



# Director's Report

## *62nd Meeting of* National Advisory Council on Minority Health and Health Disparities

February 7, 2023

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**NIH** National Institute  
on Minority Health  
and Health Disparities

# NIH Leadership Update

## National Center for Advancing Translational Sciences (NCATS)

### Joni L. Rutter, Ph.D.

- Served as NCATS acting director since April 2021 and began her role as NCATS director on Nov. 6, 2022
- Oversees a diverse portfolio of research activities focused on improving the translational process of turning scientific discoveries into health interventions. The [Clinical and Translational Science Awards \(CTSA\) Program](#), is one of NIH's largest supported programs, supported COVID-19 trials, and set up the N3C database.



# NIH Leadership Update

## Advanced Research Projects Agency for Health

### Renee Wegrzyn, Ph.D.

- First director of **Advanced Research Projects Agency for Health (ARPA-H)**
  - Supports the development of high-impact research to drive biomedical and health breakthroughs
  - Independent entity within NIH
- Leading biomedical scientist and an entrepreneur in synthetic biology with a decade of experience leading biotech projects at the Defense Advanced Research Projects Agency, known as DARPA
- Holds a Ph.D. and B.S. in applied biology from the Georgia Institute of Technology and completed her postdoctoral training as an Alexander von Humboldt Fellow in Heidelberg, Germany

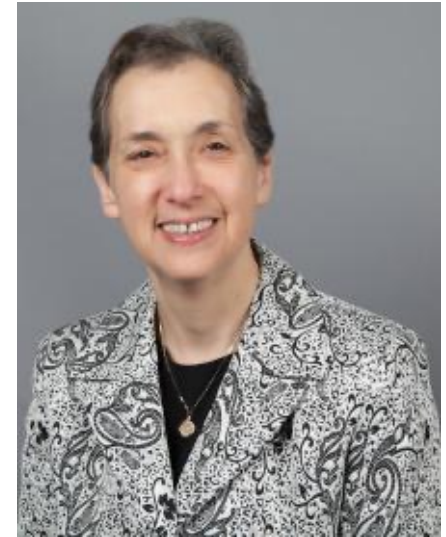


# NIH Leadership Update

## Deputy Director for Intramural Research

### **Nina F. Schor, M.D., Ph.D.**

- Served as the NIH Acting Deputy Director for Intramural Research since August 1, 2022
- In addition to leading the IRP, she is responsible for the selection and approval of new NIH principal investigators, human subjects research protection, research integrity, technology transfer and animal care and use for the IRP
- Efforts to train the next generation of biomedical and behavioral researchers
- Foster a diverse and inclusive culture across the IRP
- Joined NIH in January 2018 as Deputy Director of the National Institute of Neurological Disorders and Stroke (NINDS), and in May 2021, she also assumed the role of NINDS Acting Scientific Director



# NIH Leadership Update

Acting Director, National Institute of Allergy and Infectious Diseases

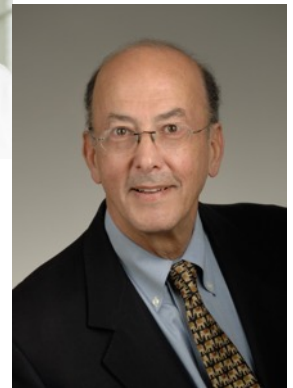
## Hugh Auchincloss, M.D.

- Assumed the acting role on January 1, 2023, after the retirement of Anthony S. Fauci, M.D.
- Served as NIAID's Principal Deputy Director since joining NIH in 2006
- Prior to joining NIAID, he was a transplant surgeon and professor at Harvard Medical School
- Operated a laboratory in transplantation immunology at Massachusetts General Hospital in Boston for 17 years
- Founded the Juvenile Diabetes Research Foundation Center for Islet Transplantation in 1998



# NIH Leadership Retirements

- **Andrea Norris, MBA**, NIH Chief Information Officer and Director of the Center for Information Technology
- **John I. Gallin, M.D.**, NIH Associate Director for Clinical Research and Chief Scientific Officer of the NIH Clinical Center
- **Roger I. Glass, M.D., Ph.D.**, Director of the Fogarty International Center and NIH Associate Director for International Research. Peter Kilmarx, MD is now Acting Director of FIC



