

Addressing the Mental Health Crisis through Research

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NIH Advisory Committee to the Director
June 8, 2023



National Institute
of Mental Health

Welcome and Agenda

- Impact of the COVID-19 Pandemic on Mental Health
- The Youth Mental Health Crisis
- Meeting the Moment in Mental Health

NIMH Vision and Mission

VISION



NIMH envisions a world in which mental illnesses are prevented and cured.

MISSION

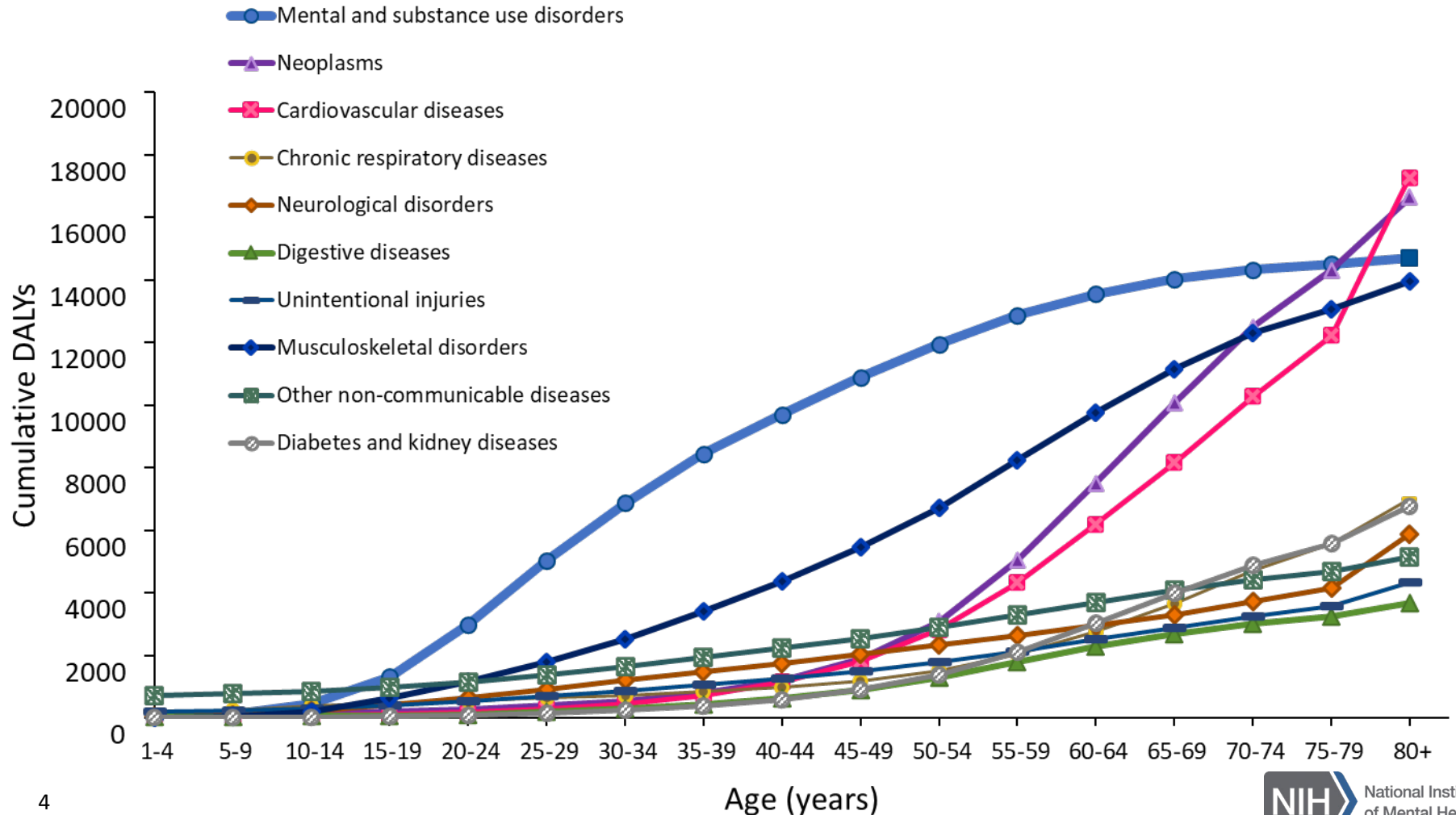


To transform the understanding and treatment of mental illnesses through basic and clinical research, paving the way for prevention, recovery, and cure.

Burden of Mental Illness: U.S. Disability-Adjusted Life Years (DALYs)

Cumulative U.S. DALYs for the Leading Disease/Disorder Categories by Age (2019)

Data Courtesy of IHME, GHDx



Agenda

Impact of the COVID-19 Pandemic on Mental Health

- The Youth Mental Health Crisis
- Meeting the Moment in Mental Health

COVID-19 Impacts on Mental Health: Increased Rates of Symptoms



Weekly / Vol. 69 / No. 32

During late June, 40% of U.S. adults reported struggling with mental health or substance use*

ANXIETY/DEPRESSION SYMPTOMS



STARTED OR INCREASED SUBSTANCE USE



TRAUMA/STRESSOR-RELATED DISORDER SYMPTOMS

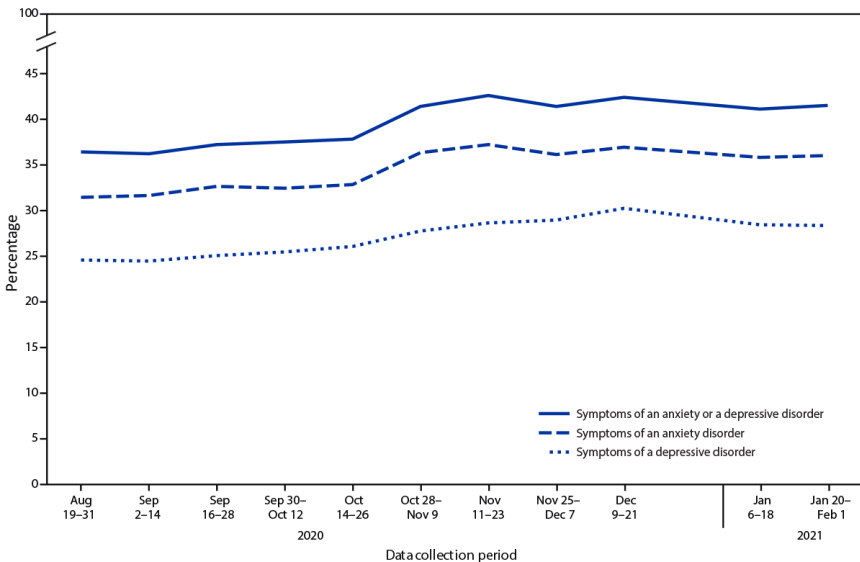


SERIOUSLY CONSIDERED SUICIDE[†]

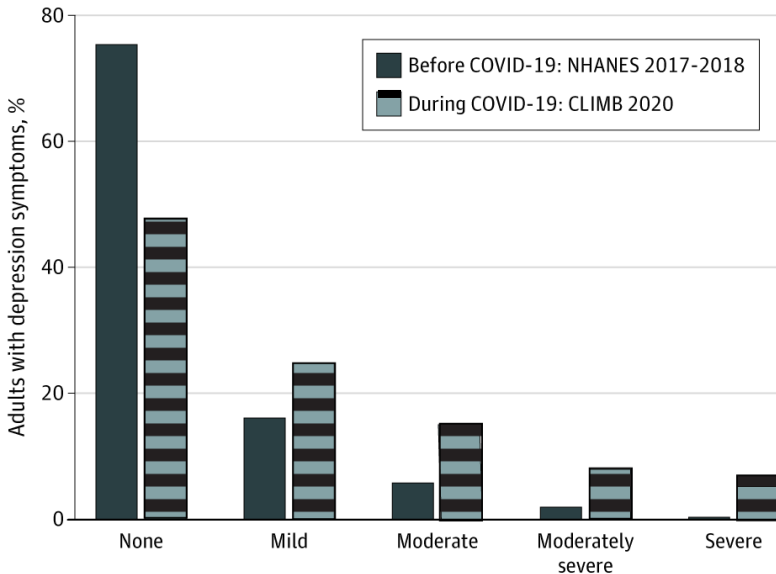


*Based on a survey of U.S. adults ages >18 years during June 24-10, 2020
[†]In the 30 days prior to the survey

%Adults with symptoms during past 7 days

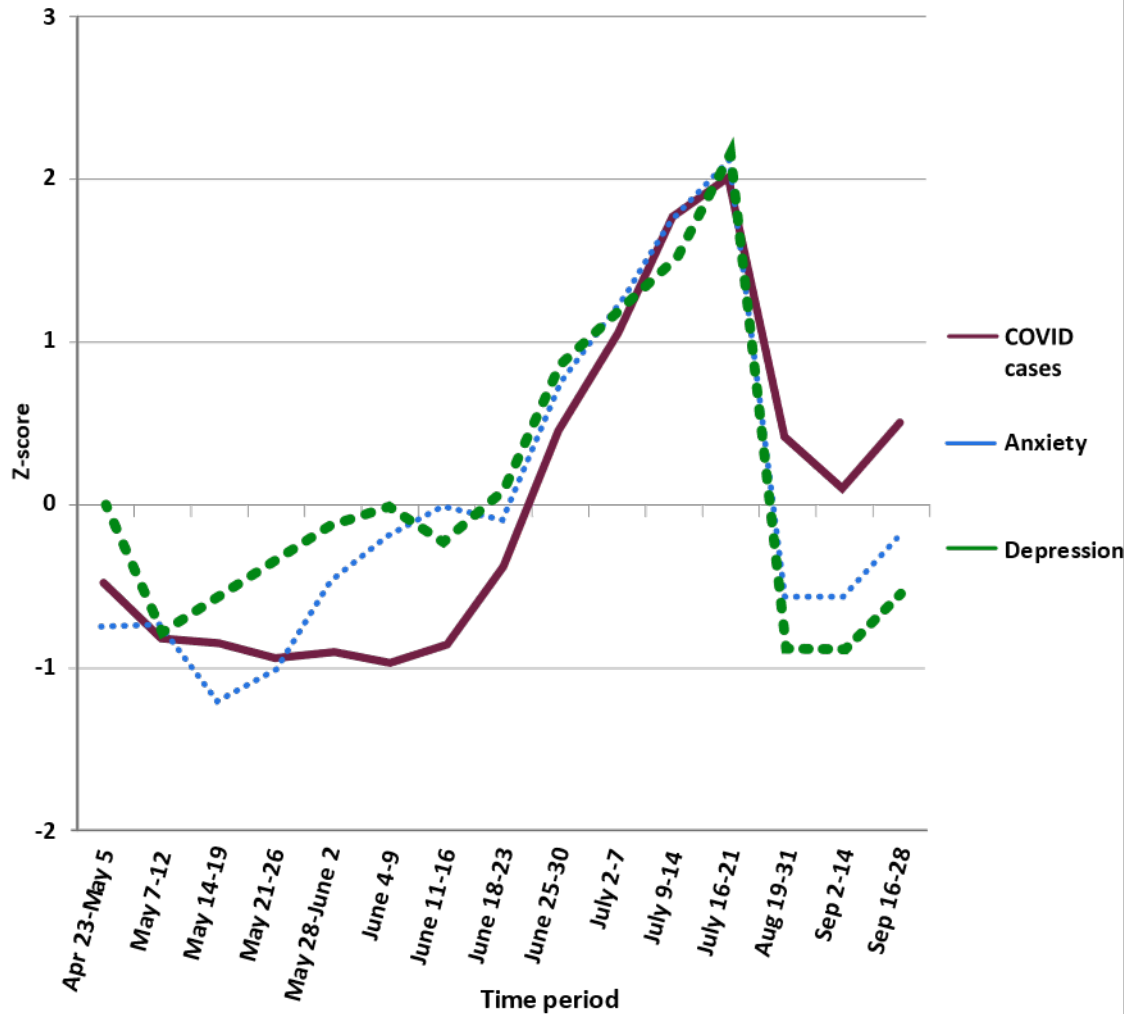


Symptom prevalence in adults



Symptom Change across Pandemic

TRAJECTORY OF SYMPTOMS IN PANDEMIC



Prior research on trauma exposure:

