

**ADVANCING AND STRENGTHENING RACIAL EQUITY, DIVERSITY, AND INCLUSION
IN THE BIOMEDICAL RESEARCH WORKFORCE AND ADVANCING HEALTH
DISPARITIES AND HEALTH EQUITY RESEARCH
(RESPONSE TO RFI NOT-OD-21-066)**

**Submitted by: The Fitzhugh Mullan Institute for Health Workforce Equity
and the Beyond Flexner Alliance**

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Fitzhugh Mullan
Institute for Health
Workforce Equity

THE GEORGE WASHINGTON UNIVERSITY



The Fitzhugh Mullan Institute for Health Workforce Equity at the George Washington University aims to strengthen health workforce policies in the United States and around the world. We do this through research, education, and promoting action in health workforce equity. The Beyond Flexner Alliance, housed in the Mullan Institute, focuses on advancing social mission in health professions education, defined as the contribution of a school in its mission, programs, and the performance of its graduates, faculty and leadership in advancing health equity and addressing the health disparities of the society in which it exists.

Racial equity, diversity, and inclusion are core to the issues of health workforce equity - how the health workforce addresses (or maintains) health disparities. The biomedical research workforce is particularly important as these researchers often make up the faculty of health professions education programs and NIH funding influences academic success and career advancement. Our recently released Health Workforce Diversity Tracker demonstrates we have significant work to do in addressing health workforce diversity. For example, in the 10 professions assessed, the representation of Black healthcare workers in the current workforce and in the educational pipeline was approximately half the comparable US population, and in 5 out of 10 professions, representation of Black graduates was lower than in the current workforce.¹

We commend the NIH for seeking to act in this important area. In light of ongoing challenges with health workforce diversity, equity, and inclusion in the educational pipeline and into practice, we offer the following ideas:

1. INCREASE FUNDING FOR HEALTH DISPARITIES AND HEALTH EQUITY RESEARCH

Health disparities occur across health and disease states (across NIH Institutes) and cause a disproportionate amount of morbidity and mortality suffered by communities of color and other historically marginalized communities. Yet, NIH funding for NIMHD remains small compared to other Institutes. **Targeted funding should be increased to NIMHD. In addition, funding opportunities across Institutes focused on disparities and health equity should be tracked and increased.**

Health disparities are rooted in systemic and structural racism. Examples include the use of race/ethnicity in clinical algorithms² and recent research demonstrating organization level disparities in access to specialized heart failure care associated with disparate outcomes for Black

¹ Salsberg E, Richwine C, Westergaard S, et al. Estimation and Comparison of Current and Future Racial/Ethnic Representation in the US Health Care Workforce. JAMA Netw Open. 2021;4(3):e213789.

² Vyas DA, Eisenstein LG, Jones DS. Hidden in Plain Sight — Reconsidering the Use of Race Correction in Clinical Algorithms. N Engl J Med 2020; 383:874-882.

and Latinx patients.³ Even when the experience of discrimination and bias is at the individual level, systems (including organizational, local, state, and national policies) either promote/allow this behavior or can act to address and dismantle racism. **NIH funding should prioritize research that aims to understand and address these systemic causes of health disparities.**

NIH should also prioritize research areas, including prevention and health disparities, that are important to diverse investigators. Asian and black women are less likely to receive NIH awards.⁴ This outcome is likely related to a combination of gender, race, investigators being earlier career (which is also related to gender and race), and the focus of their research on more prevention on health disparities.⁵ In addition, to an increased focus on health disparities research, funding should be increased in areas of interest for these investigators, and not only to increase opportunity and diversity of the workforce, but because prevention will be a critical area for improving health.

NIH should fund research to understand the causes for the ongoing underrepresentation of faculty and investigators of color, and test new programs, strategies, and policies for addressing this issue. The NIH FIRST award is an excellent example of this kind of investment. However, it only plans to award 12 total awards to support a faculty cohort approach that will implement and be evaluated over eight years. More can and should be done in this area.

NIH should work with AHRQ, HRSA, and other federal agencies to coordinate and maximize efforts across relevant areas. Federal agencies should also explore how to confidentially link data with other non-federal data to significantly expand analytic and evaluation potential. For example, the Institute for Research on Innovation & Science (IRIS) UMetrics⁶ effort linked Census and IRS tax data with university data on PhD students to conduct longitudinal analysis of doctoral students' earning potential and employment settings after graduation.⁷ This approach could be adapted to evaluate efforts to advance and strengthen diversity, equity and inclusion in the biomedical research workforce.

³ Eberly LA, Richterman A, Beckett AG, et al. Identification of Racial Inequities in Access to Specialized Inpatient Heart Failure Care at an Academic Medical Center. *Circulation: Heart Failure*. 2019;12:e006214.

⁴ Ginther DK, Kahn S, Schaffer WT. Gender, Race/Ethnicity, and National Institutes of Health R01 Research Awards: Is There Evidence of a Double Bind for Women of Color? *Acad Med*. 2016;91(8):1098-1107.