# NIMHD Updates

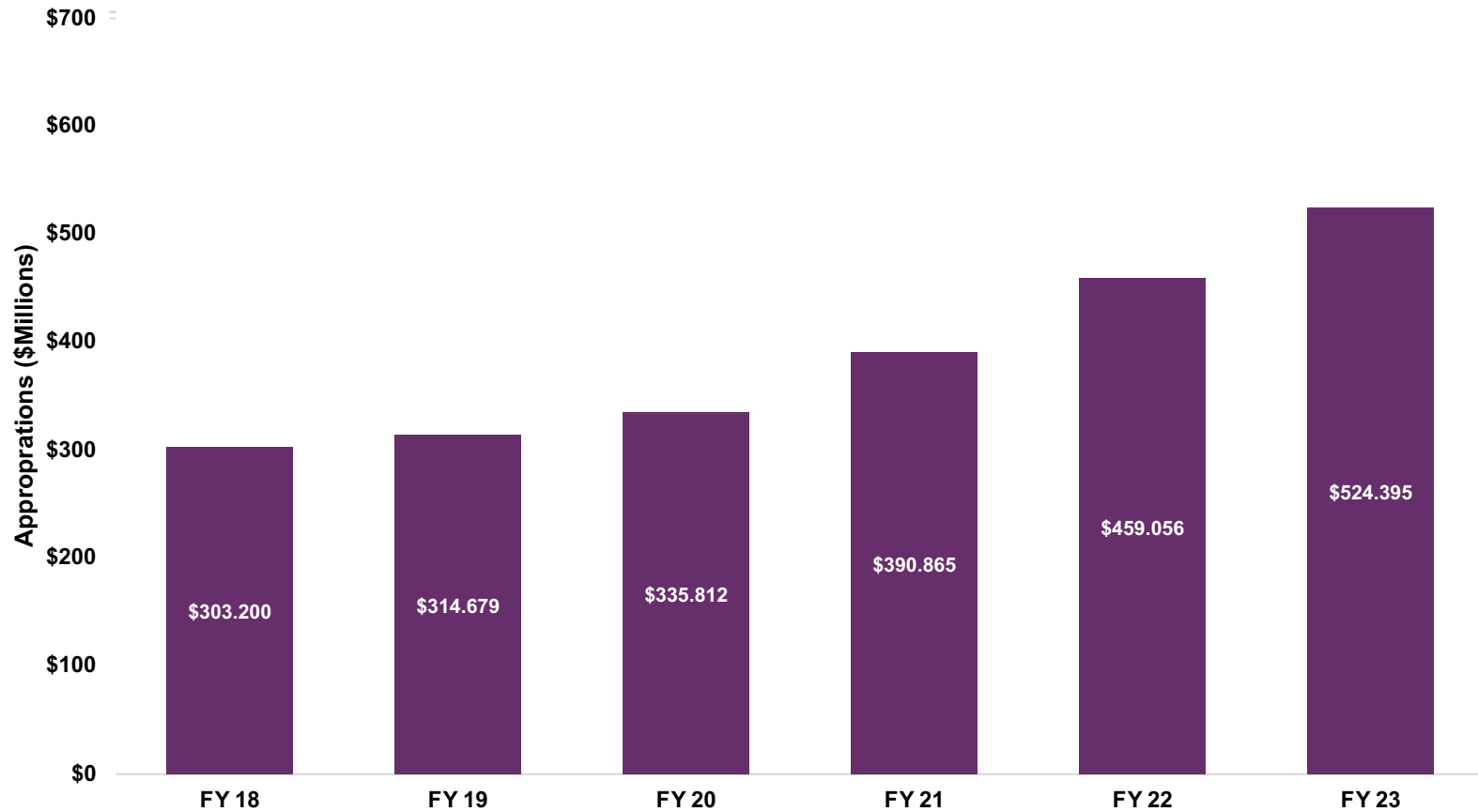


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# NIMHD Appropriations, 2018 to 2023

