UNITE

EXTERNAL
LISTENING
SESSIONS

SUMMARY REPORT

NIH National Institutes of Health
Turning Discovery Into Health

CONTENTS

EXECUTIVE SUMMARY

The U Committee of the National Institutes of Health (NIH) UNITE initiative convened listening sessions that engaged multisector audiences from the extramural community (i.e., external to NIH) to listen to and learn from various people's perspectives regarding diversity, equity, inclusion (DEI), and structural racism within the bio-medical research ecosystem. The UNITE initiative, launched in February of 2021, was established to delineate elements that may perpetuate structural racism in the NIH-supported and the greater biomedical research communities, leading to a potential lack of personal inclusiveness, equity, and diversity. The U Committee was charged with **U**nderstanding stakeholder experiences by listening and learning. The external listening sessions were an integral component of the U Committee's work to perform a broad, systematic evaluation to examine the aforementioned topics.

Facilitated by an outside contractor, the listening sessions engaged 1,295 participants from an array of settings in the extramural biomedical community. From December 1, 2021, to February 1, 2022, the U Committee hosted 14 total sessions, each of which was intended to listen and learn from individuals connected to one of the following participant groups:

- Colleges and Universities

- Historically Black Colleges and Universities (HBCUs)

- Nonprofit Organizations (NPOs), Community-Based Organizations (CBOs), and Advocacy Organizations (AOs)

- Minority-Serving Colleges and Universities (MSIs)

- Foundations and Professional Societies

- Research Staff (Assistants, Associates, Technicians)

- Students and Trainees

- Health Centers and Systems

- Tribal Nations and American Indian / Alaska Native Communities

- Faith-Based Organizations and Houses of Worship

The engagement approach included broad outreach via NIH networks, distribution lists, and social media accounts, and direct emails to points of contact within and related to target sectors. Individuals registered via the Eventbrite platform and the sessions were held virtually via Zoom.

To ensure accessibility for people who were deaf or hard of hearing, American Sign Language interpreters par-ticipated in each session and auto captioning was provided. An external facilitator led the sessions, ensuring a safe space for participants, and facilitators provided opportunities for participants to speak and/or provide comments in the chat box.

In this report, the U Committee summarizes the comments provided during the listening sessions to help inform NIH future plans and approaches. These summaries represent the opinions and perspectives of the listening session participants, and do not necessarily reflect the perspectives and practices of NIH.

SUMMARY OF CROSS-CUTTING THEMES IN PARTICIPANTS' COMMENTS

The listening sessions were framed with the context of the well-established socioecological model (SEM) to identify variables across individual, interpersonal, institutional, community, and policy factors. As indicated in the table below, participants described challenges and opportunities regarding:

- The state of equity in the biomedical sciences
- Challenges in career pathways and workforce
- Practices and policies as barriers to equity
- Challenges in health disparities research
- Challenges in addressing health care equity and health outcomes

EXTERNAL LISTENING SESSIONS: CROSS-CUTTING THEMES IN PARTICIPANTS' COMMENTS
State of Equity in the Biomedical Sciences Overall theme of comments: Systemic inequities are perceived as vast across the biomedical research ecosystem • **Disparities in NIH Grant Funding:** Adverse impacts of peer review bias on underrepresented minority (URM) scientists, leading to a lower likelihood of funding • **Micro- and Macroaggressions:** Experiences of discrimination in workplace settings; URM trainees and scientists perceived as less qualified; racial and ethnic minority groups viewed as monolithic • **Disparities in NIH Grant Funding at Minority-Serving Institutions (MSIs):** Adverse impacts of bias against MSIs, Historically Black Colleges and Universities (HBCUs), Hispanic-serving Institutions (HSIs), Predominately Black Institutions (PBIs), and smaller colleges; power differential between Predominantly White Institutions (PWIs) and MSIs disadvantages the latter • **Emerging Issues:** The disproportionate impact of the COVID-19 pandemic among racial and ethnic minority communities laid bare the structural inequities in the health care system

Challenges in Career Pathways and Workforce
Overall theme of comments: Challenges for URM groups begin with primary education and extend throughout secondary education and professional careers
 	
• **Limited Pathways:** Inadequate K-12 STEM education; limited opportunities for URM graduate-level trainees, and challenges in career development and/or advancement among URM faculty members
 	
• **Resource Inequities:** Smaller, less-resourced institutions often lack funds and infrastructure needed to attract and retain trainees and scientists, or to conduct cutting-edge science
 	
• **Lack of Representation and Mentorship Opportunities:**
   o   Few role models for youth and early-career scientists (limits entry)
   o   Few URM mentors/sponsors (limits advancement)
 	
• **Minority Tax:** URM scientists are often "taxed" with solving DEI problems, providing education around race and ethnicity, detracting from their science, without compensation or recognition

EXTERNAL LISTENING SESSIONS: CROSS-CUTTING THEMES IN PARTICIPANTS' COMMENTS

Practices and Policies as Barriers to Equity

Overall theme of comments: NIH funding structures disadvantage URM scientists and MSIs

- **Complexity in NIH Grant Submission System:** Complicated NIH grant application process creates disadvantages for less-resourced MSIs with limited research infrastructure

- **Bias in Scientific Review:** The lack of racial and ethnic diversity on grant review panels, inconsistent review critiques, and devaluing of health disparities research (often) results in unintentionally biased scoring and funding decisions

- **Bias Toward MSIs/HBCUs**: Perceived inadequacies in MSI/HBCU environment, qualifications; and application requirements that facilitate discrimination and reinforce implicit biases

- **Few Infrastructure Support Opportunities:** Most grant mechanisms exclude resources for infrastructure and capacity-building, and this exclusion facilitates funding inequities

Challenges in Health Disparities Research

Overall theme of comments: There is a need to increase funding for meaningful health disparities research that serves community needs

- **Acontextual Health Disparities Research:** A lack of diversity, limited health disparities expertise ("health disparities tourism"), and lack of cultural knowledge within research teams

- **Need for community-based participatory research (CBPR):** Importance of early and continuous engagement of community collaborators, equitable compensation, and addressing community needs; provide support to ensure sustainability and improve outcomes

- **Data Aggregation:** Combining data from diverse racial and ethnic groups, such as Latino/Hispanic and Asian American and Native Hawaiian/Pacific Islander (AANHPI) populations, presumes subgroups have same needs and obscures between group differences

- **Culturally Incompetent Communication:** Use of complex terminology, not translated into multiple languages, and ineffective patient-clinician communication, reduces inclusion in clinical research

EXTERNAL LISTENING SESSIONS: CROSS-CUTTING THEMES IN PARTICIPANTS' COMMENTS

Challenges in Addressing Health Care Equity and Health Outcomes

Overall theme of comments: Existing barriers and biases reduce the quality of health care and outcomes among racial and ethnic minority patients

- **Lack of Patient Advocacy:** The health care system can put the onus of advocacy on the patient, yet community members are often unaware of how to advocate effectively for themselves or others; patient navigation is needed

- **Lack of Diverse Representation on Medical Teams:** Racial and ethnic underrepresentation within fields of medicine may deter help-seeking, maintain implicit and explicit biases, and negatively impact health outcomes

- **Lack of Cultural Humility:** Medical professionals often lack knowledge about the patients they serve so they may not understand the nuances within communities, historical impacts, and reasons for distrust of health care systems

- **Adverse Social Determinants of Health:** Challenges such as transportation and limited patient access to medication, treatment, and other health-related resources can negatively impact outcomes

The final topics raised by participants focused on actions and initiatives taking place at participant institutions that might serve as examples for improving DEI within the biomedical research community. These actions and initiatives aligned with the four SEM levels and included (individual level) trainings to address cultural competence and implicit bias; (interpersonal level) models for DEI initiatives across settings; (institutional level) actions for inclusion, capacity-building, data collection, and mentorship; and (community level) community engagement for recruitment, relationship-building, and research.

Participants also proposed solutions for NIH—strategies, actions, initiatives, policy changes, and engagement methods—to address perceived challenges to DEI within the biomedical research enterprise. The proposed solutions were at the institutional and community levels. Institutional-level proposals included increasing accountability for DEI among applicants and grant recipients; modifying application requirements, incentives, and timelines to support capacity-building; cluster hiring and mentorship programs to enhance professional and research pathways among URM scientists, staff, and students; and increased investments in health disparities and CBPR. Community-level proposed solutions included data disaggregation within racial and ethnic groups and data sharing to address structural racism, increased visibility of historical and current role models who are underrepresented within the biomedical sciences, and pairing Research 1 (high research activity) and smaller institutions for grant application mentorship in mutually beneficial ways.

A summary of each session is available on the [UNITE – Ending Structural Racism](#) website. The external listening sessions complement three other U Committee activities: internal listening sessions and focus groups with the NIH workforce; an internal data call to understand previous, ongoing, and planned DEI efforts across all NIH Institutes and Centers; and a published request for information (RFI) to gather perspectives on approaches NIH can take to advance racial equity within all facets of the biomedical research workforce and expand research to eliminate or lessen health disparities and health inequities. The findings from these activities will be used to inform ongoing UNITE and NIH efforts to address structural racism in the NIH-supported and greater biomedical research community and promote a welcoming environment in the biomedical sciences enterprise.

INTRODUCTION

The events of 2020 brought a renewed national focus on the ongoing reality of social inequity within the United States. In response, the National Institutes of Health (NIH) leadership stated a shared commitment not to allow this pivotal moment to pass without taking action. In February 2021, NIH formally launched the UNITE initiative to identify and address structural racism within the biomedical research enterprise, with the goal of building a more welcoming and inclusive system that allows everyone to have an opportunity to succeed.

NIH is committed to enhancing and/or modifying longstanding efforts to advance equity and to facilitate the inclusion of diverse skill sets, viewpoints, and backgrounds. In addition, NIH seeks to promote research to inform and address health disparities and advance health equity. UNITE is co-chaired by NIH leadership and is comprised of five interrelated committees focused on understanding DEI within the NIH workforce as well as the external scientific workforce and the research it supports. The five committees are:

- Understanding stakeholder experiences through listening and learning

- New research on health disparities/minority health/health equity

- Improving the NIH culture and structure for equity, inclusion, and excellence

- Transparency, communication, and accountability with NIH's internal and external stakeholders

- Extramural research ecosystem and changing policy, culture, and structure to promote workforce diversity

Listening and learning from individuals who work within, represent, or are otherwise connected to the biomedical research ecosystem are essential to understand and address the complexity of systems that may perpetuate structural racism and may lead to a lack of diversity, equity, and inclusion (DEI) in science and medicine. To achieve this understanding, the U Committee is charged with conducting a broad, systematic evaluation to gather stakeholders' opinions and perspectives around these topics, and the external listening sessions summarized herein are a critical component of U Committee efforts. The U Committee is co-chaired by Drs. Monica Webb Hooper, Courtney Aklin, and Mia Rochelle Lowden, and is made up of members from across NIH Institutes and Centers. A full list of the U Committee members is included in Appendix A.

U COMMITTEE FRAMEWORK

Figure 1 illustrates the strategic framework that guides U Committee activities. The framework includes four components: (1) acknowledging the existence of elements that perpetuate the status quo and may lead to a lack of personal inclusiveness, equity, and diversity of thought; (2) listening to accounts and experiences related to the overarching goals of the UNITE Committees; (3) catalyzing action by presenting recommendations for consideration by NIH UNITE leadership; and (4) evaluating qualitative and quantitative data to inform structural change.

Figure 1: U Committee Framework

ACKNOWLEDGING
the existence of **elements that perpetuate the status quo** in biomedical research both internal to NIH and in the external community that may lead to a lack of personal inclusiveness, equity, and diversity of thought

LISTENING
to accounts and experiences related to the charges of the NIH UNITE Committees

INTERNAL & EXTERNAL EFFORTS

CATALYZING
action, presenting immediate, short-term, medium-term, and long-term **recommendations for consideration by NIH Leadership**

EVALUATING
the qualitative and quantitative data to inform structural changes, policy changes or additions, budgetary modifications, and programmatic reform ideas

PURPOSE OF LISTENING SESSIONS

To understand the perspectives and experiences of members of the extramural biomedical research community, the UNITE U Committee hosted fourteen virtual external listening sessions between December 1, 2021, and February 1, 2022. This report describes the approach used to conduct outreach and facilitate the external listening sessions, summarizes the participants' observations and proposed solutions, and presents information to support the ongoing UNITE and NIH efforts to address structural racism and promote a diverse, equitable, and inclusive biomedical research enterprise. The summaries presented in this report reflect the opinions and perspectives of listening session participants and do not necessarily reflect the perspectives or practices of NIH.
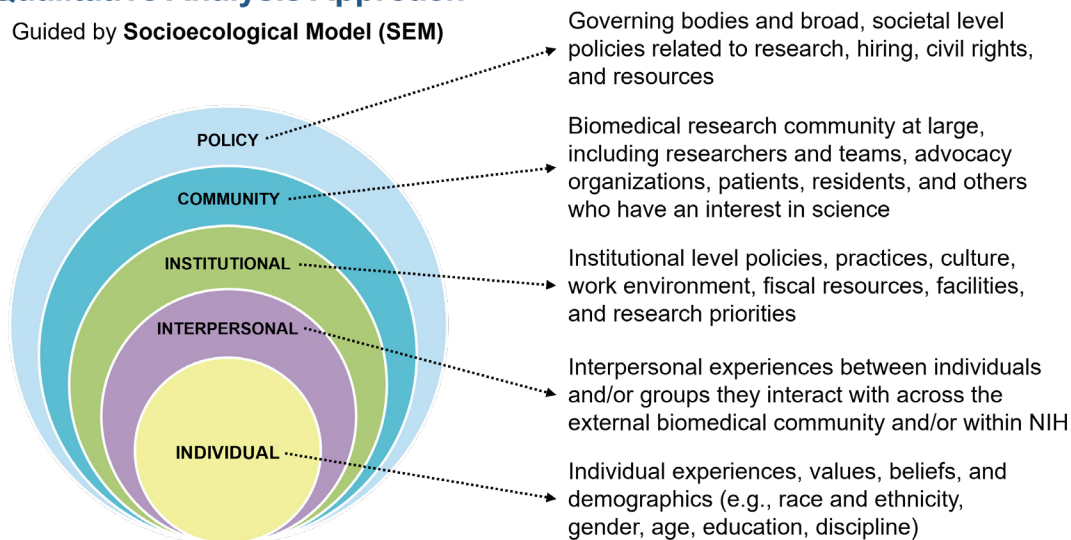
METHODS

THEORETICAL FRAMEWORK

The external listening sessions were guided by an adapted version of the socioecological model (SEM).[1] This well-established model allowed assessment at multiple levels, such as institutional, community, and policy levels, and allowed for inclusion of individual and interpersonal experiences. (Figure 2).

Figure 2: Socioecological Model (SEM) for Qualitative Analysis Approach

Qualitative Analysis Approach
Guided by **Socioecological Model (SEM)**

POLICY — Governing bodies and broad, societal level policies related to research, hiring, civil rights, and resources

COMMUNITY — Biomedical research community at large, including researchers and teams, advocacy organizations, patients, residents, and others who have an interest in science

INSTITUTIONAL — Institutional level policies, practices, culture, work environment, fiscal resources, facilities, and research priorities

INTERPERSONAL — Interpersonal experiences between individuals and/or groups they interact with across the external biomedical community and/or within NIH

INDIVIDUAL — Individual experiences, values, beliefs, and demographics (e.g., race and ethnicity, gender, age, education, discipline)

OUTREACH APPROACH

The U Committee engaged a wide cross-section of individuals connected to diverse settings. Outreach activities sought to reach beyond institutions and organizations that are typically engaged with NIH to gather experiences from the broader biomedical science community. Elements of outreach included the following:

- Contacted individuals within their professional networks
- NIH social media channels, including LinkedIn, Facebook, and Twitter
- Outreach efforts via the National Institute on Minority Health and Health Disparities (NIMHD), the Tribal Health Research Office (THRO), and the Office of Intramural Training and Education (OITE)
- Online research was conducted to identify more than 1,500 points of contact, who received emails inviting them to participate and share information with their networks. Points of contact included:
  - o Nonprofit networks and associations specifically addressing DEI issues or the needs of racial and ethnic minority communities
  - o Nonprofit organizations, community health centers, community-based organizations, and faith-based organizations
  - o Historically Black Colleges and Universities (HBCU) leaders and administrative staff, specifically targeting points of contact in DEI groups within institutions and organizations
  - o College and university faculty, who were found via staff directories and websites

Listening sessions were conducted between December 2021 and February 2022. The sessions' purposes, schedule, and registration information were posted on the NIH UNITE website. Table 1 indicates the participant groups and the numbers of sessions and total attendees per group. There were 10 participant groups across 14 sessions (Table 1), with a range of 41 to 201 persons per session.

