

## **Does Limited Health Literacy Explain Racial/Ethnic Disparities in Diabetes Control?**

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Health literacy refers to the skills, beyond basic reading ability, required to seek appropriate care and comprehend health-related instructions. Low health literacy differentially affects racial/ethnic minority groups. No study to date has explored health literacy as a mediator of the relationship between race/ethnicity and diabetes control. We investigated the relationships between health literacy, race/ethnicity and diabetes control using the population-based random-sample Boston Area Community Health (BACH) Pre-Diabetes study.

Participants were administered the Test of Functional Health Literacy in Adults (sTOFHLA). Following established convention, we categorized participants as having inadequate (0-16), marginal (17-22), or adequate (23-36) health literacy. The study population consisted of 535 community-dwelling adults with diabetes receiving prescriptions for insulin or oral hypoglycemic agents. The primary outcome was HbA<sub>1c</sub>. Poor diabetes control was defined as HbA<sub>1c</sub>  $\geq$  7.0%.

Relative to whites, HbA<sub>1c</sub> was .26 higher among blacks and Hispanics after adjustment for covariates. Although racial/ethnic minorities were more likely to have inadequate or marginal health literacy (blacks: 45.3%, Hispanics: 69.2%) than whites (whites: 20.7%,  $p < .001$ ), health literacy does not appear to mediate the effect of race/ethnicity on diabetes control. Instead, the relationship between race/ethnicity and diabetes control appears to be modified by health literacy ( $p=.01$ ). Further analyses reveal that differential prescription of diabetes medications may account for some of these differences.

These results indicate large racial/ethnic disparities in health literacy as well as in diabetes control. Initial results demonstrated an effect modification relationship between race/ethnicity, health literacy and diabetes control rather than a mediating effect. The prescription/adherence patterns of diabetes medications may play an important role in this relationship.

Keywords: health literacy, disparities