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REVIEW ARTICLE

Reconsidering Race-Based Medicine in Pediatric Rheumatology: Challenges and Opportunities for Equitable Care

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Despite growing evidence of their limitations, race-based practices in pediatric rheumatology—those that rely on race or ethnicity to influence diagnosis and treatment—continue to shape care, often reinforcing health disparities. The assumption that biologic or genetic differences exist between racial groups oversimplifies complex health issues and perpetuates health inequities. This article examines persistent race-based practices in pediatric rheumatology, particularly in the interpretation of laboratory results and clinical decision-making, and highlights their clinical limitations. For example, the use of race-adjusted formulas in evaluating estimated glomerular filtration rate, pulmonary function tests, and creatine kinase levels can lead to misdiagnoses and delayed interventions, particularly in Black and Asian populations. Additionally, race-based assumptions in diseases like Kawasaki disease and multisystem inflammatory syndrome in children can lead to incorrect conclusions about disease severity and treatment efficacy. This article advocates for a shift toward race-conscious practices that consider the role of social determinants of health and biases in clinical care. It also emphasizes the need for more inclusive research methodologies and diverse representation in clinical trials to enhance the generalizability of findings. By moving away from race-based practices and adopting equity-oriented frameworks, pediatric rheumatologists can better address the needs of marginalized populations and improve health outcomes. This shift is crucial in dismantling systemic disparities and advancing health equity in clinical and research settings.

Introduction

Race-based medicine refers to using a patient's race or ethnicity to guide medical treatment or diagnosis, often based on the assumption that distinct biologic or genetic differences exist among different racial or ethnic groups. This approach is problematic for several reasons. First, it oversimplifies complex health issues by treating race as a biologic determinant, when in fact, race is a social construct that fails to account for individual patient variations. Additionally, relying on race can perpetuate stereotypes and biases, leading to unequal treatment and reinforcing health disparities rather than addressing their root causes.

Furthermore, focusing on race can divert attention from critical social determinants of health, such as socioeconomic status, access to care, and environmental factors, which are often more influential in determining health outcomes.[1–3] Epidemiologic data demonstrating varying rates in those of different races and ethnicities are frequently highlighted in pediatric rheumatology textbooks.[4] Such demographic data may be pertinent in understanding the unequal burden of disease. However, particularly when derived from single-center experiences, which may reflect regional care practices or disparities in access to care, it is too often presented due to genetic predisposition. This misleading data collection and interpretation ultimately hinders the development of effective treatments and public health strategies.

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Steeping our clinical teaching in supposed differences between children of different races and ethnicities may contribute to the development of clinical practices and a research agenda in which race is inappropriately deemed an important driver of developing a disease and its severity. This article describes common race-based practices in pediatric rheumatology that have persisted despite evidence suggesting that they are not clinically appropriate and calls for a re-evaluation of standard-of-care practices and to inform the development of more equitable practices.[5,6]

Examples in laboratory result interpretation

The estimated glomerular filtration rate (eGFR) uses creatine for its calculations; however, Black patients are assigned higher baseline normal levels of creatinine, leading to an overestimation of renal function using the Chronic Kidney Disease Epidemiology Collaboration (CKD-EPI) eGFR calculation or the Modification of Diet in Renal Disease eGFR equation[7–10] and thus a delayed diagnosis of kidney disease or incorrect chronic kidney disease classification and contributing to delayed renal transplant. This may particularly impact Black youth with childhood-onset systemic lupus erythematosus, as higher prevalence of renal disease, worse renal outcomes, and a lower likelihood of receiving a renal transplant have been reported for Black children with lupus nephritis.[11–16] In 2020, the National Kidney Foundation and the American Society of Nephrology announced a task force that discussed this issue and identified a patient-centered solution that did not include race within the calculation equation. The task force supports using the CKD-EPIcr_R equation in all laboratory tests and recommends national efforts to increase the routine and timely use of cystatin C as an additional filtration marker.[10]

Laboratory reference values that have higher creatine kinase (CK) reference values in Black patients in comparison with other populations due to an assumption that Black individuals as a whole have a higher skeletal muscle mass and a higher proportion of fast-twitch muscle fibers compared with other groups of individuals[17,18] may also be detrimental to pediatric rheumatology patients if clinicians potentially dismiss early active myositis or other causes of elevation of CK levels due to race reference values.

