Differences in Myocardial Infarction and Stroke Knowledge and Awareness Among US- and Foreign-Born Individuals: Potential Causes and Implications

Aesha Aboueisha, MD; Peter Cram, MD, MBA

In this issue of the Journal of the American Heart Association (JAHA), Mannoh et al examined disparities in awareness of myocardial infarction (MI) and stroke symptoms among US- and foreign-born adults. Their most important finding, that there are differences in awareness of MI and stroke symptoms by region of birth, confirms and expands upon prior research in several ways.

The authors used data from the National Health Interview Survey (NHIS) from 2014 and 2017 to evaluate self-reported knowledge and awareness of MI and stroke by region of birth. Region of birth was categorized as Mexico/Central America/Caribbean, South America, Europe, Russia, Africa, the Middle East, the Indian subcontinent, Asia, Southeast Asia, and the United States. The authors also controlled for a range of potential confounders, including age, health insurance status, and access to a regular source of medical care. In addition, they considered the participants’ educational and socioeconomic status, as well as their atherosclerotic cardiovascular disease (ASCVD) risk factors and sex. This study provides several important insights, raises new questions, and hints at potential interventions that could aid in increasing knowledge and awareness of MI and stroke in certain foreign-born populations.

The study’s primary finding is a disparity (ie, otherwise unexplained difference) in MI and stroke knowledge and awareness for US-born and foreign-born individuals. These differences were observed in both unadjusted and adjusted analyses in sociodemographic, educational attainment, and cardiovascular risk factors.

More specifically, awareness of both MI and stroke symptoms were highest among individuals born in the United States, slightly lower for individuals born in Europe and Russia, and lowest in individuals born in Asia for MI and in individuals born in the Indian subcontinent for stroke. What might explain these differences in awareness? The differences might reflect underlying differences in the prevalence of MI and stroke in each racial and ethnic group and geographic region. For example, a study by Hastings et al found that the leading cause of death for Asian Americans from 2003 to 2011 was cancer (accounting for 28.6% of total causes of death) with heart disease being second (accounting for 23.5% of the cause of death). Alternatively, the leading cause of death in both Russia and Europe is cardiovascular disease as...
reflected in the knowledge and awareness prevalence of MI and stroke awareness by country of birth is necessarily disparities (unfair or unexplained differences) or whether men are less likely to seek help for their medical problems and learn about information related to their health, owing to what they believe are underlying social constraints on gender roles and their view of masculinity. In addition, the differences in the awareness level of men and women could also be explained by the increased focus on MI prevalence and awareness in women owing to previous incidences of misdiagnosis and mismanagement of MI in women.

It is also important to comment on the potential implications of the National Health Interview Survey and its associated methodology. The National Health Interview Survey is administered through a face-to-face interview and is offered in both English and Spanish. Typically, 1 adult and 1 child are selected from each household, as the representative of that particular unit, and participate in a face-to-face interview. English proficiency is assessed by asking participants to read a question that states “How well do you speak English?” and respond by reading an answer from the categories listed (very well, well, not well, etc) before conducting the survey. This method of establishing the interviewee’s English proficiency is imperfect, as an individual’s ability to read a language does not necessarily correlate with their comprehension level. Many of the populations included in the current study do not speak English or Spanish as a first language and the survey is administered only in English and Spanish. Thus, it is difficult to interpret whether differences in MI and stroke awareness are truly due to differences in knowledge or to a lack of comprehension of the questions themselves. This argument, however, is not true for all populations included in this study, because the percentage of MI and stroke knowledge and awareness was still lower in the Mexican-born participants even though the test was offered in Spanish as well. However, it is still an argument that warrants further investigation.

Moving forward, further research is needed to examine the interplay between region of birth, language, disease prevalence, knowledge, and access. Further research should also consider conducting surveys that
are administered in multiple languages to minimize the role of English proficiency and comprehension in evaluating MI and stroke knowledge and awareness. It would also be extremely useful to study whether between-region differences in MI and stroke knowledge continue to decrease over time; a related question is how time residing in the United States may affect the differences in knowledge observed for region of birth.

In conclusion, Mannoh and colleagues highlight important differences in awareness of MI and stroke symptoms both across racial and ethnic groups born in the United States and by region of birth for immigrants to the United States. The study raises many important questions about why such differences exist and the potential impact of the differences on health outcomes. The study highlights that prevalence of MI and stroke in the region of origin and individual ASCVD risk factors do not always correlate with knowledge and awareness. Further research is needed to understand the reasons for the differences that were observed, including the role of English comprehension. In the meantime, it would be beneficial for the government, private entities, and community organizations to consider outreach and educational efforts targeting immigrants to improve awareness of MI and stroke symptoms.

ARTICLE INFORMATION

Affiliations
Department of Internal Medicine, University of Texas Medical Branch, Galveston, TX (A.A., P.C.); and Faculty of Medicine, University of Toronto, Ontario, Canada (P.C.).

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