Not There Yet
Medicare Part D and Elimination of Cardiovascular Medication Usage Sociodemographic Disparities After Myocardial Infarction

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In this issue of Circulation, Lauffenburger et al examine the effect of Medicare Part D implementation on statin, β-blocker, and angiotensin-converting enzyme inhibitor (ACEI)/angiotensin receptor blockers (ARBs) medication usage based on race/ethnicity and sex in the United States. The authors used Medicare service claims in 85,017 post-myocardial infarction (MI) patients aged ≥65 years. Their primary findings are that black women are 30% less likely to be adherent to ACEI/ARBs and statins at 1 year after MI compared with white men. Additionally, women and black/Hispanic men had 10% lower medication adherence rates compared with white men.

In general, Asian men and women had similar medication adherence rates as white men, except for a 17% lower use of β-blockers in Asian women. These findings were noted despite similar rates of prescription usage at 30 days by race/ethnicity and sex 30 days after MI. The authors are to be commended for this effort and, in particular, the thoughtful discussion of their findings. Their manuscript is extremely important because only national, retrospective database information is available at http://circ.ahajournals.org.

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Although this analysis lacks associated CVD outcome data, these results suggest that health policy efforts must cross the threshold of access to care based primarily on insurance to include implementation efforts aimed at social and psychological barriers to long-term-care continuity. The influence of biological, social, and structural factors on racial/ethnic and sex differences in adherence to evidence-based medications must be addressed.

Unfortunately, a majority of published work related to insurance subsidies has yet to examine the glaring issue of extremely different lifestyles by sex along the spectrum of racial/ethnic groups in the United States. For example, unique stressors experienced by elderly black women, such as lack of comprehensive social support, demands to be the stabilizing elderly parent or caregiver of multiple family generations, lack of wealth, or access to a comfortable “nesting location/situation,” might significantly influence medication adherence. Additionally, recognition and acknowledgment that ethnic heterogeneity exists among blacks and Hispanics as in other racial/ethnic groups is crucial to strategies aimed at minimizing post-MI outcome disparities. Psychological stressors faced by elderly black/Hispanic women can be magnified and are uniquely different from those faced by other sociodemographic groups once the intersection between race/ethnicity, sex, and age are taken into consideration. Indeed, ignoring the latter and principally working under the assumption that provision of improved access to medications and quality health care will result in “a rising tide will float all boats” phenomenon is foolhardy. In this respect, the authors of the paper do a nice job in their Discussion pointing out the significance of factors, such as social support and other environmental determinants of health after MI, that need to be addressed if the differences by race/ethnicity and sex in their data are to be attenuated.

The interplay between social and biological issues can disproportionately and negatively affect elderly blacks and Hispanics receiving Medicare Part D in a manner that extends total financial burden beyond that of out-of-pocket medication costs. For example, emerging evidence suggests that elderly black and Hispanic Americans might be more susceptible to cognitive decline and dementia because of a combination of biological and cultural factors, including variations in genetics, normative aging perception by race/ethnicity, health literacy, and acculturation. In turn, the amalgamation of cognitive decline and its associated stigma result in reluctance by the elderly patient, caregiver, or healthcare provider to acknowledge or address cognitive decline. Direct effects of cognitive decline on medication adherence include financial strain and depression attributable to patient forgetfulness,

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detrimental sleep patterns, and significant loss of household income from competing caregiver demands, typically in a backdrop of limited ability to psychologically and physically access organized assistance.

Variance in the prevalence of side-effects of β-blocker, ACEI/ARBs, and statin medications according to sociodemographic issues and genetics also likely contributes to differences in medication adherence. For example, blacks and particularly older black women experience more cough and angioedema from ACEI/ARBs. Similarly, although the differential side-effect profile for statins remains controversial, data about increased risk of diabetes mellitus with statin exposure in women, cognitive impairment with statin use in a cohort of subjects from the stroke belt that oversampled for blacks, and the potential higher allele frequency related to the DR11 antigen linked to statin myopathy in black patients need additional investigation. Indeed, such information may pattern patient and provider beliefs about medication benefit versus risk in a manner that affects adherence. Interestingly, an analysis of the influence of exposure of evidence-based pharmacotherapy after acute MI in older Medicare beneficiaries indicated that mortality benefit was most impressive for statins, followed by ACEI/ARBs, clopidogrel, and β-blockers, respectively. Interestingly, in this paper, statin use was generally higher than ACEI/ARBs use, whereas β-blockers had the highest penetration, possibly because of longer provider acquaintance with this drug class.

Structural factors, including accessibility of transportation, pharmacy location, neighborhood safety, perceived discrimination, and institutional attributes of healthcare entities/provider centers that affect communication quality between elderly minority/women patients and their providers, also affect medication adherence. In a study by Kripalani et al., transportation, counseling about medications, and pharmacy wait times were cited as major additional barriers besides cost in filling prescriptions.

In conclusion, how do we cross the threshold of nonadherence for post-MI Medicare D patients? Upstream approaches might include a combination of targeted self-management programs and tailored cardiovascular disease management neighborhood-based programs to serve as an extension of the traditional provider-based health system. The need for this type of combined approach is evident from findings in this manuscript indicating that initiation of secondary prevention therapy, albeit still suboptimal by race/ethnicity or sex. Additionally, follow-up with a cardiologist or primary care physician and out-of-pocket medication costs did not significantly affect differential adherence. Furthermore, because health literacy is a key mediator of the intersection of race/ethnicity and adherence, successful communication between provider teams and elderly patients/advocates is a powerful component of tailored disease management programs. In the case of post-MI patients, such programs could rely on a derived, tested algorithmic approach to continuous, long-term post-MI care, akin to the door-to-needle in-hospital approach to MI treatment. Along with the latter, it is imperative that long-term approaches to care incorporate psychological, social, and structural need assessments that focus on the patient and family/community-centered cardiovascular care models. Undeniably, it remains fairly obvious that, despite major advancements in drug therapies and implementation of evidence-based post-MI management strategies, mortality from MI remains highest in blacks and among women, highlighting the need to delve deeper into unique attributes that define the lives of these demographics.

Disclosures

None.

References


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