Pulmonary function tests (PFTs) use a race correction for Black and Asian patients' reported values,[19] which can result in the misdiagnosis and misclassification of patients, as seen in an observational asthma study in children.[20] In a single-center, cross-sectional study, the race-neutral global reference equations were compared with the race- and ethnicity-specific race equation, which showed that using the race-neutral equation increased the prevalence of respiratory impairment in Black patients.[21] Many rheumatologic conditions such as systemic juvenile idiopathic arthritis, dermatomyositis, vasculitis, sarcoidosis, mixed connective tissue disease, and systemic sclerosis can significantly impair a patient's pulmonary function. It is possible that ensuring the use of PFT laboratory tests that use race-neutral global reference equations in the analysis of PFT results could lead to earlier detection of pulmonary disease.

Differences seen in hemoglobin reference levels also potentially underestimate anemia. In an end-stage renal disease management study, Black and Hispanic patients had lower hemoglobin levels and were less likely to receive erythropoietin-stimulating agents.[22,23] Black patients' reference values for hemoglobin baseline tend to be lower than those of White age- and sex-matched cohorts. The lower reference value seen in Black patients has been attributed to higher rates of diabetes, hypertension, kidney disease, beta or alpha thalassemia trait, sickle cell trait, fibroids, heavy menstrual bleeding, chronic stress, and poor access to nutrition-rich foods (iron and B12).[22]

Examples in clinical medicine

Kawasaki disease was first described in Japan. Despite a very high level of randomized clinical trial evidence for glucocorticoids in Japanese children with Kawasaki disease,[24–26] these practices have not been widely implemented in the United States and elsewhere due to an assumption that non-Asian races may not benefit from this same treatment. Currently, several clinical algorithms include Asian race in determining whether a child receives glucocorticoids when other risk factors for severe disease and coronary artery aneurysm are present.[27,28] This has been extrapolated to infer that those of non-Asian race are at lower risk, including the suggestion that Black race may be a protective factor for coronary artery aneurysms among youths with Kawasaki disease.[29] A small single-center study, which took place at a hospital that served predominantly Black patients, reported lower rates of coronary artery aneurysms in Black children.[29] Black children in this cohort did not experience diagnostic delays, as have been reported elsewhere, suggesting that timely treatment may drive better outcomes.[30]

This tendency to prioritize genetic differences as a potential driver of observed differences in the racial burden of disease was highlighted in the pediatric rheumatology community's response to the development of multisystem inflammatory syndrome in children (MIS-C). Rates of SARS-CoV-2 infection were higher in historically marginalized groups across the globe, including higher rates in Black, Hispanic, and Indigenous populations.[31–33] Social determinants of health including essential worker status, which vary by social class, income, and race, were also shown to impact SARS-CoV-2 infection rates.[34] However, the higher rates of MIS-C in non-White racial groups were repeatedly reported as disproportionate and speculated to have a biologic origin, despite the lack of plausible shared genetic ancestry among such geographic and ancestrally disparate groups.[35,36] Much of the pediatric rheumatology literature continued to speculate about genetic drivers long after epidemiologic data were available to suggest that rates of MIS-C were proportionate to

the burden of acute SARS-CoV-2 infection in these communities.[37] Perhaps in response to this disproportionate focus on biologic differences underlying disparities in outcomes, tremendous resources were devoted to the research of genetic risk factors, in comparison with resources dedicated to addressing inequities in SARS-CoV-2 exposure, vaccination, and testing and treatment of acute infection.