⁵ Hoppe TA, Litovitz A, Willis KA, et al. Topic choice contributes to the lower rate of NIH awards to African-American/black scientists. *Science Advances*. 2019;5(10):eaaw7238

⁶ <https://www.openicpsr.org/openicpsr/project/100605/version/V2/view>

⁷ Zolas N, Goldschlag N, Jarmin R, et al. Wrapping it up in a person: Examining employment and earnings outcomes for PhD recipients. *Science*. 2015;350(6266):1367-71.

2. INSTITUTE POLICIES AND PROGRAMS TO PROMOTE A DIVERSE BIOMEDICAL RESEARCH WORKFORCE

NIH funding influences institutional culture. What, who and how NIH funds influences institutional culture – from a focus on highly specialized care over primary care and prevention to maintenance of the status quo power structure (e.g. NIH funding is negatively associated with social mission outcomes⁸ and Black and Asian women are less likely to receive NIH awards). In addition to changing the focus of what NIH funds (above), NIH should:

Consider and award points for diversity in study teams and DEI metrics for applying organizations. Not only would this policy aim to directly support increased diversity in the research workforce, true diversity will bring the diversity of experiences and perspectives needed to generate important questions, interpret and understand nuanced findings, and translate research into meaningful change. Consideration of diversity, in addition to other review factors, is in the best interest of the government. NIH should consider DEI metrics in making awards. These metrics may include structural (e.g. organization DEI accountability procedures), process (e.g. DEI survey completion rates), and outcome (e.g. diverse student/faculty/leadership) measures. Projects might be required to report their Rank Equity Index as used by Fassiotto, et al.⁹ NIH should start by establishing such metrics and require submission, as well as public reporting, to be eligible for NIH funding. NIH should also consider testing new models of funding, such as grant lotteries¹⁰, which require applicants meet a level of minimum requirements but then select based on lottery to reduce the bias towards established researchers (who are likely to be white and male due to historical trends).

NIH should award points for applicants who offer mentorships, paid internships, and fellowships to under-represented minorities. In addition, allowable costs for grantees should include costs of mentorships, paid internships and fellowships for disadvantaged populations. Grantees should be encouraged to partner with local high schools in underserved communities to offer paid internships, and NIH should work with the civil service system and grantees to assure career steps that allow for career progression. Adding additional career steps will assist non-traditional students.

NIH should invest funds and create programs to enhance infrastructure that will help new organizations and investigators be successful. Organizational capacity (e.g. offices of research, grant writing support, grants management) varies widely across institutions and disadvantages

⁸ Mullan F, Chen C, Petterson S, et al. The Social Mission of Medical Education: Ranking the Schools. *Ann Int Med.* 2010;152(12):804-11.

⁹ Fassiotto M, Flores B, Victor, et al. Rank Equity Index: Measuring Parity in the Advancement of Underrepresented Populations in Academic Medicine. *Acad Med.* 2020;95(12):1844-52.

¹⁰ Adam D. Science funders gamble on grant lotteries. *Nature.* Nov 20, 2019.

some organizations and researchers in their ability and success in applying for NIH awards, and NIH should invest in developing new organizations and investigators.

NIH should increase mentorship programs and offer paid internships for minority college students interested in STEM careers. An example of a successful mentorship program is the Health Disparities Research Institute (HDRI) hosted by the National Institute on Minority Health and Health Disparities (NIMHD), which supports the research career development of promising early-career minority health and health disparities research scientists.

NIH should establish DEI metrics and accountability for their own funding and activities and make those publicly available annually. The research conducted by Dr. Ginther and her colleagues is one of the main reasons that conversations around racial/ethnic disparities in NIH funding were reinvigorated. The NIH should also consider funding positions in each of the 27 NIH institutes and centers that are specifically dedicated to examining and advancing each institute's progress in increasing funding among investigators from marginalized populations.

3. IMPROVE DATA COLLECTION

NIH should work across the federal government to support better data on the racial and ethnic diversity (and social determinants) for communities, including the research and health workforce. For example, the National Plan & Provider Enumeration System (NPPES) is proposing collection of race/ethnicity data, however, the NPPES is limited in what workforce is included, accuracy, and updating. Further, HHS has indicated they will not make race/ethnicity information publicly available, which will significantly limit the ability of researchers to examine questions such as whether and how racial concordance and workforce diversity affect patient outcomes.

Prepared by: Candice Chen, MD MPH, Clese Erikson, MPAff, Edward Salsberg, MPH, Leigh Anne Butler, EMT-B, Randl Dent, PhD MS, Sonal Batra, MD

Contact Information:

2175 K Street, NW, Suite 250

Washington, DC 20037

Tel. (202) 994-3424

E-mail: gwmi@gwu.edu

Fitzhugh Mullan
Institute for Health
Workforce Equity

THE GEORGE WASHINGTON UNIVERSITY

