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Title of Initiative: The Impact of Inclusive Excellence on Biomedical Research and Health Teams Outcomes

Authors: Triesta Fowler, M.D., Vanessa Marshall, Ph.D., Gniesha Dinwiddie, Ph.D., Utibe Bickham-Wright, Ph.D., PMP, Carolina Solis Sanabria, M.D., M.P.H., FACs, Pamela Tamez, Ph.D.

Reviewers: Lisa Cacari-Stone, Ph.D. and Chau Trinh-Shevrin, Dr.P.H.

Objective:

This initiative will support research that is focused on:

1. Understanding the impact of diversity (i.e., race, ethnicity, gender, socioeconomic status [SES], sexual and gender minorities [SGM], and disability) on the outcomes of biomedical research teams (i.e., publications, grants, innovation), and health care teams (i.e., patient outcomes, reducing health disparities).
2. Identifying mechanisms through which diverse teams impact performance as well as specific factors associated with the effect (i.e. specifics of team composition, team processes involved in creative performance).
3. Promoting research that develops methodologies for measuring diversity and its impact on research teams while reducing health disparities.

Background:

"Inclusive excellence" refers to cultures that establish and sustain scientific environments that cultivate and benefit from a full range of talent. This type of culture can be achieved with diverse biomedical research and health care teams. The recent efforts to increase the diversity of scientific teams have impacted the STEM workforce. According to the 2023 report by the NSF National Center for Science and Engineering Statistics (NCSES), the representation of women, Black, Hispanic, American Indian, and Alaska Native people working in STEM jobs, and earning degrees in science and engineering fields have collectively increased in the past decade. Additionally, approximately one-third of the stem workforce with at least one disability had a bachelor's degree or higher. Scientists and trainees from diverse backgrounds bring different perspectives from their life experiences that drive how they address complex scientific problems. Research has demonstrated that these different scholarly perspectives can have a positive effect on innovation.

The case for diversity has been made in various industries, such as education and economics. Research suggests that diverse teams can increase innovation and creativity. For example, a direct link has been shown between inclusive decision-making and better business performance. The importance of representation on health care teams in improving access to care and care utilization is represented in the literature. Diversity of health care

teams has been linked to improved patient outcomes and increased use of preventive care for underserved populations. Concordance of race and ethnicity between patients and research staff has been associated with improved participant enrollment in clinical studies. Gender-diverse research teams have been shown to produce publications that are more novel and highly cited, and these performance advantages is impacted by gender balance.

Research Gaps:

Areas well represented in literature include how to diversify the biomedical workforce and how to retain talent. Limited research exists on the scientific impact of diversity on biomedical and health care team outcomes, especially those working in the area of health disparities. Moreover, consensus is needed around methodologies for measuring diversity in biomedical research and health care teams. Demographic diversity is not commonly surveyed when composing research and health care teams. Measures such as surnames that have been used to show that journal articles written by ethnically homogenous authors were published in lower-impact journals and cited less frequently, are not always reliable indicators of race and ethnicity. Other gaps in the literature include the examination of the intersection of the different aspects of diversity on the productivity of biomedical research teams or quality of care and health outcomes for health care teams and the exploration of the negative and mixed effects of diversity.

Although NIH has funded several diversity-related initiatives and programs, limited studies exist that examine the impact of diverse teams on reducing health disparities. Examples include the mechanisms through which diverse teams lead to improved performance and productivity, specific factors associated with improved performance, and methodologies for measuring diversity and its impact on research teams. A recent portfolio analysis examining NIH applications (e.g., RO1, T32, R15, and U30) funded in Fiscal Years (FY) 2022, 2023, and 2024 found that funded applications related to diversifying the workforce, DEIA, and training minority scientists were the most represented among DEIA-specific Notices of Special Interests (NOSIs)/Requests for Applications (RFAs)/Notices of Funding Opportunities (NOFOs). However, gaps still exist, resulting in low funding of diverse workforce-related awards, low application submissions using DEIA terms, and few applications focusing on the impact of the diversity index on health care or research outcomes.

Description of Initiative:

This proposed initiative will support research that will: 1) evaluate how to define diversity (i.e., race, ethnicity, gender, SES, SGM, and disability) for biomedical research and health care teams, 2) define measures and develop methodologies that access the outcomes for biomedical research teams (i.e., publications, grants, innovation) and health care teams (i.e., patient outcomes, reducing health disparities), 3) determine the impact of diverse identities and the intersectionality of those identities on biomedical research and health care team

composition and team performance, and 4) identify mechanisms by which diverse teams impact team performance (i.e., specifics of team composition and team processes). For this initiative, a broad definition of diversity, as mentioned in the NIH-Wide Strategic Plan for Diversity, Equity, Inclusion, and Accessibility, is the practice of including the many communities, identities, races, ethnicities, backgrounds, abilities, cultures, and beliefs of the American people, including underserved communities. The use of populations described in the Notice of NIH's Interest in Diversity: NOT-OD-20-031 are encouraged.

Research Priorities topics of interest include, but are not limited to:

- Studies that develop diversity measures for biomedical research and health care teams
- Studies investigating the elements of diversity that impact team composition and outcomes
- Studies that explore the impact of the intersectionality of the diversity factors on the function of teams and team productivity and outcomes
- Studies investigating the impact of diverse individuals in various scientific roles
- Studies investigating the impact of diversity on in-person vs. virtual teamwork
- Studies evaluating the impact of diversity on groundbreaking scientific innovations/advances
- Studies investigating the impact of diversity on research design, settings, and collaborators
- Studies investigating the diversity of biomedical research and health care teams in various geographical areas with associated outcomes
- Studies that assess how team diversity impacts the quality of care and health outcomes for health care teams