Clinical solutions

The pediatric rheumatology clinic has served as the primary stage on which race-based practices have been implemented without critically questioning their source and scientific rigor. To rectify this, clinical practice in pediatric rheumatology must undergo an intentional shift in redefining standard-of-care practices to ensure that the needs of the diverse populations affected by pediatric rheumatologic diseases are adequately and equitably addressed.

Within the clinical sphere, clinicians can serve as race-equity champions and question when persistent practices may have limited evidence and be based in historically unfounded beliefs and systemic practices. A policy statement by the American Academy of Pediatrics proposed that pediatricians (1) integrate health equity in their continuing medical education, as well as content on the elimination of race-based medicine in lifelong learning and maintenance of certification efforts, and (2) assess their clinical practices for race-based practices and eliminate race-based medicine from their care delivery.[6]

We encourage clinicians and clinical researchers to consider the following points when assessing current practices or developing or applying new or revised clinical algorithms:

1. Whether the need for race correction is based on robust evidence and statistical analyses (ie, with consideration of internal and external validity, potential confounders, and bias), including study samples that are representative of the patient populations for which the clinical algorithm is to be applied.
2. Does the causal mechanism for the proposed "racial" difference justify the application of the race correction or are there other criteria, such as other social determinants, that may better explain the distribution of hypothesized efficacy?
3. What are the health equity implications of implementing the race correction? Will it attenuate or exacerbate existing health inequities?

Examples in research

Although diverse representation in clinical trials is necessary for equitable access to new therapeutics and inclusion throughout the spectrum of research, researchers and clinicians must also be cautious of the use of race and ethnicity in reporting medication efficacy. In the phase 3 Aspreva Lupus Management Study comparing intravenous cyclophosphamide with mycophenolate, a small sample of Black patients who had more renal scarring and hypertension were used to show inferiority of cyclophosphamide compared with mycophenolate among Black patients, but not among other races.[38,39] Within the article, the authors state that "the trial was not designed to be powered to detect an effect of a specific region, race or ethnicity"[39]; however, clinically, rheumatologists may have misinterpreted the data and made the misleading conclusion that Black patients do not respond as well to cyclophosphamide treatments.

Belimumab, one of the first targeted therapies approved for lupus in decades, included relatively few Black patients in its initial successful trial.[40] Two post hoc analyses of these small samples showed conflicting efficacy results. Therefore, due to the lack of clear scientific rationale for why a successful trial in a mixed racial group would not demonstrate similar efficacy among Black patients, a second, smaller trial was undertaken with the same endpoints and exclusively enrolled Black patients. However, this trial failed to meet reductions in disease activity, safety, and efficacy, although overall numeric trends toward improvement were similar to prior studies.[40,41]

When subgroups of racial groups are very small, analyses may be underpowered and researchers should therefore avoid making unsupported inferences. This is particularly worrisome when a non–statistically significant trend, in the absence of a plausible biologic mechanism, is interpreted as evidence that a drug may be less efficacious in patients of some races (typically those from historically marginalized groups, as White patients are rarely underrepresented in clinical trials). Indeed, care must be taken to decide whether to compare across racial and ethnic subgroups at all, as a perception of lower efficacy may contribute to differential access to new therapeutics among patients belonging to minoritized racial groups. Power calculations should guide analyses to minimize spurious and misleading results.

Research solutions

The development of revised standard-of-care practices will need to be based on rigorous research practices to prevent additional racial, ethnic, and other identity-based disparities. There is a rich body of scholarly work that can be used to frame efforts to enhance equity from a research perspective.

Methodologies. The development of alternatives to race-based practices in pediatric rheumatology will require input from diverse research and clinical teams to increase representativeness across participants and researchers. Research methods that focus on the voice and participation of individuals from marginalized communities should be implemented to ensure that the resulting research is representative of the lived experiences and

disease progression of the most affected populations. These could be fundamental in identifying alternatives to current race-based practices in pediatric rheumatology.