## NIMHD Appropriations by Fiscal Year

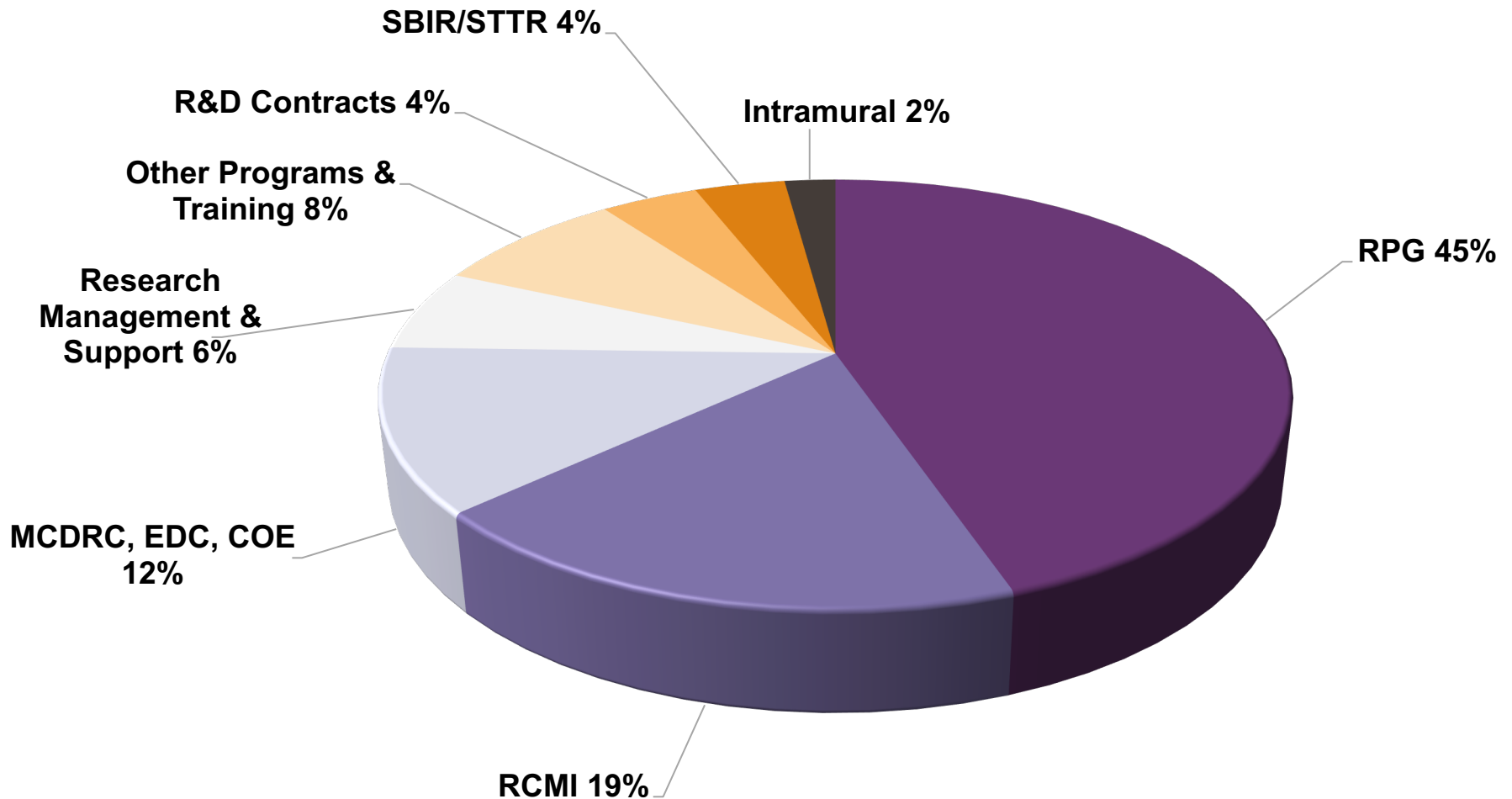


FY2023 Omnibus spending bill signed into law on December 29, 2022

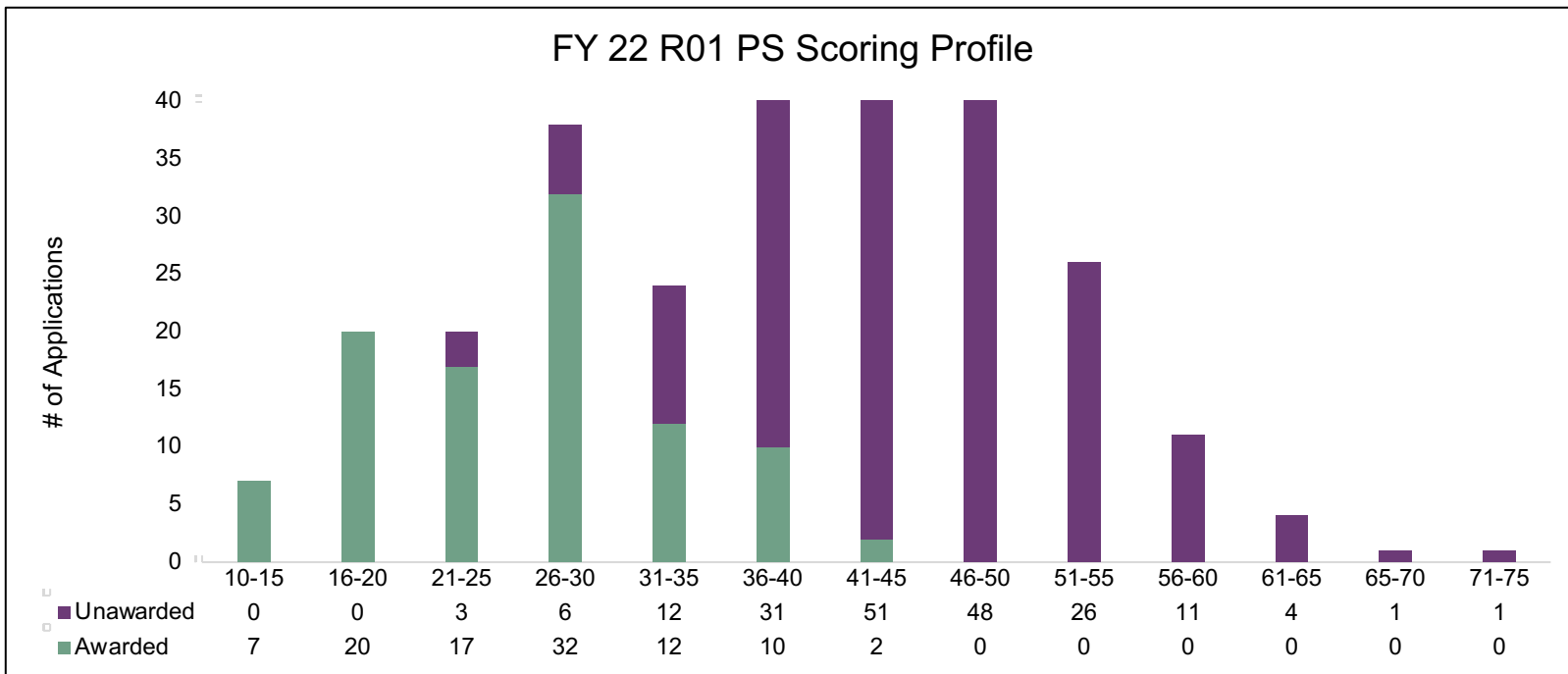




