Elizabeth Fontham  
Epidemiology Program  
Louisiana State University Health Sciences  
Center School of Public Health  
New Orleans, LA

Daniel J. Harrington  
Environmental and Occupational Health Sciences Program  
Louisiana State University Health Sciences  
Center School of Public Health  
New Orleans, LA

Edward J. Trapido  
Edward S. Peters  
Epidemiology Program  
Louisiana State University Health Sciences  
Center School of Public Health  
New Orleans, LA

REFERENCES

Recent National Trends in Acute Myocardial Infarction Hospitalizations in Medicare  
Shrinking Declines and Growing Disparities

To the Editor:

Studies reporting steep declines in acute myocardial infarction (AMI) hospitalization rates through 2007 have found lesser declines among blacks.1–4 Although subsequent studies have reported continuing— albeit less steep— declines overall through 2011,5 racial differences in declines have not been closely examined. Therefore, we looked at trends in AMI hospitalization rates among elderly Medicare beneficiaries over the 10-year period 2002 to 2011, focusing specifically on whether the post-2007 declines are also more modest for blacks than for whites, potentially reflecting a growing gap in care.

Using the Centers for Medicare and Medicaid Services 100% sample Medicare Provider Analysis and Review files linked to Medicare Denominator files, we compared trends in hospitalizations with a principal discharge diagnosis of AMI (410.xx, excluding 410.x2) for black and white Medicare beneficiaries ages 65 and older, with fee-for-service coverage between January 2002 and December 2011. We calculated annual AMI hospitalization rates per 100,000 beneficiary-years for blacks and whites: 670; see Figure and eAppendix; http://links.lww.com/EDE/A908.

Over 10 years, AMI hospitalization rates declined 36.6% among whites (from 1,057 per 100,000 beneficiary-years in 2002 to just 670 in 2011), with average declines of 5.1% per year (IRR: 0.949; 99% CI = 0.948, 0.950). Declines were more modest among blacks, with AMI hospitalization rates dropping 26.4% (from 966 per 100,000 in 2002 to 711 per 100,000 in 2011); the average annual decline for blacks, 3.4% (IRR: 0.966; 99% CI = 0.964, 0.968), was only 2/3 that for whites. Rates of decline slowed for both blacks and whites in the latter part of the study period, to 4.1% per year for whites (IRR: 0.959; 99% CI = 0.958, 0.961), but only 2.7% (IRR: 0.973; 99% CI = 0.967, 0.979) for blacks between 2007 and 2011. Strikingly, although AMI hospitalization rates were initially 9% lower among blacks than whites in 2002 (blacks: 966 per 100,000 beneficiary-years vs. whites: 1,057), the rates crossed over around 2007, and were 6% higher for blacks by 2011 (blacks: 711 vs. whites: 670; see Figure and eAppendix; http://links.lww.com/EDE/A908).

Our finding that declines in AMI hospitalization rates among blacks continue to lag those in whites raises important questions for policy and clinical practice. It is unlikely that blacks in 2002 were more heart-healthy than their white peers; therefore, the lower AMI hospitalization rates for blacks at that time may have been due to problems with symptom recognition, mistrust of the healthcare system, or inequities in access.8–8 If such barriers have been reduced, with blacks increasingly likely to be hospitalized when they have an AMI, our results may—paradoxically—reflect improvements in their quality of care. Nonetheless, our findings suggest that blacks continue to have more difficulty accessing care and have benefitted less from the national cardiovascular health initiatives that have been so effective for whites. To the extent that primary and secondary prevention efforts are more successfully disseminated among whites, quality improvement initiatives could be contributing to increased health disparities in AMI prevalence.

In conclusion, over the 10-year period 2002–2011, the benefits of reductions in AMI hospitalizations through aggressive cardiovascular risk factor management may be slowing overall, with even smaller declines for blacks resulting in a crossover;
AMI hospitalization rates, which had been lower for blacks than for whites in 2002, were comparable in 2007 and higher by 2011. The causes of this growing disparity should be elucidated.

ACKNOWLEDGMENTS
The authors would like to thank William Jesdale, PhD, for advice on using Poisson regression and for thoughtful comments on an earlier version of this manuscript; and David Hoaglin, PhD, for advice on checking assumptions in statistical models.

Naomi C. Sacks
Department of Quantitative Health Sciences
University of Massachusetts Medical School
Worcester, MA
naomi.sacks@umassmed.edu

Arlene S. Ash
Department of Quantitative Health Sciences
University of Massachusetts Medical School
Worcester, MA

Kaushik Ghosh
National Bureau of Economic Research
Cambridge, MA

Amy K. Rosen
Center for Healthcare Organization and Implementation Research (CHOIR)
VA Boston Healthcare System
Boston, MA

John B. Wong
Division of Clinical Decision Making
Department of Medicine
Tufts Medical Center
Boston, MA

David M. Cutler
Department of Economics
Harvard University
Cambridge, MA

Allison B. Rosen
Department of Quantitative Health Sciences
University of Massachusetts Medical School
Worcester, MA
National Bureau of Economic Research
Cambridge, MA

REFERENCES