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National Institutes of Health
9000 Rockville Pike
Bethesda, Maryland 20892

**RE: Request for Information (RFI): Inviting Comments and Suggestions on the Draft NIH Chief Officer for Scientific Workforce Diversity Strategic Plan for FYs 2022-2026 (NOT-OD-22-054)**

*Submitted electronically at COSWDStrategicPlan@nih.gov*

The Association of American Medical Colleges (AAMC) appreciates the opportunity to provide feedback to the National Institutes of Health (NIH) on the Chief Officer for Scientific Workforce Diversity (COSWD) Strategic Plan (SP) for FYs 2022-2026. The NIH's vision of fostering inclusive excellence in the biomedical workforce is well-aligned with the AAMC's mission. Specifically, the AAMC's strategic plan seeks to create more inclusive, equitable environments in the research community, medical schools, and teaching hospitals, so they can better attract and advance a diverse workforce and improve the health of all people.

The AAMC is a nonprofit association dedicated to transforming health through medical education, health care, medical research, and community collaborations. Its members are all 155 accredited U.S. and 17 accredited Canadian medical schools; approximately 400 teaching hospitals and health systems, including Department of Veterans Affairs medical centers; and more than 70 academic societies. Through these institutions and organizations, the AAMC leads and serves America's medical schools and teaching hospitals and the millions of individuals employed across academic medicine, including more than 186,000 full-time faculty members, 94,000 medical students, 145,000 resident physicians, and 60,000 graduate students and postdoctoral researchers in the biomedical sciences.

It is our understanding that the COSWD serves as the agency's thought leader in the science of scientific workforce diversity, using evidence-based approaches to catalyze cultures of inclusive excellence. We are pleased that the COSWD SP will enable the NIH and NIH-funded institutions to benefit from a full range of talent in biomedical science. In addition to the COSWD SP, the AAMC recognizes and commends the NIHs' prioritization of Diversity, Equity, Inclusion and Accessibility (DEIA) in both the intramural and extramural communities, including the UNITE initiative to address structural racism and the NIH (DEIA) strategic plan. These NIH-wide initiatives occur amidst the national backdrop of overdue social change spurred by persistent racial and social inequities and injustices, and the AAMC commends the NIH for advancing inclusive excellence during this critical time.

As with all evidence-based inquiries, identifying barriers and pitfalls that could potentially thwart the successful facilitation of inclusive excellence will be crucial. The AAMC has therefore garnered perspectives from the academic medicine community[1] to aid the NIH as they undertake this extensive mission.

The AAMC submits comments to this five-year SP to address the specific sections of this RFI:

1. *Three key goals—build, disseminate, and act on the evidence to advance scientific workforce diversity—including benefits, challenges, or alternative or additional goals for consideration.*
2. *Cross-cutting strategies—collaborations, accountability, and evaluation—to be leveraged to pursue the goals, including benefits, challenges, or alternative or additional strategies that may be considered.*

Below, we comment on both the goals and the strategies outlined in the draft COSWD SP, highlighting barriers, suggestions, and comments.

**Build the Evidence**

*Conceptualizing Diversity*

We commend the NIH for operationalizing and clearly defining "diversity" (pg.10, COSWD Draft SP).[2] Essential to 'building the evidence' is setting up clear expectations regarding what constitutes 'diversity', as many divergent definitions and parameters of "diversity" currently abound. A clear definition of diversity is critical for evaluating metrics and outcomes; but also lays the groundwork for preventing conflicting or misleading results and interpretations. We believe the NIH has set forth a specific and clearly defined mechanism to conceptualize "diversity". Consistent with the definition outlined in NO-03-20-081[3], we use the term "diversity" to refer to underrepresented populations in the U.S. biomedical, clinical, behavioral and social sciences research enterprise.

We likewise commend the NIH for recognizing and capturing the broad dimensions of diversity, such as those in the military, those that have experienced homelessness, and individuals that hail from rural populations. We urge the NIH to examine how multiple, intersecting identities can amplify the barriers faced by historically excluded, minorized and marginalized individuals[4]. For example, not *all* women benefit equally from the progress of *some* women.[5, 6] Thus, even *within* a diverse group of individuals, recognizing and building a framework that captures multiple, intersecting identities is crucial. Lastly, we urge the NIH to continue to develop and implement specific initiatives for populations that have been historically excluded, marginalized, and underrepresented, including those of various racial and ethnic backgrounds.

