odds of having elevated SBP; however, after adjusting for drug use, racial/ethnic differences in SBP control persisted. These differences also persisted in subgroup analyses of subjects with high levels of HTN drug use (i.e., PDC=100%).

Conclusions: Patients of non-white race/ethnicity had lower levels of adherence to HTN drug treatment, and Black patients had higher levels of elevated SBP, compared with White patients, on average. While drug adherence was strongly associated with SBP control, Black patients had poor SBP control even after accounting for treatment adherence. Additional work is needed to assess potential differences in HTN treatment, such as treatment intensification and blood pressure monitoring.