- Initial symptoms improve for most
- Significant minority may have long-term or chronic mental illness
- Social inequities increase trauma exposure and mental health vulnerability and care

Risks for Poor Outcomes

Nature and severity of exposure

- Exposed directly to death or injuries
- Trauma type

Individual differences

- History of trauma or mental illness
- Ongoing stressors, including occupational and financial strain
- Substance use/abuse
- Female
- Non-white

Environment

- Few social supports

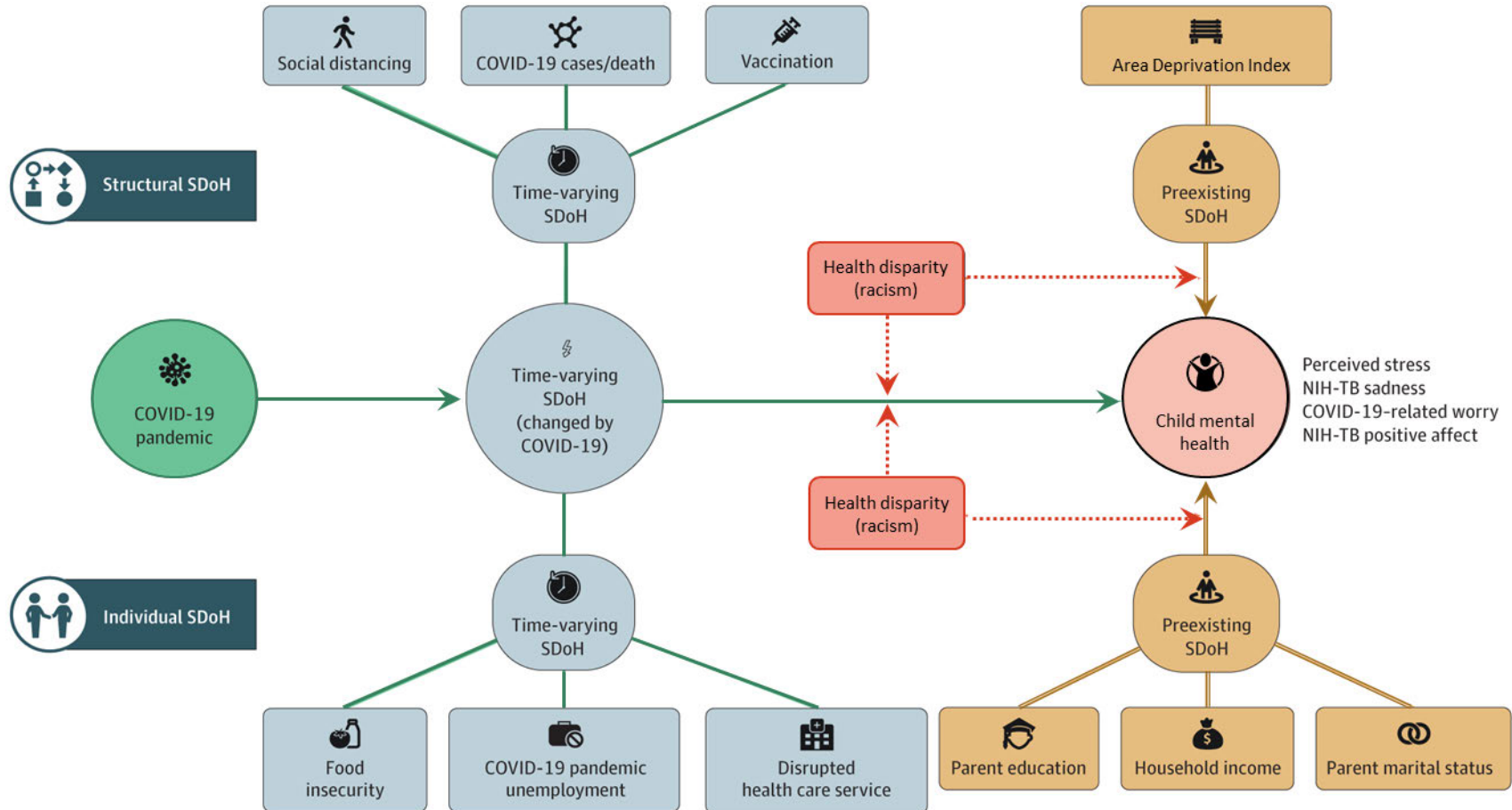


Pandemic-specific factors (youth)

- Living in areas with severe outbreaks
- Losing a family member
- Having caregiver who is a frontline worker
- Being worried about COVID-19
- Disruptions in routines
- Experiencing more adverse childhood experiences
- Experiencing financial instability, food shortages or housing availability

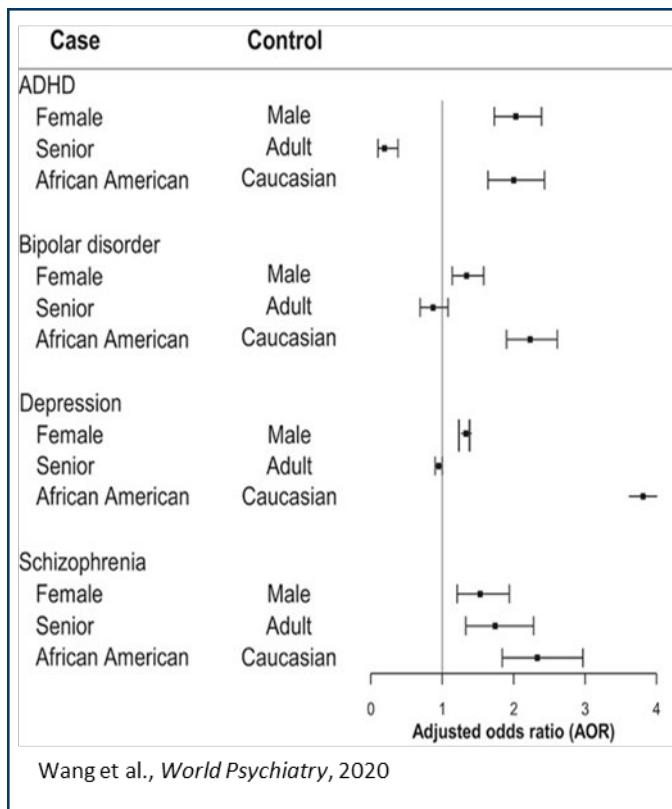
HHS, 2021

Disparities in Mental Health Outcomes and Factors Associated with those Outcomes

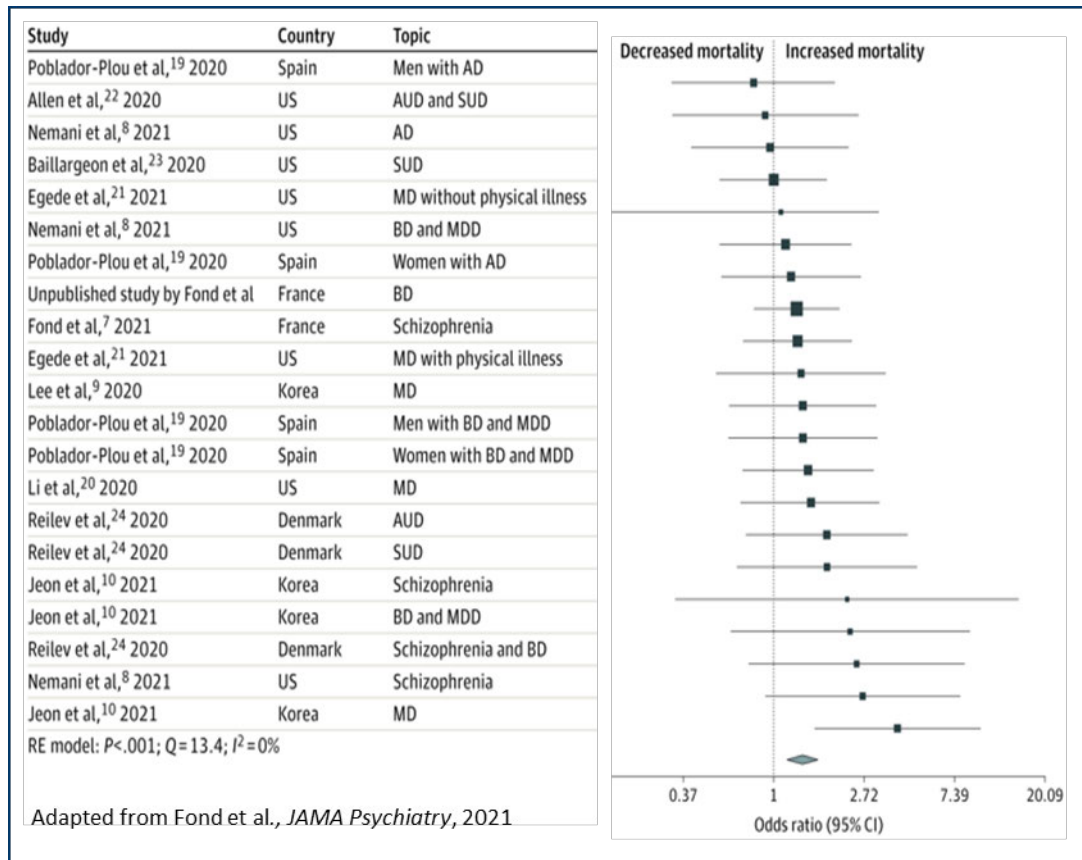


Increased Risk of SARS-CoV-2 Infection and Death Among Those With Mental Disorders