- Community-based participatory approaches: community engagement with those who are the focus of the research to aid in the development of, implementation of, and insight generation into the research process.[42]
- Explanatory- or exploratory-designed mixed-methods approach: define a problem either quantitatively or qualitatively first, then use results to implement a second-phase study that addresses the problems defined in the first phase.

Equity-oriented frameworks. Equity-oriented frameworks are approaches to knowledge production that ask questions, develop research projects, and analyze and disseminate data from a social justice value orientation. These frameworks are useful for countering science's complicity with racist oppression and assist researchers in identifying and correcting agendas in research that support white supremacy.[43] Although many equity-oriented frameworks have been developed, feminist standpoint theory and intersectionality represent two valuable frameworks for enhancing racial equity in pediatric rheumatology practice and research.

- Intersectionality in medical research is a framework that recognizes how various aspects of a person's identity—such as race, gender, age, sexual orientation, socioeconomic status, and disability—interact to shape their health experiences and outcomes. For example, structural-level issues such as racism and sexism influence individual-level outcomes in health in impacted people.[44,45]
- Feminist standpoint theory in medical research focuses on understanding health issues from the perspectives of women and marginalized groups. It argues that people's social backgrounds, such as gender, race, and economic status, shape experiences and insights about health and challenges the idea of objective knowledge in medicine, suggesting that traditional medical research often reflects the biases of those in power, primarily White, male researchers.[43,46–48]

Publication. Publication of scientific work can be a space in which race-based practices are perpetuated and therefore serves as a point of intervention that can be leveraged to support the dissemination and adoption of equitable clinical practices in pediatric rheumatology. A recent commentary by editors of multiple biomedical journals has highlighted the need for systematic changes in the reporting of race and ethnicity in genetic and genomic research.[49] Multiple leading biomedical journals have implemented protocols around the acknowledgment of race and ethnicity as social constructs and the reporting of race and ethnicity in their publication guidelines.[50,51] A review by Gilliam et al reported that almost 50% of 126 identified published US pediatric clinical practice guidelines contained language around race that could negatively affect health care inequities.[52] A primary barrier to the dissemination of equitable practices is the inconsistent practices around reporting and interpreting results based on race and ethnicity. Researchers should carefully consider how race and ethnicity are presented, how results stratified by race are interpreted, the representativeness of the participant sample, the impact of missing data, and other indicators that may reduce the generalizability of results.[53,54] Researchers should be careful not to conclude that outcomes are based on biology when systemic and structural racism may be driving the disparities noted in research studies. Ensuring rigorous research and publication practices in the effort to inform clinical practice can support equitable practices in the clinic. However, elimination of race-based medicine does not mean that we should not continue to collect race and ethnicity data and highlight and increase diversity in research.

Conclusions

In this article, we promote alternatives to race-based practices—namely, race-conscious practices in which clinicians consider the racialized systems that contribute to disease presentation and racialized biases in care.[54,55] Addressing and eliminating racial and ethnic health inequities associated with race-based practices in pediatric rheumatology requires a willingness to dismantle practices ingrained in the pediatric rheumatology pedagogy and to design and conduct research that prioritizes participant representation as a means to promote scientific rigor. We hope that by taking steps toward race-conscious practices and away from race-based practice in the clinic and research, we will continue to advance health equity and the field of pediatric rheumatology.

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Although we acknowledge the importance of inclusive language, we aim to communicate in a manner that prioritizes clarity and accessibility for a broad audience and utilizes terminology used in referenced studies. We recognize that terminology can evolve, and we encourage readers to engage critically with the content and consider the context in which language is used. Our commitment is to foster understanding and respect for all individuals, regardless of their racial or ethnic backgrounds.