Table 1: NIH UNITE External Listening Sessions Held Between December 1, 2021 through February 1, 2022

PARTICIPANT GROUP	# OF SESSIONS	# OF ATTENDEES
Colleges and Universities	2	347
Historically Black Colleges and Universities	2	195
Nonprofit Organizations, Community-Based Organizations, Advocacy Organizations	2	157
Minority-Serving Colleges and Universities	2	142
Foundations and Professional Societies	1	108
Research Staff (Assistants, Associates, Technicians)	1	90
Students and Trainees	1	78
Health Centers and Systems	1	74
Tribal Nations and American Indian / Alaska Native Communities	1	52
Faith-Based Organizations and Houses of Worship	1	52
Total	**14**	**1,295**

SESSION STRUCTURE

Each external listening session was conducted by an outside contractor, and was 90 minutes in duration and hosted via the Zoom videoconferencing and events platform. Sessions were recorded and automatically transcribed via Zoom and with backup transcription via a secondary automated service. Two American Sign Language (ASL) interpreters provided by a separate contractor provided live translation. Attendees were welcomed by leaders from an NIH Institute, Center, or Office who summarized the mission and goals of UNITE. The facilitator provided participants with instructions and guidance, setting ground rules intended to create an environment focused on contribution, candor, and courtesy. Participants could communicate verbally (cameras on or off), add comments and questions directly in the chat box, or request that their written comments be shared anonymously by the chat monitor. A two-question poll assessed institution type and role/position for each participant (Figure 3), and poll responses are shown in Table 2 and Appendix C.

Figure 3: Example Poll Questions

Poll Questions

1) Type of institution (choose all that apply):

1. Public Hospital
2. Private Hospital
3. University Hospital
4. Federal Government Hospital
5. Hospice
6. Long-Term Care Facility
7. Psychiatric/Mental Health Facility
8. Physician Office/Outpatient Clinic
9. Health System (Corporate)
10. Other (Enter in Chat)

2) Your role/position (select one):

1. Health Care Executive or Administrator
2. Physician
3. Physician Assistant
4. Nurse/Nurse Practitioner/Nurse Leader
5. Behavioral and Mental Health Provider
6. Student/Trainee
7. Physical/Occupational Therapist
8. Federal Government Employee
9. State/Local Government Employee
10. Other (Enter in Chat)

Table 2: Common Organization Types and Roles of Listening Session Participants

CATEGORY	ORGANIZATION TYPE	ROLE/ POSITION
Academic	• Private/Public 4-year Universities – 30.8% • Minority-Serving Institutions – 1.3% • Asian-American and Native American Pacific Islander-Serving Institutions – 1.3% • Hispanic-Serving Institutions – 3.7% • Predominately Black Institutions – 1.1% • Historically Black Colleges and Universities – 5.3% • Tribal Colleges and Universities – 1.6%	• Academic Faculty or Staff – 22.4% • Administration/Leadership – 12.9% • Students and Trainees – 4.1%
Health Care & Scientific	• Hospitals / Health Systems – 3.9% • For-Profit Corporations or Laboratories – 0.1% • Clinical Research Organizations – 3.5% • Professional Societies – 3.7%	• Research Staff – 12.0% • Clinical Staff – 0.9% • Foundations or Professional Societies Staff – 0.9%

CATEGORY	ORGANIZATION TYPE	ROLE/ POSITION
Civil and Social	• Federal / State Agency – 6.9% • Community-Based Organizations – 3.1% • Advocacy Organizations – 2.6% • Faith-Based Organizations – 1.4% • Health-Related Nonprofits – 2.7% • Protestant or Catholic Churches – 1.1% • Other Religious Organizations – 0.8%	• Federal Government Employees – 6.8% • State / Local Government Employees – 4.3% • Faith-Based Organization Staff or Leaders – 2.3% • Nonprofit / Community-Based Organization / Advocacy Organization Staff or Executives – 5.9%
Tribal	• Tribal Nations – 0.7% • Tribal Departments of Public Health – 0.7%	• Tribal Nations Members – 0.8% • Tribal Departments of Public Health Staff – 0.8%
Other	• Consulting Firm – 1.5% • Independent Research Institution – 3.5% • Other Unaffiliated – 20.4%	• Consultants – 1.0% • Other (Former or Current Role) – 25.6%

Note: Percentages of listening session attendees who reported the category of organizations they represented and their current role or position.

The facilitator led the discussion through a set of topics structured to elicit comments related to each SEM level. There was some variation in these topics based on participant composition; however, at minimum, four of the following topics were addressed in each external listening session:

- The overall state of racial and ethnic equity in the biomedical sciences
- Opportunities and challenges in career pathways and workforce
- Practices and policies as barriers to equity
- Needs and challenges in health disparities research
- Challenges in addressing health care equity and health outcomes
- Actions and initiatives to address racial and ethnic equity within participants' organizations
- Proposed solutions for NIH: tactics, actions, initiatives, policy, and engagement

At the close of each session, the facilitator thanked participants for their engagement and encouraged them to keep abreast of initiatives by accessing the UNITE webpage.

DATA COLLECTION AND SYNTHESIS APPROACH

Following each session, immediate observations and preliminary emerging topics were captured on a debriefing form. Automated transcripts were compared and reconciled with notes taken during the sessions, and the comments entered in the chat box were added to the reconciled documents. All identifying information was excluded from the data. Summaries of the participants' comments from each session are included in Appendix B.

The summaries presented in this report are based on the opinions and perspectives of listening session participants and do not necessarily reflect the perspectives or practices of the NIH. The next section is a summation of cross-cutting themes in participants' comments aggregated across all 14 sessions.

CROSS-CUTTING THEMES

CROSS-CUTTING THEMES OVERVIEW

Participants in each listening session contributed unique perspectives based on their lived experiences, professional endeavors, and engagement with NIH. This section describes the cross-cutting themes within each of the major topic areas, highlighting insights and proposed solutions. The opinions and perspectives presented in this report reflect those of listening session participants and do not necessarily reflect the perspectives or practices of NIH.

STATE OF EQUITY IN BIOMEDICAL SCIENCES: PARTICIPANT PERSPECTIVES

Perceived systemic inequities are vast across the biomedical research ecosystem

Across the listening sessions, participants stated their perceptions of vast systemic inequities across the biomedical research ecosystem and shared examples of how the biomedical enterprise remains centered on the perspectives, experiences, and needs of the majority population. NIH grant funding policies and practices were discussed as adversely impacting racial and ethnic minority scientists, raising concerns about how review processes perpetuate bias and lead to lower likelihood of funding. **Disparities in NIH grant funding** were also discussed at the institutional level, with participants stating that bias against Minority-Serving Institutions (MSIs), HBCUs, Hispanic-serving Institutions (HSIs), Predominantly Black Institutions (PBIs), and smaller colleges often prohibit these institutions from securing funding. Participants shared that when Predominantly White Institutions (PWIs) and MSIs enter partnerships to conduct studies, there can often be a power imbalance such that the PWI maintains decision-making authority even if the MSI is best positioned to lead the work. As highlighted by a participant in the statement to the right, imbalanced power structures and the lack of representation at decision-making levels were seen as ultimately disadvantaging racial and ethnic minority populations.

> *"I think much has to do with power dynamics and who makes the decisions. When you don't have representation at the table, racist structures get perpetuated. I don't know if this happens at NIH, but I am comfortable with saying it happens in the country. I think that [we need to] make a commitment to ensuring this power is shared wherever we are."*

Across sessions, participants shared perspectives on how workplace discrimination against trainees and scientists from racial and ethnic minority groups remains prevalent. In fields ranging from academia to health sciences, to civil and social disciplines, **micro- and macroaggressions** were described as common, including misperceptions that racial and ethnic minority individuals are less qualified. Participants also discussed the harms caused from racial and ethnic minority groups being seen as monolithic groups. A participant emphasized the systemic challenges and raised questions around real versus symbolic change:

> *"We are still surrounded by a White male environment in the workplace. It is more of… checking the box is what matters and what I am wondering is if there is a mechanism… [if] there is a genuine structural change to foster a more diverse and inclusive environment without instrumentalizing the minority groups that are accepted into those spaces…"*

Participants also acknowledged the historical injustices and structural challenges that have led to current day inequities in the biomedical sciences, agreeing that there is not one cause or solution. They also discussed the disproportionate impact of **emerging issues**, including the COVID-19 pandemic, which laid bare the structural inequities in the health care system for racial and ethnic minority communities.

> *"…The COVID pandemic exposed inequities for medical devices, vaccine distribution, and education. Living in central Maryland outside of DC, we had a couple counties having difficulty accessing vaccines and yet others not interested in accessing vaccines at all. We tried to parse that difficulty of demand, and a lot of it came down to lack of education based on racial and other disparity trends…"*

CHALLENGES IN CAREER PATHWAYS AND WORKFORCE: PARTICIPANT PERSPECTIVES

> *Perceived challenges for underrepresented minority (URM) groups begin with primary education and extend throughout secondary education and professional careers*

Participants across listening sessions acknowledged that challenges for people from racial and ethnic minority groups begin with primary education and extend throughout secondary education and into professional careers. Starting with grades K-12, participants described inadequate exposure to career opportunities in science, technology, engineering, and math (STEM), creating **limited pathways** into the biomedical sciences. The lack of engagement with elementary-aged students in racial and ethnic minority communities is seen to limit the number of people from racial and ethnic minority groups who ultimately pursue careers in the biomedical sciences. Among college students, various structural barriers, including low compensation, inadequate benefits, and insufficient resources, prevent many students from racial and ethnic minority groups from entering and continuing with graduate-level biomedical programs. As one participant highlighted, to achieve desired outcomes, it is important to be intentional in dismantling structural barriers in early education for those who have been historically and systemically excluded from STEM careers.

"We need to be intentional about giving opportunities and give Black students who are really interested in these pathways [access to resources]. It has to be more holistic about how we treat our youth. How do we remove these barriers for our youth? There was an intentional move to build these barriers, so we must be as intentional to break down those barriers that were built."

Participants also discussed the **resource inequities** across academic institutions. Many MSIs are smaller, less-resourced colleges and universities, and participants pointed to the lack of funds and infrastructure needed to provide competitive startup packages and compete for the most talented candidates. As a result, these colleges and universities may not be able to attract and retain the talent needed to secure grant funding and conduct cutting-edge science. Consequently, students within these institutions may not have the exposure to faculty members with highly successful research programs nor the research experiences needed to grow and become competitive in their biomedical sciences careers.

Participants across sessions discussed the importance of diversity and representation in academic and scientific institutions as well as adverse impacts of underrepresentation. They noted that the lack of representation among faculty members and senior scientists can become a self-perpetuating barrier that inhibits the advancement of racial and ethnic minority scientists and faculty members. The impact of this underrepresentation was highlighted in multiple sessions as resulting in an insufficient number of role models for youth and early-career scientists, limiting successful entry into scientific fields. The **lack of representation and mentorship opportunities** was also seen as limiting access to long-term mentors, sponsors, and supportive professional networks—critical elements in early career development and in obtaining the knowledge needed to navigate complex academic and scientific environments. This, in turn, can curtail career advancement. While it is possible that mentors and sponsors from different backgrounds can be helpful, the effectiveness of such cross-cultural professional relationships may be hampered by implicit bias or a lack of understanding of the experiences of racial and ethnic minorities, as expressed in the statement below.

"I was an undergraduate [student at an elite university] and being the kid of immigrants, I remember thinking, 'None of these professors look like me. None of them sound like me. None of them think like me. How in the heck are you going to stay in this domain?' Now I [work] at a minority-serving institution. Students say to me often, 'I've never met anybody like you. But now that I've met you, I know that I can stay...'"

Participants also described the harmful effects of the "**minority tax**" which creates the expectation on employees from racial and ethnic minority groups to complete additional DEI-related service activities and to educate their colleagues and identify solutions to deep-rooted DEI problems. Whether this involves formal or informal DEI efforts, this work is not typically compensated or recognized as a professional activity within performance evaluations or grant applications. This "tax" represents time that could otherwise be spent on pursuing research or other endeavors to advance the individual's career. Many racial and ethnic minority professionals nevertheless undertake this additional work, risking negative impacts to their own careers to support others.

"When we go into positions, people expect us to be the spokesperson for the community we represent. They don't understand our communities are just as diverse as theirs... being the only representative, anything we then say is immediately challenged because there are always exceptions. We do not only carry the burden of needing to succeed but we also carry the burden of someone asking questions we did not sign up for by having to speak for the full community. They do not put these expectations on themselves. The key [question] is what expectation does an organization have already when we enter and how unrealistic [is it]?"

PRACTICES AND POLICIES AS BARRIERS TO EQUITY: PARTICIPANT PERSPECTIVES

Perception that NIH funding structures disadvantage URM scientists and MSIs

There were several themes around the ways in which NIH funding practices and policies were perceived to disproportionately disadvantage racial and ethnic minority scientists and MSIs. Participant comments covered the lifecycle of the grant funding process. Speaking to the **complexity in the NIH grant submission system**, application processes were seen as disadvantaging less-resourced MSIs. Participants expressed that NIH grant application language, systems, and practices are unnecessarily complex, adversely impacting less-resourced or less-experienced institutions. MSIs may not have the resources or infrastructure needed to compete for funding with other universities, such as R1 and R2 institutions, as one participant articulated in the statement below.

"The problem I've experienced with NIH is that there is an emphasis on equality and how they structure the funding opportunities and the funding formulas put into place, but it is not equitable. It does not allow MSIs [and] non-research 1s [R1 institutions] to get funding."

In addition to identifying how structures limit lower-resourced institutions in developing competitive grant applications, participants mentioned grant application reviews and scoring criteria as sources of bias in scientific review against racial and ethnic minority scientists and MSIs. The lack of racial and ethnic diversity on grant review panels, inconsistent review critiques, and the devaluing of health disparities research results were all seen as leading to biased scoring and funding decisions, even if unintentionally. One participant's experience in applying for NIH grant funding and the consequences of the current scoring criteria is illustrated by the following quote:

"The scoring criteria favors [R1 and R2 institutions], folks who have established reputations and a history of cited research. When they talk about the team and research environment, they are not talking about people like me who serve communities of color."

Participants also perceived high levels of **bias toward MSIs and HBCUs**. Across sessions, participants described biases they deemed related to how NIH grant reviews consider applications from MSIs and HBCUs. Participants explained how the application requirements further facilitate discrimination and reinforce implicit biases. One participant provided an example of feedback received on an application:

> *"Some feedback I have received has been, 'It is a strong rigorous design. It's [a] great proposal, but we do not have confidence in the research infrastructure within your universities.' This cannot be settled overnight... A lot of us spend our careers building capacity within our institutions, yet we're penalized for trying to bring research dollars to train our students to do research. It would be more helpful to us to help us to be able to build the capacity and infrastructure ourselves."*

Participants noted that most NIH grant mechanisms do not address this gap. Specifically, there are **relatively few infrastructure support opportunities**, as NIH grants typically exclude resources for infrastructure and capacity-building. Participants noted that without sufficient funds, smaller, less-resourced institutions may not have the equipment needed to execute research projects or have the capacity to scale up their research teams in the requisite short funding timelines. These structural issues were seen as further perpetuating funding inequities.

CHALLENGES IN HEALTH DISPARITIES RESEARCH: PARTICIPANT PERSPECTIVES

> *Perceived need to increase funding for meaningful health disparities research that serves community needs*

Across sessions, participants emphasized the need to increase funding for health disparities research. They also suggested that this work should engage communities beyond research to truly understand and serve their needs. Participants raised concerns related to **acontextual health disparities research**. Specifically, participants highlighted the lack of diversity and cultural knowledge within research teams, as well as the growing trend of "health equity tourism," in which researchers with limited commitment to or prior experience with equity work seek funding to conduct health disparities research. Participants shared two primary concerns around this ostensibly growing practice. First, health equity tourism prevents long-standing experts from conducting the research they are best positioned to do. Second, health equity tourists may cause long-term damage if they lose the trust of community members. This loss in trust may result in fewer community members being willing to participate in research. In the statement below, a participant explains the perception that NIH structures, policies, and practices may preclude those best positioned to conduct the research from obtaining the support needed to address disparities.

