Comments on: Amitabh Chandra, Tyler Hoppenfeld and Jonathan Skinner, "Are Black-White Mortality Rates Converging? Acute Myocardial Infarction in the U.S., 1993-2010"

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This paper is a good example of the strengths of this research program in the economics of aging. It deals with a problem of first-order importance for the health and well-being of the older population. It utilizes data that are both appropriate and all-but-definitive for the question. The methods are careful but not overwrought, letting the data speak for themselves. The conclusion is well-supported by the evidence, and points clearly to the next steps to be taken in the research agenda.

Racial disparities in health and aging are substantial. According to NCHS life tables for 2010, life expectancy at age 50 is 3.3 years longer for white men than African-Americans (12% longer) , and 2.2 years longer for white women than for black women (7% longer). When we factor in morbidity, as in a measure of healthy life expectancy, the differences are even greater. Combining morbidity data from HRS 2010 with the NCHS life tables, healthy life expectancy at age 50 is 4.1 years longer for white men than African-Americans (24%) and 5.1 years longer for white women than for black women (31%).

Racial disparities in health have been a major public policy concern for many years. "Healthy People" expresses US policy goals by decade. The goal for the 1990s was to reduce health disparities by 2000. The goal in the first decade of the 21st century was to eliminate health disparities by 2010. Having largely failed to meet either goal, the goals for this decade are to achieve health equity, eliminate disparities, and improve the health of all groups. Understanding why such oft-stated policy goals are so resistant to progress is an important topic for scientific research.

This paper focuses on outcomes of acute myocardial infarction (AMI), i.e., heart attacks. This is clearly an important category of health event both for its frequency in the population and its impact on health and mortality. They begin with a good theoretical framework delineating the possible sources of race differences in AMI outcomes into three categories: 1) different risk (individual characteristics that relate to outcomes), 2) discrimination within hospitals (differential results by race within hospitals, conditional on individual characteristics), and 3) segregated access (correlation between racial composition of patient pool and outcomes).

They use the universe of Medicare hospital records for 1993-2010, limited to patients who were on a fee-for-service basis (necessary to have good data records in the Medicare claims) and to hospitals who treated at least 10 such cases in a year (it is not clear what fraction of all AMI cases are excluded by this). With over four million observations, this is clearly an impressive data source for the problem, and largely free of sample selection issues.

Risk adjustment for individual risk is a pretty familiar concept in health economics as in the medical care business. It is often not very intellectually satisfying, and the authors do not provide much detail on their modeling choice, which relies mainly on detail of the location and severity of the heart damage from the infarct. As they note, there are other characteristics (e.g., smoking) that would be relevant bur cannot be included. Overall, observable risk did not vary much across hospitals arrayed from low to high percentage of black patients. It seems then that the adjustments are adequate to the task, which is to demonstrate that a) individual differences in ex ante risk are small relative to differences in outcomes, and b) they can be adequately removed.

The paper thus focuses mainly on the question of whether worse outcomes for blacks occur mainly within hospitals, or between hospitals. The evidence is very clear that most of the racial gap arises between hospitals. Whites and blacks have very similar outcomes within hospitals. The overall gap is due to the fact that blacks go to hospitals that have on average worse outcomes for patients of all races.

One minor concern with the use of Medicare records for racial disparities is the quality of the race information on the Medicare files. Race is imported into CMS records from Social Security records, which capture race as a self-report at the time of application or at other encounter events such as claiming benefits. The authors are aware of the issue, and refer to work based on MCBS that suggests it's good enough. Using HRS linked to Medicare it is possible to examine not only the concordance of self-report but also concordance with genetic data. Black race is highly accurate in the Medicare claims—very few HRS self-reported or genetically-identifiable blacks are recorded as anything other than black in Medicare data, and vice versa. The problem is with identifying whites as distinct from other races and in particular Hispanic ethnicity.   Roughly six to eight percent of Medicare "whites" are either Hispanic or some other race. The possible concern for this paper is that whites in majority-black hospitals may be disproportionately other minorities and so their outcomes may understate the effect of discrimination within hospitals.

The time-series aspect of the data is also used effectively to understand the problem. First, treatment quality and survival from AMI has been improving everywhere. Against this backdrop of improvement, the gap between good hospitals and bad hospitals has stayed about the same over time. Significantly, the size of the gap between good and bad hospitals, and the overall black/white gap in 90-day survival, is equivalent to about five years of progress. Thus, the bad hospitals of 2010 are substantially better at survival from AMI than were the good hospitals of 1993.

What do the paper's findings suggest for the future of research on this topic?   The authors seem most interested in medical performance—understanding what makes good hospitals good and bad ones bad. In a dynamic world of rapid improvement everywhere this is a question mainly about the diffusion of technological change and not a question of static differences.   What seems more persistent is the association of racial composition with position in the quality hierarchy of hospitals. That is a question more economic and less medical in nature. Why do blacks persist in going to bad hospitals? AMI is largely an emergency condition and most patients will either be delivered by ambulance or go to a nearby facility. The extra time it would take to search for a better hospital and get there would

outweigh any benefit of better treatment. Thus, geographic location is the primary reason for where people get AMI care and the most likely cause of the persistent association of racial composition and quality is the economic process allocating lower-quality inputs to hospitals located in minority-serving areas.

Finally, it should be noted that differences in medical care are not the primary source of racial disparities in health, just as differences in medical care are not the reason why the US lags behind other countries in health.   The racial gap in life expectancy at age 50 is equivalent to about twenty years of progress, compared with the AMI survival gap studied here that represents about five years of progress. Differences in health at the population level arise mainly from differences in incidence of things like hypertension and diabetes that elevate risk for more severe conditions.   Research and policy aimed at reducing racial disparities should focus more on primary prevention.