






A National Institutes of Health Approach for Advancing Research to Improve Youth Mental Health and Reduce Disparities

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Even before the COVID-19 pandemic, mental health challenges were the leading cause of disability and poor health outcomes in youth. Challenges are even greater for youth from racially and ethnically minoritized groups in the United States. Racially and ethnically minoritized youth are more vulnerable to mental health problems than White adolescents, yet are less likely to use mental health services. In late 2021, the National Institutes of Health (NIH) sponsored a virtual conference to examine the state of the science around youth mental health disparities (YMHD), focusing on youth from racially and ethnically minoritized populations and the intersection of race and ethnicity with other drivers of mental health disparities. Key findings and feedback gleaned from the conference have informed strategic planning processes related to YMHD, which has included the development of a strategic framework and funding opportunities, designed to reduce YMHD. This commentary briefly describes the collaborative approach used to develop this framework and other strategies implemented across the NIH to address YMHD and serves as an urgent call to action.

DRIVERS OF YOUTH MENTAL HEALTH DISPARITIES

Approximately 50% of youth in the United States experience mental health problems in their lifetime,¹ a clear indicator of a national public health crisis. At the same time, for racially and ethnically minoritized youth, mental health outcomes and access to quality care have continued to

remain at or below those of their counterparts, suggesting increasing youth mental health disparities (YMHD).² Disparities, defined as differences in health outcomes that adversely impact disadvantaged populations,³ have persisted in the last 2 decades. Underlying social determinants of health such as structural racism and discrimination contribute unique risks for poorer mental health outcomes, and widen disparities among racially and ethnically minoritized youth.² Other social determinants such as housing and food insecurity can interact with structural racism and discrimination to further increase risk of adverse mental health outcomes and exacerbate mental health inequities.⁴ Thus, it is clear that the drivers of poor mental health outcomes and mental health disparities are complex and multifactorial, requiring multidimensional, multidisciplinary solutions that consider the intersection of multilevel factors conferring risk and protection.

YMHD are well documented among minoritized youth populations, with an impact on both access to and use of mental health services. For example, minoritized youth have greater exposure to mental health risks, yet are less likely to use mental health services compared to their White counterparts and are more likely to terminate treatment prematurely.⁵ In addition, despite experiencing mental health disorders associated with severe impairment, minoritized youth are less likely than their White counterparts to initiate or to receive adequate treatment.^{1,6}

There are also striking disparities in mental health conditions. For example, recent data suggest that although multiracial youth were most likely to experience persistent sadness in the past year (49%) compared to American

Indian/Alaska Native, Asian, Black, Hispanic, and White youth, American Indian/Alaska Native youth were most likely to have attempted suicide in the past year (16%) compared to youth of other racial/ethnic groups.⁷ Also in the past year, Black and Hispanic youth were more likely to be injured in a suicide attempt compared to youth of other racial/ethnic groups.⁷ There are also notable disparities related to behavior disorders, with Black and Hispanic youth more likely to be diagnosed with behavior disorders compared to youth of other racial/ethnic groups.⁸ Although these differences are likely driven by sociocultural and systemic factors (eg, bias in diagnosis, inequitable access to care),⁸ they nonetheless increase the burden of illness on individuals, families, communities, and society. Collectively, research findings illuminate a public health crisis complicated by YMHD driven by factors as divergent as the multiple, marginalized identities of youth populations.

A NIH APPROACH TO REDUCE YOUTH MENTAL HEALTH DISPARITIES

In response to specific language in the 2021 House Committee on Appropriations Report,⁹ increasing awareness of the persistence of YMHD, and expanding institutional efforts to address mental health disparities research, the National Institute of Mental Health (NIMH), the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD), and the National Institute on Minority Health and Health Disparities (NIMHD) co-sponsored a virtual 2-day conference in December 2021 to examine the state of the science around YMHD, focused on racially and ethnically minoritized populations and drivers of YMHD. As noted in the report, a primary goal of the conference was to convene experts to “discuss research opportunities and gaps, as well as evidence-based solutions and therapeutic interventions...” resulting in a report that described “priority areas for additional study to advance research in addressing mental health disparities in youth” (House Report 116-450, p.122). Experts across multiple scientific disciplines from inside and outside the federal government with experience working with diverse marginalized youth populations presented and discussed innovative prevention, treatment, and implementation strategies across the continuum of care—including risk identification, screening, treatment, and follow-up care—with the goal of reducing YMHD (see Conference Meeting Summary¹⁰). During follow-up discussions occurring immediately after the conference with federal partners from the Department of Health and Human Services (HHS) working in youth health disparities (eg, from the Substance Abuse and Mental Health Services Administration, Office of Minority Health,