> *"The people who've been doing the work all along and are well established in the science of community engagement already exist..., but in many places, they are not among NIH's typical go-to research community. So [we need] to make sure that... some of the existing expertise is really honored and recognized."*

Participants identified a need to make health disparities research more balanced in considering and addressing community feed-back, advocating specifically for community-based partici-patory research (CBPR)—a model that prioritizes early and continuous engagement of community members. CBPR was identified as a viable approach to promoting sustainable and improved outcomes for communities. Participants stated that the traditional research model is not reciprocal, as investigators are seen as parachuting into a community, collecting what they need, and leaving without benefit to the community. As one participant described, current structures do not enable building relationships with communities.

> *"I do research and I feel the research paradigm of grant funding and timelines does not allow for relationship building. Especially with community research and community voice in the picture. It does not allow funding for community relationships."*

Participants emphasized the need not only to engage community leaders and members, but also to ensure they are compensated equitably for their time and contributions. Community members are often asked to participate in research studies for limited compensation, which may not cover costs to cover travel to the research location, child/dependent care, or lost earnings from missed work. Participants highlighted the need for community leaders and members to be compensated for their time and expertise:

> *"Some in the field are starting to use the term 'context expert' to signify that many are experts in their own community, condition, context, culture, etc. And they advocate for 'context experts' to be paid just as much as 'content experts.'"*

In addition, participants discussed the perceived harmful impacts of **data aggregation in research**. They explained that data is often aggregated in a way that presumes diverse racial and ethnic minority subgroups have the same needs, which obscures differences within populations. Participants shared that this practice is common when research is conducted on, rather than with, Latino/Hispanic or Asian American and Native Hawaiian/Pacific Islander (AANHPI) populations. Participants also spoke at length about how they have seen outside researchers employ **culturally incompetent communication and community engagement tactics**. They cited examples of researchers using complex terminology and explained that materials are often not translated into community members' primary languages.

CHALLENGES IN ADDRESSING HEALTHCARE EQUITY AND HEALTH OUTCOMES: PARTICIPANT PERSPECTIVES

> *Perceived barriers and biases reduce the quality of healthcare and outcomes among racial and ethnic minority patients*

Participants were asked for their perspectives on the primary challenges in addressing healthcare equity and health outcomes. In response, participants discussed perceived barriers and biases that reduce the quality of care and outcomes among racial and ethnic minority patients. The **lack of patient advocacy** was identified as an area needing improvement. Participants cited data indicating that racial and ethnic minority patients receive a poorer standard of care. As highlighted by a participant below, in a healthcare system that puts the

onus of advocacy on the patient, educating community members to build awareness of standards of care and effective health advocacy is key.

> *"Health advocacy and teaching people of color and communities how to advocate for themselves is huge for equity. If you do not know what the standard of care is, then you do not know what is subpar. We know many Black/Brown communities have lower care than others."*

Participants expressed concerns about the limited **diverse representation on medical teams**, stating that patients may be less likely to seek care if they do not have clinicians who look like them and who reflect their community. Underrepresentation may also cause implicit and explicit biases toward patients to be maintained, ultimately negatively impacting health outcomes. Moreover, participants explained that medical professionals with a **lack of cultural humility** and knowledge about the patients they serve may not understand community nuances, including historical injustices and community members' reasons for distrusting health care systems. In the statement below, one participant acknowledged this lack of representation as one of the biggest challenges in health equity work.

> *"It is important to have increased representation in all medical fields. Clinical and non-clinical fields within a health care setting. That is one of the biggest obstacles we have faced in health equity work. It is hard to address implicit bias when we don't have workers who look like the population they serve."*

Moreover, participants discussed relationships between **adverse [social determinants of health (SDOH)](#)** and health care access. They highlighted inadequate infrastructure, such as transportation challenges in rural communities, and limited patient access to medication, treatment, and other health-related resources. These structural challenges further create and drive health disparities, negatively impacting outcomes for racial and ethnic minority populations.

REPORTED ACTIONS AND INITIATIVES TO ADDRESS EQUITY AT PARTICIPANT INSTITUTIONS: PARTICIPANT PERSPECTIVES

Participants detailed a variety of actions and initiatives that have been implemented or discussed in their institutions to address racial and ethnic equity. Table 3 summarizes these key actions and initiatives by SEM level.

Table 3: Actions and Initiatives at Participant Institutions

SEM LEVEL	ACTIONS AND INITIATIVES AT PARTICIPANT INSTITUTIONS
Individual	• Instituted initiatives and trainings to increase the cultural competency of staff
Interpersonal	• Incentivized and supported faculty, staff, and students to engage in DEI initiatives • Implemented DEI models, discussions, initiatives, and centers to address structural racism

SEM LEVEL	ACTIONS AND INITIATIVES AT PARTICIPANT INSTITUTIONS
Institutional	• Redesigned recruiting and hiring practices to be more inclusive, including implementing cluster hiring. Cluster hiring is the hiring of multiple faculty members into one or more departments based on shared, interdisciplinary research interests or programs. • Improved data and metrics on SDOH and shared information back with communities • Augmented mentorship programs to support skill-building, relationship development, and research funding • Focus on building capacity and infrastructure at their institution and on identifying appropriate funding opportunities
Community	• Hired participant recruitment specialists and translators to engage communities in their own languages • Piloted CBPR studies, enabling research teams to immerse themselves in the community • Leveraged virtual platforms and networks to engage communities • Enhanced networks by establishing partnerships with other institutions, government agencies, and communities

PROPOSED SOLUTIONS FOR NIH: PARTICIPANT PERSPECTIVES

In each session, participants were asked to propose solutions, focusing on strategies, actions, initiatives, policies, and engagement, for NIH to consider in its efforts to address structural racism in the biomedical sciences enterprise. Participants provided a wide variety of responses that addressed many of the challenges they identified throughout the listening sessions, and several recommended solutions were proposed in multiple sessions. Some of the proposed solutions are summarized in Table 4 where they are aligned to the relevant SEM level.

Table 4: Proposed Solutions for NIH to Consider

SEM LEVEL	PROPOSED SOLUTIONS FOR NIH TO CONSIDER
Institutional	• Require DEI report cards from grantees and prospective grantees • Monitor grantee DEI inputs and results to hold them accountable to their grant proposals • Implement more cluster hiring and mentorship programs to support URM researchers, staff, and students • Change the requirements, incentive structure, and timelines for NIH grants funding to support capacity building • Institute appropriate implicit bias training for grant reviewers and other key decision-makers • Invest in more health disparities and CBPR studies and training

SEM LEVEL	PROPOSED SOLUTIONS FOR NIH TO CONSIDER
Community	• Leverage virtual platforms established during COVID-19 to engage with communities • Collect, disaggregate, track, and share data to identify gaps and progress in addressing structural racism • Promote more visibility into historical and current diverse trailblazers within the biomedical sciences • Appoint designated cultural liaisons at NIH and NIH-funded campuses to provide education and awareness • Conduct outreach to diverse K-12 and undergraduate (non-R1) institutions to engage them in STEM • Pair R1 and smaller institutions for grant application mentorship, establishing a mutually beneficial partnership • Create community forums to serve as the connector between researchers, organizations, and communities

CONCLUSION

The UNITE external listening sessions provided a platform for NIH to listen and learn about perspectives and experiences related to racial and ethnic equity in the biomedical enterprise by engaging the broader biomedical community. Listening session participants represented a wide range of organizations and communities, yet many common challenges, opportunities, and proposed solutions emerged across sessions. The following key themes from participants' comments were identified from the 14 external listening sessions:

- **Systemic inequities are perceived as vast across the biomedical research ecosystem** and extend from lived experiences of racial and ethnic minority biomedical research professionals, to disparities in NIH grant funding for URM scientists and MSIs, to broader issues affecting racial and ethnic minority populations such as the disproportionate impact of emerging issues like the COVID-19 pandemic.

- **Challenges surrounding the career pathways of members of URM groups** are perceived to begin with inadequate K-12 STEM education and result in both limited opportunities for graduate-level trainees and a multitude of career advancement challenges.

- The complexity in the **NIH grant submission structures and systems** is perceived to bias all aspects of the scientific review process, and the exclusion of infrastructure-building and capacity-building within grant mechanisms is seen as creating a multifaceted set of barriers to equity for URM scientists and MSIs.

- There was a call for increased funding for **health disparities research**, but separately, a lack of diversity in research teams, limited health disparities expertise among funded researchers, insufficient CBPR, and culturally disconnected research teams are perceived as adversely impacting the effectiveness of this research.

- Perceived **barriers and biases to equity in healthcare and health outcomes** include an inability for many underserved patients to advocate effectively for themselves and others, underrepresentation of

racial and ethnic minority clinicians, a lack of cultural humilty among many clinicians, and adverse SDOH such as unreliable transportation and limited access to health-related resources—all of which reduce health outcomes among racial and ethnic minority patients.

The external listening sessions, in conjunction with other U Committee efforts, confirmed public interest in seeing that significant efforts are made to address structural racism in the biomedical research enterprise and in building a welcoming and inclusive system that works for everyone. Participants proposed a broad array of solutions for NIH to consider, including:

- Access and use of workforce and funding data

- Recruiting, hiring, and mentorship

- Requirements, timelines, and criteria for NIH grant applications and funding

- Training for members of grant review panels, decision makers, research teams, and URM communities to reduce bias and improve capacity

- Increased investment in health disparities and CBPR research

- Partnerships and collaborations to support capacity development and access to funding for URM students and scientists, and MSIs

The breadth of proposed solutions demonstrates the complexity of identifying and addressing structural racism within the biomedical research enterprise. Any necessary substantive structural change will take time and involve individuals and institutions across the biomedical scientific community. The UNITE Committee will leverage the insights provided within this report to inform ongoing initiatives, target resources, and provide guidance to NIH leadership to implement any necessary changes.

REFERENCES

1. Bronfenbrenner U. Ecological models of human development. In: International Encyclopedia of Education. Vol 3. 2nd ed. Elsevier; 1994.

APPENDIX A: U COMMITTEE MEMBERS

- **Monica Webb Hooper (NIMHD), Co-Chair**
- **Courtney Aklin (IMOD/OD), Co-Chair**
- **Mia Rochelle Lowden (ORIP/OD), Co-Chair**
- Vanessa Marshall (NIMHD), Staff Lead
- Shelli Avenevoli (NIMH)
- Dexter Collins (FIC)
- Laura Cooper (NIAMS)
- Kevin Davis (CIT)
- Cara Finley (IMOD/OD), Staff Lead
- Melissa Laitner (IMOD/OD), Staff Lead
- Charlene Le Fauve (COSWD/OD)
- Leslie Littlejohn (NIAMS)
- Troy Muhammad (NCI)
- Ian Myles (NIAID)
- Roland Owens (OD)
- Kamilah Rashid (IMOD/OD), Staff Lead
- Melanie Reagan (NEI)
- Denisha Simmons (NCCIH)
- Kelly Ten Hagen (NIDCR)
- Brian Trent (NEI)
- Della White (NIGMS)

APPENDIX B: SESSION SUMMARIES

SESSION SUMMARIES OVERVIEW

Session summaries were created after each session based on the session recording/notes/transcript. This section presents the compiled summaries of participant perspectives for the fourteen sessions that were hosted by the U Committee. They represent participants' perceptions and proposed solutions that had some level of agreement within the overall participant group. Discussions within each session were guided by a facilitator based on pre-established topics; however, the intention was to listen, learn, and allow the conversation to evolve based on participants' interests. The summaries are intended to capture the essence of the discussion and the overarching observations and themes.

The summaries, listed below, are also posted on the UNITE Events webpage.

#	Listening Session
1	Colleges and Universities Session #1
2	Historically Black Colleges and Universities Session #1
3	Foundations and Professional Societies
4	Tribal Nations and American Indian / Alaska Native Communities
5	Faith-Based Organizations and Houses of Worship
6	Minority-Serving Colleges and Universities #1
7	Nonprofits, Community-Based Organizations, and Advocacy Organizations #1
8	Historically Black Colleges and Universities #2
9	Minority-Serving Colleges and Universities #2
10	Health Centers and Systems
11	Nonprofits, Community-Based Organizations, and Advocacy Organizations #2
12	Students and Trainees
13	Research Staff (Assistants, Associates, Technicians)
14	Colleges and Universities #2

NIH is grateful for the participation and perspectives provided by the wide variety of stakeholders in these listening sessions. For more information about past listening sessions, and to follow the efforts of the UNITE initiative, please visit the UNITE events webpage at nih.gov/ending-structural-racism.

1. COLLEGES AND UNIVERSITIES SESSION #1 SUMMARY

Wednesday, December 1, 2021, 3:00-4:30 pm ET

Brief Overview

The purpose of the session was to listen and learn about perspectives and experiences related to racial and ethnic equity in the biomedical research enterprise among stakeholders who represent, attend, work within, or are otherwise connected to U.S. colleges and universities. The listening session, facilitated by an outside contractor, was attended by more than 145 participants. Dr. Courtney Aklin, Acting NIH Associate Deputy Director, welcomed attendees and summarized the goals of the UNITE initiative.

Summary of Discussion

Topic 1: The overall state of racial and ethnic equity in the biomedical sciences

Participants perceived disparities between institutions in terms of NIH research funding success and grant application scrutiny. Participants suggested that researchers at large universities receive grant funding more easily and frequently than researchers at HBCUs, HSIs, PBIs, and other MSIs. Some expressed concerns that MSIs (in general) are disadvantaged in the scientific review process due to less favorable evaluations of the research environment and less of an ability to execute grants successfully. Participants suggested that NIH evaluate the distribution of awarded grants to institutions within different categories and with different reputations to assess whether a positive bias exists toward high-resourced, legacy research universities that submit grant applications.

Topic 2: Challenges to racial and ethnic equity in career pathways and within the workforce – education, hiring, and research opportunities

Participants indicated that students, postdoctoral fellows, and researchers from underrepresented groups would benefit from mentorship to navigate both career and grant opportunities. Participants expressed difficulties finding invested mentors, noting the importance of mentorship for help navigating academia, which can feel shrouded or inaccessible. However, positive mentorship experiences with URM faculty members as research mentors were shared. Suggestions were made that NIH should initiate formalized mentorship programs for early stage researchers and trainees focused on career building in the biomedical research enterprise and navigating the grant process to optimize successful proposals. Participants also emphasized that the often unstructured, decentralized nature of mentorship across institutions can make it difficult to maintain long-term mentor-mentee relationships, despite the importance of sustained mentorship in the early stages of a research career. A few participants also advocated for institutional recognition of service as a mentor, both formally and informally.

Topic 3: Practices and policies as barriers to racial and ethnic equity

Desire was expressed for increased transparency around the distribution of NIH-funded grants by institution characteristics (e.g., size) and investigator demographics. There were consistent perspectives indicating that in past grant applications, the reviewer critiques have seemed inconsistent, making it difficult to understand the rationale for the scores and funding decisions. Some participants mentioned concern about the NIH practice of relying on summary statements and the inability of investigators to resolve discrepant critiques from NIH. A few participants also expressed concern about implicit or explicit bias, socioeconomic privilege, and racism because of the required educational and professional research background information included as part of the

grant application. They indicated that these factors are less relevant than the science proposed. Also noted was that these biases could explain the difficulty that many URM researchers experience in the process of seeking NIH funding.

Topic 4: Challenges in racial and ethnic health disparities research

Participants perceived that researchers focusing on racial and ethnic minority groups and health disparities must over-explain and defend their research to study section reviewers to a greater degree than do basic scientists. A few went on to express that it is difficult to convince reviewers of the significance and need of the work.

Faculty members who participated in the session discussed the burden of conducting DEI work for their institutions. Participants expressed concern about a perceived widespread opinion that among college and university faculty members, health disparities research is akin to community service or outreach rather than rigorous biomedical research. Additional concern was voiced that NIH's propensity to fund and support basic science versus clinical and health disparities research limits both the biomedical research enterprise and funding committed to racial and ethnic minority populations.