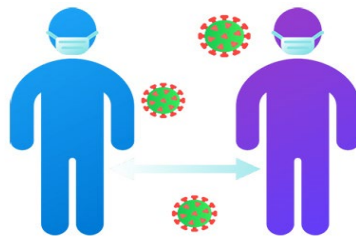
Risk of Infection



Risk of Death

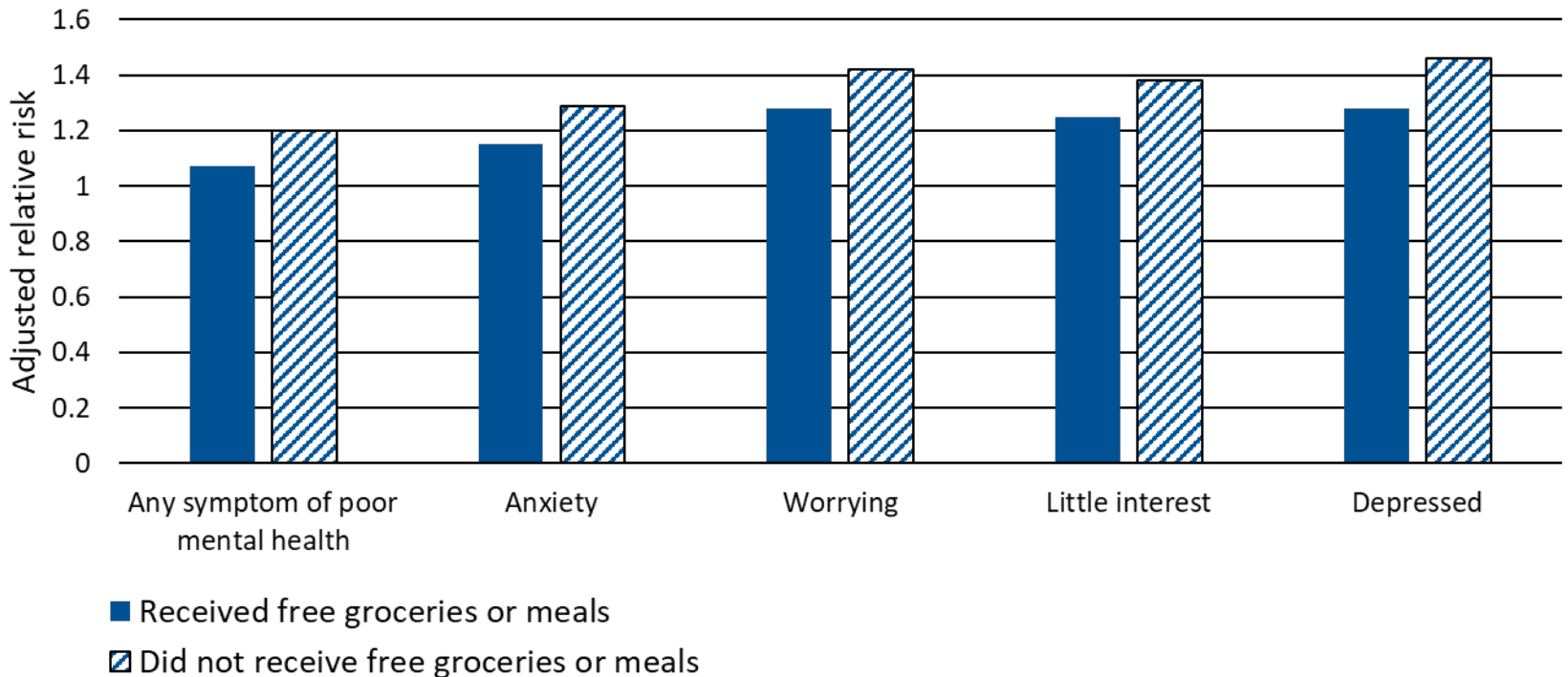


Fond et al., *JAMA Psychiatry*, 2021



Impact of Policy Changes on Mental Health

Access to Free Groceries/Meals Improved Mental Health Among Food Insecure Individuals



Disruptions in Care

- Among >650k Medicare beneficiaries with Schizophrenia or Bipolar 1 disorders during the acute phase of the pandemic

↓ 20% outpatient visits

↓ 20% antipsychotic and mood stabilizer prescription fills

↓ 28% emergency department visits and hospital admissions

Utilization rebounded yet was lower than 2019

- 30% of adolescent mental health service users were unable to receive care during the pandemic



Shifts in Behavioral Health Treatment

- Telehealth use rate increased from 2.2% in January 2020 to 65.2% in April 2020, and remained stable at 65.6% in June 2020 (Yu et al 2021)
- From January 2020 to January 2021, telehealth availability increased by 77% for mental health and 143% for substance use disorder (Cantor et al 2021)
- Significantly lower telehealth usage by Blacks, Hispanics, and Asians than non-Hispanic Whites (Yu and Bekerian, 2023)



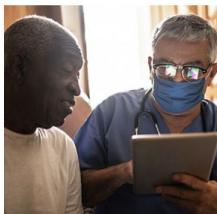
NIMH Response to COVID-19

NIMH-Sponsored Initiatives

- Urgent Award: COVID-19 Mental Health Research ([PAR-22-112](#), [PAR-22-113](#))
- COVID-19 Pandemic Mental Health Research ([NOT-MH-22-100](#))
- Social, Behavioral, and Economic Impact of COVID-19 in Underserved and Vulnerable Populations ([NOT-MH-21-330](#))
- COVID-19 Related School Disruptions Impact on Mental Health, Cognitive, Social, and Emotional Development of Children (NOT-MH-21-225)

NIMH Participation

- Social, Behavioral, and Economic Research on COVID-19 Consortium ([PAR-21-213](#))
- Research to Address Vaccine Hesitancy, Uptake, and Implementation among Populations that Experience Health Disparities ([NOT-MD-21-008](#))
- Simulation Modeling and Systems Science to Address Health Disparities ([NOT-MD-20-025](#))



RADxSM Underserved Populations (RADx-UP)

The overarching goal of the RADx-UP initiative is to understand the factors associated with disparities in COVID-19 morbidity and mortality and to lay the foundation to reduce disparities for those underserved and vulnerable populations who are disproportionately affected by, have the highest infection rates of, and/or are most at risk for complications or poor outcomes from the COVID-19 pandemic.

Budget: \$500 Million



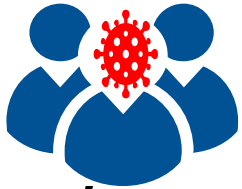
RECOVER

Researching COVID to Enhance Recovery

3 Year COVID-19 and Mental Health Summary

PREVIOUS RESEARCH IS RELEVANT

- Initial widespread distress is not sustained but even small sustained new and worsened illness cannot be absorbed by the healthcare system



BIDIRECTIONAL RELATIONSHIP EXISTS

- Mental illness leaves you vulnerable to infection and death
- COVID-19 (particularly severe infection) is associated with incident mental illness

PANDEMIC EXPLOITS SYSTEMIC & SOCIAL INEQUITIES

- Many health disparity populations (e.g., racial and ethnic minorities, less privileged SES, rural residents) experience compounded impacts



RESEARCH NEEDS PERSIST

Outstanding questions include (but are not limited to):

- Why are people with mental illness more susceptible to infection and poor outcomes?
- How does infection change long term psychosis risk?
- How to extend mental health workforce?
- What are most impactful SDOH to target?



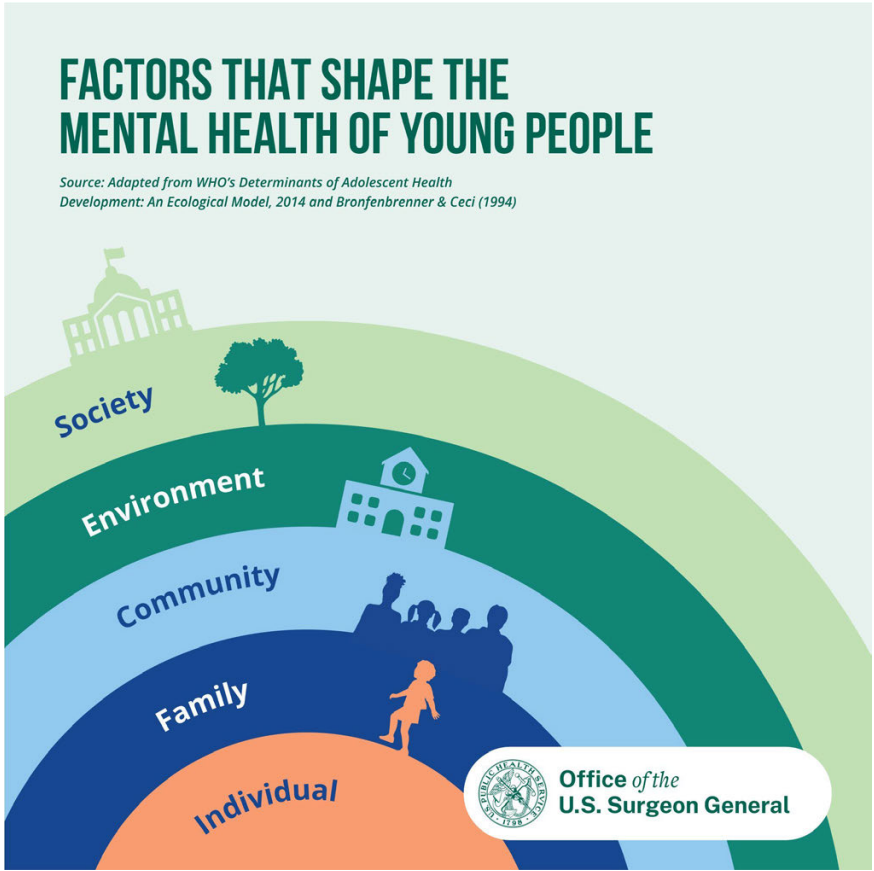
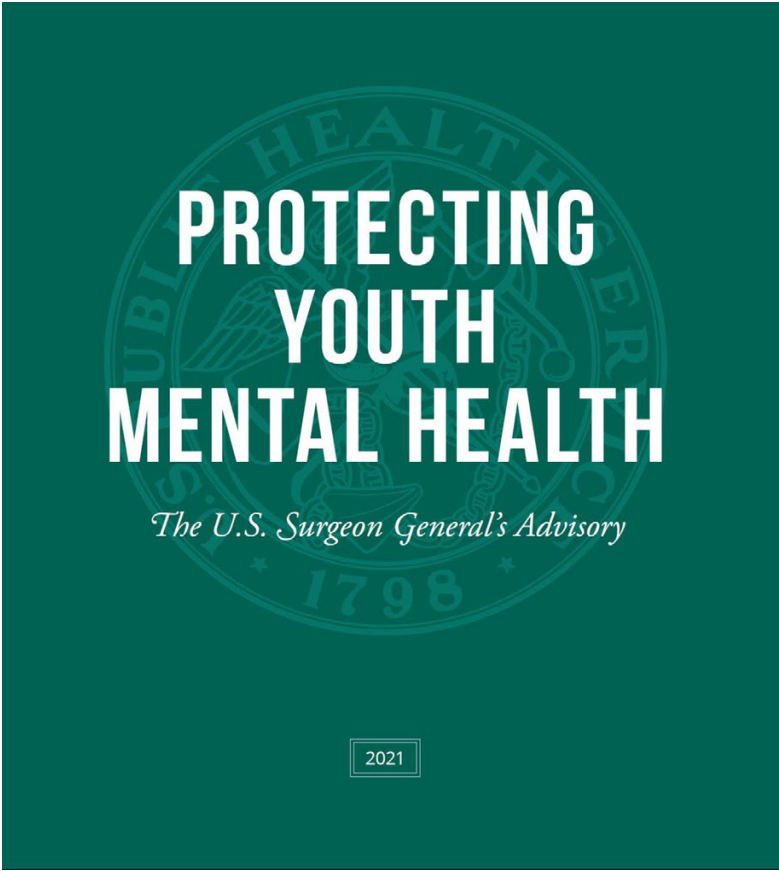
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The Youth Mental Health Crisis