Administration of Children and Families), conference proceedings were reviewed, and equity-focused themes relevant to YMHD reduction were identified. Conference themes identified from these discussions included: partnering with communities and youth; understanding the role of racism in youth mental health; developing interventions to address multiple risks; addressing challenges to service delivery in low-resource settings; finding solutions to healthcare data-related barriers; and disaggregating data and findings across groups to target drivers of YMHD that may differ as a function of racially and ethnically minoritized and other marginalized identities among youth.

In addition, a literature review was completed to support conference planning and to contextualize findings (ie, enhance identification of gaps and opportunities), and an internal NIH group formed with representatives of the co-sponsoring Institutes of the conference and representatives from other NIH Institutes/Centers/Offices (ICOs), to strategically implement the findings from the conference. The conference themes, information from the literature review, and other feedback received during and after the conference from NIH ICO representatives and other partners were collectively used to inform new initiatives and notices of funding opportunities (NOFOs) designed to reduce YMHD, as well as the development of the “NIMH Strategic Framework for Addressing Youth Mental Health Disparities” (NIMH Strategic Framework).¹¹ For example, conference themes such as “partnering with communities and youth” and “developing interventions to address multiple risks” were integrated into NIH funding opportunities.

The NIMH Strategic Framework developed by the NIMH Office for Disparities Research and Workforce Diversity incorporates themes from the conference, the literature review, and input from NIH ICOs, researchers, and HHS partners. The NIMH Strategic Framework articulates a plan to guide NIMH activities that support innovative research to reduce YMHD through 3 Components: (1) addressing knowledge gaps and expanding research opportunities; (2) extending and supporting stakeholder engagement; and (3) growing the YMHD workforce. The Components align with many of the conference themes and represent an effort to operationalize what was learned collectively from experts in the field, the literature, and federal colleagues about how to advance science, practice, and research that can reduce YMHD. For example, the first Strategic Framework Component aligns with the theme of exploring how examining different determinants of mental health (eg, racism and discrimination) and interventions implemented in different settings/contexts (eg, low-resource settings) can affect YMHD. In addition, the second Strategic Framework Component aligns with the theme of

TABLE 1 Examples of Implementation of National Institutes of Health (NIH) Approach to Address Youth Mental Health Disparities (YMHD)**NIMH strategic framework component #1: addressing knowledge gaps and expanding research opportunities**

NOFO/initiative	Brief description of NOFO/initiative	ICO lead	ICO partner(s)	Conference topic(s)
RFA-MD-24-002 – Youth Violence Prevention Interventions (R01 – Clinical Trial Required)	Supports research to develop and test multilevel youth violence prevention interventions for populations that experience health disparities, and which includes strategies that address structural discrimination and other social determinants of health. The target age range for this initiative is children and youth aged 10-24 years.	NIMHD	ODP, OBBSR	<ul style="list-style-type: none"> • Risk and etiology • Intervention and treatment
RFA-AT-23-003 – Fostering Mental, Emotional, and Behavioral (MEB) Health Among Children in School Settings: Opportunities for Multisite Trials of Complementary and Integrative Health Interventions (Clinical Trial Optional)	Supports multisite clinical trials in geographically diverse school settings to test the efficacy or effectiveness of CIH approaches to promote MEB health and prevent MEB disorders among youth.	NCCIH	ODP	<ul style="list-style-type: none"> • Detection and screening • Intervention and treatment
NOT-AT-22-004 – Notice of Special Interest (NOSI): Dissemination and Implementation Research to Advance Mental, Emotional, and Behavioral (MEB) Health Preventive Interventions in School Settings	To advance implementation and dissemination research of evidence-based MEB programs aimed at promoting children’s MEB health or preventing MEB disorders in school settings with a focus on schools that serve NIH-designated health disparity populations.	NCCIH	NICHD, NIMH, NIMHD, ODP, OBBSR, and ORWH	<ul style="list-style-type: none"> • Intervention and treatment