Topic 5: Actions and initiatives to address racial and ethnic equity within participants' institutions

URM scientists described their experiences serving in both faculty positions and incidental roles as diversity champions at their institutions. Colleges and universities with the means to lessen faculty responsibilities and workload indirectly give faculty time to evaluate and adapt their processes to improve equity and increase diversity. Many institutions have initiated efforts to address racial equity, and there was an expressed desire for measurable progress.

Topic 6: Proposed solutions for NIH – actions, initiatives, policy, and engagement

Many of the participants who worked within university settings described their repeated lack of success in receiving funding for past grant submissions and difficulty identifying common themes to elucidate the reasons their proposals were not selected for funding. Some participants suggested that NIH implement processes to eliminate perceived bias in decision-making by bolstering bias training for scientific review officers and program officers, implementing systemic oversight of study sections, and incorporating more diversity on review panels to broaden perspectives around the need and potential impact of the proposed research.

Participants requested greater clarity in the NIH grant application process and pointed out that researchers may not be familiar with the NIH and federal policy terminology used throughout the grant application process. Participants stated that comprehensible grant application and review materials are important to provide early stage researchers and faculty from HBCUs, MSIs, and institutions with fewer resources equal footing to earn support for their research.

2. HISTORICALLY BLACK COLLEGES AND UNIVERSITIES SESSION #1 SUMMARY

Thursday, December 2, 2021, 1:00pm-2:30pm ET

Brief Overview

The purpose of the session was to listen and learn about perspectives and experiences related to racial and ethnic equity in the biomedical research enterprise among individuals who lead, attend, work in, or are otherwise connected to HBCUs. The UNITE listening session, facilitated by an outside contractor, was attended by more than 50 participants. Dr. Monica Webb Hooper, Deputy Director of NIMHD at NIH, welcomed attendees and summarized the mission and goals of the UNITE initiative.

Summary of Discussion

Topic 1: The overall state of racial and ethnic equity in the biomedical sciences

Participants described several challenges and inequities in the biomedical sciences experienced by HBCUs. Among the challenges noted were the disparities in grant funding among URM investigators despite high interest and multiple efforts to seek NIH support. Participants noted that many HBCUs lack the research infrastructure and support to be competitive in the NIH grant application process. They also emphasized the importance of HBCU faculty member representation in biomedical science training and capacity-building programs, which could increase diversity in biomedical science fields and increase research funding to URM faculty members at MSIs. Participants expressed concerns about the power differential created when HBCU investigators are involved via subcontracts to NIH-funded projects that have been awarded to larger PWIs. This power differential limits the ability of these investigators to utilize the funding as they deem necessary. To address the associated inequities, participants suggested that NIH should increase the level of direct funding to HBCU investigators, thereby facilitating their contributions to high-impact science.

Participants discussed the importance of increasing equity in the biomedical sciences to address the health needs of racial and ethnic minority and other underserved communities. They described the disproportionate impact of global disasters, including climate change and the COVID-19 pandemic, on disadvantaged communities and HBCUs. Among the points raised was that insufficient attention to climate change and natural disasters in affected geographic regions has the potential to further exacerbate inequities. Participants highlighted the need to focus on these issues as well as long-term systemic changes needed to improve health and socioeconomic equity.

Topic 2: Challenges to racial and ethnic equity in career pathways and within the workforce – education, hiring, and research opportunities

Participants stated that achieving equity across research institutions requires NIH to allocate more resources toward the infrastructure of HBCUs and MSIs. Doing so would enhance the competitiveness of these institutions to attract and support talented trainees and scientists. Participants indicated that many HBCUs provide less than optimal startup packages for new faculty members, which has negative impacts on recruitment and retention, as well as research productivity and achieving tenure. As a result, smaller, less-resourced universities are unable to build the critical mass of faculty members needed to secure research funding. Racial and ethnic inequities in available resources were noted as disincentives for trainees to pursue academic careers. Participants highlighted the need for grants that include sufficient funds to hire additional URM investigators, as well as the need for opportunities for early stage researchers to build relationships and networks, which are critical

in increasing diverse representation and leadership in the biomedical sciences. Participants suggested that NIH should collect and track data on these challenges to inform areas of need for HBCUs and MSIs.

Topic 3: Practices and policies as barriers to racial and ethnic equity

The primary barriers discussed included the complicated NIH grant application process, as well as perceived biases in the review process. Participants highlighted the importance of mentorship to bridge the funding gap and provide technical assistance on navigating the application process and obtaining grants. They also perceived that review biases against selected topics and researchers who have not received funding previously may be elevated for faculty members at HBCUs and smaller colleges and universities. Participants believe that blind evaluation of grant applications (i.e., no identifying individual or institutional information) could help eliminate perceived bias based on applicant demographic or institutional factors in the review process.

Topic 4: Challenges in racial and ethnic health disparities research

Participants expressed the importance of institutional outreach and resources to support science conducted among racial and ethnic minority groups and underserved communities to achieve lasting equity. Participants stated that increased diversity on NIH grant review panels would help amplify the needs of disadvantaged groups and the importance of the proposed science. They asserted that resolving racial and ethnic health disparities requires URM researchers to speak up about any biases they observe in the review process. Participants also shared that the greater resources and funding accessible to larger institutions causes inherent bias in favor of R1 universities (doctoral universities with very high research activity) and limits opportunities for HBCUs to conduct research on minority health and health equity. Participants also discussed funding barriers to sustainable health disparities research. Long-term funding periods that exceed five years would better enable teams to conduct community-engaged research, as the current funding levels often prevent researchers at MSIs from working with communities to provide meaningful and sustainable partnerships.

Topic 5: Actions and initiatives to address racial and ethnic equity within participants' institutions

Participants discussed experimental research initiatives at their institutions to improve CBPR. Effective CBPR and other community-engaged research approaches often require significantly more time than other research designs. Participants shared that their institutions have leveraged state funding and funding from NIH institutes, such as the National Institute of Mental Health, to introduce pilot programs examining the efficacy of longer timelines for CBPR. They asserted that extended funding timelines have the potential to increase effective community engagement, trial execution, and the dissemination of research findings. Researchers involved in these pilot programs have also documented the infrastructure and wide range of community collaborators that have been involved, which contributes to the body of knowledge, and the ability to share best practices for community engagement.

Topic 6: Proposed solutions for NIH – tactics, actions, initiatives, policy, and engagement

Participants asserted that NIH should provide additional outreach, support, and funding for HBCUs, which are more likely to serve racial and ethnic minority groups and socioeconomically disadvantaged communities. This would include support for mentorship programs and establishing or connecting with research-based networks. Participants recommended that NIH conduct a formal funding analysis to examine inequities in funding among HBCUs and smaller colleges and universities, which would be followed by initiatives to reduce any identified

disparities. Participants also recommended mentoring programs for researchers at R1 institutions to support and mentor those at non-R1 institutions to create tailored and sustainable impact for smaller biomedical research programs.

Participants recommended increased funding and support for HBCUs to conduct community-engaged research with higher direct costs limits and extended project timelines. Participants suggested that these grants should require partnership-building with community leaders and other constituents, greater funding for community partners, and appropriate participant compensation. Participants also observed the need for more research in rural communities and suggested facilitating networks of faculty members from various colleges and universities to discuss best practices. Finally, they suggested that NIH should provide a forum for HBCU faculty, students, and research staff to highlight the value and impact of research programs at these institutions.

3. FOUNDATIONS AND PROFESSIONAL SOCIETIES SESSION SUMMARY

Monday, December 6, 2021, 12:00-1:30pm ET

Brief Overview

The purpose of the session was to listen and learn about perspectives and experiences related to racial and ethnic equity in the biomedical research enterprise among individuals who lead, work within, are members of, or are otherwise connected to U.S. foundations and professional societies. The listening session, facilitated by an outside contractor, was attended by more than 100 participants. Dr. James Gilman, Chief Executive Officer of the NIH Clinical Center, welcomed attendees and summarized the mission and goals of the UNITE initiative.

Summary of Discussion

Topic 1: The overall state of racial and ethnic equity in the biomedical sciences

Participants expressed that racism is deeply embedded in medicine, which impacts the health and wellbeing of racial and ethnic minority populations. They perceived a widespread lack of racial and ethnic diversity and multiculturalism in higher education and research institutions. Also noted was the missed opportunity for meaningful academic-community partnerships with organizations that have direct connections with racial and ethnic minority communities. Participants highlighted the need for stronger support of community-based organizations (CBOs) and for health care professionals to work with communities that have been impacted by structural racism and health inequities.

Additionally, participants pointed to the lack of information and data that could help communities and researchers identify and address structural racism in health care. They emphasized the importance of collecting and disaggregating racial and ethnic demographic data for participants in all funded research projects to grow the body of available information and findings on health outcomes.

Topic 2: Opportunities and challenges to pathways and workforce equity – education, hiring, and research opportunities

Participants discussed various challenges that prevent racial and ethnic minority students from entering and advancing in careers in the biomedical sciences. One example, echoed throughout the group, was the limited (or complete lack of) resources committed to STEM in K-12 education. The group also described the lack of diversity among college and university leadership and faculty members as well as the low compensation for trainees in graduate or professional programs as significant challenges to equity. Participants noted the lower likelihood of promotions or appointments to leadership positions among URM faculty members.

Participants described several opportunities to strengthen the pathway and increase workforce equity. They expressed the need for more support and funding of K-12 programs to equip students with a quality STEM education and improve awareness of biomedical research career opportunities. Attendees also suggested that NIH leverage its resources to increase support for recruiting and hiring diverse graduate and post-graduate trainees. Additionally, after recruitment, robust training and other opportunities for success in early stage research are important for increasing diversity and inclusion in research settings, professional organizations, and societies, and for fostering partnerships with community organizations. Providing such opportunities will have positive effects on pathways to careers in science and medicine, as well as overall diversity in college and university settings, URM faculty members in leadership roles, and students' views of possibilities and their sense of belonging.

Topic 3: Needs and challenges in racial and ethnic health disparities research

The discussion centered on several needs and challenges to increase the emphasis on health disparities and support science seeking to promote health equity. There is a need for robust data collection to identify health disparities. Moreover, there is a need to collect and report data that reveal the root causes of health problems—beyond surface-level socioeconomic factors. Participants also discussed the need to address the significant distrust of biomedical science and health care among members of racial and ethnic minority groups, which has been exacerbated by the COVID-19 pandemic.

Community-based researchers have an important role in asking the scientific questions that are most important to community members and in facilitating change in the types of data collected. These scientists also have the relationships needed to bridge connections between NIH-funded research and nonprofit organizations (NPOs), CBOs, and advocacy groups that engage with families and students. Thus, the group advocated for increased funding for community-engaged research and meaningful community engagement, and for promoting better health outcomes. Participants also described opportunities for extramural researchers to leverage relationships with local doctors, who are poised to communicate research goals to community members, encourage clinical trial participation, and disseminate research findings to communities. The group also highlighted that CBPR requires competencies that some researchers do not practice in basic science; thus, requirements for investigators to obtain funding for CBPR projects should include demonstrated competency and a track record of successful partnerships.

Topic 4: Actions and initiatives to address racial and ethnic equity provided or leveraged by participants' organizations

Participants highlighted the increased attention to diversity and inclusion and noted the importance of initiatives at their organizations. They described components of successful DEI programs in higher education and biomedical sciences, such as inclusive recruitment practices, multicultural awareness, and mentorship to increase diversity and the success of people from URM groups. Participants shared examples of efforts to recruit early stage URM faculty cohorts, research programs designed to strengthen pathways into biomedical research careers among URM students, and NIH-supported DEI programs at their institutions. They noted that virtual presentations have increased public access to research findings and engagement with scientists and community partners. Participants described programs in their communities that increase awareness of career opportunities, as well as provide support, resources, and educational courses to help manage financial and cultural challenges often experienced by students from URM groups.

Topic 5: Practices and policies as barriers to racial and ethnic equity

Participants discussed several practices and policies that might affect racial and ethnic equity among scientists. Noting the complexity of grant application requirements, they described the potential for bias favoring large research institutions over MSIs and smaller institutions. Providing training for URM trainees, faculty members, and researchers on best practices in the grant application process was raised as a mitigation strategy and endorsed by other attendees. The group also observed that the racial funding disparity for support under R01-level (and larger) grants has additional structural consequences, including a lower likelihood of selection for NIH study sections and being viewed as less qualified to serve as a training grant mentor. The participants noted that these ostensibly biased practices create disadvantages for faculty members at smaller, less-resourced institutions. Participants also indicated that NIH does not hold institutions accountable for diversity, and that DEI report cards would enable validation of the extent of diversity among faculty members and within research teams, as well as support for DEI initiatives.

Topic 6: Proposed solutions for NIH – tactics, actions, initiatives, policies, and engagements

Participants' solutions included actions related to the NIH application review process, institutional accountability for DEI, and community engagement. It was suggested that grant applicants report the diversity of leadership, faculty members, and students, which could be a component of the review process. This may prompt institutions to follow through on equitable hiring and advancement goals. Participants also encouraged NIH to increase its involvement with CBOs and NPOs by supporting and attending local events within underserved communities.

4. TRIBAL NATIONS AND AMERICAN INDIAN/ALASKA NATIVE COMMUNITIES SESSION SUMMARY

Tuesday, December 7, 2021, 3:00pm-4:30pm ET

Brief Overview

The purpose of the virtual listening session was to listen and learn about perspectives and experiences related to equity in the biomedical research enterprise among stakeholders who represent, work within, or are otherwise connected to Tribal Nations, American Indian and Alaska Native (AI/AN) communities, and Tribal-serving organizations. The listening session, facilitated by an outside contractor, was attended by more than 50 participants. Dr. Mia Rochelle Lowden, Health Science Policy Analyst in the NIH Office of Research Infrastructure Programs, Office of the Director (OD) and immediate past Chairperson of the Special Populations Research Forum, welcomed attendees and summarized the mission and goals of the UNITE initiative. Dr. Juliana Blome, Deputy Director of THRO, then highlighted the important roles of Tribal and AI/AN scientists, and the organizations that serve these groups, in reducing health disparities.

Summary of Discussion

Topic 1: Equity for underrepresented groups in the biomedical sciences

Participants acknowledged the historical transgressions experienced by Tribal nations and AI/AN communities in the United States overall and in biomedical science. Reconciling with this history was seen as important for increasing AI/AN representation in science in multiple roles, including as community partners, participants, and researchers. Participants asserted that significant and consistent efforts are needed to increase representation in the field, address health and health care needs, and assure equity going forward. Participants emphasized that partnerships are critical to reduce inequities, including health disparities and gaps in education and food security, and must be managed separately with each Tribe to address their unique needs. Participants clarified that Tribes are sovereign Nations, and highlighted government-to-government partnerships as an approach to build trust and promote healing from the past, as well as to address the disparities and inequities experienced by AI/AN communities.

Topic 2: Opportunities and challenges to pathways and workforce equity – education, hiring, and research opportunities

Participants discussed the scarcity of AI/AN doctoral level biomedical scientists and outlined challenges in building and strengthening career pathways. Among the challenges was the burden for AI/AN researchers to serve as cultural representatives and educators due to the underrepresentation of AI/AN scientists within their institutions. This burden also exists on NIH review panels, on which AI/AN researchers find themselves having to justify the need for Tribal-focused biomedical research and discussing the significance of longstanding health disparities. Participants asserted that NIH should hire AI/AN individuals at every level of the NIH workforce and increase representation on review panels so that their important perspectives and experiences are regularly included.

Participants discussed the need for more opportunities for AI/AN students to pursue STEM careers, beginning in grades K-12. They recommended creating programs that elevate AI/AN researchers as role models and provide opportunities for young people to engage meaningfully with these scientists. Participants also noted the challenges of transitioning from reservation high schools, Tribal Colleges and Universities (TCUs), or other small colleges to large, unfamiliar research institutions and noted the need for cultural and academic support for

AI/AN students and early stage scientists. They also suggested targeted grant application training to establish a strong career foundation and improve grant proposal outcomes for early stage scientists.