AUTHOR CONTRIBUTIONS

All authors contributed to at least one of the following manuscript preparation roles: conceptualization AND/OR methodology, software, investigation, formal analysis, data curation, visualization, and validation AND drafting or reviewing/editing the final draft. As corresponding author, Dr Balmuri confirms that all authors have provided the final approval of the version to be published and takes responsibility for the

affirmations regarding article submission (eg, not under consideration by another journal), the integrity of the data presented, and the statements regarding compliance with institutional review board/Declaration of Helsinki requirements.

REFERENCES

1. Amutah C, Greenidge K, Mante A, et al. Misrepresenting race - the role of medical schools in propagating physician bias. N Engl J Med 2021;384(9):872–878.
2. Lujan HL, DiCarlo SE. The racist "one drop rule" influencing science: it is time to stop teaching "race corrections" in medicine. Adv Physiol Educ 2021;45(3):644–650.
3. Smedley A, Smedley BD. Race as biology is fiction, racism as a social problem is real: anthropological and historical perspectives on the social construction of race. Am Psychol 2005;60(1):16–26.
4. Petty RE, Laxer RM, Lindsley CB, et al. Textbook of Pediatric Rheumatology. Elsevier Health Sciences; 2020.
5. Cerdeña JP, Plaisime MV, Tsai J. From race-based to race-conscious medicine: how anti-racist uprisings call us to act. Lancet 2020; 396(10257):1125–1128.
6. Wright JL, Davis WS, Joseph MM, et al; AAP Board Committee on Equity. Eliminating race-based medicine. Pediatrics 2022;150(1): e2022057998.
7. Levey AS, Stevens LA, Schmid CH, et al; CKD-EPI (Chronic Kidney Disease Epidemiology Collaboration). A new equation to estimate glomerular filtration rate. Ann Intern Med 2009;150(9):604–612.
8. Eneanya ND, Yang W, Reese PP. Reconsidering the consequences of using race to estimate kidney function. JAMA 2019;322(2):113–114.
9. Yan G, Nee R, Scialla JJ, et al. Estimation of Black-White disparities in CKD outcomes: comparison using the 2021 versus the 2009 CKD-EPI creatinine equations. Am J Kidney Dis 2022;80(3):423–426.
10. Delgado C, Baweja M, Crews DC, et al. A unifying approach for GFR estimation: recommendations of the NKF-ASN Task Force on reassessing the inclusion of race in diagnosing kidney disease. Am J Kidney Dis 2022;79(2):268–288.e1.
11. Hiraki LT, Feldman CH, Liu J, et al. Prevalence, incidence, and demographics of systemic lupus erythematosus and lupus nephritis from 2000 to 2004 among children in the US Medicaid beneficiary population. Arthritis Rheum 2012;64(8):2669–2676.
12. Hiraki LT, Benseler SM, Tyrrell PN, et al. Ethnic differences in pediatric systemic lupus erythematosus. J Rheumatol 2009;36(11):2539–2546.
13. Alarcón GS, McGwin G Jr, Bartolucci AA, et al; LUMINA Study Group. Lupus in Minority Populations, Nature versus Nurture. Systemic lupus erythematosus in three ethnic groups. IX. Differences in damage accrual. Arthritis Rheum 2001;44(12):2797–2806.
14. Chang JC, Sears C, Torres V, et al. Racial disparities in renal outcomes over time among hospitalized children with systemic lupus erythematosus. Arthritis Rheumatol 2022;74(8):1430–1439.
15. Tucker LB, Uribe AG, Fernández M, et al. Adolescent onset of lupus results in more aggressive disease and worse outcomes: results of a nested matched case-control study within LUMINA, a multiethnic US cohort (LUMINA LVII). Lupus 2008;17(4):314–322.
16. Hiraki LT, Lu B, Alexander SR, et al. End-stage renal disease due to lupus nephritis among children in the US, 1995-2006. Arthritis Rheum 2011;63(7):1988–1997.