# FY 2022 Funding Distribution Categories



# NIMHD FY 22 R01 Scoring Profiles

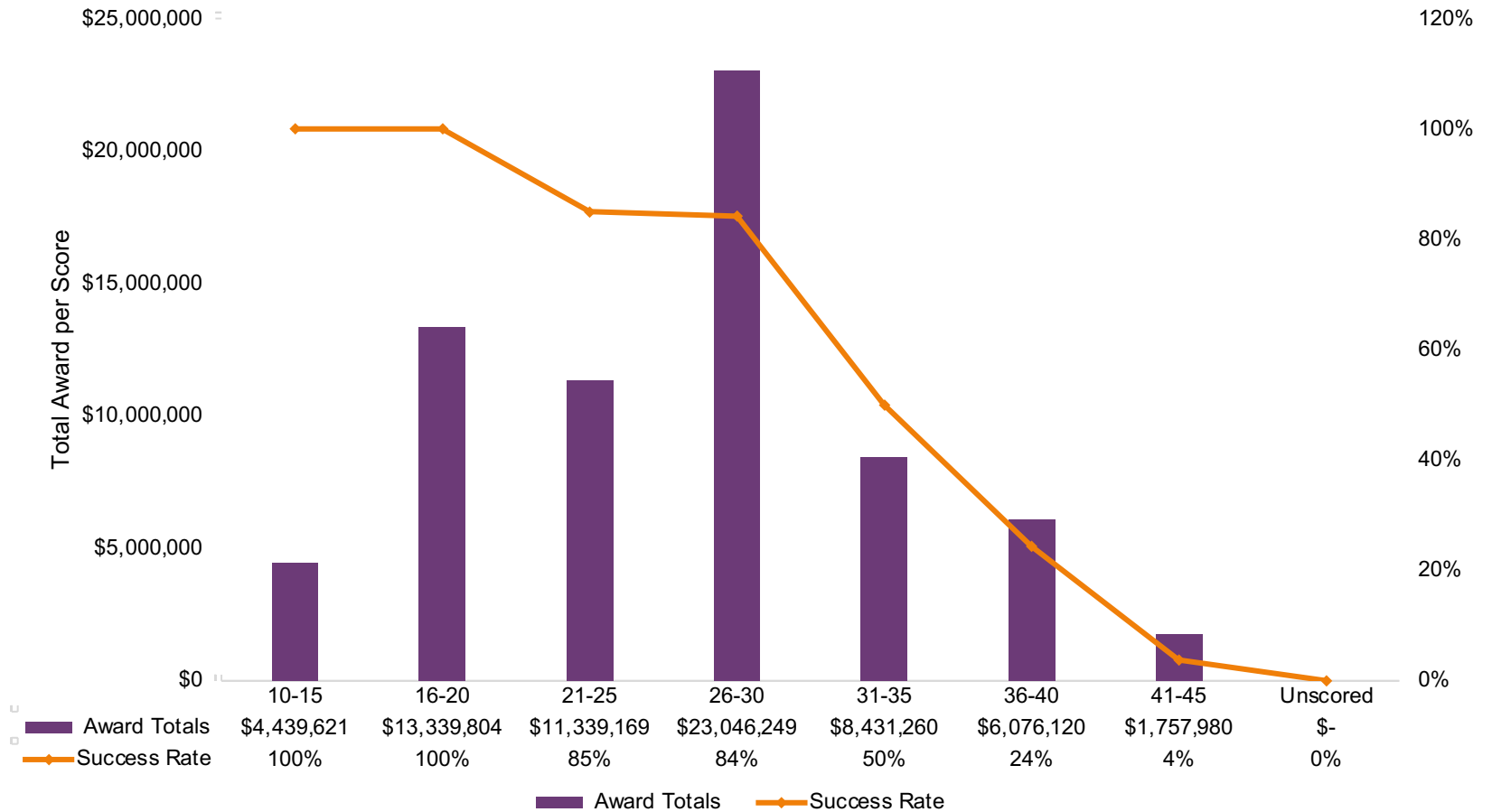


R01 Success Rates (2018 - 2022)				
FY	Total Applications	Awarded	Success Rate	Award Totals
2022	546	100	18.3%	\$ 68,430,203
2021	494	64	13.0%	\$ 40,084,074
2020	437	42	9.6%	\$ 23,063,286
2019	394	41	10.4%	\$ 23,848,018
2018	281	39	13.9%	\$ 26,101,230