Topic 3: Practices and policies as barriers to equity

Participants discussed inequities in research funding that exist for TCUs, for Tribal Nations, and among Tribal Epidemiology Centers (TECs). Participants noted challenges in obtaining grant funding for research conducted by TCUs and Tribal Nations. They also perceived that a small number of large TECs receive the majority of research funding, creating funding disparities among these centers. Participants indicated that the resources available for Tribal health and health disparities research are insufficient to support AI/AN health needs and needed research within AI/AN communities.

Participants also described data-related limitations as barriers to equity. Key data needed to identify and monitor disparities, such as death certificates and U.S. Census estimates, are not collected systematically in Tribal Nations and may underrepresent health concerns among AI/AN communities. Participants suggested that collaborations with other federal agencies to collect the appropriate data and ensure recognition of TECs as public health authorities would result in accurate health disparities data and improvements in AI/AN health.

Topic 4: Opportunities, needs, and challenges in health disparities and health equity research

Participants discussed how low representation of AI/AN researchers across institutions limits ethical community-engaged research focused on AI/AN health disparities. AI/AN scientists have historical, culturally competent research approaches that can be difficult to translate and implement within the broader scientific enterprise. Moreover, AI/AN scientists may face a conflict between upholding their Tribal values and scientific practices and applying U.S. academic and NIH-accepted approaches that may not work within Tribes and AI/AN communities.

Participants shared the perception that Tribal viewpoints are not valued during grant reviews, and that biases exist around the expertise and resources within TCUs and smaller colleges, as compared with highly ranked universities. Greater AI/AN representation on review panels was seen as a method to bring a more culturally respectful perspective to the review process.

Participants also highlighted that CBPR, which engages members and leaders to design, approve, and participate in research, is needed within Tribal Nations and AI/AN communities. They believe that community members should be included as partners, and that Tribes should derive direct benefit from the research.

Topic 5: Actions and initiatives to address racial and ethnic equity provided or leveraged by participants' organizations

Native American Research Centers for Health (NARCH) awards from the National Institute of General Medical Sciences in conjunction with Indian Health Services (IHS) were leveraged by participants to support AI/AN research. Through the NARCH award mechanism, a Tribe or Tribal organization can conduct studies at the R01 level, which provides five years to conduct effective community-engaged research. Participants stated that NARCH provided the core funding needed to maintain staffing consistency, conduct grant application and research training, and provide support for the engagement of recent graduates and investigators. NARCH-funded researchers were able to develop deep partnerships with Tribal Nations and generate more positive outcomes and impactful findings for the community. Through NARCH awards, researchers also become prepared to successfully apply for research grants and to work with other institutes in the future.

Topic 6: Proposed solutions for NIH – Tactics, actions, initiatives, policy, and engagement

Participants proposed solutions that focused largely on improving career opportunities and experiences for AI/AN researchers and improving the body of research that engages Tribal Nations. Suggestions included increased NIH engagement with Tribal-serving organizations, the implementation of programs to encourage and support AI/AN students in the biomedical sciences, and technical assistance for preparing grant applications. Additionally, participants suggested that NIH should hold researchers who study AI/AN health accountable for conducting meaningful community-engaged research, which includes describing and executing plans for integrating Tribes and Tribal leadership into projects from concept to dissemination of findings. Finally, to alleviate the burden on AI/AN scientists to educate others, participants suggested that appointing designated cultural liaisons at NIH and NIH-funded campuses would raise awareness and provide education on the diversity of cultures, histories, and values among Tribal Nations.

5. FAITH-BASED ORGANIZATIONS AND HOUSES OF WORSHIP SESSION SUMMARY

Wednesday, December 8, 2021, 12:00-1:30pm ET

Brief Overview

The purpose of the listening session was to listen and learn about perspectives and experiences related to racial and ethnic equity in the biomedical research enterprise among stakeholders who lead, work within, attend, or are otherwise connected to U.S. faith-based organizations and houses of worship. The listening session, facilitated by an outside contractor, was attended by more than 40 participants. Dr. Helene Langevin, Director of the National Center for Complementary and Integrative Health, welcomed attendees and summarized the goals of the UNITE initiative. She explained that the information obtained during the discussion would inform the UNITE initiative's action plan to promote diversity and inclusion within the scientific workforce and advance racial equity on the NIH campus and within the extramural community.

Summary of Discussion

Topic 1: Interests, needs, and issues regarding racial and ethnic equity in health care and biomedical sciences

Participants recognized the lack of racial diversity within many faith-based organizations and houses of worship, and some discussed a desire to increase diversity. They also discussed historical factors that have led to a relative racial and ethnic segregation within houses of worship, as well as the needed investments to address social needs and the effects of structural racism within their communities. The geographic areas of houses of worship, coupled with persistent segregation in the U.S., often lead organizations to focus on community-centered needs and priorities. Participants recognized that houses of worship often play important roles in addressing community health and translating science into lay language.

Participants recognized faith-based organizations and houses of worship as links to biomedical science and health care. The discussion included the suggestion that hosting NIH events in these venues would encourage congregants to learn about scientific efforts and to consider careers in science. Participants suggested that research forums could highlight successful scientists from underrepresented minority groups, and by doing so, promote STEM, encourage research engagement, and minimize distrust toward scientists. One participant cited the rapid scientific effort to develop COVID-19 vaccines as such an example, and other participants supported this example. Specifically, participants noted that a Black woman was a lead scientist on a Food and Drug Administration-approved SARS-CoV-2 vaccine. In addition, participants discussed the importance of enhancing the training of current and future scientists on the ethical conduct of community engaged research and the facilitation of inclusive participation in research.

Participants highlighted the opportunity for faith-based organizations to support efforts to improve community health. Specific needs in some communities include programs to reduce the burden of COVID-19 and HIV, which disproportionately affect racial and ethnic minority groups and Lesbian, Gay, Bisexual, Transgender, and Queer (LGBTQ+) individuals, respectively. Important in the discussion were potential challenges with the integration of such programming in houses of worship due to misinformation, stigma, and conflicting religious and cultural values.

Topic 2: The roles of faith-based organizations and houses of worship in addressing racial and ethnic equity in health care and biomedical research

Participants emphasized the unique role that faith-based organizations and houses of worship serve in addressing SDOH by bringing health care services such as vaccinations, cancer screenings, and blood drives out of hospitals and clinics and into neighborhoods. Moreover, the reach and access to both virtual worship services and meetings in response to the COVID-19 pandemic offers a promising opportunity to expand the support offered by faith-based organizations to communities outside their immediate geographic area, including health-related educational sessions and community discussions. Participants emphasized that strategic partnerships with faith-based organizations and houses of worship have the potential to improve community health outcomes and that researchers and advocates should engage organizations to solicit their advice and concerns.

Topic 3: Needs of and challenges to participation by racial and ethnic minorities in biomedical research

Participants noted several challenges in increasing the participation of racial and ethnic minority persons in biomedical research. They discussed historical factors related to the elevated distrust in science and health care among racial and ethnic minority groups, including the well-known research abuses that occurred in the name of science. Some participants also noted the complexity of these issues, given that houses of worship had been involved in recruiting racial minorities to participate in the Tuskegee Study of Untreated Syphilis in the Negro Male. Others discussed their experiences recruiting racial and ethnic minority participants and the important role that houses of worship can play.

Participants discussed how faith-based organizations and houses of worship have the potential to address the need for inclusive research participation. Participants noted the importance of gaining the buy-in of community and faith leaders, as trusted figures to disperse the necessary information to engage community members in the research process. They suggested that research institutions and community-engaged researchers should partner with faith leaders to explain the objectives of biomedical research being conducted in their communities. Doing so could help ease the significant distrust of biomedical research; yet sustained efforts will be needed, and faith leaders are key stakeholders in addressing health inequities and reframing views of the health care system to contribute to lasting change through research.

Topic 4: Proposed solutions – How NIH and faith-based organizations and houses of worship can partner more effectively for racial and ethnic equity in biomedical research

Participants offered several solutions for NIH partnerships with faith-based organizations and houses of worship. They included hosting NIH events at faith-based organizations and houses of worship, such as events designed to bolster the biomedical science pipeline among URM students who are members of faith communities. Participants suggested that NIH leverage the established relationships that colleges and universities have with faith-based organizations across the United States. Doing so would facilitate the understanding of medical and socioeconomic needs and opportunities, as well as connect researchers with community leaders and organizations to conduct meaningful research and enhance health care access.

Participants made several suggestions to improve DEI in research participation. Among them was clear communication with stakeholders from the outset regarding how the science reflects community health needs and specific ways in which the community will benefit. Clinical trial procedures should accommodate the lifestyles and needs of community participants, including flexible scheduling and fair compensation. However, research should also add lasting value to the community and not rely solely on individual financial incentives. Participants recommended that all NIH studies disseminate a full research report to clinical trial participants, community leaders and representatives, and the community, outlining the findings and including corresponding feasible and actionable solutions in accessible language.

6. MINORITY-SERVING COLLEGES AND UNIVERSITIES SESSION #1 SUMMARY

Thursday, December 9, 2021, 6:00pm-7:30pm ET

Brief Overview

The purpose of the listening session was to listen and learn about perspectives and experiences related to racial and ethnic equity in the biomedical research enterprise among stakeholders who represent, work with, attend, or are otherwise connected to colleges and universities that serve racial and ethnic minority students (i.e., MSIs). The UNITE listening session, facilitated by an outside contractor, was attended by more than 30 participants. Dr. Wilson Compton, Deputy Director of the National Institute on Drug Abuse (NIDA) at NIH, welcomed attendees and summarized the mission and goals of the UNITE Initiative.

Summary of Discussion

Topic 1: The overall state of racial and ethnic equity in the biomedical sciences

Participants discussed micro- and macroaggressions experienced by trainees and professionals from racial and ethnic minority groups in biomedical research settings. Some participants described experiences of racism they experienced directly or witnessed toward Black/African American and Latino/Hispanic students in college and university biomedical labs. Faculty members discussed biases exhibited towards them and other scientists from URM groups. They also discussed racial and ethnic inequities in selection and hiring practices, and subsequent mistreatment in college and university programs and departments. Specifically, a point raised by one participant and underscored by others was the misperception that racial and ethnic minority students and faculty members are less qualified compared with their White and Asian American and Pacific Islander counterparts. Participants shared concerns that enduring racism within and outside of educational institutions may damage URM students' self-efficacy and motivation to seek and advance in biomedical science careers. The group highlighted the need to strengthen training and career pathways, as well as amplify the voices of groups who are underrepresented in science and medicine.

The group described data aggregation and the labeling of groups as barriers to reducing health disparities and assuring equity and inclusion. They discussed insufficient data collection on racial and ethnic minority populations and how data aggregation obscures both between- and within-group differences. Participants highlighted that the term 'BIPOC' (Black, Indigenous, and people of color), which is used with increasing frequency in academic settings, ostensibly excludes Latino/Hispanic persons. In addition, aggregated data on AANHPI groups presumes that subgroups and persons of differing nationalities have the same backgrounds, needs, and opportunities. These issues limit the advancement of equity for Latino/Hispanic and AANHPI populations, and does not promote the consideration of within-group diversity.

Topic 2: Opportunities and challenges to racial and ethnic equity in career pathways and workforce equity – education, hiring, and research opportunities

The discussion focused on the need to strengthen and build racial and ethnic equity into training and career pathways. The group emphasized that faculty member diversity in the biomedical sciences remains low and advocated for higher representation of people from URM groups. Beyond diversity, participants described inequities in opportunities for faculty members to achieve research success. Relative to White scientists at R1 universities (doctoral universities with very high research activity), faculty members from URM groups, particularly at smaller MSIs, tend to have limited professional networks and thus have less awareness and access to

resources and research opportunities. This is a structural factor that has the potential to improve if the recent emergence of DEI efforts across colleges and universities are successful. Participants also discussed the low retention of faculty members from racial and ethnic minority groups. They described failures to recognize and reward the contributions of African American women, in particular. Participants suggested that institutions should invest in mentorship programs that include both training and fair compensation for mentors, with a goal of long-term mentor-mentee relationships.

Topic 3: Practices and policies as barriers to racial and ethnic equity

The discussion centered on practices within the culture of the biomedical ecosystem that serve as barriers to both career development and advancement, as well as health equity. Participants described the perceived practices of minimal nomination and selection of people of racial and ethnic minority status on policymaking bodies and advisory boards, biomedical grant review panels, and faculty member search committees in college and university settings. Participants also noted that the lack of faculty members and leaders from racial and ethnic minority groups has, among other consequences, led trainees to doubt their own aptitude to advance in the biomedical science careers. The underrepresentation within the workforce and on professional boards also prevents meaningful progress in addressing the health and health care needs of racial and ethnic minority populations who are more likely to be medically underserved.

Topic 4: Opportunities, needs, and challenges in racial and ethnic health disparities and equity research

The discussion focused on the importance of CBPR and the need to address several concerns that prevent this approach from maximizing its potential impact. The group noted that few funding opportunities are available to support CBPR. They also described experiences indicating that grant review panels are more critical of CBPR applications compared with basic biomedical science applications, which has a negative impact on funding for health disparities research. In addition, the total direct and allowable cost limits within grant budgets prevent researchers from providing the needed support for community engaged leaders and organizational partners. The group also discussed the concern that initial engagement with potential community collaborators often occurs after a grant submission or award. They asserted that community engagement is needed during the research design phase so that community-specified feedback can be considered. Most Ph.D. program curricula do not include formal CBPR training, and this was suggested as a core competency across areas of science.

Topic 5: Actions and initiatives to address racial and ethnic equity within participants' institutions

Participants described actions and initiatives at MSIs that have had varying levels of success. Institutions have hosted facilitated discussions on diversity, equity, inclusion, and accessibility (DEIA); however, participants expressed disappointment about the tendency for those conversations to focus on the guilt experienced by White individuals, rather than elevating the voices of people of racial and ethnic minorities. Some institutions are implementing pathway programs to enhance skill-building and relationship development among post-doctoral fellows. Others are offering early stage researcher mentorship programs to provide guidance on obtaining research funding and earning tenure. Participants also described initiatives designed to help community members learn about and become eligible for community health and research-related job opportunities.

Topic 6: Proposed solutions for NIH – tactics, actions, initiatives, policy, and engagement

Participants proposed a wide array of solutions, focused on reducing racial gaps in NIH funding and increasing support for health disparities researchers. Participants suggested policies to increase equity during grant application reviews, including the inclusion of reviewers from URM groups on every grant study section, as well as implicit bias training and CBPR education for grant reviewers. Participants also recommended that NIH award a greater proportion of training grants to MSIs as a means of increasing capacity and building sustainable research programs, and provide extramural investigator feedback mechanisms to continually improve policies conducive to research-related equity.

7. NONPROFIT ORGANIZATIONS, COMMUNITY-BASED ORGANIZATIONS, AND ADVOCACY ORGANIZATIONS SESSION #1 SUMMARY

Tuesday, December 14, 2021, 6:00-7:30pm ET

Brief Overview

The purpose of the listening session was to listen and to learn about perspectives and experiences related to racial and ethnic equity in the biomedical research enterprise among individuals who lead, work for, are members of, or are otherwise connected to NPOs, CBOs, and advocacy organizations.

The UNITE listening session, facilitated by an outside contractor, was attended by more than 60 participants. Dr. Diana Bianchi, Director of the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development and head of the Prenatal Genomics and Therapy Section for the Medical Genetics Branch at the National Human Genome Research Institute, welcomed attendees and summarized the mission and goals of the UNITE initiative.

Summary of Discussion

Topic 1: Racial and ethnic equity in the biomedical sciences

Participants identified areas indicative of inequities in the biomedical sciences. The group discussed the importance, yet lack, of racial and ethnic minority group representation across the enterprise, specifically among faculty members, research teams, and NIH grant review panels. This underrepresentation results in key issues, such as research questions and designs that lack cultural and community competence; research teams that are unfamiliar with community nuances that affect trust, engagement, and meaningful inclusion; and grant reviewers who do not have the lived experiences to recognize the importance of specific research topics. Racial and ethnic minority scientists are well-positioned to build community engagement and trust due to their deeper understanding of the health needs and challenges of populations that experience health disparities. Inequities and inaccurate interpretations also result when grant applications and grant review panels are absent of the individuals from the groups that are targeted for clinical research. An overarching point was that greater representation of racial and ethnic minority groups within the biomedical sciences is critical for transformative change and healing.

