Editorial

Race in Ophthalmology

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Over the last several years, attention has been drawn to the role of race, bias, and discrimination across many facets of society. Medicine, in particular, has a long history of racialization, including overt bias, racial disparities in care and outcomes, and race-based medicine. Ophthalmology is, in many ways, at the forefront of medicine, with rapid advancement in technology, drug delivery, and surgical techniques. Unfortunately, our field lags behind in efforts to push forward the diversity and social progress needed in medicine. Racially, the ophthalmology workforce, departments, and residencies remain less diverse compared with medicine as a whole as well as the U.S. population. In fact, in a recent survey of U.S. residency programs' racial diversity, ophthalmology ranked last.[1] However, increasing racial diversity alone will not automatically result in a complete understanding of and reckoning with the role of race in our field. This requires a more intentional effort and greater conversation around how race impacts the ways we think and practice and how race-based ophthalmology can weaken the care we provide for our patients.

Terminology around diseases and exam findings that have historically been informed by race must be examined and critiqued. This effort should center around the question of whether language carries bias or racial implications that can negatively inform how we think about disease and practice medicine, for example, by implying causal relationships where there are none. A clear example (outside of our field) is the recent reterming of the skin finding historically labeled "Mongolian spots." Referring to a benign congenital pigmented skin lesion found on some newborns, the term "Mongolian spot" is closely tied to overtly racist pseudoscientific theories of racial superiority.[2] Persistent use of this term reinforces an incorrect notion of some relationship between the pathology and a poorly defined racial subgroup. Recently, the term has appropriately been supplanted by "congenital dermal melanocytosis," a more descriptive name and one that does not carry and reinforce the racialized history of its predecessor.

Within ophthalmology, a term that similarly deserves scrutiny is "racial melanosis." This refers to benign pigment deposition in the conjunctiva and still frequently appears in modern literature and clinical practice. A newer alternative for this term is "complexion-associated melanosis" (CAM). Inherent in its name, "racial melanosis" suggests that there is a racial predilection for this exam finding/diagnosis. The reality, however, is that CAM is closely related to *skin color*, not race. Historically, skin color has at times formed a loose basis for racial categorization. However, the delineation of racial categories has varied immensely throughout history, often to serve larger sociopolitical purposes, and does not map clearly by skin color. By 2020 U.S. Census categorizations, race is largely defined by one's area of geographic origin, not skin color. Skin pigmentation thus cannot equate perfectly with race, and terming a condition that correlates with level of skin pigmentation "racial" is fundamentally scientifically inaccurate. As with much of race-based medicine, the term "racial melanosis" represents the use of race as a poor proxy for variables that deserve greater attention. In its implication of racial causality, it suggests we need not look further into other factors—considering, for example, actual level of skin pigmentation—and belies the need to incorporate these variables into clinical decision-making as to whether, for example, a particular patient needs closer monitoring or a lesion needs to be biopsied.

In clinical practice, race has become firmly lodged in the ways we think about and manage many ophthalmic diseases. Conventional teaching is that African American patients have a higher risk of primary open-angle glaucoma (POAG).[3] Similarly, rates of certain types of uveitis seem to differ across racial lines: Our department has found higher rates of postcataract extraction anterior uveitis among African American patients.[4] However, differences in disease that we

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assume are due to race may actually be due to more complex underlying factors. It can be tempting to assign racial differences in disease to "genetic" variability. However, a genetic basis for race has long been a discredited notion, and it is now well understood that race is instead a social categorization.[5,6] In a 2006 study, researchers examined the rates of POAG between populations of different geographic origin but the same "race."[7] They found variable rates of POAG between, for example, Black populations from South Africa, Nigeria, Tanzania, and the United States versus from Ghana, St. Lucia, and Barbados, all of which are groups that, by race alone, would be categorized as "Black." Even patients from the same area of geographic origin living in London versus the Caribbean had substantially lower rates of POAG. Attributing health differences to race alone largely erases these other factors that may even be more proximally causative and thus deserving of greater attention.

A thorough examination of the question of why one racial group may have higher rates of POAG, uveitis, or any other disease would instead need to focus on the myriad differences that actually do exist between population groups, including cultural, social, economic, political, geographic, dietary, housing, and educational differences. In her work examining the history of race and pulmonary spirometry, Lundy Braun has pointed out the deeply racialized (and, at times, overtly racist) history that led to the modern use of race as a correction factor in pulmonary function tests, and that "research and clinical practice needs to devote more careful attention to the social nature of racial and ethnic categories.... By featuring race with only marginal attention to the intersection of race and social class, we risk ignoring the complex and dynamic relationship of lung function and the environment."[8] In a direct example of the potential harms of race-based medicine, racial correction of calculated glomerular filtration rate from serum creatinine has been demonstrated to have a negative impact on transplantation wait times for African American patients.[9] Lessons such as these, gleaned from historical examinations of race and medicine in other fields, should be incorporated into our specialty.

Lastly, the way that race is treated in research and clinical trials needs to be more closely considered. This includes not only examining levels of diversity in studies but also more carefully understanding and delineating how race is defined. In a recent study published in *JAMA Ophthalmology*, Moore reviewed 547 articles published in major ophthalmic journals in 2019, finding that only 43% of articles reported the race/ethnicity of their subjects, and that those that did so applied variable terminology including "race," "ethnicity," "race/ethnicity," and "ancestry."[10] Only 13% of articles reported how race and/or ethnicity was defined and, in the majority of these, it was self-reported by subjects. To our knowledge, no study has been undertaken on the rate of reporting of other important social determinants of health and markers of diversity in the ophthalmic literature, including income, level of education, and occupation.

Race permeates many levels of ophthalmology, ranging from levels of diversity to the ways we think about and label diseases and perform clinical trials. We, as a field, must collectively undertake an examination of the role race plays in ophthalmology and then carefully consider how to continue to advance our understanding and combating of gaps in care and outcomes across multiple lines of inequities. Ultimately, the solution is unlikely to be greater use of race-based medicine as research in other medical fields has taught, racialized medicine is fraught, and often unproductive. Instead, we propose that a concrete next step would be to convene a field-wide task force to critically examine racialized terminology and more scientifically delineate "race" and its use in research and clinical practice within ophthalmology. How we think about and use race in ophthalmology will have critical implications in our scientific understanding of disease and in turn fundamentally change the ways we manage and treat our patients.

Conflict of Interest
None declared.

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