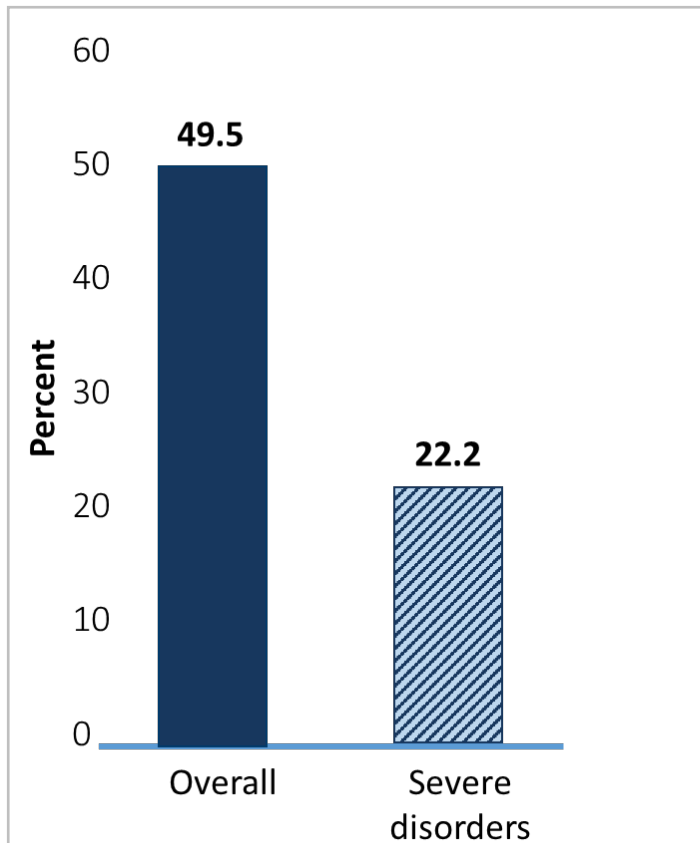
- Meeting the Moment in Mental Health

Surgeon General's Advisory on Youth Mental Health

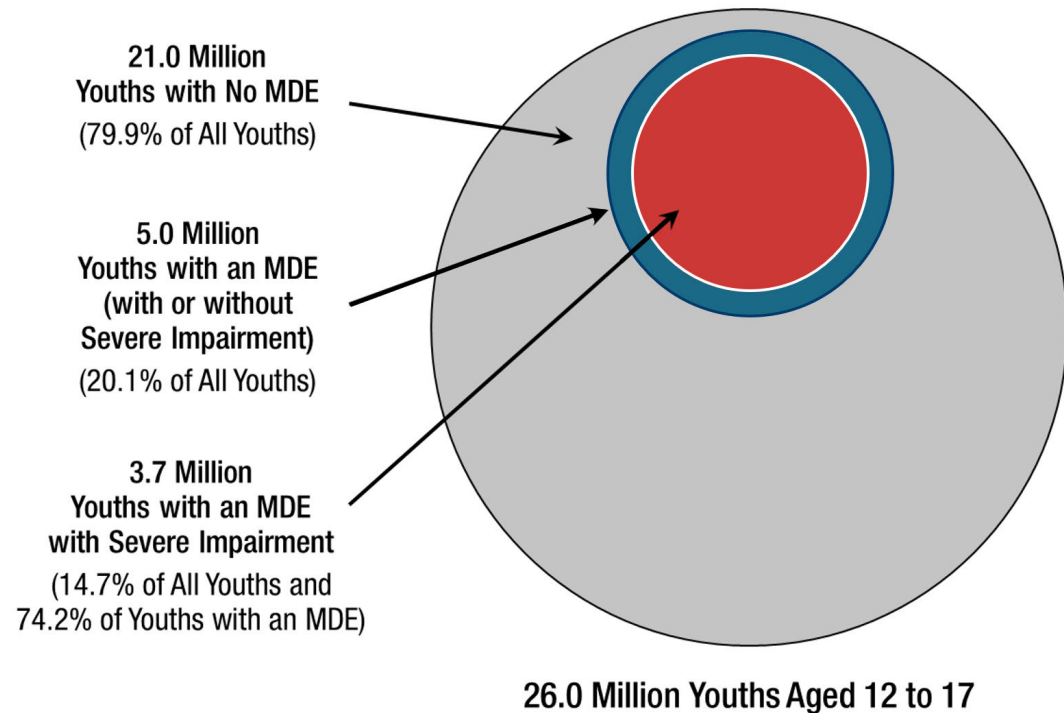


Mental Disorders are Highly Prevalent

Lifetime Prevalence of Any Mental Disorder: Aged 12 to 17; 2001-2004

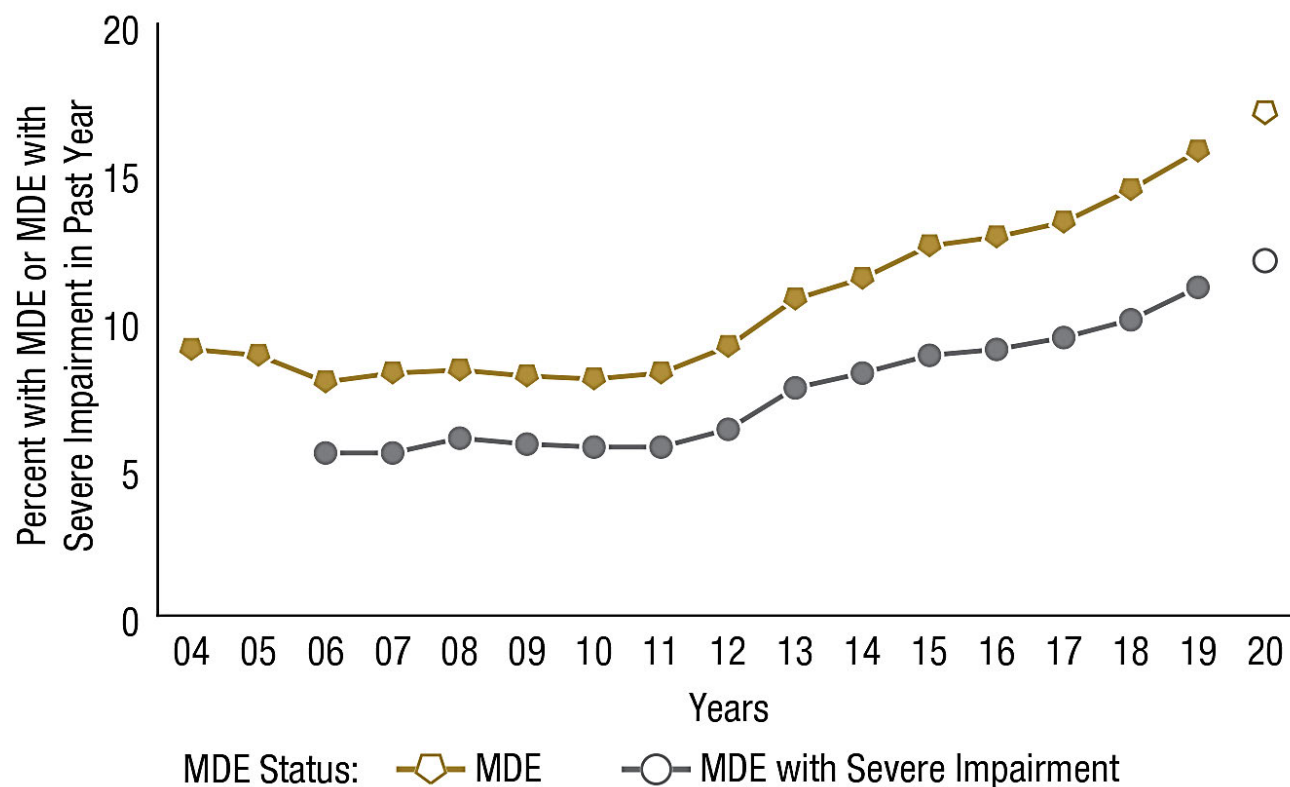


Major Depressive Episode in the Past Year: Aged 12 to 17; 2021



Rates of Depression are Increasing Among Youth

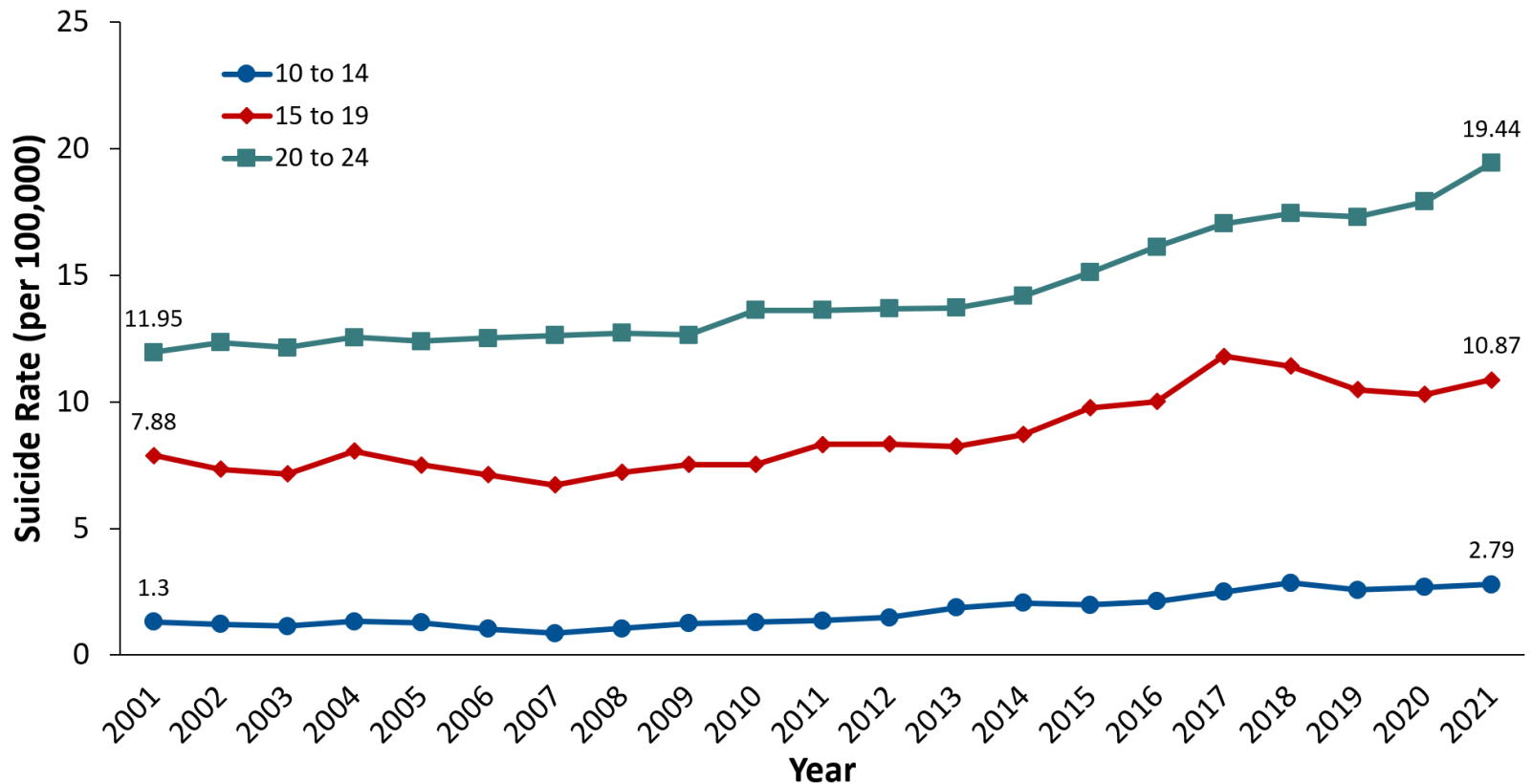
Major Depressive Episode (MDE) and MDE with Severe Impairment in the Past Year Among Youths Aged 12 to 17: 2004-2020