(continued)

TABLE 1 Continued

NIMH strategic framework component #1: addressing knowledge gaps and expanding research opportunities

NOFO/initiative	Brief description of NOFO/initiative	ICO lead	ICO partner(s)	Conference topic(s)
NOT-HD-22-043 – Notice of Special Interest (NOSI): Implementation Science to Advance Maternal Health and Maternal Health Equity for the IMPROVE initiative	Intended to stimulate dissemination and implementation research on innovative approaches built on evidence-based findings from foundational research on factors that contribute to maternal morbidity and mortality (MMM) by supporting the development and implementation of strategies to inform integrated efforts involving policy and practice changes to improve preconception, pregnancy, perinatal, and postpartum care and to advance maternal health and maternal health equity.	NICHD	NHLBI, NIAID NIAMS, NICCH NIDA NIDDK, NINDS, NINR, NIMHD, NIMH, ODP, OAR, ODS, OBSSR, ORWH	<ul style="list-style-type: none"> • Intervention and treatment
RFA-MH-22-140 - Understanding Suicide Risk and Protective Factors among Black Youth (R01 Clinical Trial Not Allowed)	Supports translational research to identify neurobiological, behavioral, social, and structural/systemic mechanisms that underly risk and protective factors for suicide among Black youth.	NIMH	NIMHD, OBSSR	<ul style="list-style-type: none"> • Risk and etiology • Detection and screening

(continued)

TABLE 1 Continued

NIMH strategic framework component #1: addressing knowledge gaps and expanding research opportunities

NOFO/initiative	Brief description of NOFO/initiative	ICO lead	ICO partner(s)	Conference topic(s)
NOT-MH-22-195 – Notice of Special Interest (NOSI): Administrative Supplements for NIMH Grants to Inform the Assessment of Suicide Thoughts and Behaviors among Children and Preteens	Encourages research focused on informing or refining developmentally and culturally sensitive approaches for assessing suicide thoughts and behaviors (STB) among children and preteens (defined here as age 12 years and younger).	NIMH	NIDA, NIMHD	<ul style="list-style-type: none"> • Risk and etiology • Detection and screening
PAR 21-287 – Effectiveness of School-Based Health Centers (SBHCs) to Advance Health Equity (R01 Clinical Trial Optional)	Supports research that investigates the effectiveness of SBHCs as a health services care delivery model to address the needs of school-aged children from populations impacted by health disparities.	NIMHD	NIDA, NIMH, ODP	<ul style="list-style-type: none"> • Intervention and treatment • Follow-up care
PAR-21-358 – Risk and Protective Factors of Family Health and Family Level Interventions (R01 - Clinical Trial Optional)	Advances the science of minority health and health disparities by supporting research on family health and well-being and resilience, and soliciting innovative multidisciplinary minority health and health disparities research and interventions at the interpersonal level, especially within and at the family level.	NIMHD	NCI, NIAAA, NICHD, NINR, OBSSR, ODP, ORWH SGMRO	<ul style="list-style-type: none"> • Intervention and treatment
Advancing Clinical Trials in Neonatal Opioid Withdrawal Syndrome (ACT NOW) Program	Through the NIH Helping to End Addiction Long-term Initiative, the Advancing Clinical Trials in Neonatal Opioid Withdrawal Syndrome (ACT NOW)	NICHD	NIDA, NIH OD (ECHO)	<ul style="list-style-type: none"> • Risk and etiology • Detection and screening • Intervention and treatment

(continued)

TABLE 1 Continued

NIMH strategic framework component #1: addressing knowledge gaps and expanding research opportunities