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[1] Including the following AAMC professional development groups: the Group on Research Advancement and Development (GRAND); the Group on Research, Education and Training (GREAT); the Group on Women in Medicine and Science (GWIMS); the Group on Faculty Affairs (GFA); and the Group on Diversity and Inclusion (GDI)

[2] NIH Chief Officer for Scientific Workforce Diversity Strategic Plan Draft

[3] NOT-OD-20-031: Notice of NIH's Interest in Diversity

[4] Rooted in Black feminist scholarship, intersectionality is the perspective that various "social categories various "social categories (e.g. race, gender, sexual orientation) are not independent and unidimensional" but rather intersect "at the micro level of individual experience to reflect interlocking systems of privilege and oppression (i.e., racism, sexism, heterosexism, classism) at the macro social structural level." (Crenshaw, 1994; Bowleg, 2012)

[5] Lautenberger D, Dandar V (2020). The state of women in academic medicine 2018-2019: Exploring pathways to equity. J Assoc Am Med Coll. Available at: https://store.aamc.org/downloadable/download/sample/sample_id/330/

[6] Ginther DK, Schaffer WT, Schnell J, et al. Race, ethnicity, and NIH research awards. *Science*. 2011;333(6045):1015-1019. doi:10.1126/science.1196783

*Capitalize on pre-existing evidence*

It is important to note that there is a wealth of pre-existing evidence about the diversity of our biomedical workforce[5,7,8]. For example, data shows that the pandemic has disproportionately affected women in science, technology, engineering, medicine, and mathematics discipline (STEMM). Data likewise highlight inequities in the distribution of NIH research project grant funding mechanisms[5]. To date, existing reports provide data on the climate, culture, and consequences of sexual harassment of women in STEMM[9] as well as the state of women, minorities, and persons with disabilities in STEM[10]. In addition to identifying ways to build *new* evidence, the AAMC urges the NIH to synthesize the wealth of pre-existing information, much of which stratifies for race, gender, and other identifiers.

*Identify outstanding gaps and questions*

There are important gaps in our understanding of the biomedical workforce. For example, metrics on the postdoctoral (postdoc) workforce are not currently measured in a reliable way. Postdocs represent a critical developmental step in the workforce. Though some institutional reporting exists, without standardized and reliable data, it is hard to effectively gauge the number, impact, and progression of postdocs as they transition into academic jobs or other careers. The AAMC urges the NIH to think strategically about what outstanding gaps and questions in the biomedical workforce need to be addressed. This is an opportune time to implement such areas into the COSWD SP.

In addition to those embedded above, our specific recommendations on 'Building the Evidence' are as follows:

1. Continue to have and use a clear mechanism to define and operationalize 'diversity'.
2. Embrace and reflect the multiple identities that individuals may choose to declare. This is essential in making sure that individuals are not distilled down to a singular attribute or monolithic category; but rather, are allowed to embrace the nuances that emerge from intersectional identities.
3. Capitalize on pre-existing evidence demonstrating key trends and conclusions regarding scientific workforce diversity.

**Disseminate the Evidence**

The NIH has a range of effective mechanisms to bolster scientific workforce diversity, such as training grants and minority supplements to enhance diversity. The AAMC believes that the key challenge will be ensuring that these and other mechanisms that arise from the COSWD SP are broadly known. The main challenge of implementing the COSWD SP will be in disseminating the information.

Our specific recommendations on 'Disseminating the Evidence' are as follows:

1. Provide data on the outcomes of programs (for example, what interventions work and what does not work) such as training grants, thereby empowering the biomedical research community to drive their own efforts in bolstering the diversity of the workforce. Knowing the success of programs such as 'Building Infrastructure Leading to Diversity' (BUILD) would be advantageous to interested parties. The AAMC recognizes the *Extramural Nexus* as an important source that condenses data in a

[7] NIH Extramural Nexus: Inequalities in the Distribution of National Institutes of Health Research Project Grant Funding
[8] NIH Workforce Profile
[9] National Science Foundation: National Center for Science and Engineering Statistics. (2021). Women, Minorities, and Persons with Disabilities in Science and Engineering. https://ncses.nsf.gov/pubs/nsf21321/report
[10] National Academies of Sciences, Engineering, and Medicine (2018). Sexual Harassment of Women: Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine. Washington, DC: The National Academies Press. Available at: https://doi.org/10.17226/24994

digestible format. We encourage the NIH to continue to likewise publish outcomes from other programs and initiatives. This dissemination of information will be key to the COSWD SP success; and will allow institutions to pivot their approaches accordingly. The NIH has a wealth of data and the effective dissemination of such data in a way that is 1) easy for individuals to find and 2) accessible to implement locally will allow institutions and individuals to benchmark their success and evaluate the outcomes. Like the Health Resources and Services Administration (HRSA), the AAMC recommends reporting and dissemination of data that is consistent among the NIH Institutes.