Rates of Suicide are Increasing Among Youth

Crude Suicide Rates Among Youth in the United States (2001-2021)

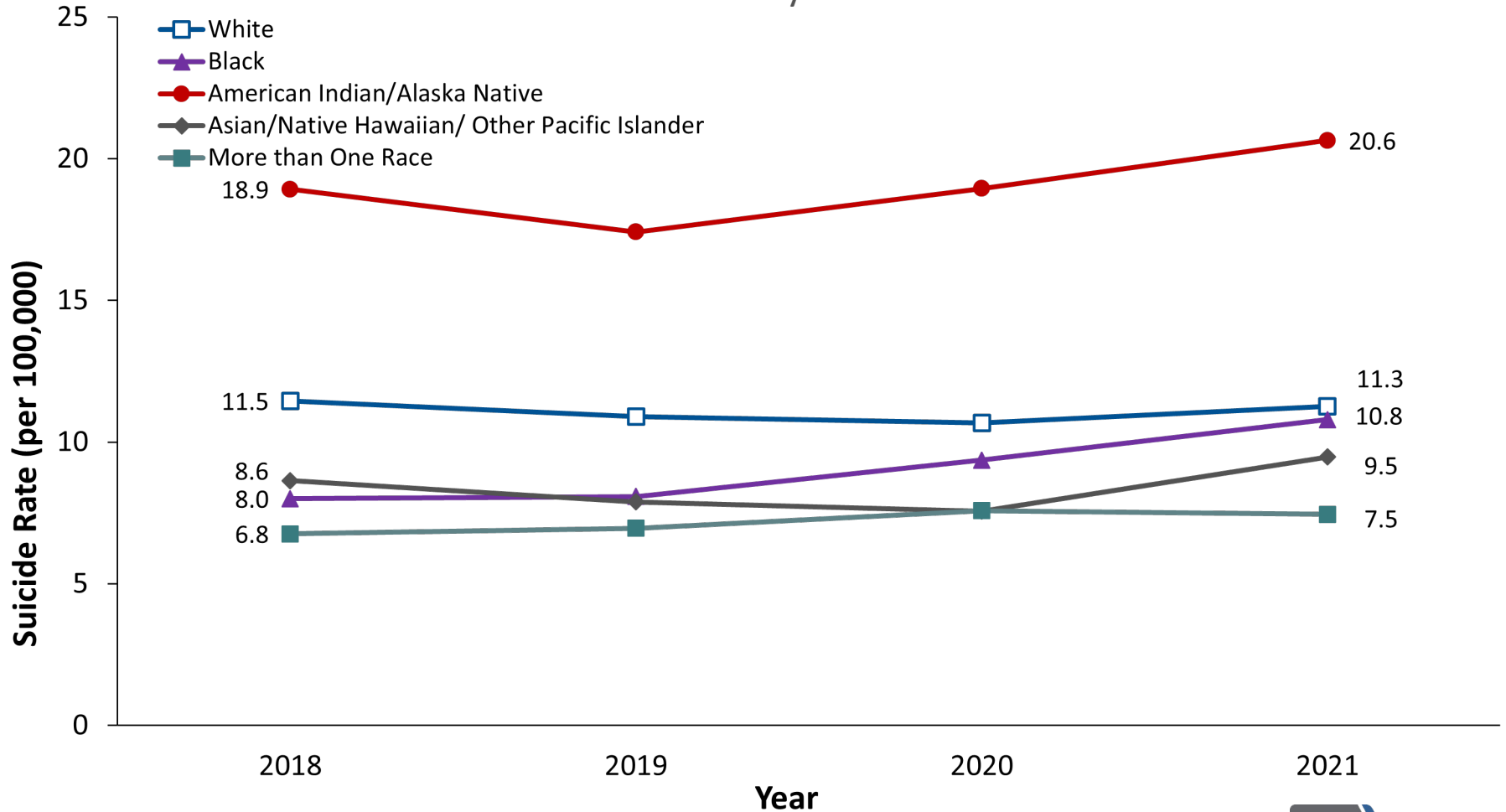
Data Courtesy of CDC



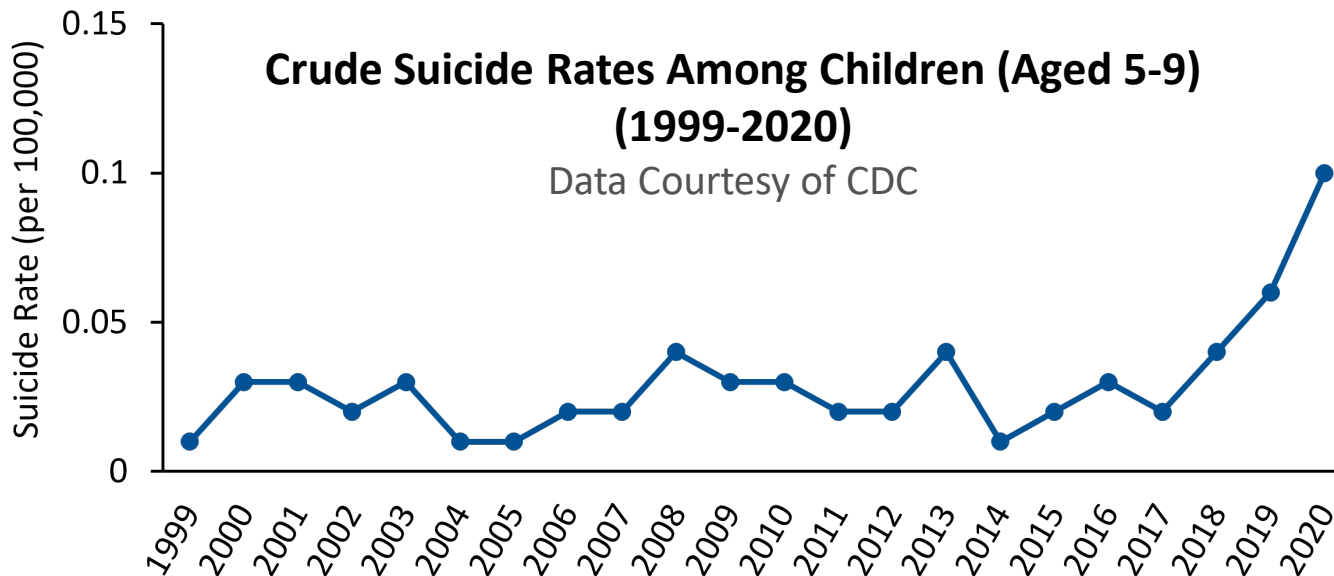
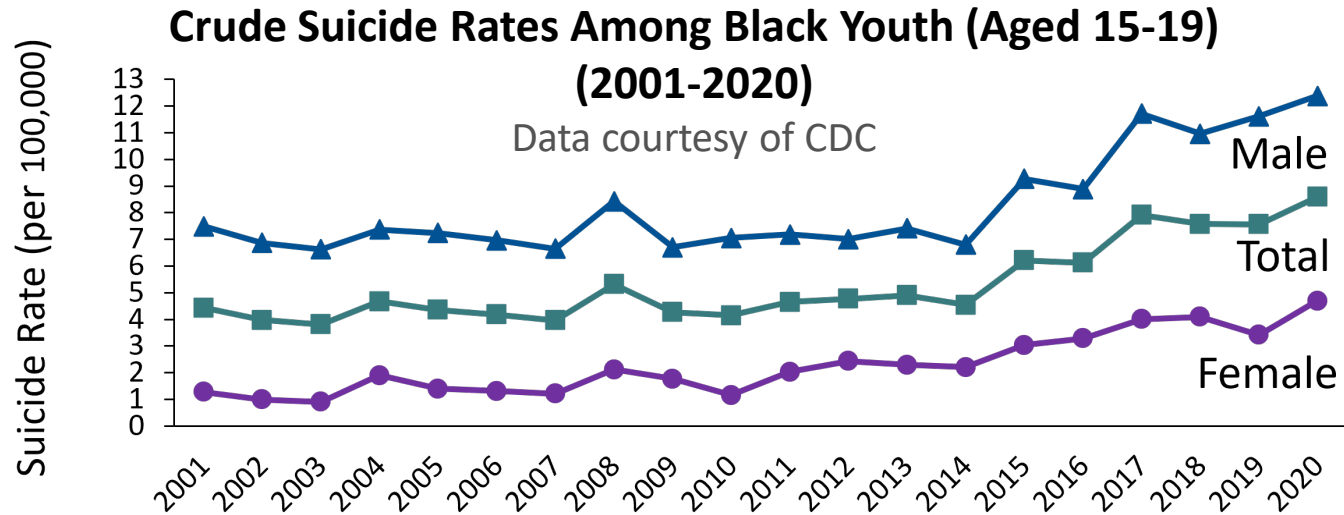
Increases in Youth Suicide Rates Differ by Race/Ethnicity (Ages 10-24)

Crude Suicide Rates in the United States (2018-2021)

Data Courtesy of CDC



Emerging Risk Groups: Black Youth and Pre-Teens



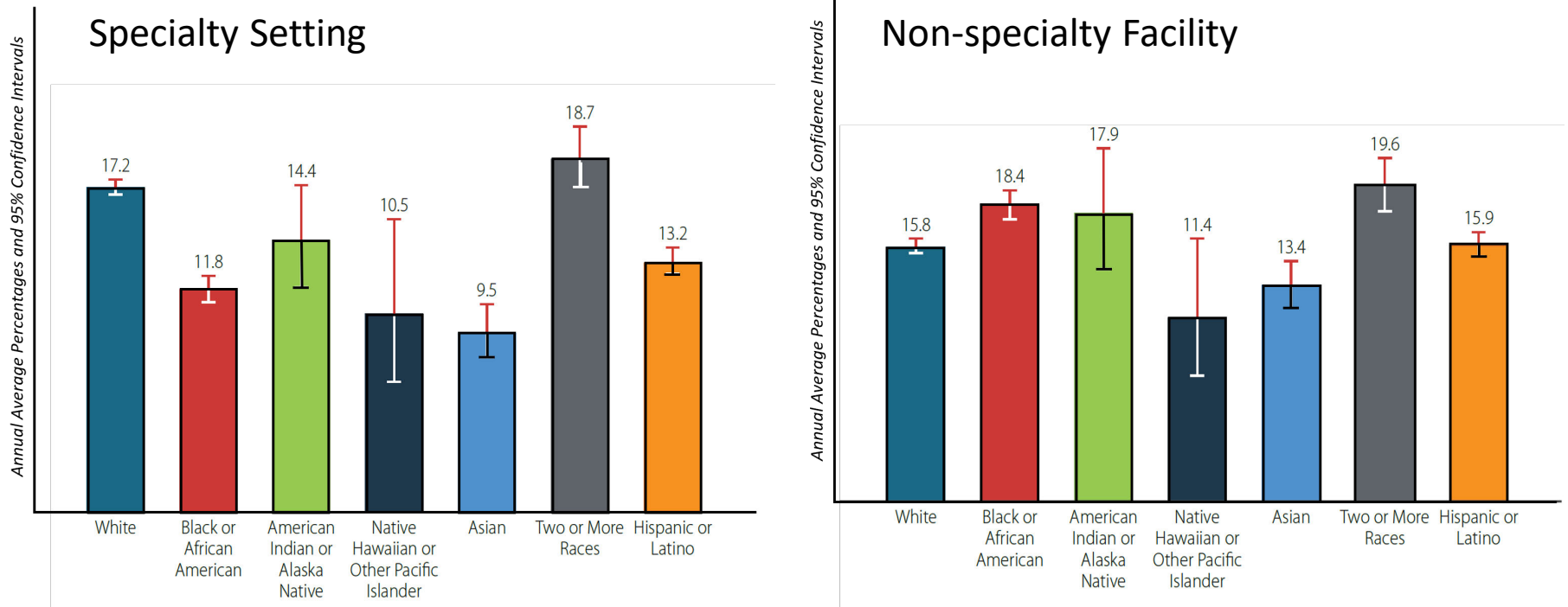
Proportion of Youth Receiving Mental Health Care

