Racial health disparities and the role of differential reporting error

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Disparities in health across racial groups has been an important and complex issue. The share of smokers in the U.S. has been declining overall but Non-Hispanic Black males reported to have the highest share of current smokers. Obesity and hypertension are more prevalent among Non-Hispanic Black adults than other racial groups. Differences in access to care, insurance coverage, and adherence treatment to treatment can contribute towards health disparities.

Many of these indicators and prevalence trends are based on self-reports. Self-reported responses provide useful information but also can be susceptible to social desirability bias, especially for behaviors and conditions that tend to be stigmatized. For health conditions that are asymptomatic and need medical attention, individuals may not know they have the condition without adequate access to health care regularly.

This paper attempts to better understand whether reporting error in self-reported responses of health varies by racial groups and whether this explains racial disparities in health behaviors and outcomes using the National Health and Nutrition Examination Survey (1999-2016) data. This data set contains both objective and subjective measures of various health conditions and behaviors (i.e. weight, height, smoking, blood pressure, cholesterol, and diabetes). Nearly 96% of the respondents participated in both the interview and medical examination components of the survey.

Results show that Non-Hispanic Blacks are less likely to accurately report their current smoking status, diabetes, weight and height than Non-Hispanic Whites. Non-Hispanic Blacks are more likely to false negatively report smoking (report that they don't smoke but cotinine results show otherwise) and high blood pressure than Non-Hispanic Whites. On the other hand, Non-Hispanic Blacks more likely to false positively report diabetes and obesity compared to Non-Hispanic Whites. Using self-reports lead to an underestimation of the measured disparities in health particularly for smoking. This pattern holds true even when controlling for annual family income or access to health care and insurance coverage.