2. As the nation's biomedical engine, the NIH is in a unique position to highlight and showcase successful and exemplary programs, institutes and/or institutions for inclusive excellence, such as Rochester Institute of Technology[11], the Morehouse School of Medicine[12], and the Howard Hughes Medical Institute's collaborative and pioneering model of Inclusive Excellence[13]. In this way, the NIH can reinforce best practices, and allow the community to learn from each other.

**Act on the Evidence**

The unequal impact of the ongoing COVID-19 pandemic, in which marginalized and disadvantaged populations continue to suffer disproportionately, likewise extends to the biomedical workforce. For example, the COVID-19 pandemic has disrupted the careers of women in STEMM fields, the effect of which has been especially acute for academic mothers[14]. Evidence has shown that professional women still bear an excess burden of housework and childcare[14] and are more affected by unique disruptors like the COVID-19 pandemic. Pandemic disruptions have not yet been seen in their entirety. For example, early analyses from 2020 suggest that female academics are publishing fewer preprints and starting fewer research projects than their male peers[15]. This will no doubt shape the future progress of women and impact careers for years, if not decades, to come. When collecting and 'acting on the data', it is critical that the NIH continue to evaluate data in the context of a national pandemic[16], and proactively have mechanisms[17,18,19,20] in place to help individuals from groups that are disproportionately impacted by the pandemic[21]. The AAMC urges the NIH to think about *how* the COSWD SP will be implemented in the face of a pandemic.

The following section addresses two of the **three key strategies** laid out by the COSWD SP – collaboration and accountability.

**Collaboration**

[11] RIT HHMI Inclusive Excellence,
[12] MSM Recognized with Inaugural ACGME Diversity and Inclusion Award
[13] HHMI: Inclusive Excellence
[14] Minello A (2020). The pandemic and the female academic. Nature. https://doi.org/10.1038/d41586-020-01135-9
[15] *Nature*. 2020. Are women publishing less during the pandemic? Here's what the data say.
[16] Bernard M, Lauer M (2021). The Impact of COVID-19 on the Extramural Scientific Workforce—Outcomes from an NIH led survey. National Institutes of Health Extramural Nexus. Available at: https://nexus.od.nih.gov/all/2021/03/25/the-impact-of-the-covid-19-pandemic-on-the-extramural-scientific-workforce-outcomes-from-an-nih-led-survey/
[17] *ACS*. 2021. Turning the Tide for Academic Women in STEM: A Post pandemic Vision for Supporting Female Scientists
[18] AAMC. Workforce: Women of Color Initiative
[19] Tilghman S, Bruce A, Colón-Ramos D, Dzirasa K, Kimble J, Varmus H (2021). Concrete Steps to Diversify the Scientific Workforce. Science 372,133–135.
[20] National Academies of Sciences, Engineering, and Medicine (2020). Promising Practices for Addressing the Underrepresentation of Women in Science, Engineering, and Medicine: Opening Doors. Washington, DC: The National Academies Press. Available at: https://doi.org/10.17226/25585.
[21] NYT. 2021. Could the Pandemic Prompt an 'Epidemic of Loss' of Women in the Sciences?

The COSWD Draft SP specifies that collaborations will be used as a strategy to "enhance programs' depth and reach while creating a more integrated culture of DEIA across the biomedical workforce. The COSWD will enhance and expand internal and external collaborations to inform, communicate, and implement evidence-based practices."

