

**National Institutes of Health (NIH), National Institute on Drug Abuse (NIDA)
Enhancing Health Disparities Research Related to Substance Use and Addiction:
Research Gaps and Opportunities**

Executive Summary

Background

The National Institutes of Health (NIH) has launched an effort to identify and address structural racism in biomedical research through a new initiative called [UNITE](#). NIH Director, Dr. Francis S. Collins, issued a statement committing NIH to instituting new ways to support diversity, equity, and inclusion, and identifying and dismantling any policies and practices that may harm the science it supports and the biomedical workforce. Aligned with the overall NIH efforts to address this important issue, in June 2020, the National Institute on Drug Abuse (NIDA) formed its Racial Equity Initiative (the Initiative or REI). Operated by volunteers from NIDA staff, the Initiative focuses on (1) addressing research gaps and opportunities; (2) developing the addiction science workforce to include more underrepresented minorities (URM); and (3) ensuring equity, diversity, and inclusion in NIDA's workplace climate. A major milestone for the Initiative will be the development of a stand-alone Action Plan on promoting racial equity, which will be integrated with the NIDA 2021–2024 Strategic Plan and followed by an implementation phase. NIDA has committed to allocate \$100 million over the next 10 years to funding opportunities related to advancing racial equity in addiction science. The Institute will allocate these funds to understand racial disparities and the impact of racism on substance use disorder (SUD) in general and health disparities in particular.

On February 16 and 17, 2021, the Research Gaps and Opportunities Workgroup (RGO WG) of the NIDA Racial Equity Initiative (the Initiative or REI) convened a virtual meeting to discuss research gaps on racial inequities in substance use and addiction. More than 1,300 attendees registered for the event. Attendees, speakers, and panelists received a set of questions developed by the RGO WG and other NIDA staff members in advance of the meeting, and the Institute collated the written responses. Through keynote presentations and discussion panels, researchers who concentrate on the social determinants of health (SDOH) and their influence on SUD and scientists knowledgeable on the effects of racial discrimination on biology relevant to addiction provided feedback that will inform NIDA's efforts to promote racial equity. Specifically, they offered recommendations for NIDA's REI Action Plan regarding synergies in health disparities and addiction research, research opportunities for SDOH and basic science, and best practices and ways to measure progress.

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Keynote Presentation Summaries

Margarita Alegria, Ph.D., Harvard Medical School and Massachusetts General Hospital, discussed three opportunities for NIDA to transform its research on disparities in treatment services: (1) Take SUD treatment where and when people of color need it, how it best serves them, and in a way that allows them to co-create their goals. She emphasized that services should be provided in the community (via by mobile clinics, peers, and community health workers) rather than in the criminal justice system. (2) Change from treating addiction to focusing on a package of services that support reintegration into society and recovery. (3) System re-orientation requires many changes, including altering the explanatory models of SUD, providing more services outside clinics, and focusing on people’s basic needs. An article published by Dr. Alegria and colleagues outlined five actions policymakers can take to [transform mental health and addiction services](#).

Debra Furr-Holden, Ph.D., Michigan State University College of Human Medicine, explained that *disparities* indicate downstream differences among individuals or groups, whereas *inequities* denote upstream unfairness in systems, structures, and institutions. A common mistake is to attribute downstream differences in health to race when, in fact, the experience of individual and structural racism explains the observed variation. For example, since the federal government declared an opioid epidemic and developed a [five-point strategy](#) to address it, opioid-related deaths have declined—but mostly among whites. [Opioid-related overdose deaths among Blacks now outpace those of whites in the United States](#). The science and resources brought to bear to fight the opioid epidemic disproportionately left behind Blacks and Hispanics, as individuals who are white, male, and have health insurance disproportionately receive medication-assisted treatment for opioid use disorder. Although the inequity is not intentional, in the absence of an effort to be fair, the natural drift is toward inequity. Dr. Furr-Holden called for a federal or institutional equity mandate (#MandateEquity) to counter the natural drift and inspire communities of practice and research. She stressed that there is a business case for health equity, as society pays for the cost of racism and inequity.

