

asked and answered before we can hope to discern the causes of unfair disparities, which threaten our patients' health. This article models a well-designed study for doing just that.

### Competing Interests

The author declares no competing interests.

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*(Accepted for publication December 4, 2013.)*

### In Reply:

We appreciate the recent letter by Dr. Wilson and would like to expand upon some of the insightful points he raised. The goal of our study<sup>1</sup> was to determine whether racial differences in body mass index (BMI) could account for the differences in operative time which we had observed across black and white patients in a previous analysis in a different population of Medicare patients undergoing surgery.<sup>2</sup> In the current study, we carefully assessed both operative time and BMI through new chart reviews of 15,914 patients. In so doing, we observed two main findings. In the Medicare population over 65 yr of age, BMI is similar between whites and blacks, and differences that did occur in BMI did not account for the significant difference in operative time observed by race.

It is important to remember that for a confounder to affect a study on race, it must both be associated with race and influence outcome. Obesity was a plausible confounder. It may have been associated with race and it is associated with longer procedure time for some procedures. We found a weak association of BMI with race which we removed by matching. After matching closely on principal procedure, secondary procedure group, the individual hospital where the treatment was performed, a mortality risk score, a propensity score to be black, an expected time score based on principal and secondary procedure, 29 patient comorbidities, including

congestive heart failure, arrhythmia, past myocardial infarction, hypertension, diabetes, renal disease, chronic obstructive pulmonary disease, asthma, stroke, and dementia, age, sex, and BMI, the study continued to find a significant difference in the length of the operative procedure. This difference occurred almost completely between the “cut-to-close” interval, not between the “induction-to-cut” or “close-to-recovery room” intervals. None of the three articles cited by Dr. Wilson accounted for BMI differences when examining why outcomes differed between black and white patients.

We did not adjust for socioeconomic status variables such as neighborhood level poverty or education, or the Dual-Eligibility status of Medicare recipients. Our belief is that a black–white disparity that can be explained away by income or socioeconomic variables is still a black–white disparity in health care. Such a disparity remains a source of concern, even if it occurs also among poor whites. A disparity in operative time should not exist if adequate medical covariates have been accounted for. The strength of studying operative procedure length is that, for biologically similar patients, operative time is an outcome determined purely by the healthcare system. A long operative time cannot be ascribed to a failure on the part of the patient.

We agree with Dr. Wilson that further analyses examining socioeconomic status may be useful, especially in helping determine what processes occur inside the hospital that may lead to this observed racial disparity. An understanding of the process that produces a disparity can be helpful when trying to eliminate it. Nonetheless, if a racial disparity in health care disappears when adjustments are made for income, it still is a racial disparity.

### Competing Interests

The authors declare no competing interests.

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*(Accepted for publication December 4, 2013.)*