NOFO/initiative	Brief description of NOFO/initiative	ICO lead	ICO partner(s)	Conference topic(s)
	<p>Program supports research to inform the clinical care of infants who are exposed to opioids in the womb.</p> <p>The ACT NOW Eat, Sleep, Console (ESC) Clinical Trial is testing a care approach for treating infants with Neonatal Opioid Withdrawal Syndrome (NOWS) that prioritizes non-pharmacologic care over the use of opioids.</p> <p>The ACT NOW Trial to Shorten Pharmacologic Treatment of Newborns with NOWS (Weaning Trial) will compare rapid with slow opioid weaning management among neonates with NOWS treated with morphine or methadone.</p> <p>The ACT NOW Longitudinal Study will look at MRI findings and other data in infants with and without NOWS to examine the impact of antenatal opioid exposure and NOWS on childhood brain structure and connectivity and on medical, developmental, and behavioral trajectories in early childhood. The</p>			

(continued)

TABLE 1 Continued

NIMH strategic framework component #1: addressing knowledge gaps and expanding research opportunities

NOFO/initiative	Brief description of NOFO/initiative	ICO lead	ICO partner(s)	Conference topic(s)
RFA-DA-19-035 and RFA-DA-19-034 - HEAL Initiative: Preventing Opioid Use Disorder in Older Adolescents and Young Adults (ages 16–30) (UG3/UH3 Clinical Trial Required)	<p>study will also identify risk factors for adverse sequelae to optimize neurodevelopmental, behavioral, and family outcomes. Another ACT NOW comparative effectiveness study is testing how to optimize care for infants exposed to opioids in utero, while also taking into account other types of non-drug therapies, such as behavioral interventions.</p> <p>Supports research and a coordinating center focused on establishing the evidence base for interventions and strategies to prevent initiation of opioid misuse and development of Opioid Use Disorder (OUD) in at-risk older adolescents and young adults. Studies that target adolescents and young adult populations with risk for opioid misuse in health care settings, justice</p>	NIDA	NIAAA, NCCIH, NICHD, NIDCR, NIMH, NIMHD, OBSSR	<ul style="list-style-type: none"> • Detection and screening • Intervention and treatment

(continued)

TABLE 1 Continued

NIMH strategic framework component #1: addressing knowledge gaps and expanding research opportunities

NOFO/initiative	Brief description of NOFO/initiative	ICO lead	ICO partner(s)	Conference topic(s)
	settings as well as child welfare and other systems that intersect with the justice system, and other systems and settings opportune for accessing and engaging older adolescents and young adults with risk for opioid misuse are prioritized.			
NIMH strategic framework component #2: extending and supporting stakeholder engagement				
PAR 21-287 – Effectiveness of School-Based Health Centers (SBHCs) to Advance Health Equity (R01 Clinical Trial Optional)	Supports research that investigates the effectiveness of SBHCs as a health services care delivery model to address the needs of school-aged children from populations impacted by health disparities.	NIMHD	NIDA, NIMH, ODP	<ul style="list-style-type: none"> • Intervention and treatment • Follow-up care

Note: ICO = Institutes and Centers; MRI = magnetic resonance imaging; NCI = National Cancer Institute; NCCIH = National Center for Complementary and Integrative Health; NIAAA = National Institute on Alcohol Abuse and Alcoholism; NIAID = National Institute of Allergy and Infectious Diseases; NIAMS = National Institute of Arthritis and Musculoskeletal and Skin Diseases; NIBIB = National Institute of Biomedical Imaging and Bioengineering; NICHD = Eunice Kennedy Shriver National Institute of Child Health and Human Development; NIDA = National Institute on Drug Abuse; NIDCR = National Institute on Dental and Craniofacial Research; NIDDK = National Institute of Diabetes and Digestive and Kidney Diseases; NIMH = National Institute of Mental Health; NINDS = National Institute of Neurological Disorders and Stroke; NHLBI = National Heart, Lung, and Blood Institute; NIMHD = National Institute on Minority Health and Health Disparities; NINR = National Institute of Nursing Research; NOFO = NIH notice of funding opportunity; OAR = Office of AIDS Research; OBSSR = Office of Behavioral and Social Sciences Research; ODP = Office of Disease Prevention; ODS = Office of Dietary Supplements; ONR = Office of Nutrition Research; ORWH = NIH Office of Research on Women’s Health; SGMRO = Sexual & Gender Minority Research Office.

partnering with youth and communities, and examples included in the NIMH Strategic Framework highlight the importance of engagement with multiple collaborators/partners from various disciplines and systems.