Kafui Dzirasa, M.D., Ph.D., Duke University, discussed the exciting possibilities for innovative treatments offered by discoveries about the genomic architecture of schizophrenia. However, the clinical use of polygenic risk scores may exacerbate health disparities, as large studies in this area may not include people of African ancestry. Gene profiles based on people of European ancestry are often used to predict disease states, and the data are erroneously extrapolated to different populations. The African Ancestry Neuroscience Research Initiative aims to ensure that new treatments work for everyone and that African Americans are included in studies as therapies are developed. Inclusion is crucial for clinical trials and in studies considering whether genomic differences exist. However, researchers on such projects will need to address concerns among African Americans stemming from the history of racist treatment in biomedical research.

Gene Brody, Ph.D., University of Georgia, aimed to raise awareness about the value of embedding biomarkers in longitudinal studies that examine the biological impacts of racism and other social injustices. He discussed the biomarkers studied in samples from rural African American families from a predominantly African American region of the United States characterized by poverty (“the Black belt”). In a longitudinal study of African American

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adolescents followed into young adulthood, [Dr. Brody and colleagues found](#) that frequent encounters with racial discrimination during adolescence resulted in higher allostatic loads, which predicts many major health outcomes, compared with those without this experience. However, this effect was not observed among adolescent individuals who had a high level of parental support, which was augmented by preventive interventions. Similar patterns have been found for accelerated cellular aging and the [negative impact of poverty on neurodevelopment](#).

Actionable Steps for NIDA

1. Increase Funding for Community-Based Research

Because the environment influences behavior and vulnerability to SUD and treatment outcome success, it is important that researchers study the underlying factors for addiction in the community and with the populations most affected. Community-based research allows direct investigation of factors related to health disparities. Working in the community will facilitate the development of strategies to mandate equity to improve health disparities and intervene on SDOH. NIDA's ability to balance its portfolio toward greater inclusion of community-level research will go a long way to improve substance use treatment outcomes in URM populations.

2. Recognize the Validity of Different Clinical Study Designs when Studying Racial Inequity

Although randomized controlled trials are considered the gold standard in clinical research, investigators should not control for the contextual variables that are the drivers of inequity. Rather, these factors need to be explicitly studied in addition to a focus on URM populations—as opposed to inclusion of racial minorities by simply “ticking the box.”

3. Work to Implement Changes to the Scientific Review Process

To encourage a greater amount of addiction research through a social science lens, the composition of study sections must be more diverse—including a higher number of URM, non-NIH-funded individuals, and scientists with expertise outside of NIDA's traditional portfolio (i.e., social scientists involved in racial health disparity research). Additionally, grant reviewers need diversity/equity/inclusion training. Measuring scientific productivity in the traditional ways (e.g., number of publications) is problematic for those who conduct community-based research (which has greater impact but fewer publications).

4. Establish Funding Set-Asides for Disparity Research

This step could involve including benchmarks for funding applications from minority-serving institutions beyond training grants. It would also be helpful if NIDA supported community-based participatory research and infrastructure to accelerate the translation of research into practice in real-world settings. Policy research to advance equity is

needed—particularly on behavioral health care treatment, and on alternative settings for services and provision of linkages to services for basic needs.

5. Reframe the Goal and Language of Funding Opportunities

To understand racial health disparities, research should focus on the experiences or aspects of the environment that are associated with racism for different groups and their links with SUD, as well as protective factors. Researchers should incorporate a broad representation of factors that drive health disparities (e.g., SES, housing, health care) into their studies.

7. Ensure That Researchers Incorporate Appropriate Methodology to Study Disparities

Appropriate sampling, measurement, and research design and analyses are crucial to the rigorous study of racial health disparities across the life course. Researchers need training in this area, as graduate curricula do not often address these issues, as well as in communicating study results in ways that do not perpetuate racism. Applicants should provide plans for recruitment of diverse participants and community engagement. In open science projects, NIH must act as a gatekeeper to control how the data are used and establish protocols to act when data are used inappropriately. Research with animal models and other basic science can address the biological underpinnings of racial disparities (e.g., by studying adversity and stress). Translational research can incorporate this knowledge into prevention and treatment, and community-focused dissemination and implementation research would help bring interventions to those who need them.

