Response by Arora et al to Letter Regarding Article, "Twenty Year Trends and Sex Differences in Young Adults Hospitalized With Acute Myocardial Infarction: The ARIC Community Surveillance Study"

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In Response:

In a recent investigation from ARIC (Atherosclerosis Risk in Communities Study), we analyzed 28 732 acute myocardial infarction (AMI) hospitalizations sampled among black and white patients aged 35 to 74 years.[1] We observed that an increasing percentage of the AMI hospitalizations from 1995 to 2014 were young patients (35–54 years), and that the increase was especially pronounced among women. We also noted that young women with AMI were less likely to receive guideline-based therapies compared to young men.

We appreciate the thorough review of our work by Zhang et al and the hypothesis that racial demographics explain the temporal trends in AMI hospitalizations attributable to young patients.[2] Zhang et al point out that an increasing proportion of AMI hospitalizations for young patients is black, among both women and men. Indeed, for all ages, black patients constitute an increasing proportion of AMI hospitalizations in the ARIC communities. This reflects both the underlying population demographics in the community and a slower rate of decline in the incidence rate of AMI among blacks compared to whites in recent years.[3] We agree that further analysis of these trends is of interest. However, analyses by race are somewhat confounded by geographic location and only 2 of the 4 ARIC communities have sufficiently large black populations to allow a meaningful computation of AMI event rates. This is especially true for analyses among younger age groups where the sample size of AMI hospitalizations is already small.

Nevertheless, we agree that racial differences exist in the management of patients with AMI and reported this in a previous study.[4] In the study under discussion, we observed sex differences in the prescription of medical therapy and invasive strategy for young patients with AMI. Our primary analysis was adjusted for race, geographic location, and year of admission. However, we also conducted race-stratified analyses, shown in the online-only Data Supplement. When compared to young white men, young white women were less likely to receive nonaspirin antiplatelets (relative risk [RR], 0.83; 95% CI, 0.73–0.93), lipid-lowering agents (RR, 0.86; 95% CI, 0.77–0.94), beta blockers (RR, 0.96; 95% CI, 0.89–1.00), and angiotensin-converting enzyme inhibitors/angiotensin receptor blockers (RR, 0.88; 95% CI, 0.79–0.98); and were less likely to receive angiography (RR, 0.87; 95% CI, 0.78–0.95) or revascularization (RR, 0.77; 95% CI 0.67–0.86). A similar pattern was observed for young black patients hospitalized with AMI. Compared to young black men, young black women had a lesser likelihood of receiving nonaspirin antiplatelets (RR, 0.86; 95% CI, 0.74–0.98) and angiotensin-converting enzyme inhibitors/angiotensin receptor blockers (RR, 0.90; 95% CI, 0.81–0.99).

Understanding the determinates of community-based trends in AMI hospitalizations is complex and requires ongoing, multiregional, community-wide surveillance of validated events. We believe data from ARIC Study Community

Surveillance presented in the current study provides important insights into trends among younger adults.[1] We look forward to continued exploration of these and other surveillance data from other settings to stimulate prevention and effective treatment of AMI throughout the community.

ARTICLE INFORMATION

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Disclosures

None.

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