Topic 2: Opportunities and challenges to pathways into the biomedical sciences and workforce

The discussion centered on two primary challenges to increasing professional pathways within the biomedical sciences. The first was the adverse impact of low representation of racial and ethnic minority persons in biomedical sciences careers and in senior scientific and leadership positions. Environments absent of diverse representation limit exposure to opportunities and entry among URM students and trainees, often do not provide effective mentorship to these groups and/or early stage professionals, and tend to offer low compensation during early career stages. Participants advocated for increased NIH funding to academic institutions to support the recruitment and hiring of racial and ethnic minority researchers. They also advocated for greater accountability for high-quality mental health care in medically underserved groups. Second, there is a need to increase and strengthen academic-community partnerships. Working closely with community-based organizations and advocacy groups to conduct research has the potential to increase pathways into the biomedical research workforce. Such partnerships will also provide important insights into community perspectives, needs, and challenges, and facilitate inclusion in clinical research.

Topic 3: Needs and challenges in racial and ethnic health disparities and equity research

Participants discussed several needs and challenges around advancing health disparities research. Racial and ethnic minority communities experience a range of health disparities, such as the greater prevalence of multiple chronic medical conditions among African American women and challenges to accessing mental health care services in communities with low socioeconomic positions. Intersectionality was also raised, with participants acknowledging that LGBTQ+ individuals who are also members of racial or ethnic minority groups face unique health disparities and health care access challenges. Attention to research methodology relevant to promoting health equity is also needed, such as collecting and disaggregating data for Asian/Asian American and Hispanic/Latino populations to identify the unique needs and challenges of groups with varying national origins, and greater NIH support for CBPR. Greater NIH investments in health disparities research, incentives for research participants, and accountability for funded investigators to share findings with communities are needed.

The group also discussed challenges related to seeking NIH funding that have implications for health disparities research and health equity promotion. There is high interest in applying for NIH funding, yet the timing and accessibility of Requests for Applications (RFAs) do not allow sufficient time for community groups and organizations to develop strong applications. Moreover, the language in RFAs should be written in plain language to increase accessibility of the application process among a broader set of researchers. NIH support for linking CBOs and encouraging collaborations would enhance existing and future health disparities research efforts. Participants also advocated for NIH to invest in community organizations in ways that directly benefit community residents. Long-term funding mechanisms and strong community engagement were seen as keys to expanding health disparities research.

Topic 4: Actions and initiatives to address racial and ethnic equity provided or leveraged by participants' organizations

The discussion of actions and initiatives centered on the ways in which medical and biomedical professionals have engaged communities to conduct health disparities research and promote health care equity. Participants highlighted the importance of clinicians immersing themselves within, and spending more direct time in, communities. Four best practices were shared that have demonstrated success in CBPR projects: (1) co-designing programs with members of the impacted communities; (2) using accessible language so that the purpose of the research and the importance of participation is elucidated; (3) involving community leaders and members to help develop the project and build trust; and (4) recognizing that building relationships and change take time.

Topic 5: Proposed solutions for NIH: tactics, actions, initiatives, policy, and engagement

Proposed solutions for NIH were focused on building trust and improving the quality of research by implementing changes in research funding practices, community engagement, and strategies to improve career pathways. Conducting research, building trust, and creating sustainable health equity solutions in racial and ethnic minority communities would be enhanced via the "co-design" of research with community members. Participants suggested that NIH should consider requiring that CBPR researchers spend at least three years within a community of interest to understand context, facilitate the interpretation of findings, and enable the identification and implementation of actionable solutions. Supporting educational (e.g., STEM) programs offered by CBOs and advocacy groups and career pathways for people from URM groups in the biomedical sciences might also assist with trust-building and increase research participation among racial and ethnic minority communities.

Participants also suggested that NIH consider prioritizing health disparities research, community engagement, and researcher training in CBPR; and increasing the research project periods to facilitate sustainable efforts and a positive impact on the health of racial and ethnic minority communities.

8. HISTORICALLY BLACK COLLEGES AND UNIVERSITIES SESSION #2 SUMMARY

Tuesday, January 11, 2022, 3:00pm-4:30pm ET

Brief Overview

The purpose of the listening session was to listen and learn about perspectives and experiences related to racial and ethnic equity in the biomedical research enterprise among individuals who lead, work in, are members of, or are otherwise connected to HBCUs. The listening session, facilitated by an outside contractor, was attended by more than 130 participants. Dr. Richard J. Hodes, Director of the National Institute on Aging, welcomed attendees and summarized the mission and goals of the UNITE initiative.

Summary of Discussion

Topic 1: The overall state of racial and ethnic equity in the biomedical sciences

Participants discussed the national emphasis on structural racism and inequities, which was attributed to the COVID-19 pandemic and other social injustices. They acknowledged that the focus on racial and ethnic equity has led to new NIH funding opportunities yet expressed skepticism about the commitment to this research in the long term. Participants emphasized that HBCUs are well-positioned to conduct biomedical research in a range of fields. The group noted, however, that HBCUs are generally under-resourced and are less likely than PWIs to be awarded NIH funding.

The group discussed the positive role of HCBUs in advancing research conducted among racial and ethnic minority groups, which are often underrepresented in clinical research. Participants described challenges to recruiting these groups, specifically linguistic and cultural barriers to participation in clinical research. Materials (e.g., consent documents, recruitment flyers, and questionnaires) are rarely translated to meet the needs of non-native English speakers or are not culturally responsive. Participants asserted that more diverse language and culturally appropriate materials would bridge racial and ethnic gaps and increase participation. Moreover, the composition of the leadership, faculty members, and students at HBCUs, as well as their research interests and established service within underserved communities, could facilitate research to address health disparities and promote equity.

Topic 2: Challenges to racial and ethnic equity in career pathways and within the workforce – education, hiring, and research opportunities

Several challenges to racial and ethnic equity in career pathways and opportunities were discussed. Effective and culturally responsive mentoring is essential for successful biomedical research careers. Biomedical science trainees at HBCUs often experience difficulties in navigating their career options and plans to become early stage investigators. Participants emphasized the need for consistent and supportive mentors to help students maximize their potential and strengthen career pathways. Importantly, participants observed that mentors with similar backgrounds and lived experiences are more likely to understand the challenges that racial and ethnic minority students face. Needed are critical masses of diverse and well-established scientists and health care professionals in multiple settings across the biomedical research ecosystem, including at HBCUs.

Trainees and early stage investigators are interested in seeking NIH funding for their scientific and career development efforts. Participants highlighted the importance of grant funding to facilitate access to research experiences and resources (e.g., lab experience, high quality research equipment) that enhance career development and readiness to conduct independent research. They also discussed a lack of awareness about training grant opportunities and/or how to access them.

Participants described inequities in research infrastructure between HBCUs, MSIs, and higher-resourced institutions. The discussion centered on the need for additional support to develop their infrastructure and capacity to provide research experiences to trainees. They indicated that grants requiring partnership(s) with an R1 college or university often do not allow sufficient funding to purchase needed equipment or support research staff. Participants suggested that NIH should develop initiatives to support building infrastructure for biomedical science programs or to augment existing resources and research programs. Such grants would be instrumental in assisting HBCUs and MSIs with building and supporting research facilities needed to enhance training for students from underrepresented racial and ethnic minority groups.

Topic 3: Practices and policies as barriers to racial and ethnic equity

Participants focused on barriers to racial and ethnic equity that affect trainees. Implicit bias and racism were noted as factors embedded in the educational curriculum and within the behavior of faculty members in some college and university settings. These issues present barriers to educational equity and can prevent students from racial and ethnic minority groups from pursuing or maintaining careers in biomedical science. Participants suggested that programmatic and policy changes are needed to counter structural barriers, particularly for Black or African American students interested in biomedical science pathways. Mentorship programs that facilitate connections to individuals with established commitments to DEI are one strategy to help students manage experiences with bias and racism. Moreover, participants indicated that improving pathways for racial and ethnic minority trainees is also essential to address health disparities in meaningful ways.

Topic 4: Challenges in racial and ethnic health disparities research

Participants discussed the challenge of limited funding for scientists at HBCUs seeking to conduct health disparities research. HBCUs are often trusted and respected institutions within their communities and are poised to address health disparities and promote equity in meaningful ways. Participants indicated, however, that large institutions and PWIs are more likely to be awarded health disparities grants. Of concern was the observation that researchers at large institutions may shift their target population(s) simply to apply for health disparities research funding. In addition, these principal investigators (PIs) often lack the lived experiences, scientific expertise, and true community engagement needed for positive outcomes within the affected communities.

Topic 5: Actions and initiatives to address racial and ethnic equity within participants' institutions

Participants focused on efforts to build research capacity at their institutions. They have sought capacity-building grants to facilitate the research efforts of faculty members as well as create biomedical science experiences for trainees. They asserted that capacity is a prerequisite for increasing racial and ethnic equity in the biomedical sciences by attracting and retaining diverse faculty members and trainees. Capacity is also needed to provide a high-quality education for trainees at all points along the pathway. They noted, however, that sufficient time is needed to make a true impact and asserted that a 5-year (versus 2-year) funding period is optimal to build capacity.

Topic 6: Proposed solutions for NIH – tactics, actions, initiatives, policy, and engagement

The discussion focused primarily on funding for capacity building, partnerships, and mentorship. Participants recommended that NIH conduct a historical analysis to review funding trends over time. The purposes would be to identify variations in grants awarded to HBCUs and MSIs across specified fiscal years and to identify

NIH policies and practices in place during periods of higher funding. NIH could then seek to isolate policies and practices that support these institutions and potentially re-institute them. Participants also encouraged the implementation or expansion of research partnerships between HBCUs and other organizations to increase both funding, capacity-building, and biomedical science training. Some participants acknowledged the positive impact that previous NIH training programs had on their career trajectories and suggested that new or additional programs should be developed to support workforce diversity.

9. MINORITY-SERVING COLLEGES AND UNIVERSITIES SESSION #2 SUMMARY

Wednesday, January 12, 2022, 12:00pm-1:30pm ET

Brief Overview

The purpose of the listening session was to listen and learn about perspectives and experiences related to racial and ethnic equity in the biomedical research enterprise among individuals who represent, work within, attend, or are otherwise connected to U.S. minority-serving colleges and universities. The listening session, facilitated by an outside contractor, was attended by more than 100 participants. Dr. Nora Volkow, Director of NIDA, welcomed attendees.

Summary of Discussion

Topic 1: The overall state of racial and ethnic equity in the biomedical sciences

Participants stated that all facets of U.S. institutions and culture are influenced by structural racism and White supremacy. They expressed that achieving equity across the biomedical sciences will require committing resources and revising policies to actively support researchers from underrepresented minority groups, URM populations, and MSIs. Points raised and underscored included that a more visibly diverse biomedical research community could help alleviate scientific racism and misinterpretations of findings related to racial and ethnic minority health, as well as increase trust and participation in clinical research. Participants also perceived that policy and reputational biases in favor of researchers from highly ranked institutions are among the causes of funding disparities between R1 universities and smaller MSIs. These biases at the institutional level have a disproportionately negative impact on the funding success of URM scientists.

Topic 2: Opportunities and challenges to racial and ethnic equity in career pathways – education, hiring, and research opportunities

The discussion centered on the adverse impacts of structural factors, including systemic racism, on racial and ethnic minority persons across the educational and career continua. Educational inequities in STEM programs begin during grades K-12 and reduce the likelihood of racial and ethnic minority students in underserved school districts pursuing science-based careers. Participants noted the importance of early exposure to STEM programs among URM students and encouraged NIH funding mechanisms to support STEM programs in K-12 public schools, as well as programs at community colleges, to provide students with greater exposure to career options. Other systemic issues discussed, resulting in part from the lack of early science preparatory training, were the small proportions of URM faculty member role models, even at college and university-level MSIs. In addition, URM college and university students who attend MSIs perceived that White students are more likely than URM students to be selected as research assistants—a presumed reflection of widespread bias.

The group also focused on challenges to career pathways and advancement opportunities among faculty members and trainees at HBCUs. Researchers at HBCUs often experience systemic inequities in hiring, advancing in their careers, and obtaining NIH funding. One example echoed amongst attendees was the perceived "old boys club" that favors White male researchers in hiring and grant funding and perpetuates biases against HBCU scientists. Trainees at HBCUs and smaller MSIs are aware of the biased perceptions about these institutions, and as a result, educational and career transitions can be especially intimidating for URM students, postdoctoral fellows, and early stage scientists. Structured mentorship and programs that address these issues directly and provide appropriate support for effective navigation of such transitions are needed.

Topic 3: Opportunities, needs, and challenges in addressing health disparities and health care equity

The group identified several opportunities, challenges, and needs around addressing health disparities and increasing equity. Many colleges and universities have started DEI initiatives, which include increased attention to health disparities and community-engaged research. Such initiatives represent an opportunity for positive change and reducing disparities, yet key concerns emerged. The challenges already experienced among MSIs in securing NIH funding for health disparities research may be exacerbated by increased competition with R1 universities and PWIs. The group noted that large R1 institutions may approach this work inappropriately due to their lack of diversity, inexperience with health disparities research, and lack of familiarity with the targeted communities. They discussed the importance of having diverse research teams that integrate the perspectives of the community members and that can support participant recruitment. Another point raised and underscored was the need for researchers to include community partners early in the research design process and to bridge gaps with community members who may be wary of research due to past unethical practices. Moreover, White researchers may not commit the time and resources to understand the racial and ethnic minority communities they study or develop sustainable partnerships with community members, leaders, or local advocacy groups.

Topic 4: Practices and policies as barriers to racial and ethnic equity

Participants discussed ways in which NIH practices and policies can create funding barriers for researchers from MSIs. They described concerns that NIH review panels are insufficiently diverse, and that implicit bias adversely impacts scores. Participants highlighted the importance of grant funding that sufficiently covers both direct and indirect research costs, as these funds are needed at MSIs and small institutions to support the research teams and build sustainable projects. Often, MSIs must fund those elements themselves to meet the needs of research projects. Participants perceived that grant application requirements advantage R1 universities relative to smaller MSIs, demonstrated by the lower success rate among smaller institutions such as HBCUs. Moreover, the administrative resources and infrastructure needed to prepare applications, as well as to meet NIH funding and reporting deadlines, may disadvantage smaller MSIs.

Topic 5: Actions and initiatives to address racial and ethnic equity within participants' institutions

The group described actions and initiatives to raise visibility and enhance equity within their institutions. The examples centered on inter- and intra-institution/entity collaborations. One such collaboration was a partnership between an HBCU and a local health system to address issues around health disparities. This partnership financially supported the HBCU's research, increased diversity of the research team, and enabled organized discussions and resource-sharing to improve community health. In a second example, faculty members at an HSI facilitated discussions with their chancellor to gain clarity on the NIH grant reviewer selection process and encourage the institution to designate reviewers who would provide unbiased, informed review of URM researchers and HSI research efforts. A third example was a collaboration between the HHS Office of Minority Health and two universities on a project focusing on the health impacts of restoring AI/AN culture.

Topic 6: Proposed solutions for NIH: tactics, actions, initiatives, policy, and engagement

Participants generated ideas to increase equity in the biomedical sciences. They encouraged changes in grant review processes and advocated for community-engaged research. They suggested that NIH adopt DEI initiatives similar to those underway at the National Science Foundation. They emphasized that grant review panels should include people who graduated from or are faculty members at MSIs and HBCUs, as they possess a strong understanding of the culture, practices, and barriers that affect URM researchers and racial and ethnic minority communities. NIH should provide robust education about MSIs, particularly smaller institutions, to all grant review panelists, regardless of race and ethnicity. Participants also suggested that NIH ensure that community-engaged researchers and those conducting CBPR immerse themselves in the community of focus to understand and build trust with community leaders and members.

10. HEALTH CENTERS AND SYSTEMS SESSION SUMMARY

Thursday, January 13, 2022, 6:00-7:30pm ET

Brief Overview

The purpose of the listening session was to listen and learn about perspectives and experiences related to racial and ethnic equity in the biomedical research enterprise among stakeholders who represent, work within, or are otherwise connected to U.S. health centers and systems. The listening session, facilitated by an outside contractor, was attended by more than 70 participants. Dr. Joni Rutter, Acting Director of the National Center for Advancing Translational Sciences at NIH, welcomed attendees and summarized the mission and goals of the UNITE initiative.