8. Improve Data Sets on Race/Ethnicity

Data from some racial/ethnic groups are not included (or not appropriately disaggregated) in national data sets, or the data are not released publicly, or their numbers are small. The lack of data on such groups has a detrimental effect on the understanding of health disparities. Increasingly, it is crucial to capturing intersectionality, as people who identify with multiple marginalized groups have dramatically different outcomes because of stigma. The data set should capture multiple, broad factors related to health disparities, as well as environmental information related to SDOH. Analysis of big data can provide opportunities to intervene in the course of SUD without causing stigma.

9. Forge Equitable Partnerships

Creating equitable partnerships with communities, practitioners, policymakers, advocates, and scientists is crucial to promoting community engagement and involvement in research. Partnership efforts must consider contextual factors and indicators of equity.

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Scientific Meeting (RGO WG) Co-Chairs

Will M. Aklin, Ph.D., Program Director, Division of Therapeutics and Medical Consequences (DTMC)

Carlos Blanco, M.D., Ph.D., Division Director, Division of Epidemiology, Services and Prevention Research (DESPR)

Meeting Organizers/Panel Moderators

Aria Crump, Sc.D., Deputy Branch Chief of Prevention, DESPR

Kathy Etz, Ph.D., Program Officer, Director, Native American Program, DESPR

Mehdi Farokhnia, M.D., Staff Scientist, NIDA Intramural Research Program (IRP)

Carol Hubner, Ph.D., Health Scientist Administrator and Associate Director, Addiction Treatment Discovery Program, DTMC

Holly Moore, Ph.D., Program Officer, Division of Neuroscience and Behavior

Meeting Speakers*/Panelists

*Margarita Alegria, Ph.D., Chief, Disparities Research Unit, Massachusetts General Hospital, Professor, Harvard Medical School, Harry G. Lehnert, Jr. and Lucille F. Cyr Endowed Chair, Mass General Research Institute, Massachusetts General Hospital

Tallie Z. Baram, Ph.D., Professor, Pediatrics, Anatomy and Neurobiology, Neurology, Physiology and Biophysics, University California, Irvine

*Gene Brody, Ph.D., Regents' Professor of Child and Family Development and Director of Center for Family Research, University of Georgia

Jean Lud Cadet, M.D., Senior Investigator, Molecular Neuropsychiatry Branch, National Institutes of Health, NIDA IRP

*Kafui Dzirasa, M.D., Ph.D., Associate Professor, Department of Psychiatry and Behavioral Sciences, Duke University

*Debra Furr-Holden, Ph.D., Director, Flint Center for Health Equity Solutions; Associate Dean for Public Health Integration, Michigan State University College of Human Medicine

Sandro Galea, M.D., MPH, DrPH, Dean and Robert A. Knox Professor, Boston University

Helena Hansen, M.D., Ph.D., Professor & Chair, Research Theme in Translational Social Science and Health Equity, University of California, Los Angeles

Raul Gonzalez, Ph.D., Professor of Psychology, Psychiatry and Immunology, Florida International University

Bryan Heckman, Ph.D., Director, Center for the Study of Social Determinants of Health and Associate Professor, Psychiatry and Behavioral Sciences, Meharry Medical College

Rohan Palmer, Ph.D., Assistant Professor of Psychology, Emory University

Wizdom Powell, Ph.D., Director, Health Disparities Institute, Associate Professor of Psychiatry at University of Connecticut Health

Guillermo J. Prado, Ph.D., Vice Provost for Faculty Affairs, University of Miami

Natalie Slopen, Sc.D., Assistant Professor, Epidemiology and Biostatistics, University of Maryland