17. George MD, McGill NK, Baker JF. Creatine kinase in the U.S. population: impact of demographics, comorbidities, and body composition on the normal range. Medicine (Baltimore) 2016;95(33): e4344.
18. Black HR, Quallich H, Gareleck CB. Racial differences in serum creatine kinase levels. Am J Med 1986;81(3):479–487.
19. Braun L. Race, ethnicity and lung function: a brief history. Can J Respir Ther 2015;51(4):99–101.
20. Burbank AJ, Atkinson CE, Espaillat AE, et al. Race-specific spirometry equations may overestimate asthma control in Black children and adolescents. Respir Res 2023;24(1):203.
21. Moffett AT, Bowerman C, Stanojevic S, et al. Global, race-neutral reference equations and pulmonary function test interpretation. JAMA Netw Open 2023;6(6):e2316174.
22. Merz LE, Siad FM, Creary M, et al. Laboratory-based inequity in thrombosis and hemostasis: review of the evidence. Res Pract Thromb Haemost 2023;7(2):100117.
23. Weisbord SD, Fried LF, Mor MK, et al. Associations of race and ethnicity with anemia management among patients initiating renal replacement therapy. J Natl Med Assoc 2007;99(11):1218–1226.
24. Kobayashi T, Saji T, Otani T, et al; RAISE study group investigators. Efficacy of immunoglobulin plus prednisolone for prevention of coronary artery abnormalities in severe Kawasaki disease (RAISE study): a randomised, open-label, blinded-endpoints trial. Lancet 2012; 379(9826):1613–1620.
25. Kobayashi T, Inoue Y, Otani T, et al. Risk stratification in the decision to include prednisolone with intravenous immunoglobulin in primary therapy of Kawasaki disease. Pediatr Infect Dis J 2009;28(6): 498–502.
26. Inoue Y, Okada Y, Shinohara M, et al. A multicenter prospective randomized trial of corticosteroids in primary therapy for Kawasaki disease: clinical course and coronary artery outcome. J Pediatr 2006; 149(3):336–341.
27. Gorelik M, Chung SA, Ardalan K, et al. 2021 American College of Rheumatology/Vasculitis Foundation guideline for the management of Kawasaki disease. Arthritis Care Res (Hoboken) 2022;74(4): 538–548.
28. Son MBF, Gauvreau K, Tremoulet AH, et al. Risk model development and validation for prediction of coronary artery aneurysms in Kawasaki disease in a North American population. J Am Heart Assoc 2019; 8(11):e011319.
29. Porcalla AR, Sable CA, Patel KM, et al. The epidemiology of Kawasaki disease in an urban hospital: does African American race protect against coronary artery aneurysms? Pediatr Cardiol 2005;26(6): 775–781.
30. Padilla LA, Collins JL, Idigo AJ, et al. Kawasaki disease and clinical outcome disparities among Black children. J Pediatr 2021;229:54–60.e2.
31. Wu SL, Mertens AN, Crider YS, et al. Substantial underestimation of SARS-CoV-2 infection in the United States. Nat Commun 2020; 11(1):4507.
32. Gaffney AW, Himmelstein D, Bor D, et al. Home sick with coronavirus symptoms: a national study, April-May 2020. J Gen Intern Med 2020; 35(11):3409–3412.
33. Acosta AM, Garg S, Pham H, et al. Racial and ethnic disparities in rates of COVID-19-associated hospitalization, intensive care unit admission, and in-hospital death in the United States from March 2020 to February 2021. JAMA Netw Open 2021;4(10):e2130479.
34. Goyal MK, Simpson JN, Boyle MD, et al. Racial and/or ethnic and socio-economic disparities of SARS-CoV-2 infection among children. Pediatrics 2020;146(4):e2020009951.
35. Stierman B, Abrams JY, Godfred-Cato SE, et al. Racial and ethnic disparities in multisystem inflammatory syndrome in children in the United States, March 2020 to February 2021. Pediatr Infect Dis J 2021;40(11):e400–e406.
36. Feldstein LR, Rose EB, Horwitz SM, et al. Multisystem inflammatory syndrome in U.S. children and adolescents. N Engl J Med 2020; 383(4):334–346.

