Disparities in Cardiovascular Care
Does a Rising Tide Lift All Boats?

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Last year, an Institute of Medicine panel identified health care delivery and disparities as the nation’s top 2 priorities for comparative effectiveness research. We have long known that disparities in the delivery of cardiovascular care are pervasive and harmful; the literature is robust and clear. These disturbing disparities are most prominent for emerging high-technology procedures. Compared with whites, blacks are less likely to undergo coronary angiography and revascularization and are more likely to die of cardiovascular disease. As the cardiovascular research community moves from describing disparities to finding solutions, a key question emerges: Will improving quality of care for all patients eliminate disparities, or should we tailor our approach and target particular contributors and populations?

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In this issue of Circulation, Cohen et al used data from the American Heart Association’s (AHA) Get With the Guidelines (GWTG) program to address the long-standing debate of whether improving quality of care overall is enough to eliminate disparities in care. Based on a sample of >140,000 patients with acute myocardial infarction seen in 443 hospitals between 2002 and 2007, the authors found that a general trend toward improved quality of care was associated with an apparent elimination of disparities. In 2002, 70% of whites and Hispanics received “defect-free care,” whereas only 60% of blacks did; by 2007, well over 90% of all patients received defect-free care with no substantial differences in ethnic groups.

The AHA GWTG program is a remarkable quality improvement collaborative. Participation in the GWTG–Coronary Artery Disease (CAD) program has been independently associated with improvements in guideline adherence above that in other hospitals participating in public reporting programs. Many hospitals enrolled in the GWTG program achieve extraordinarily high levels of recommended care for heart failure, acute myocardial infarction, and stroke. Improvements in these process measures in part explain lower risk-adjusted mortality for acute myocardial infarction in hospitals that are recipients of GWTG achievement awards.

In addition to quality improvement, the GWTG program maintains a research database of patient treatment. This database has the potential to provide a contemporary glance into the quality of care delivered and trends in care over time. However, concerns about selection bias and uncontrolled quality improvement interventions hinder this potential. Several studies examining trends in disparities in care use this unique resource. A recent analysis of the GWTG-CAD database found an association of the program with increased guideline adherence over time and the narrowing of small treatment gaps observed based on age and sex.

The present study by Cohen et al complements the description of age and sex disparities in the GWTG database by examining racial and ethnic disparities in care. In particular, the authors found differences in specific processes of care in the first half of the study that were no longer present during the latter half of the study window. On the surface, the findings described in this article are remarkable; improvement in care for all leads to equal care. However, on further consideration, the study does not address the crucial question of whether this intervention achieves improved outcomes in the quantity and quality of life that do not differ by race/ethnicity. Within the context of the study design, the findings do not definitively answer the question of how to eliminate disparities in care. Rather, this study is an important first step and serves to generate hypotheses, opening the door for future work in this area.

Several questions remain: Are the reported disparities truly disappearing? If disparities are indeed reduced, is it the result of the quality improvement intervention? How generalizable are the results?

Are the Reported Disparities Truly Disappearing?

The study is based on the assessment of performance measures in acute myocardial infarction care. Although performance measures are important consensus assessments, they may not be sensitive to the external influences that are differentially present among certain subpopulations. For example, a measure of smoking cessation counseling does not account for differences in health literacy that have an impact on the effect of that counseling. Although largely derived from those selected by the American College of Cardiology/AHA Performance Measure Writing Group and endorsed by the American College of Cardiology, AHA, and National Quality Forum, the performance measures in this study are process measures with limited ability to predict true quality of care and long-term patient outcomes. Although data do exist showing an association between hospital measures and 30-
day mortality among patients with acute coronary syndrome, the long-term outcome of true reduction in health disparities is entwined with other contextual issues (eg, presentation, site of care, and follow-up care). Although beyond the scope of this study, it is important to understand how changes in process measures affect care over time, postdischarge clinical outcomes, and disparities. Without this information, we are limited in our ability to interpret the impact of the findings of this study. Thus, the question remains whether the reduction in racial/ethnic differences in performance measure achievement translates into a decrease in disparities in acute myocardial infarction outcomes.

The authors found that at baseline blacks had lower achievement rates for 2 of the 6 performance measures evaluated (smoking cessation counseling and aspirin at discharge) and their composite of defect-free care, which appears to be driven by these 2 measures. Both of these measures are important in their own right, but can they plausibly reduce the increased mortality seen among blacks? For example, understanding the relationship between smoking cessation counseling (obtained as part of this program), actual cessation rates, and any variation in this relationship by racial/ethnic groups may provide greater insight into the true impact of these interventions on health disparities. Furthermore, the data on reducing disparities in smoking cessation counseling are conflicting. The American College of Cardiology’s Guidelines Applied in Practice program in Michigan found that the program led to significant increases in rates of evidence-based care in both white and nonwhite Medicare patients; however, nonwhite patients received less quality improvement smoking cessation counseling.7

If Disparities Are Indeed Reduced, Is It the Result of the Quality Improvement Intervention?

Another limitation of an observational or registry study design and data set is the inability to prove causality (ie, whether the quality improvement intervention directly results in elimination of differences in performance measures). Specifically, the GTWG-CAD database lacks a control group for its interventions; hospitals that do not participate in the program are not included in the database. Thus, in the present study, it is difficult to account for other confounding factors such as secular trends (eg, increased national focus on quality improvement and disparities elimination over the time course of the study). Nevertheless, this study raises the question of causality as the relevant clinical and policy issue for future, more definitive approaches to answer.

Are the Results Generalizable?

The GTWG-CAD database as a registry raises the inevitable concern of selection bias and generalizability. The authors appropriately cite the limitations of self-selection of hospitals and potential differences in care patterns nationally. It is also important to note that the large numbers of patients and hospitals in the sample do not equate to generalizability. Without exploring potential systematic bias in reasons for nonparticipation that may affect the outcome, as well as characteristics of nonparticipating hospitals, careful interpretation of the study results is warranted. Thus, these findings may represent an optimal case scenario that hospitals with lower degrees of organizational motivation may be unable to replicate. In hospital settings without a GWTG quality improvement program, achievement of 100% defect-free care may be unattainable, and disparities may persist or even worsen.

Conclusions

Cohen et al have taken an important first step in the evaluation of particular strategies to eliminate health care disparities. On the surface, progress has been made toward the mitigation of disparities, but closer examination shows that there is still more work to be done. This study generates more questions than answers, including future hypotheses to be addressed. It does lay a foundation for additional studies carefully designed to arrive at definitive answers for the question that I believe is most relevant to clinicians and decision makers: Will achieving 100% defect-free care in all patients also eliminate disparities in clinical outcomes, or do we need specific initiatives targeted at contributors or subpopulations to move toward the true elimination of health disparities? The question will not be easy to answer and may require complementary contributions from both approaches. Perhaps we need future studies that use rigorous designs such as trials that compare compelling targeted (multilevel and multifactorial), generalized, or combined approaches.

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Disclosures

None.

References


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