Summary of Discussion

Topic 1: The overall state of racial and ethnic equity in the biomedical sciences

Participants described significant racial and ethnic equity challenges in multiple settings, including biomedical research, health care, and academia. They observed that these environments have been developed and remain centered on the perspectives, experiences, and needs of the majority (i.e., White) population—and infrequently focus on the experiences and challenges faced by racial and ethnic minority groups. Participants expressed the need to create safe and inclusive environments that welcome diversity and enable health care professionals to be their authentic selves. Further, they expressed that racial and ethnic minority persons in the workplace carry the burden of representing their entire group. Participants emphasized that assuring racial and ethnic equity will require culturally competent care for racial and ethnic minority patients, greater representation of racial and ethnic minority persons as participants in biomedical research, as well as more URM scientists.

Topic 2: Opportunities and challenges to racial and ethnic equity in career pathways – education, hiring, advancement, and research opportunities

The dialogue focused on several points, including the importance of—and barriers to—careers in biomedical science. Participants described the importance of increasing the pipeline of URM students and early career researchers to advance science, stimulate more inclusive environments, and increase the diversity of participants in research. They indicated that early introduction (during the K-12 years) to career opportunities in STEM would have a positive influence on URM students and encourage them to pursue these as viable options. Identified barriers to racial and ethnic equity in research careers included low compensation and inadequate resources to facilitate success among early career individuals, and participants stated that improvements in these areas would increase URM recruitment and retention.

Participants emphasized the importance of mentorship and sponsorship among URM students and early career researchers. Sponsorship, in particular, was noted as a critical element in increasing the representation of URM scientists in leadership positions. Some participants detailed personal difficulties identifying mentors and sponsors to support their research careers or assist them in navigating health care and academic settings.

Topic 3: Opportunities, needs, and challenges in addressing health disparities and health care equity

Participants identified a lack of advocacy and representation as key challenges in addressing health disparities and health care equity. Participants expressed that community advocacy can lead to improvements in long-term health outcomes and bridge the health care gaps experienced by underserved groups. Increasing the frequency of direct, high-quality health care experiences would enable racial and ethnic minority persons to advocate effectively for their communities and for themselves. Participants also stated that greater diversity among physicians and other clinicians, as well as researchers, would increase health care-seeking and research participation among racial and ethnic minority patients.

Additional challenges and opportunities to advance health equity were noted. Challenges included the need for culturally competent health care professionals and researchers who recognize the diversity within racial and ethnic minority populations, and that health needs may differ within and across groups. Participants also highlighted that inadequate infrastructure and transportation to rural communities can limit patient access to medication and health-related resources, which create and maintain health disparities. Finally, opportunities to advance health equity included increasing support for CBPR and addressing adverse SDOH (e.g., by providing access to adequate home health care services and improving working conditions).

Topic 4: Actions and initiatives to address racial and ethnic equity within participants' institutions

Participants shared information about their organizations' actions and initiatives to address racial and ethnic inequities. These efforts were often focused on reducing health disparities or increasing the cultural competence of staff members. Specific activities included focused discussions among researchers, health equity advocates, and communities to identify issues and propose strategies that address health disparities. Organizations are also developing trainings for staff in areas such as respectful and equitable treatment practices for all patients. Given the infrastructure challenges noted above (see Topic 3), participants also described efforts to begin collecting data on SDOH to improve infrastructure, medication access, and transportation services in rural communities. Participants also discussed efforts to apply the strategy of cluster hiring—recruiting multiple URM researchers or faculty members concurrently—allowing these professionals to grow as a cohort and avoiding the tokenism that can be experienced with individual URM hires.

Topic 5: Practices and policies as barriers to racial and ethnic equity

Participants expressed that a lack of representation and community inclusion throughout the research process is a critical barrier to racial and ethnic equity in research and health care. They shared that community members outside of the academic system have valuable perspectives that support evaluation of the research and its impact on the community. Participants recommended establishing the practice or policy of including non-academic community members and community organization leaders in grant review panels to provide a community-based perspective which could counter implicit bias within the panel. They further suggested that researchers forge reciprocal relationships with the communities in which research is being conducted to ensure research funding and findings are infused into these communities.

Topic 6: Proposed solutions for NIH – tactics, actions, initiatives, policy, and engagement

Proposed solutions varied, including actions to support translational science, deepen the understanding of root causes of health disparities, and increase exposure to STEM careers. Participants suggested that NIH continue to fund and support translational science, which turns observations in the laboratory, clinic, and community into interventions that improve the health of individuals and the public. Participants also suggested that NIH require investigators to explain or justify including race as a variable in their research analysis. This could encourage researchers to consider more specific variables, instead of race, to deepen hypotheses regarding the root causes of health disparities. Participants recommended that NIH fund public school STEM programs and career exposure for students, beginning as early as elementary school and continuing throughout their academic careers.

11. NONPROFIT ORGANIZATIONS, COMMUNITY-BASED ORGANIZATIONS, AND ADVOCACY ORGANIZATIONS SESSION #2 SUMMARY

Wednesday, January 18, 2022, 6:00pm-7:30pm ET

Brief Overview

The purpose of the listening session was to listen and learn about perspectives and experiences related to racial and ethnic equity in the biomedical research enterprise among stakeholders who represent, work within, or are otherwise connected to NPOs, CBOs, and advocacy groups. The listening session, facilitated by an outside contractor, was attended by more than 90 participants. Dr. Debara L. Tucci, the Director of the National Institute on Deafness and Other Communication Disorders at NIH, welcomed attendees and summarized the mission and goals of the UNITE initiative.

Summary of Discussion

Topic 1: Racial and ethnic equity in the biomedical sciences

The discussion centered around challenges to equitable patient and community engagement, as well as personal and family advocacy in health care and research. A primary challenge noted was distrust in health care systems and biomedical research. Racial and ethnic minority community members, particularly those who are medically underserved, report negative health care experiences such as discrimination. Participants described biases due to cultural incompetence and lack of humility, with specific examples among neurodiverse individuals and persons whose native language is not English. These experiences maintain or increase distrust across racial and ethnic minority groups and those with less privileged socioeconomic status.

The group advocated for specific changes needed to reduce disparities in health care access, engagement, and outcomes. They emphasized the need for understandable and accessible health information and materials describing research opportunities. It is also important that materials are available in multiple languages and written for general (i.e., lay) audiences. The existing distrust for health care systems and biomedical research reported across racial and ethnic minority and medically underserved communities may be reduced with intentional efforts to develop and disseminate culturally appropriate information. Doing so will allow patients to make informed decisions for themselves and their families. Increasing workforce diversity via mentorship and training, as well as supporting long-term strategies to build trust for the biomedical community, are important for reducing racial and ethnic inequities.

Topic 2: Opportunities and challenges to equity in education and career pathways in the biomedical sciences – education, hiring, and research

The discussion centered on the experiences of people of racial and ethnic minority groups who work in biomedical science and health-related organizations that reflect challenges to equity. Within organizations, people from racial and ethnic minority groups are often faced with undue burden associated with being underrepresented in the workforce. Participants described the stress associated with tokenism and isolation. The "minority tax," in which racial and ethnic minority employees are tasked with leading or participating in diversity initiatives and are also expected to teach others about race, ethnicity, racism, and equity, is common. These issues increase their burden and create additional barriers to career progression. Participants highlighted and expressed the value of racial and ethnic sensitivity trainings within their organizations to combat prejudice and build supportive cultures.

Topic 3: Opportunities, needs, and challenges in racial and ethnic health disparities and equity research

Participants discussed a range of challenges and needs that adversely impact the health of racial and ethnic minority groups. They described inequities in health care settings such that these populations, in general, receive lower quality of care compared with White patients. Racial and ethnic minority patients are often unclear about their health status following medical encounters and report truncated time with their doctors, as well as health care professionals' minimization of their symptoms and complaints. Improving the extent and quality of patient-provider communication was a point raised and underscored among group members. Suggestions for addressing these issues included enhancing workforce diversity, training providers on effective and culturally competent communication, providing patient advocates at medical visits, and sharing decision-making responsibilities with caregivers.

The group discussed needs and opportunities to address racial and ethnic health disparities. Community-based research has the potential to reduce health disparities and improve the health of racial and ethnic minority groups yet is less likely to be awarded NIH grants compared with basic and clinical science projects. Other points raised and underscored were the importance of engaging community members as research collaborators and partners and recognizing the key context expertise that such team members provide. Inequities in compensation for "context experts" compared with content experts, as well as for enrolled study participants and community members hired to recruit and collect data, were also noted. Given the important contributions of community partners and participants to the richness of the science, increased and equitable compensation is needed.

Topic 4: Practices and policies as barriers to racial and ethnic equity

The discussion focused on practices—often unstated—that create barriers to racial and ethnic workforce equity. Participants discussed the power differential that exists between scientists and research staff, and described instances of bias, discrimination, and harassment directed at themselves or others. Understanding and addressing the adverse impacts of this unbalanced power dynamic and the negative environments that can result is a potential training domain for investigators. Individuals whose employment is contingent on work visas were described as among the most vulnerable workers and may have an increased likelihood of mistreatment by supervisors. An additional barrier identified was a lack of sufficient, formal and informal mentorship opportunities among people from racial and ethnic minorities across settings. Participants asserted that the NIH budget should reflect priorities to reduce inequities and provide strategic support to create diverse teams that include community-based organizations as partners. There is a need for long-term strategies to combat biases and ensure equitable treatment for vulnerable members of the workforce.

Topic 5: Proposed solutions for NIH – tactics, actions, initiatives, policy, and engagement

Participants proposed solutions focused on the distribution of NIH grant awards, data analysis, and the sharing of research findings with communities. They suggested that NIH consider efforts to address the racial funding success disparity and increase support for investigators who study populations that experience health disparities. Collecting and analyzing data to identify funding disparities and monitor trends over time are important aspects of these efforts. Participants also encouraged NIH and NIH-supported scientists to disseminate findings within the communities in which the research was conducted. Translating scientific findings into useable formats would empower community organizations and members to apply the information to bring positive change to their communities.

12. STUDENTS AND TRAINEES SESSION SUMMARY

Wednesday, January 26, 2022, 6:00pm-7:30pm ET

Brief Overview

The purpose of the virtual listening session was to listen and learn about perspectives and experiences related to racial and ethnic equity in the biomedical research enterprise, with an emphasis on students and trainees. The listening session, facilitated by an outside contractor, was attended by more than 70 participants. Dr. Walter Koroshetz, Director of the National Institute of Neurological Disorders and Stroke at NIH, welcomed attendees and summarized the mission and goals of the UNITE initiative.

Summary of Discussion

Topic 1: Interests, needs, and issues regarding racial and ethnic equity in health care and biomedical sciences

The group highlighted inequities in health care and academic settings stemming from insufficient diversity and inclusion at multiple levels. Participants expressed concern that racial and ethnic minority groups at the university or college level continue to lack representation in academic leadership positions, despite diversity efforts and the overall expansion of departments and faculty positions in many colleges and universities. They also described high levels of perceived bias toward faculty members and researchers from racial and ethnic minority groups in these settings, which negatively impacts their success and retention. Among students and graduate trainees, there was agreement that implicit bias toward people from racial and ethnic minority groups is prevalent and has adverse impacts on the overall experience and likelihood of pursuing careers in biomedical science. Increased training to address implicit bias was identified as a significant need that could address the issue. However, participants also described challenges around implementing these trainings at colleges and universities, due to notable pushback, voluntary attendance policies, and relaxed compliance.

Topic 2: Opportunities and challenges to racial and ethnic equity in career pathways and within the workforce – education, hiring, and research opportunities

Participants noted challenges and opportunities to racial and ethnic equity along the pathway to a career within the biomedical research ecosystem. Among the challenges were limited resources committed to STEM in primary and secondary schools. The group advocated for increased funding for STEM programs in K-12 education, particularly programs that expose students to career opportunities and include meaningful mentorship within schools in racially and ethnically diverse communities. As students matriculate into college, there is a need to address financial barriers (e.g., the cost of college or university attendance) that have a disproportionate impact on students from racial and ethnic minority groups. Participants identified paid internships as opportunities to provide students with professional development, skill-building, and income to support their overall education.

The need for increased mentorship opportunities was also identified for college and university students. The group discussed the critical contributions of mentorship experiences to overall professional success, as well as for building and sustaining biomedical science careers. Participants suggested that large research institutions provide students with culturally responsive and supportive mentorship opportunities to facilitate retention of racial and ethnic minority students. Participants indicated and underscored that such support is of particular importance for college students transitioning from MSIs or HBCUs to graduate programs at R1 institutions. Faculty mentors should also be compensated and otherwise rewarded for providing this valuable and needed service.

The group discussed inequities in the career pathways of faculty members from racial and ethnic minority groups. They described challenges in career progression for these faculty members compared with White male faculty. They emphasized that inequities are embedded in the current academic system, which was designed to enable the research and success of White persons. Participants suggested that the biomedical research ecosystem should integrate the needs of racial and ethnic minority populations and address the structures that facilitate exclusion. Publication-related inequity was an example underscored by participants in the session. Specifically, behavioral and social science research, as well as community-based and/or community-engaged research—which are of interest to some scientists from racial and ethnic minority groups—is less likely to be accepted for publication in high-impact peer-reviewed journals. Moreover, the lack of diversity among journal reviewers and the perceived lower valuing of these topics are problematic. Given the need for researchers to publish in top-tier journals, these are structural barriers to career progression and earning promotion and tenure.

Topic 3: Opportunities, needs, and challenges in racial and ethnic health disparities and health equity research

The discussion centered around two main needs and opportunities. Participants highlighted the importance of community engagement in advancing health disparities research and promoting health equity. They noted that CBPR and other community-engaged approaches could amplify the voices of affected communities, allow residents to define priorities, and increase participation in clinical trials. Moreover, the group highlighted the importance of involving young people in research to infuse new perspectives and identify concerns of relevance to youth and young adults. Participants also suggested that much can be learned from existing health disparities research and that synthesizing the available evidence could point to areas of need as well as new scientific directions.

Topic 4: Actions and initiatives to address racial and ethnic equity within participants' institutions

Participants highlighted ongoing initiatives to promote equity within their institutions. They described strategies to increase diversity among faculty members, including new hiring methods. "Cluster hiring" was described and underscored as a method of inclusive hiring. It describes the practice by which academic institutions recruit a cohort of early stage investigators from demographic groups that are underrepresented in STEM. Among the goals of cluster hire efforts are building support networks and facilitating retention. Participants also described an increase in support networks, which provide resources, mentorship, and funding opportunities, for faculty members from racial and ethnic minority groups. Some colleges and universities have recently established "antiracism" centers, which seek to increase awareness of workplace racism and career inequities and to provide resources, mentorship, and support to students and faculty members from racial and ethnic minority groups.

Topic 5: Proposed solutions for NIH – tactics, actions, initiatives, policy, and engagement

The group proposed solutions in the areas of providing community education and resources, addressing barriers to diversity and inclusion in biomedical research, and increasing opportunities to publish scholarly projects in academic journals. Participants suggested that new educational initiatives focused on sharing the benefits of NIH-supported science for underserved communities should be located in community settings, thus building trust and demonstrating that NIH values inclusion of racial and ethnic minority populations in clinical research. They also suggested that NIH support K-12 school educational programs to encourage students to pursue

STEM education and careers in science and medicine. Participants also suggested considering initiatives to address financial barriers to pursuing biomedical science careers, including fair compensation standards for interns, graduate students, and mentors. Participants also suggested efforts to enhance equity in peer-reviewed publication options, such as an NIH-supported scientific journal without processing fees and with a focus on publishing articles submitted by new investigators, small laboratories, and diverse scientists.

13. RESEARCH STAFF SESSION SUMMARY

Thursday, January 27, 2022, 3:00pm-4:30pm ET

Brief Overview

The purpose of the listening session was to listen and learn about perspectives and experiences related to racial and ethnic equity in the biomedical research enterprise among research assistants, associates, technicians, and other individuals who represent, work with, or are otherwise connected to the daily work involved in conducting research. The UNITE listening session, facilitated by an outside contractor, was attended by 90 participants. Dr. Rena D'Souza, the Director of the National Institute of Dental and Craniofacial Research at NIH, welcomed attendees and summarized the mission and goals of the UNITE initiative.