Our specific recommendations on 'Collaborations' are as follows:

- Invest in robust continuity between programs that support various stages of the biomedical workforce (e.g., K-12, predoctoral, postdoctoral). The concept of 'team science' or 'collaborative medicine' in which an oncologist and cardiologist work together to deliver the best quality of care to the patient is an apt analogy. Greater synergy among programs – coupled with transparent, traceable data - will no doubt fuel collaboration by enabling individuals to better act on evidence based-strategy.
- We urge the NIH to catalyze the wisdom and lived experiences of those who have and are experiencing barriers to inclusivity, equity, belonging, and accessibility. Fundamentally, a framework built without community trust cannot sustain meaningful and sustained diversity[22]. It is important to note that experts are embedded *within* the community, and in listening to the voices of diverse groups of people, the NIH can develop community trust and involvement in their extensive mission. In addition to individual perspectives, established organizations are key stakeholders that can facilitate the collection and dissemination of data. The AAMC is happy to continue playing a role in disseminating key information to and receiving feedback from its biomedical research community.
- Lastly, we invite the NIH to bolster inclusive excellence in a way that thoughtfully integrates the international population within the national biomedical workforce. Thinking broadly about how to capture these researchers – and not just permanent residents and U.S. citizens – will not only enhance and enrich the biomedical workforce, but also, contribute to discovery and health.

**Accountability**

The COSWD Draft SP states that "accountability will enable leaders' focus on the appropriate issues and ensure alignment of incentives."

Our specific recommendations on implementing the strategy of 'accountability' are as follows:

- The NIH has mandated doctrines to help create inclusive workplaces, including rigorous new strategies to reduce sexual harassment in STEMM. Recognition of inequities does not necessarily equate with progress towards equity, and to ensure both, it is important to measure the schism between written strategies and the actual reform. For example, though diversity is an important component of the Medical Scientist Training Program (MSTP), some elite programs have subpar diversity of students. On average, over half of the NIH funded MSTP programs have 0-5% representation of Black/African American Trainees. Moreover, a small number of MSTP programs are in IDeA states[23], and none are at HBCU's[24]. Therefore, a *commitment* to diversity should be followed by mechanisms to *enforce* inclusive excellence in the community.
- As the vanguard of the biomedical enterprise, the NIH is uniquely poised to take bold steps towards accountability. A prime example of accountability is the Athena SWAN intervention[25,26] for gender equity, a UK framework used across the globe to support and transform gender equality within higher

[22] AAMC. Principles of Trustworthiness
[23] NIH IDeA
[24] NIH MSTP; NIH IDeA
[25] Athena SWAN
[26] Understanding the Athena SWAN award scheme for gender equality as a complex social intervention in a complex system: analysis of Silver award action plans in a comparative European perspective

education and research. Instituted by the UK, Athena SWAN "helps institutions achieve their gender equality objectives; uses a targeted self-assessment framework to help applicants identify areas for positive action as well as recognize and share good practices; and supports the promotion of inclusive working practices." The AAMC encourages the NIH to standardize measures of accountability across institutions and grant mechanisms, allowing greater enforcement.

- The dearth of tenure track faculty from underrepresented groups cannot be singularly attributed to obstacles in recruitment, hiring, promotion and retention; but rather, reflect an accumulation of obstacles that underrepresented researchers experience throughout the educational and career continuum. In addition to the lack of representation and belonging experienced by individuals from underrepresented groups, implicit bias, microaggressions, overt discrimination and unique (and often unmet) cultural needs establish and fortify a sense of isolation throughout their scientific careers. The AAMC applauds the NIH for developing an array of programs across the undergraduate, graduate, postdoctoral, and faculty spectrum to increase diversity in the biomedical workforce. However, the NIH must also recognize that a focus on diversity without the integration of solutions that likewise enhance inclusion, community, or equity, will thwart even the most well-strategized and funded initiatives.
- We therefore propose that the NIH invest in meaningful conversations and mechanisms (e.g., the NSF ADVANCE program)[27] to measure "culture" –which is notoriously difficult to quantify. Representation and diversity alone, without building and sustaining the climate and culture in which folks can thrive, is a disservice. By focusing on culture, the NIH can internally and externally prevent the over-fixation on measurable outcomes (e.g., number of women faculty) without true transformation of culture (e.g., end to sexual harassment, predominance of "manels").
- Lastly, the AAMC urges the NIH to evaluate the composition of study sections, which are often homogenous and lacking in representation. Less diverse perspectives may contribute to a narrower set of criteria around the evaluation and selection of awarded grants and may also place less value on certain fields of study (e.g., community-based or health disparities research), which often attract underrepresented scientists.

In summary, the AAMC appreciates the opportunity to submit these comments that the NIH have expressed as priorities. If you have any questions regarding this response, please feel free to contact me at rmckinney@aamc.org or Julia Omotade, PhD, Senior Specialist, Science Policy, at jomotade@aamc.org.

Sincerely,

Ross McKinney, Jr., MD
Chief Scientific Officer

[27] NSF ADVANCE program