Percent of children, ages 3 through 17, with a mental/behavioral condition who receive treatment or counseling

	Received treatment or counseling	Did not receive treatment or counseling	Total %
%	51.6	48.4	100.0
C.I.	49.6 - 53.5	46.5 - 50.4	
Sample Count	7,144	5,812	
Pop. Est.	4,522,442	4,245,505	

Disparities in Service Delivery

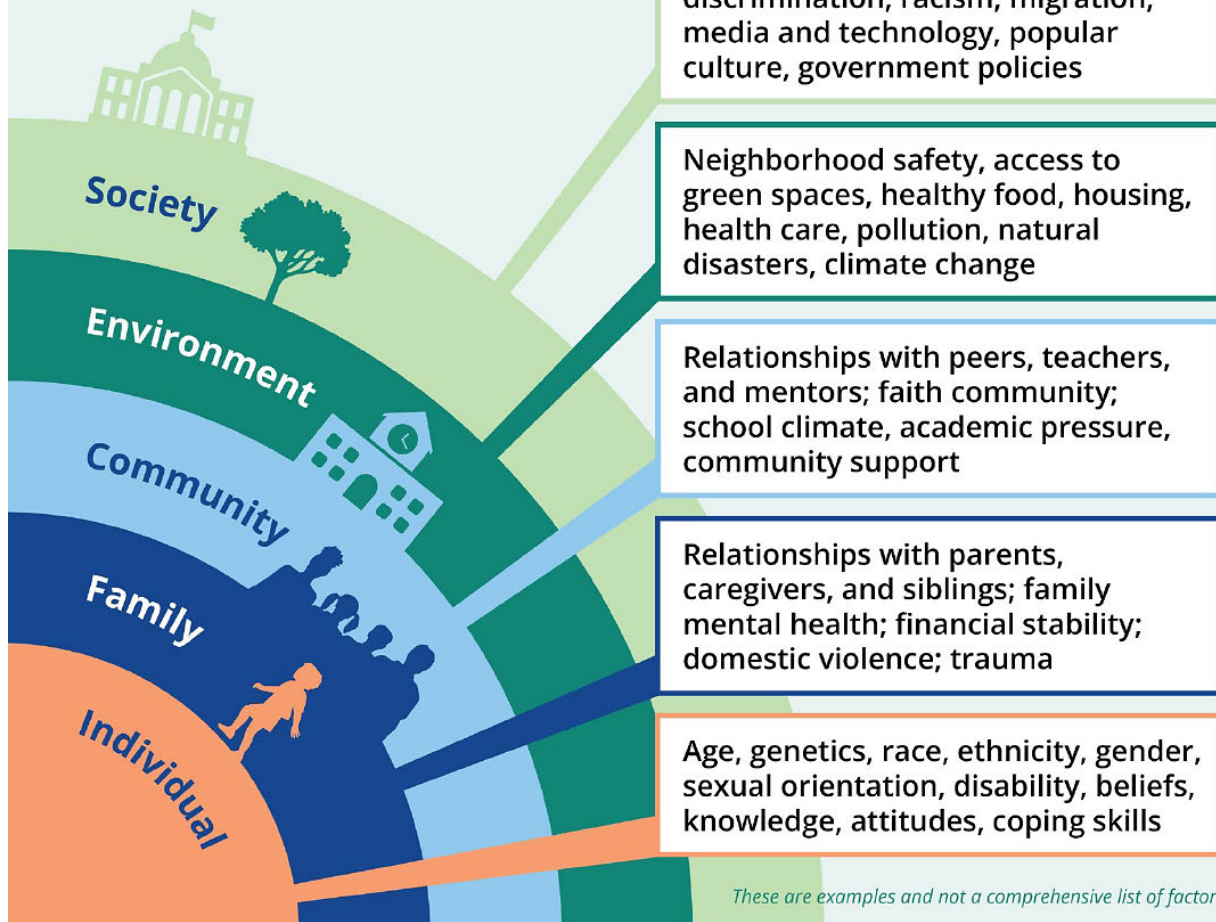
Received Mental Health Services in the Past Year Among Adolescents, by Race/Ethnicity: 2015-2019, Annual Averages



FACTORS THAT CAN SHAPE THE MENTAL HEALTH OF YOUNG PEOPLE



Source: Adapted from WHO's Determinants of Adolescent Health Development: An Ecological Model, 2014 and Bronfenbrenner & Ceci (1994)



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 **Meeting the Moment in Mental Health**

White House and Congressional Interest in Mental Health



DOMESTIC POLICY COUNCIL



NIMH submitted a **Professional Judgment Budget on Serious Mental Illness** to Congress

Winter 2023

President released the **White House Report on Mental Health Research Priorities and Fiscal Year 2024 Budget**

Spring 2022

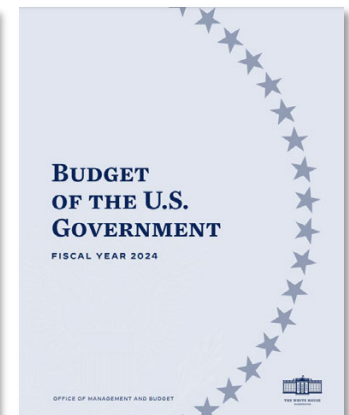
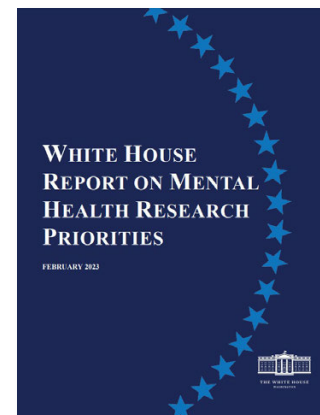
White House identified **mental health as a priority**

NIH engaged with the White House and provided **research priorities**

Summer 2022

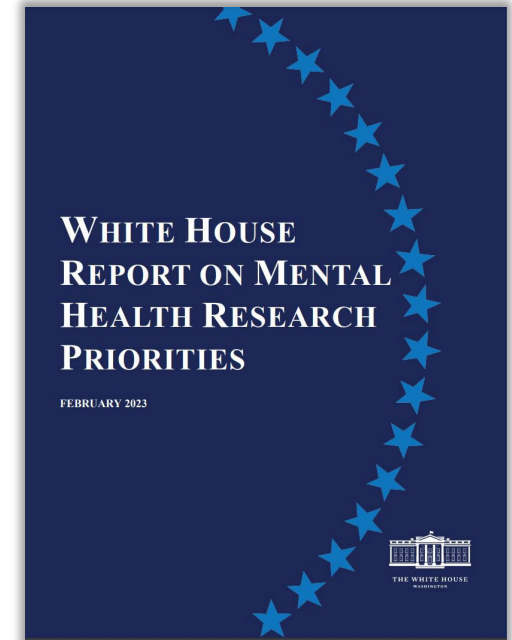
March 01, 2022

FACT SHEET: President Biden to Announce Strategy to Address Our National Mental Health Crisis, As Part of Unity Agenda in his First State of the Union



White House Report on Mental Health Research Priorities

- Outlines administration-wide needs and opportunities to advance mental health research
- Areas of emphasis include
 - Addressing mental health inequities
 - Leveraging digital mental health interventions
 - Supporting the mental health workforce
 - Increasing the availability, quality, and impact of interventions
 - Integrating substance use and mental health research and treatment
 - Developing and improving treatments for serious mental illnesses
 - Preventing fatal and non-fatal suicide outcomes
 - Supporting youth mental health
- Highlights several NIMH-supported initiatives



President's FY24 Budget Request for NIMH

- On March 9, 2023, the Administration released the President's FY24 Budget Request
 - The budget proposes \$48.6 billion for NIH, an increase of \$920 million above FY23 enacted levels
 - It proposes \$2.5 billion for NIMH, an increase of \$200 million above FY23 enacted levels, including
 - \$130 million to support better diagnostics, improved treatments, and enhanced precision of mental health care
 - \$20 million to study the mental health impacts of social media
 - \$50 million for the Precision Psychiatry Initiative



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Meeting the Moment in Mental Health

- **Advancing Learning Health Care to Improve Mental Health Outcomes**
- Transforming the System of Care for Youth Mental Health
- Leveraging Precision Medicine to Transform Therapeutics
- Diversifying Genetics for Next-Generation Treatments

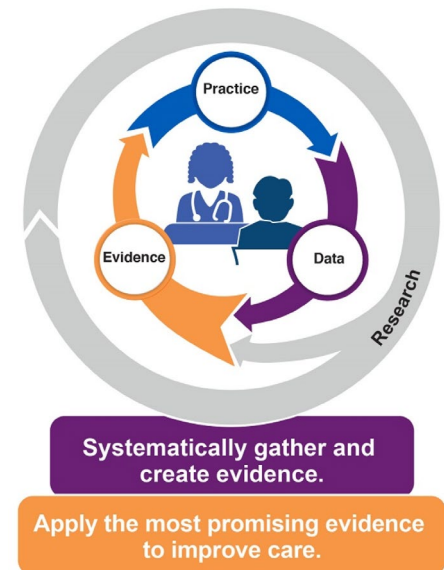
Advancing Learning Health Care to Improve Mental Health Outcomes

- Clinical effectiveness often declines as evidence-based interventions move from controlled research environments to real-world treatment settings
- Learning health care is a promising data-driven framework for mitigating this “voltage drop” and promoting continuously improving health care
- Learning health systems utilize standard measures, data science, quality improvement studies, and real-time feedback to support immediate improvements in health care delivery and patient outcomes