Taken together, the conference and the NIMH Strategic Framework are outcomes of an emerging NIH-wide approach to support research and training that can inform policies and practices aimed at reducing YMHD. For NIH ICOs promoting youth health and mental health, supporting this emerging approach and the NIMH Strategic Framework includes internal and external collaboration to address YMHD across the continuum of care. A major strategy is the release of funding opportunities specific to youth health and mental health. As illustrated in Table 1, much of this work was already taking place prior to the conference, as addressing youth health and YMHD has been a strategic priority for several NIH ICOs. Specifically, Table 1 provides a few examples of how NOFOs align with the NIMH Strategic Framework Components and address research topics in YMHD across the continuum of care described during the conference. As NIH ICOs continue to refine an evidence- and community-informed research agenda to address YMHD, increased emphasis on supporting invited and investigator-initiated research that employs community engaged approaches and partnerships, and that considers strengths-based approaches and evidence-based strategies to foster resilience at individual, family, and community levels, will ensure that a cohesive NIH approach to addressing YMHD reflects the breadth and scope of research needed to achieve the goal of reducing YMHD.

CALL TO ACTION

The work described herein articulates a way forward for the NIH to continue to improve youth mental health and to reduce YMHD through supporting rigorous, impactful research. However, the urgency of the youth mental health crisis and YMHD is so pressing that many NIH ICOs have already begun this important work, particularly through supporting research. As exemplified by the NIMH Strategic Framework, which was developed to be a living document, the scourge of YMHD amidst the broader youth mental health crisis in the United States constitutes a clear call to action requiring an agile, collaborative response. However, the call sounds far beyond the NIH. Researchers and scientists addressing YMHD come from myriad disciplines, including but not limited to psychiatry, psychology,

pediatrics, social work, public health, health services, economics, public policy, nursing, education, and law. To effectively address YMHD, the emerging approach described requires that researchers and scientists collaborate with funders, clinicians, educators, caregivers and families, policy makers, payors, and youth themselves where youth live, learn, work and play, and receive health care and social services. This call to action requires collective expertise and effort to develop and implement innovative policies, programs, and practices—informed by research—to effectively address the drivers and social determinants of YMHD and to promote health equity for all youth.

This article is part of a special series devoted to addressing bias, bigotry, racism, and mental health disparities through research, practice, and policy. The 2023 Antiracism Team includes Deputy Editor Lisa R. Fortuna, MD, MPH, MDiv, Consulting Editor Andres J. Pumariega, MD, PhD, Diversity, Equity, and Inclusion Emerging Leaders Fellows Tara Thompson-Felix, MD, and Amalia Londoño Tobón, MD, Assistant Editor Eraka Bath, MD, Deputy Editor Wanjikū F.M. Njoroge, Associate Editor Robert R. Althoff, MD, PhD, and Editor-in-Chief Douglas K. Novins, MD.

Accepted January 16, 2024.

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The authors have reported no funding for this work.

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The authors wish to thank Andrew Hooper, PhD, of the National Institute of Mental Health, for participation in reviewing and technical editing of the manuscript. This work was written as part of the authors' official duties as Government employees. The views expressed in this article are the opinions of the authors and do not necessarily represent the views of the NCCIH, NHGRI, NIAAA, NICHD, NIDA, NIMH, NIMHD, NIH, or the United States Government.

Disclosure: Drs. Barksdale, Hill, Jean-Francois, Maholmes, Friedman-Hill, Parsafar, Freeman, Willis, Deeds, and Borba and Ms. Quartey-Ampofo have reported no biomedical financial interests or potential conflicts of interest.

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0890-8567/\$36.00/Published by Elsevier Inc. on behalf of the American Academy of Child and Adolescent Psychiatry.

<https://doi.org/10.1016/j.jaac.2023.09.553>

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