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JOURNAL DISCUSSION

Dissecting Health Disparities in Cardiology Patients

Katherine R. Schlosser and George L. Anesi

Cook NL, Ayanian JZ, Orav EJ, Hicks LS. Differences in specialist consultations for cardiovascular disease by race, ethnicity, gender, insurance status, and site of primary care. *Circulation*. 2009;119(18):2463-2470.

Introduction

Heart disease is the most common cause of death in the United States [1]. Cardiovascular outcomes, however, differ significantly when examined by gender and race, among other patient characteristics [2]. As the amount of attention paid to health disparities grows, so have efforts at exploring the underlying reasons for their existence and potential steps toward removing them [3].

"Health inequality" and "health inequity" are complex terms often used in the context of discussions about "health disparities," itself a catch-all term for differences in health outcomes between different patient groups. Health *inequalities* are defined as "differences in health status or in the distribution of health determinants among different population groups"; in contrast, a health *inequity* is an inequality that is "attributable to the external environment and conditions mainly outside the control of the individuals concerned" [4]. When *inequalities* are unnecessary, avoidable, unjust, or unfair, we define them as *inequities*.

In "Differences in Specialist Consultations for Cardiovascular Disease by Race, Ethnicity, Gender, Insurance Status, and Site of Primary Care," Cook et al. address one particular health inequality: the varying rates of referral from a primary care setting to a cardiology specialist based on various patient characteristics [5]. The authors find that referral to a cardiologist improves cardiovascular outcomes and that referral rates differ significantly based on nonclinical patient characteristics, and they therefore deem this inequality an inequity—and one worth further investigation.

Study Design and Limitations

This retrospective cohort study examined electronic medical records for patients seen in two academic health care centers between 2000 and 2005. Criteria for inclusion in the study were racial/ethnic categorization as non-Hispanic white, non-Hispanic black, or Hispanic; two visits to a primary care office in the 12 months preceding the study period; and a diagnosis of coronary artery disease (CAD) or congestive heart failure (CHF). Their three main outcome measures were: (1) time to first cardiology consultation, (2) frequency of follow-up consultations, and (3) each patient's yearly health performance as measured by number of clinic visits.

An examination of the study design and cohort yields a few weaknesses worth noting. The retrospective design does not account for cardiology consultations prior to the index study visit or consultation at time of diagnosis, so the results are limited to continuing care received during the study period by previously diagnosed patients. Furthermore, the authors defined “disease severity” as the number of visits in the primary care clinic in the 12-month interval before the index study visit. It is well documented that racial and ethnic minorities have less access to health care, especially cardiac care [6]. It follows that using visit number as the measure of disease severity may underrepresent the severity of disease in ethnic minorities and introduce bias into the study.

Finally, the study sample was more than 75 percent non-Hispanic white for both CAD and CHF. Low representation of minorities in the sample may limit the ability to draw conclusions for these populations, which is particularly troublesome in a study examining inequities in health outcomes among patient groups. Underrepresentation of minority groups in clinical trials is well documented [7]. It is problematic to exclude certain populations from studies because conclusions generalized from a population with particular illness behaviors and life circumstances are applied to other groups which may or may not share them.

One particular strength of this study is the authors’ ability to draw conclusions about women, who represented 48 percent of their study population. Women are traditionally underrepresented in clinical trials and studies [8]; this paper did not suffer that fate.

Study Results and Epidemiologic Implications

The authors found that, for both CAD and CHF, women were less likely than men, and community health center patients were less likely than hospital practice patients, to receive primary and follow-up cardiology consultation. They noted additionally that women experienced greater health benefits than men when they did receive a cardiology consultation.

The authors unsurprisingly found that whites were more likely than blacks, and—perhaps surprisingly—that Medicare/Medicaid patients were more likely than privately insured patients, to receive primary consultation for CAD. The well-known and long-standing disparities in health outcomes between patients who are in minority groups and those who are not persisted. Patients with consultation status, men, whites, and privately insured patients had better outcomes than those without consultation, women, blacks, Hispanics, and Medicaid recipients.

Research supports the hypothesis that members of racial minorities are less likely to receive intervention for acute coronary syndrome (ACS) than whites [9]. This evidence also suggests that cardiology consultation may be an important factor in bridging the gap in the rate of intervention, and Cook et al’s conclusion that minorities receive fewer consultations may indeed account for at least part of that gap.

Ethical Considerations

Health inequities—what people tend to mean when they say "health disparities"—are of significant ethical concern due to the confluence of two findings: (1) when all else is corrected for, some groups—in this study, women and members of minority racial and ethnic groups in particular—receive worse health care and have poorer health outcomes than others, and (2) this seems to be explained by nonclinical factors (e.g., gender and race/ethnicity) or, put another way, factors that should not matter. The latter of those findings is an important one that defines the difference between inequality and inequity introduced at the beginning of this article. Inequalities are everywhere in our world, and only a true utopian (or dystopian, depending on the point of view) would believe it possible to eliminate all of them.

The same is true in health care: there is most certainly an inequality in the rates of cancer between the young and the old, for instance, and, while we certainly have an enduring goal of reducing cancer in the elderly, we do not see this inequality as an injustice, because age is a factor that matters in the acquisition of genetic mutations and the development of tumors—indeed on some level, it *should* matter. Inequities, on the other hand, are unjust inequalities; those made by factors—race, gender, socioeconomic status—that we believe should not matter.

The bioethical principle that underlies our moral objection to inequities, such as those illustrated by Cook and colleagues, is justice. Rooted in the Aristotelian notion that "equals must be treated equally, and unequals must be treated unequally" [10], justice can be thought of, though it is indeed more complicated, as a measure of fairness and of what is "due" to an individual. It follows that our objection to health inequities derives from our view that these situations can be described as the unequal treatment of those who, for the purposes of the issue at stake, are equal. That is to say, there is no inherent reason why blacks and whites and women and men should have unequal access to specialty cardiology consultation, and yet they do.

Objection to unequal access, characterized rightly as an injustice, also carries with it a moral and ethical imperative to reduce or remove the inequity. What makes such a task so difficult is that inequities—different rates of cardiology consultation, for instance—are systemic and come about less from overt discrimination than from subtle patterns unnoticeable in individual patient interactions. It takes statistical analyses of the sort that Cook and colleagues executed to even identify the inequities, and it is vitally important that such research is done to find, as precisely as possible, where inequities exist and to give us a chance to address them.

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Katherine R. Schlosser is a fourth-year medical student at Case Western Reserve University School of Medicine in Cleveland, Ohio. Her research focuses on the association of abnormal blood pressure and abnormal BMI in a large, urban pediatric cohort. She received a BS in biology and honors in international security studies from Stanford University and will be applying for pediatrics residency programs this year.

George L. Anesi is a fourth-year medical student at Case Western Reserve University School of Medicine in Cleveland, Ohio, pursuing a dual degree as a graduate student in the Department of Bioethics. His research in the Center for Genetic Research Ethics and Law (CGREAL) focuses on personalized genomic medicine and end-of-life care. He received a BS in biological chemistry and a BA in chemistry from The University of Chicago, where he was editor in chief of the *Chicago Maroon*. He will be applying for internal medicine residency programs this year.

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