Clinical Trials → Practice



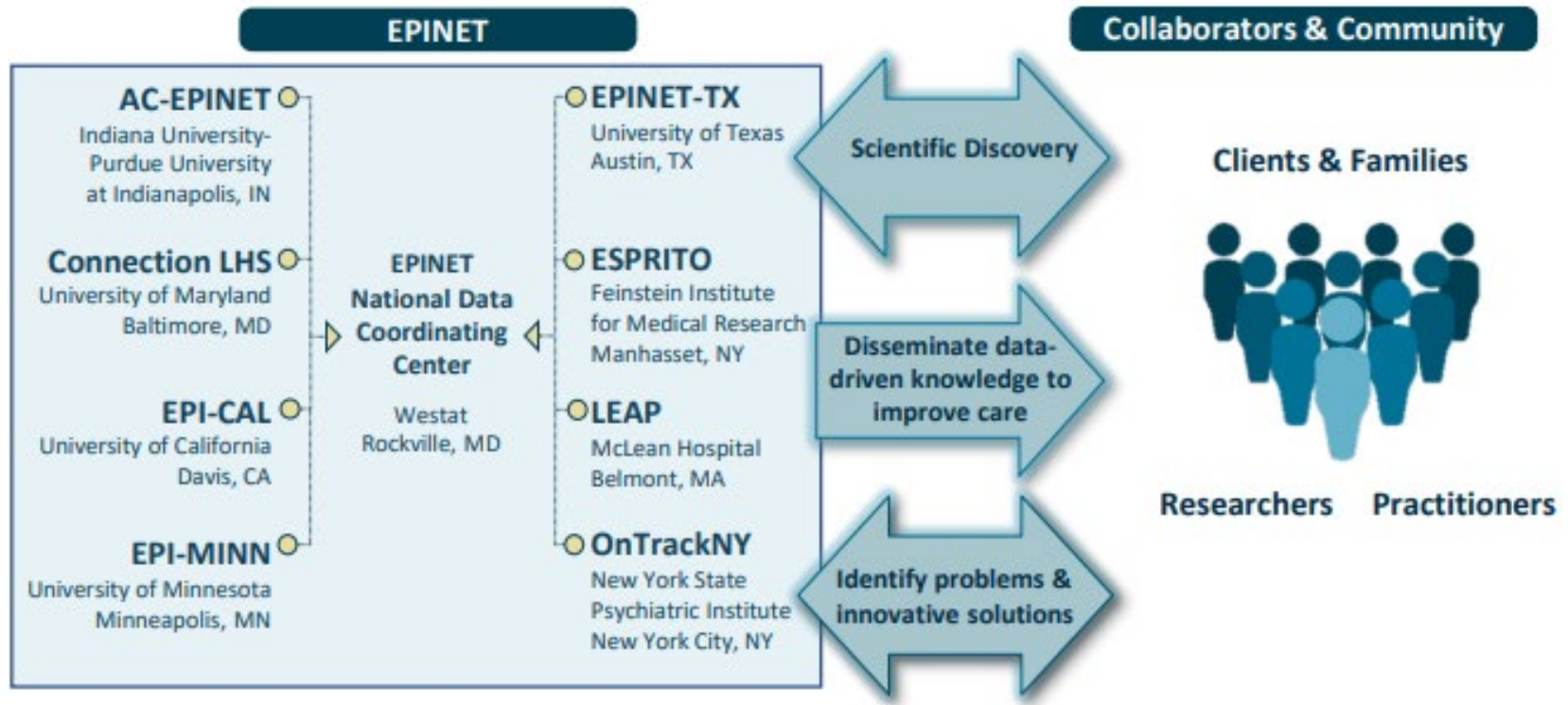
Learning Health Systems



Early Psychosis Intervention Network (EPINET): Growing Efforts to Investigate Early Psychosis



Accelerating advances in early psychosis care, recovery outcomes, and scientific discovery through a national early psychosis learning health care partnership

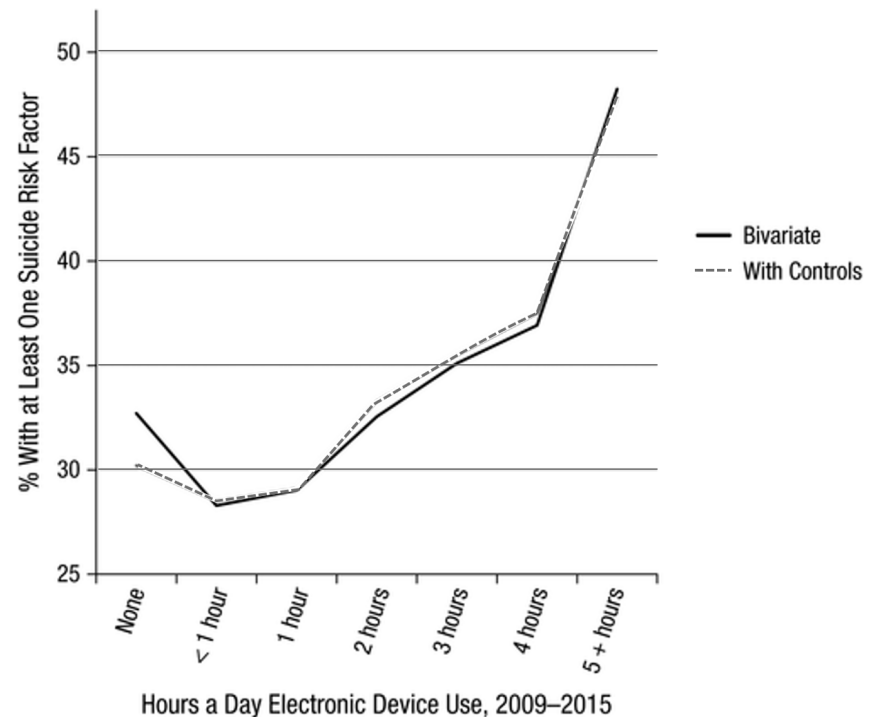
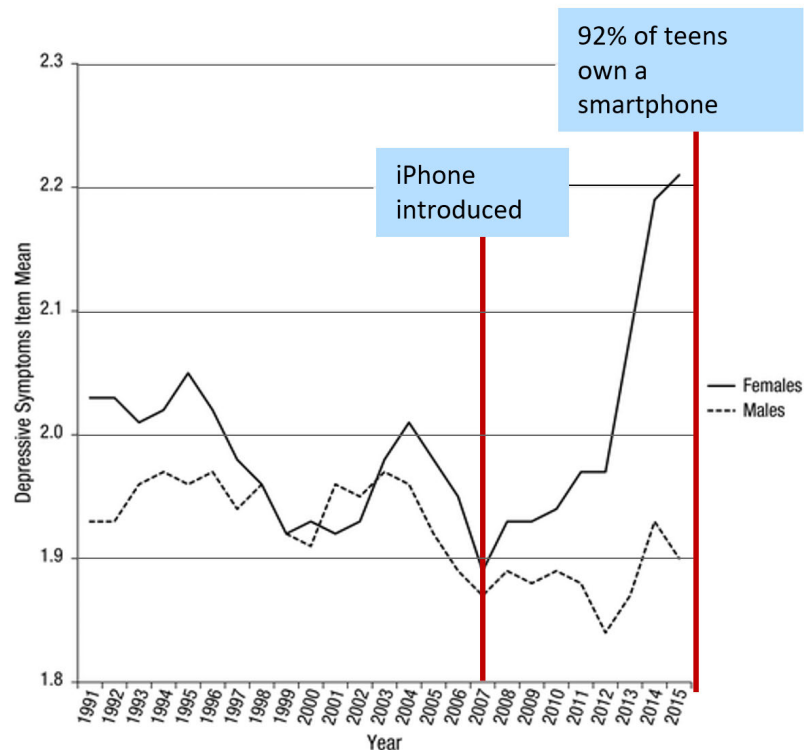


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Effects of Technology and Digital Media on Mental Health

- Adolescents who spent more time on new media (including social media and electronic devices such as smartphones) were more likely to report mental health issues



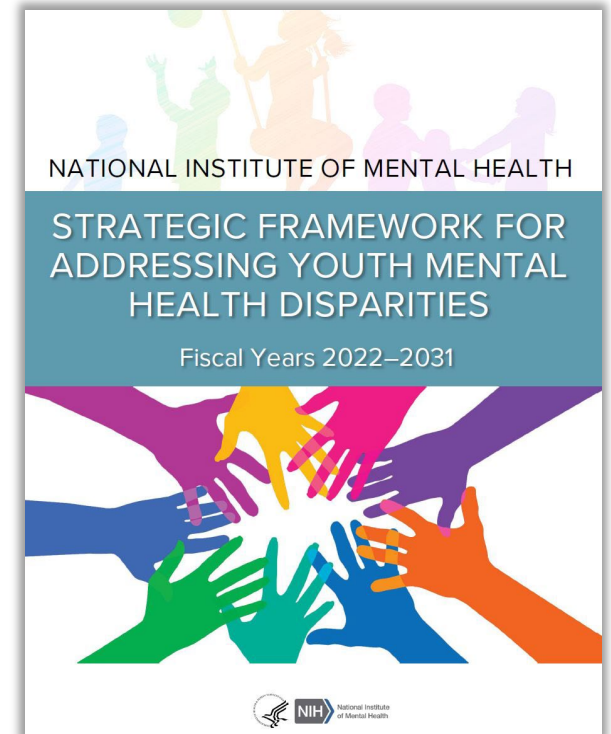
Opportunities in Technology and Digital Media

- Bidirectional Influences Between Adolescent Social Media Use and Mental Health (RFA-MH-23-115/-116)
- Using Just-in-Time Adaptive Interventions to Optimize Established Adolescent Mental Health Treatments (RFA-MH-23-170)



NIMH Strategic Framework for Addressing Youth Mental Health Disparities

- Outlines NIMH’s plans and priorities for guiding research to address and reduce mental health disparities among underserved and underrepresented youth by 2031
- Three Components:
 - Addressing Knowledge Gaps and Expanding Research Opportunities
 - Extending and Supporting Stakeholder Engagement
 - Growing the Youth Mental Health Disparities Research Workforce



Developed with support from The National Institute on Minority Health and Health Disparities; The Eunice Kennedy Shriver National Institute of Child Health and Human Development; and Other entities across NIH, HHS, and the federal government

Youth Suicide Prevention Activities and Initiatives

Black Youth Suicide

- Initiatives on risk, detection, prevention, interventions for Black and Vulnerable Youth
- Responding to the Alarm: Addressing Black Youth Suicide ([webinar on April 21, 2020](#))



Preteen Suicide

- Four-part roundtable series: Risk, Resilience, & Trajectories in Preteen
- Suicide (January-June 2021)
- Assessment of Suicide Thoughts and Behaviors among Children and Preteens ([NOT-MH-22-086](#))