37. Encinosa W, Moon K, Figueroa J, et al. Complications, adverse drug events, high costs, and disparities in multisystem inflammatory syndrome in children vs COVID-19. JAMA Netw Open 2023;6(1): e2244975.
38. Appel GB, Contreras G, Dooley MA, et al; Aspreva Lupus Management Study Group. Mycophenolate mofetil versus cyclophosphamide for induction treatment of lupus nephritis. J Am Soc Nephrol 2009; 20(5):1103–1112.
39. Isenberg D, Appel GB, Contreras G, et al. Influence of race/ethnicity on response to lupus nephritis treatment: the ALMS study. Rheumatology (Oxford) 2010;49(1):128–140.
40. Furie R, Petri M, Zamani O, et al; BLISS-76 Study Group. A phase III, randomized, placebo-controlled study of belimumab, a monoclonal antibody that inhibits B lymphocyte stimulator, in patients with systemic lupus erythematosus. Arthritis Rheum 2011;63(12):3918–3930.
41. Ginzler E, Guedes Barbosa LS, D'Cruz D, et al. Phase III/IV, randomized, fifty-two-week study of the efficacy and safety of belimumab in patients of Black African ancestry with systemic lupus erythematosus. Arthritis Rheumatol 2022;74(1):112–123.
42. Brockman TA, Shaw O, Wiepert L, et al. Community engagement strategies to promote recruitment and participation in clinical research among rural communities: a narrative review. J Clin Transl Sci 2023; 7(1):e84.
43. Harding S. Science and Social Inequality: Feminist and Postcolonial Issues. University of Illinois Press; 2006.
44. Collins PH. Learning from the outsider within: the sociological significance of Black feminist thought. Soc Probl 1986;33(6):s14–s32.
45. Collins PH. Bilge S. Intersectionality. John Wiley & Sons; 2020.
46. Cho S, Crenshaw KW, McCall L. Toward a field of intersectionality studies: theory, applications, and praxis. Signs (Chic) 2013;38(4): 785–810.
47. Harding S. Whose Science? Whose Knowledge? Thinking From Women's Lives. Cornell University Press; 1991.
48. Harding SG. The Science Question in Feminism. Cornell University Press; 1986.
49. Feero WG, Steiner RD, Slavotinek A, et al. Guidance on use of race, ethnicity, and geographic origin as proxies for genetic ancestry groups in biomedical publications. JAMA 2024;331(15):1276–1278.
50. Woo JMP, Simmonds F, Dennos A, et al; CARRA Registry investigators. Health equity implications of missing data among youths with childhood-onset systemic lupus erythematosus: a proof-of-concept study in the Childhood Arthritis and Rheumatology Research Alliance Registry. Arthritis Care Res (Hoboken) 2023;75(11):2285–2294.
51. Flanagin A, Frey T, Christiansen SL; AMA Manual of Style Committee. Updated guidance on the reporting of race and ethnicity in medical and science journals. JAMA 2021;326(7):621–627.
52. Gilliam CA, Lindo EG, Cannon S, et al. Use of race in pediatric clinical practice guidelines: a systematic review. JAMA Pediatr 2022;176(8): 804–810.
53. Swilley-Martinez ME, Coles SA, Miller VE, et al. "We adjusted for race": now what? A systematic review of utilization and reporting of race in American Journal of Epidemiology and Epidemiology, 2020-2021. Epidemiol Rev 2023;45(1):15–31.
54. AMA Manual of Style Committee. AMA Manual of Style: A Guide for Authors and Editors. Oxford University Press; 2020.
55. Cerdeña J, Plaisime MV, Belcher HME, et al. A PLAN for race-conscious medicine in pediatrics. Pediatrics 2024;153(3): e2023061893.