Summary of Discussion
Topic 1: Interests, needs, and issues regarding racial and ethnic equity in health care and biomedical sciences

The group noted multiple barriers to racial and ethnic equity in health care and biomedical science. They discussed the lack of diversity (racial and ethnic, deaf or hard of hearing) on research teams, which prevent acknowledgment of, and true efforts to address, the actual health care needs and health challenges faced by populations with health disparities.

They also expressed concerns that persons within racial and ethnic minority groups face difficulties in accessing quality health care and related resources. Inequities within the biomedical science enterprise were also noted during the session. The group pointed to longstanding practices that create challenges to obtaining NIH funding. Among the practices discussed were perceived biases during scientific review that negatively affect small research institutions with limited budgets and resources. These biases limit the success rates of scientists from underrepresented minority groups who conduct research at these institutions and seek NIH funding. Participants also suggested that insufficient collection of demographic data and aggregation of racial and ethnic categories perpetuate inequities. They suggested the disaggregation of demographic data to better understand the state of health among specific racial and ethnic minority populations in the United States.

Topic 2: Opportunities and challenges to racial and ethnic equity in career pathways and within the workforce – education, hiring, and research opportunities

The discussion centered on challenges to obtaining careers in biomedical research. Participants expressed concern that some hiring criteria for biomedical research assistants and associate positions may unfairly disadvantage racial and ethnic minority persons and inhibit entry into the scientific workforce. Almost all research support positions require a four-year college/university degree, which excludes strong candidates who have extensive research experience and on-the-job training but have not completed a four-year degree. Participants also noted that requirements for standardized exams such as the SAT, the GRE (Graduate Record Examination), and the TOEFL (Test of English as a Foreign Language) can create significant barriers among socially and economically disadvantaged people seeking research careers. Families of high socioeconomic status have the resources to provide students with a private school education and intensive preparation for these examinations, which increases the likelihood of admission to R1 institutions compared with students from families of lower socioeconomic status. Participants highlighted that mentorship opportunities and greater visibility of URM scientists in leadership positions can support and inspire students to enter and advance in research careers.

The group also discussed ways in which URM individuals, once hired in research positions, can continue to face inequities and cultural challenges in the workplace. Participants asserted that tokenism (making only a symbolic effort to recruit a small number of racial and ethnic minority persons to create the appearance of workforce diversity) is prevalent in institutional hiring practices. In addition, participants described the concept of URM faculty members and staff being "instrumentalized," or used to increase diversity within their department or among the student body without being provided the level of support or resources needed to conduct research and advance their careers. Participants emphasized that multicultural and inclusive working environments facilitate URM faculty member and staff retention.

Topic 3: Opportunities, needs, and challenges in racial and ethnic health disparities and health equity research

Participants discussed the importance of involving community members and leaders as partners in CBPR. They suggested the practice of bidirectional communication, in which researchers and community members directly impacted by health disparities inform each other and, in the case of CBPR, work collaboratively to develop the questions and procedures that will be used in the research proposal. A specific concern raised and echoed by others was that health disparities research conducted in the absence of racial and ethnic minority researchers and/or community members may lead to gaps in understanding and missed opportunities. Participants emphasized that community members and leaders can improve research efforts and impact by contributing personal experiences, facilitating lines of communication with the community, identifying needs and opportunities, and enhancing community engagement in clinical trials.

The group discussed the need for clarity and communication around how the community benefits from research initiatives. Bidirectional communication with engaged communities should continue after projects are completed by sharing data and findings, increasing transparency of information, and ensuring that local leaders and organizations have access to knowledge that could improve health outcomes. Ongoing communication with community leaders after findings have been disseminated could help researchers better understand the relevance of the research conducted and challenges to reducing health disparities in the community. Participants also indicated that community partners should be compensated for their support, time, effort, and important contributions.

Topic 4: Actions and initiatives to address racial and ethnic equity within participants' institutions

Participants shared the success of their institutions' employee training programs and community engagement efforts to create antiracist cultures. They acknowledged that these programs have helped faculty members and staff consider how their own biases, stereotypes, and microaggressions adversely impact interpersonal interactions and the overall experience of people of racial and ethnic minority groups. Participants also discussed the importance of multicultural awareness and active antiracism efforts in health care and community engagement. For example, participants described specific initiatives to increase access to research information and resources, such as the translation of health-related resources into multiple languages and the hiring of culturally competent research recruitment specialists to engage communities that are often overlooked by research teams.

Topic 5: Proposed solutions for NIH – tactics, actions, initiatives, policy, and engagement

Participants offered recommendations to increase diversity and improve equity for URM researchers and the underserved communities engaged in research. They suggested that evaluating employment practices at NIH-funded institutions would incentivize inclusive hiring and promotion opportunities, which would in turn improve workforce diversity. Another recommendation was for NIH to publish data online that illustrates the distribution of NIH awards by race, ethnicity, gender, and other demographics.

The group proposed solutions to increase support for community-engaged research and CBPR. Participants encouraged NIH to revise funding opportunity requirements to increase equity and inclusion. A highly endorsed suggestion was to institute a requirement that all grant applicants and reviewers articulate how the proposed research may impact the communities they engage. Participants also suggested that NIH allow investigators to allocate funds from their awarded grants to engage and provide educational opportunities for community members who contribute to—and could benefit from—the research.

14. COLLEGES AND UNIVERSITIES SESSION #2

Tuesday, February 1, 2022, 1:00pm-2:30pm ET

Brief Overview

The purpose of the listening session was to listen and learn about perspectives and experiences related to racial and ethnic equity in the biomedical research enterprise among individuals who represent, work within, attend, or are otherwise connected to U.S. colleges and universities. The UNITE listening session, facilitated by an outside contractor, was attended by more than 200 participants. Dr. Noni Byrnes, Director of the Center for Scientific Review at NIH, welcomed attendees and summarized the mission and goals of the UNITE initiative.

Summary of Discussion

Topic 1: The overall state of racial and ethnic equity in the biomedical sciences

The group identified several factors that maintain inequities within colleges and universities at the faculty and student levels. Participants pointed to the need to enhance the depth of education around DEI and racism among investigators. Many biomedical researchers and educators have a cursory understanding of the history of racial groups in the U.S. and do not understand that race is a social construct. The perspective that racial groups are biologically distinct persists, which has implications for research and education in the biomedical sciences. There is also a need to ensure that Chief Diversity Officers are experts in this field to prevent unintentional harm and ensure that efforts go beyond implicit bias training.

Participants discussed challenges and opportunities in obtaining NIH funding for investigators from racial and ethnic minority groups, particularly for those at HBCUs and TCUs, who also have greater needs for infrastructure support and are often engaged in community-based science. NIH systems and forms were characterized as complex and difficult to understand for those unfamiliar with the NIH funding process, which creates barriers for less-resourced institutions and community-based organizations. Participants also emphasized the importance of adopting inclusive language that does not reinforce racism and health inequities and discontinuing use of the term "human subjects," which can be perceived as reductive. Providing inclusive mentorship to students and expanding NIH funding mechanisms, such as diversity supplements, would diversify NIH grantees, for example, by facilitating inclusion of applicants with terminal master's degrees. To further assist smaller universities in underserved communities in obtaining funding, participants recommended collaborations with larger NIH-funded institutions for knowledge-sharing and infrastructure support.

Topic 2: Opportunities and challenges to racial and ethnic equity in career pathways and within the workforce – education, hiring, and research opportunities

The discussion centered on the need to prioritize pathways for entry into and advancement in biomedical science fields. Outreach efforts such as inclusive mentorship should be expanded to reach students at early ages with the goals of enhancing health literacy and awareness of health care and biomedical research careers. Few programs address societal-, community-, and individual-level barriers to entry and advancement, including structural racism, stigma, and racial and ethnic trauma. Meaningful incorporation of strategies to address these significant issues would increase the pool of applicants and the success of pathway program participants. Participants also described challenges experienced by people from URM groups seeking research positions. One recommendation was to reassess the academic and professional credential requirements for positions on research teams, as some roles and responsibilities can be performed effectively without a Ph.D. or master's

degree. Participants also suggested that NIH support programs to improve health literacy and awareness of health research to encourage more URM persons to enter research careers and to increase participation in clinical research among people impacted directly by health disparities. To ensure accountability for expanding the pathways for URM persons, NIH should publish metrics.

Topic 3: Practices and policies as barriers to racial and ethnic equity

The group discussed practices and policies associated with racial and ethnic disparities in NIH (R01-equivalent) funding. The primary perceptions were that the grants process is biased against URM researchers and does not effectively support the communities being studied. Participants expressed the sentiment that the NIH grants process is structured so that "the rich get richer," as eligibility requirements and the review process for R01 grants prioritize applications from large, well-funded institutions and discriminate against Black/African American researchers who are often from less-funded institutions. Participants also indicated that NIH peer reviewers and program officials undervalue community-based science and the skills offered by community scientists. They suggested that eligibility for community-based research grants should be expanded to include scientists who do not have doctoral degrees, yet have the needed research, cultural, and linguistics skills to conduct research and work within communities.

The discussion also focused on the need for greater diversity and representation on research teams. PIs and research teams often do not represent the communities being studied and have low cultural awareness, which can increase cultural barriers and misunderstandings. More collaborations with grassroots community organizations to establish research teams that reflect and serve as voices of the community would ensure that research leads to actual impact. The group encouraged NIH to consider the implementation of meaningful metrics that encourage both diversity and inclusion. Metrics should hold grantees accountable for their commitments around diversity and cultural awareness and ensure that research funding is allocated appropriately to promote health equity.

Topic 4: Opportunities, needs, and challenges in racial and ethnic health disparities and health equity research

The discussion centered around supporting racial and ethnic minority and medically underserved communities at multiple levels by engaging local community organizations, business partners, and non-traditional groups. Participants were pleased that NIH has NIMHD but emphasized that health disparities research should also be funded by other Institutes and Centers to reduce competition among investigators who focus on similar areas. The group encouraged NIH to create infrastructure and research funding mechanisms for sustainable partnerships between scientists and CBOs to better support the needs of communities. Training on how to navigate the system at NIH would improve the probability of success in receiving grants focused on health disparities.

Topic 5: Actions and initiatives to address racial and ethnic equity within participants' institutions

The group discussed DEI initiatives at their institutions. Many organizations are currently utilizing implicit bias training, but there is a need to go beyond this type of training. Some organizations have developed educational programs around DEI and have held listening sessions to facilitate transparent conversations on diversity, race, and racism. There is an increased emphasis on "community science" and models to reengage communities about science and university efforts. Participants encouraged developing and sharing institutional efforts, DEI

metrics, and research findings within the surrounding community to promote health literacy. They also suggest-ed that NIH consider providing and mandating educational programs and training to promote health equity for staff across Institutes and Centers.

Topic 6: Proposed solutions for NIH: Tactics, actions, initiatives, policy, and engagement

The group offered several solutions to increase equity. They encouraged NIH to increase support for community engaged science and CBPR that values community-identified needs and partners and rethinks scientific models and investigator phenotypes. Addressing barriers to URM persons' effective navigation of career opportunities would expand access to career pathways. Education innovation was suggested as a means of reducing health care profession shortages in underserved areas. Participants are seeking changes and transparent metrics to quantify and track impact. Finally, when ideas are solicited, active listening, responses, and measurable and sustainable change should follow.

APPENDIX C: LISTENING SESSION PARTICIPANT CHARACTERISTICS

The following tables provide participant types across the fourteen listening sessions, based on data collected through in-session polls regarding participant organization or institution types and positions or roles.

Organization / Institution	Approximate # of Participants	Approximate % of total Participants
Private / Public 4-year University	399	30.8%
Federal Government	89	6.9%
Other Nonprofit	69	5.3%
Historically Black Colleges and Universities (HBCU)	68	5.3%
Hospital or Health System	50	3.9%
Hispanic-Serving Institution (HSI)	48	3.7%
Foundations or Professional Societies	48	3.7%
Independent Research Institution	45	3.5%
Community-Based Organization (CBO)	40	3.1%
Private / Public 2-year University	38	2.9%
Advocacy Organization	34	2.6%
Local or State Government Employee	27	2.1%
Unaffiliated Religious Organization	22	1.7%
Tribal Colleges or Universities (TCU)	21	1.6%
Consulting Firm	20	1.5%
Faith-Based Nonprofit	18	1.4%
Asian-American and Native American Pacific Islander-Serving Institutions	17	1.3%
Minority-Serving Institution (MSI)	17	1.3%
Protestant or Catholic Church	14	1.1%
Predominately Black Institutions (PBI)	14	1.1%
Other Religious Organization	10	0.8%
Tribal Nations	9	0.7%

Organization / Institution	Approximate # of Participants	Approximate % of total Participants
Tribal Departments of Public Health	9	0.7%
Alaska Native and Native Hawaiian-Serving Institutions (ANNHI)	6	0.5%
Think Tank / Private Research Organization	3	0.2%
For-profit Corporation or Laboratory	2	0.1%
Other	264	20.4%

Role / Position	Approximate # of Participants	Approximate % of total Participants
Academic Faculty or Staff	289	22.4%
Administration	167	12.9%
Research Staff	155	12.0%
Federal Government Employee	88	6.8%
Nonprofit / Community-Based Organization / Advocacy Organization Staff or Executives	76	5.9%
State / Local Government Employee	55	4.3%
Graduate Student / Trainee	51	4.0%
House of Worship Member or Leader	16	1.2%
Faith-Based Organization Staff or Executives	14	1.1%
Consultant	13	1.0%
Clinical Staff	12	0.9%
Foundations or Professional Societies Staff	11	0.9%
Tribal Nations Members	10	0.8%
Tribal Departments of Public Health Staff	10	0.8%
Fellow/Resident	2	0.1%
Other	331	25.6%

Notes: Facilitators used the Zoom polling and chat functions to collect participants' organization types and roles/positions. Each participant was allowed to select all applicable organization types and a single role/position. Those who did not see a relevant organization type or role/position were encouraged to post their information in the chat. Polling data was retained in the platform for only 9 of the 14 sessions. In those 9 sessions, 60 to 70% of participants completed the poll. For the 5 sessions in which polling data was not retained, information that participants posted in the chat in response to the poll questions was used as a proxy for participant group composition. In all cases, estimated percentages are extrapolations based on the number of session attendees.

APPENDIX D: DEFINITIONS OF ACRONYMS AND TERMS

Acronym or Term	Definition
AANHPI	Asian American, Native Hawaiian, and Pacific Islander
AI/AN	American Indian/American Native
ANNHI	Alaska Native and Native Hawaiian-Serving Institutions
ASL	American Sign Language
BIPOC	Black, Indigenous and People of Color
CBO	Community-based Organization
CBPR	Community-based Participatory Research
DEI	Diversity, Equity, and Inclusion
DEIA	Diversity, Equity, Inclusion, and Accessibility
HBCU	Historically Black Colleges and Universities
HSI	Hispanic-Serving Institution
IHS	Indian Health Service
LGBTQ+	Lesbian, Gay, Bisexual, Transgender, Queer, and Others
MSI	Minority-Serving Institution
NARCH	Native American Research Centers for Health
NIDA	National Institute on Drug Abuse
NIH	National Institutes of Health
NIMHD	National Institute on Minority Health and Health Disparities
NPO	Nonprofit Organization
OD	NIH Office of the Director
OITE	Office of Intramural Training and Education
PBI	Predominantly Black Institution
PI	Principal Investigator

Acronym or Term	Definition
PWI	Predominantly White Institution
R01	National Institutes of Health Research Project Grant
R1	Doctoral universities with very high research activity
R2	Doctoral universities with high research activity
RFA	Requests for Applications
SDOH	Social Determinants of Health
SEM	Socioecological Model
STEM	Science, Technology, Engineering, and Math
TCU	Tribal Colleges and Universities
TEC	Tribal Epidemiology Center. Public health organizations within the Indian Health Service that serve American Indian/Alaska Native Tribal and urban communities by managing public health information systems, investigating diseases of concern, managing disease prevention and control programs, responding to public health emergencies, and coordinating these activities with other public health authorities.
THRO	National Institutes of Health Tribal Health Research Office
URM	Underrepresented Minority