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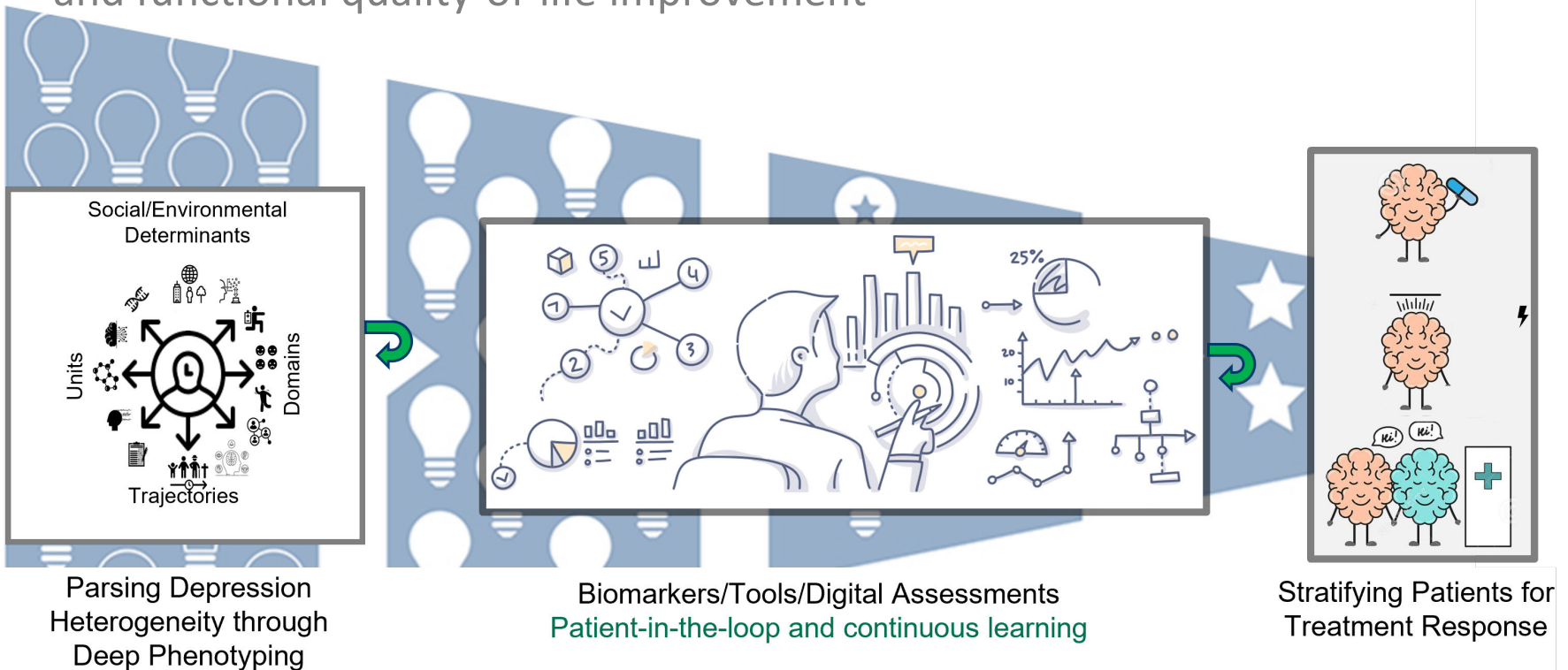
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Advancing Precision Psychiatry Research

- Biomarker Development Research
 - Explore approaches to deliver highly sensitive and specific biomarkers to guide treatment decisions for major depression
- Precision Diagnostics Research
 - Follow large, diverse cohorts over time using novel behavioral and physiological methods to better predict patient prognosis and optimize treatment

Adapting the “Innovation Funnel” Approach to Treatment Selection for Depression

- Goal: Develop accurate, fast, easy-to-use, and accessible tools to predict response among multiple existing treatments for depression
- Long-Term Deliverables: Validated clinical tools to accelerate symptom relief and functional quality-of-life improvement



Individually Measured Phenotypes to Advance Computational Translation in Mental Health (IMPACT-MH)

Goal: Use data-centric and data-driven approaches to generate more specific and less biased clinical phenotypes to enrich precision-medicine approaches for diagnostics, prognosis, and treatment decisions

- Develop a data “infostructure” that integrates multimodal datasets with an emphasis on representative, diverse, and generalizable samples
- Identify relationships within data using artificial intelligence/machine learning methods (e.g. Bayesian models)
- Develop robust clinical non-biased decision-making tools



Individually Measured Phenotypes to Advance Computational Translation in Mental Health (IMPACT-MH)

- RFA-MH-23-105/106 (U01/U24)
 - Identify/develop behavioral tasks optimized for measuring individual differences
 - Collect data from novel clinical cohorts/identify existing datasets
 - Define novel clinical signatures
 - Partner with a Data Coordinating Center

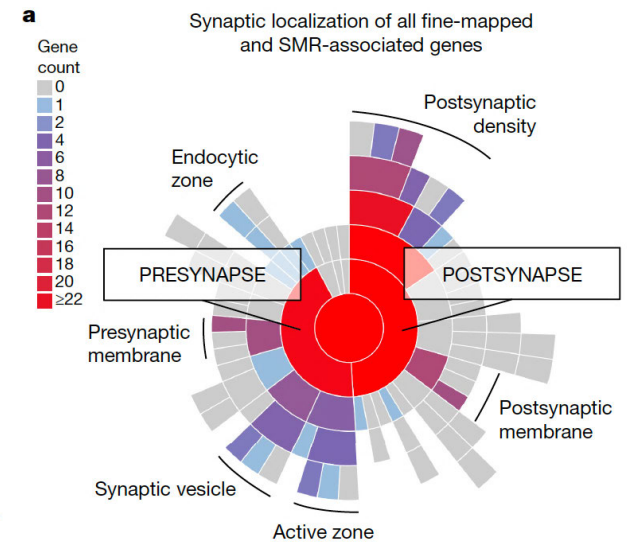
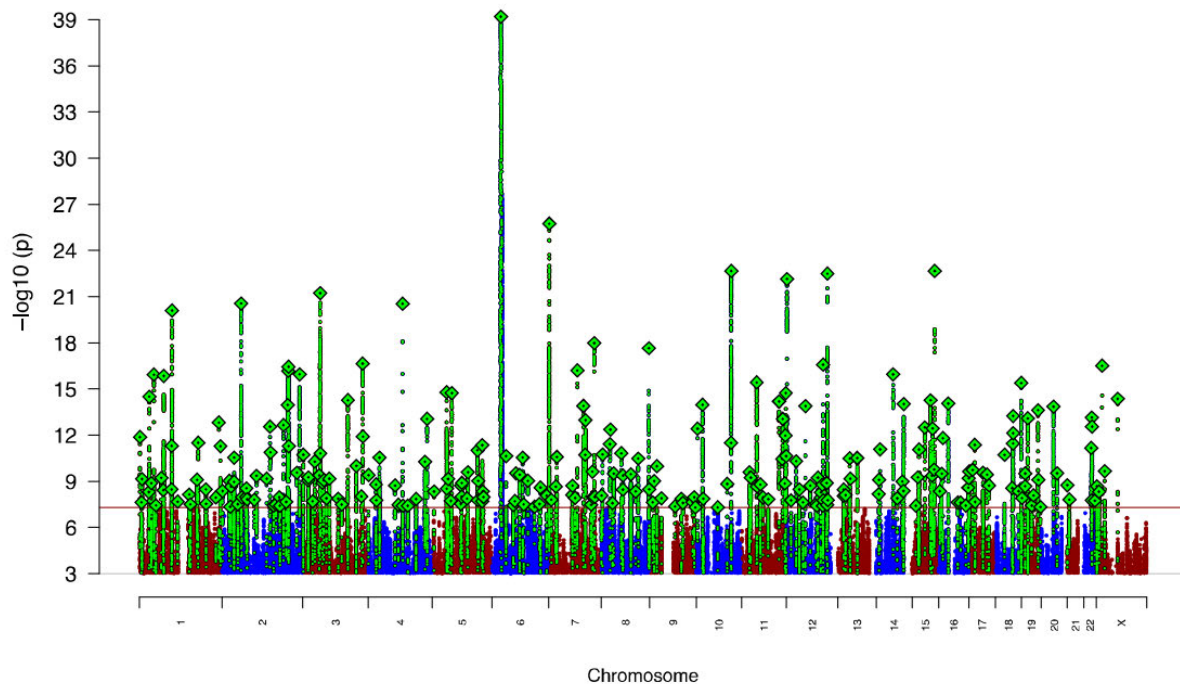
- Application due date: **June 14, 2023**

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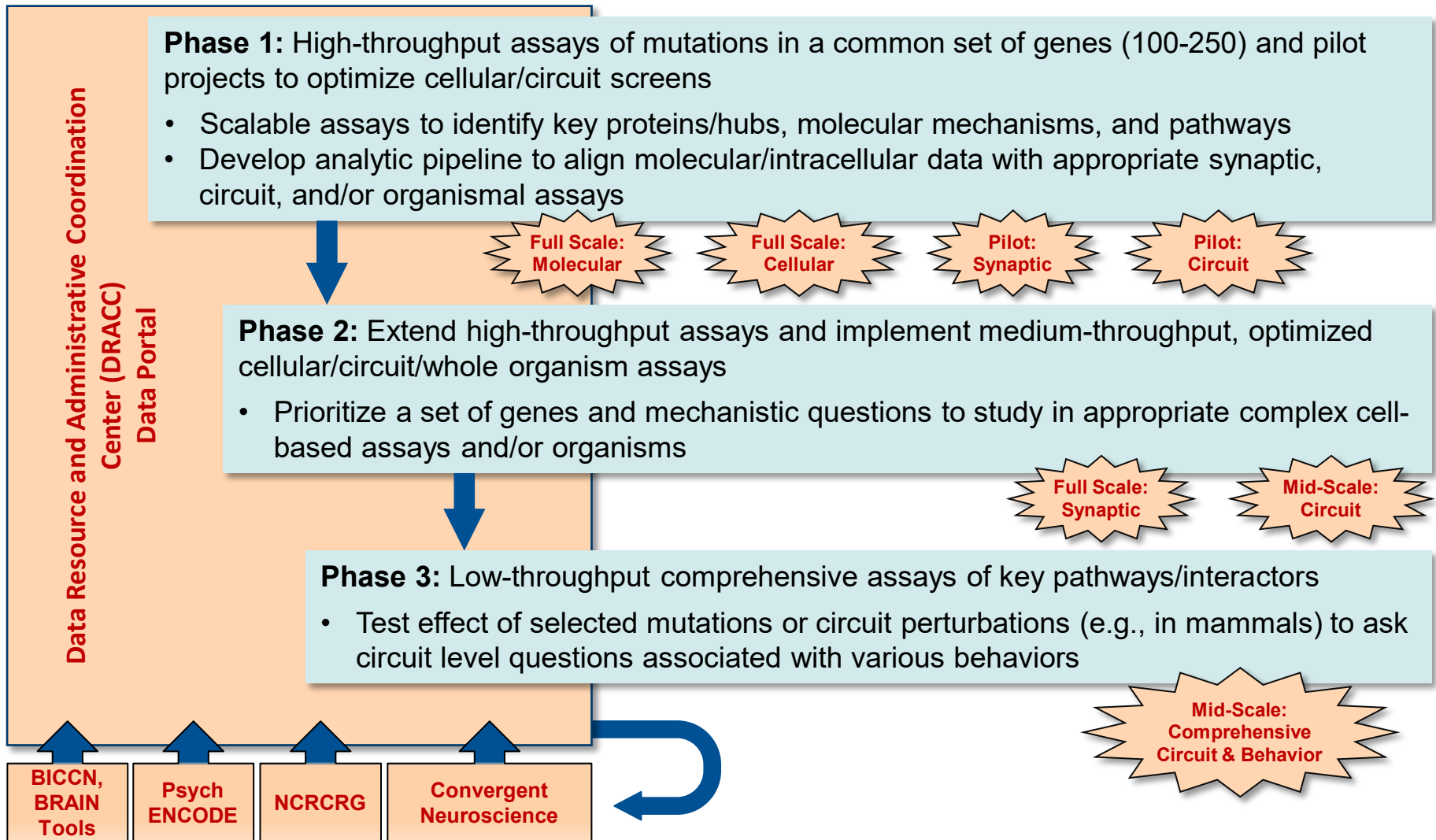
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 **Diversifying Genetics for Next-Generation Treatments**

Genetic Risk for Schizophrenia is Accounted for by the Combined Influence of Many Risk Genes



Genes to Biology



Questions

