The practice of medicine—the traditions, diagnoses, treatments and guidelines—is ever-changing. We now acknowledge human papillomavirus infection as the primary driver of cervical cancer. Hormone replacement therapy is no longer routinely recommended for postmenopausal women. Rate control is preferred over rhythm control in atrial fibrillation. However, as we look back at the past hundred years, our profession has been slow to release the grip that the concept of biological race has had on our science and our medical practice.

Most of us have heard and acknowledge the truth of race as a social construct. While we may accept the truth of this science in theory, this has not changed the way we practice medicine. In fact, we often have perpetuated the myth of race and ethnicity as markers of disease. We describe our patients in racial terms and our guidelines and laboratory criteria, like glomerular filtration rate, use race. We use race as a proxy for genetics, ancestry and biology when it is not.

We are not the first people to challenge the use of race in medicine. Many prolific researchers and activists have been arguing against treating race as biological for years1-3. We brought our resolution on eliminating race-based medicine to the Minnesota Academy of Family Physicians’ (MAFP) House of Delegates this year because we see the negative results of medicine’s error when it comes to race, and we wanted the MAFP and Minnesota’s family physicians to be part of the change. When we started to bring this issue forward, we encountered some resistance, but mostly many questions. We wanted to share our answers with you, not because we are the experts, but because we see the importance of this issue and the need for reform.

WHAT IS RACE?
Race is a social construct that does not represent shared genetic ancestry. It is, instead, a way of categorizing people based on physical characteristics and geographic ancestry. The United States (US) Census identifies five racial categories: white; black; Asian; American Indian and Alaska Native; and Native Hawaiian and Pacific Islander. Under this system, Middle Easterners and North Africans are classified as white, and people who hail from countries as different as Afghanistan, India and China are all classified as Asian.

These racial categories, however, are not universal, as they vary between societies and have changed over time. For example, an individual could be both white in Brazil and black in the US. In addition, at various points in Virginia’s history, people who had 1/4th, 1/8th, 1/16th or any African ancestry were legally defined as black and, therefore, subject to racially discriminatory laws4. In the US, blackness was constructed to be overly inclusive, such that a person with seven white great-grandparents and one black great-grandparent could still be considered black and, therefore, used for slave labor. Thus, it is curious that, given this broad definition of “black,” black people are treated as a distinct racial category with genetically distinct health risk factors and different treatment protocols.

Given that politics, not science, guided the construction of race, it is not surprising that there are no genetic features shared by all people who belong to the same racial category. Most of our genetic variability occurs within racial groups, and belonging to the same racial group does not imply greater genetic similarity5,6. For example, an Asian person may have more genetic similarity to a white person than to another Asian person. This is because blacks, whites and Asians are not actually distinct groups of people, although we have been socialized to see them as such.

IF RACE ISN’T REAL, THEN WHY ARE THERE GENETIC DIFFERENCES THAT CLUSTER WITHIN DIFFERENT POPULATIONS?
Our genetic diversity is derived from random genetic mutations passed down over generations. Very few genetic mutations provide a survival benefit or are clinically relevant. Natural selection is the theory that genetic mutations that are advantageous to survival result in an increase in the prevalence of these mutations, as the people with said mutations have greater longevity and more time to reproduce. A common example of this can be seen in sickle cell disease. People with sickle cell disease have a shorter life expectancy than those without the disease. However, sickle cell carriers—those who are capable of passing on the sickle cell gene but do not carry the
DOING PEOPLE OF COLOR A DISSERVICE?

Race is a social construct and, when we treat it as a substitute for genetic ancestry, it prevents us from investigating and addressing racism, the cause of the racial health disparities. Treating race as a proxy for genetics also actively harms black, brown and Indigenous communities. By treating race as biological, we place the blame of racial disparities on communities already suffering from racism and enforce the racist belief that these communities are genetically inferior.

Additionally, the way we think and talk about race and racial health disparities affects how we perceive and treat patients. Recent research by Brian Donovan presented at the American Association for the Advancement of Science Conference\textsuperscript{11,12} showed that merely mentioning the prevalence of certain diseases by race was associated with the belief that race influenced intelligence. A 2016 study evaluating medical students and residents showed that those who believed blacks and whites to be biologically different rated the pain experienced by black patients, in comparison to white patients, as lower and recommended inappropriate treatments\textsuperscript{13}.

WHAT ABOUT EPIGENETICS?

Epigenetics is the study of changes in gene expression that are not due to changes in the genetic code itself. Evidence suggests that trauma and adverse events lead to epigenetic changes that are then inherited by offspring. Racial trauma, stress, discrimination and systemic racist practices, such as financial and environmental disinvestment in minority communities, have been proposed as an etiology of epigenetic changes\textsuperscript{8}. Mouse models indicate that epigenetic changes can be reversed with removal of the initial stressors and exposure to an enriched environment\textsuperscript{10}. Therefore, what we perceive to be health disparities caused by innate racial difference could, in actuality, be due to reversible epigenetic changes.

WHAT IS THE HARM OF USING RACE IN MEDICINE?

WHAT ABOUT EPIGENETICS?

OBSERVED BIOLOGICAL RACE DIFFERENCES, AREN’T WE DOING PEOPLE OF COLOR A DISSERVICE?

While not biologically real, race has had actual negative biological effects through racism (see epigenetics above for one, but not the only example). Thus, while it may be necessary to continue to be knowledgeable of the race-based health disparities when screening for disease, it is equally important to avoid attributing these differences to genetic ancestry or immutable biological differences. We, as clinicians and researchers, need to look further than race as the cause for these disparities and identify and address the actual causes of the disparate disease burden and treatment outcomes. Racially disparate treatment and lived experiences result in racially disparate health outcomes. We need to treat the socially-induced racial disparities by addressing racism.

Dr. Okah received a MAFP Foundation Resident Research Grant for her study The Association Between a Color-blind Racial Ideology and the Use of Race in Medical Decision-making.

REFERENCES


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