Using quantile regression to assess disparities in medication adherence

Juarez DT, Tan C, Davis JW, Mau MM

Author information: 1College of Pharmacy, University of Hawaii, Hilo, HI, USA. dtjuarez@hawaii.edu

Abstract

OBJECTIVE:

To examine racial/ethnic disparities in medication adherence between Asian and Pacific Islander Americans and Whites.

METHODS:

This retrospective data analysis included diabetes patients enrolled in a health plan in Hawaii (N = 43,445). For anti-diabetic, lipid-lowering, and anti-hypertensive medications, quantile regression was estimated at 25(th), 50(th), and 75(th) quantiles to examine the association with race and ethnicity, controlling for other patient characteristics.

RESULTS:

Consistently, Filipinos, Native Hawaiians, and other Pacific Islanders were significantly less adherent than Whites. The greatest disparities were found for other Pacific Islanders using lipid-lowering medications, with adjusted differences in medication adherence, with reductions relative to Whites of as much as 19% for lipid-lowering medications for the 25(th) quantile of adherence.

CONCLUSION:

Whereas the large sample size undoubtedly contributed to the statistical significance, the large magnitude of the disparities, particularly for Filipinos, Native Hawaiians, and other Pacific Islanders, which suggests that these are meaningful differences that need to be addressed. The largest disparities were found at the lowest quantile suggests that they may be occurring among the most vulnerable populations with potentially poor access to care.

PMCID: PMC3777694 [Available on 2015/1/1]

PMID: 24034680 [PubMed - in process]