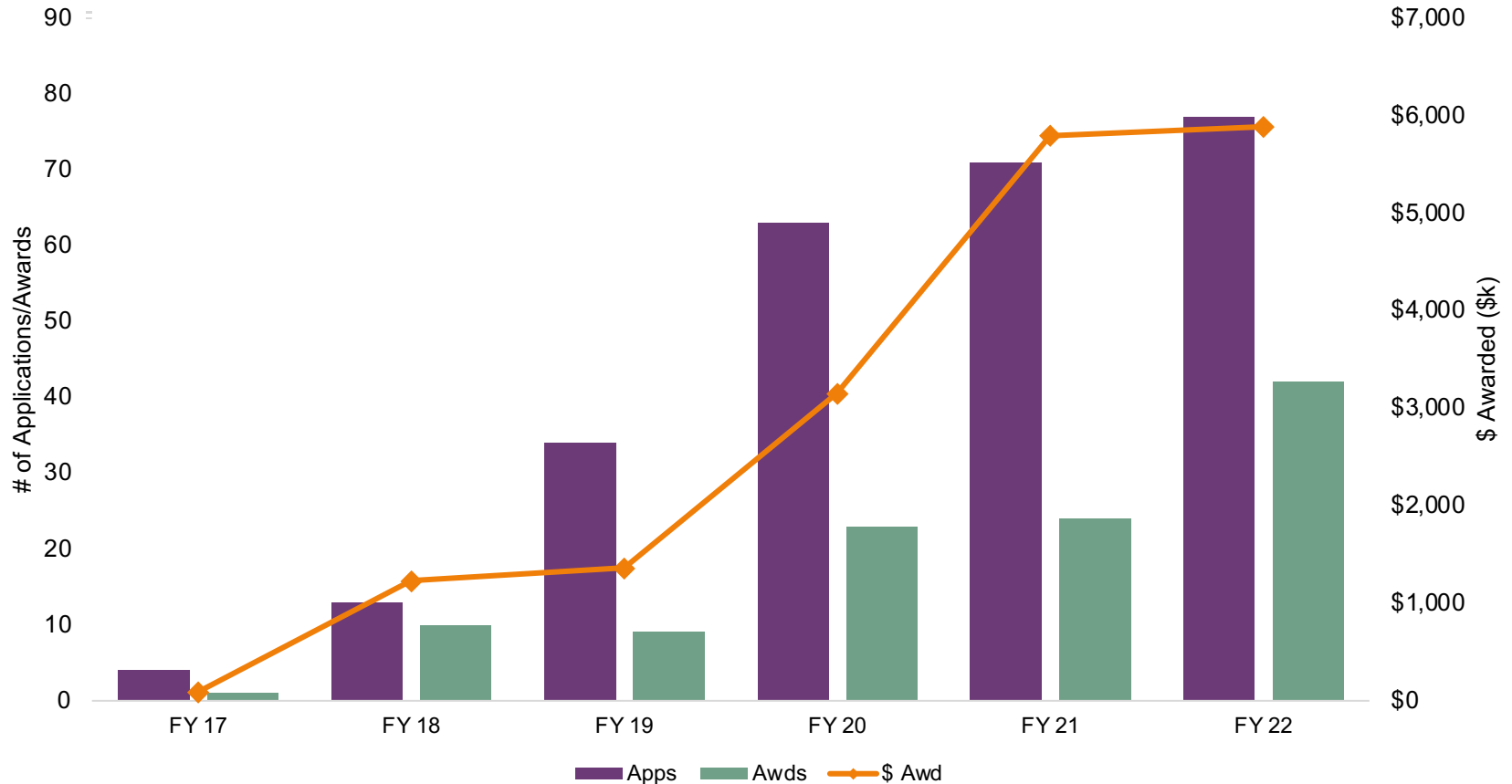
# NIMHD FY 22 R01 Awards

FY 22 R01 Awards



# Growing Interest in Career Development Awards – K01, K08, K23, K99

FY17-FY22 Competing Career (K) Applications and Awards



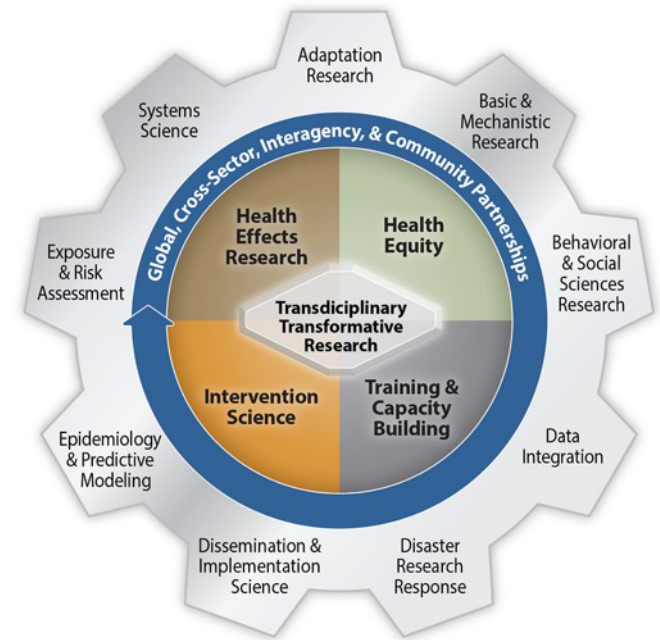
# Other FY 2022 Funding Accomplishments

- >80 Loan Repayment Awards
- \$46M to fund 11 Centers for Multiple Chronic Diseases Associated with Health Disparities plus a Coordinating Center
- Provided substantial funds to the Community Engagement Alliance (CEAL) by making an award to the OT that supports 21 CEAL Teams
- Supported 11 R01s through Community Level Interventions RFA
- 75% increase in Career Development Awards
- Funded four new Clinical Research Networks for Health Equity to RCMI institutions
- \$5M for RCMI Research Coordinating Network



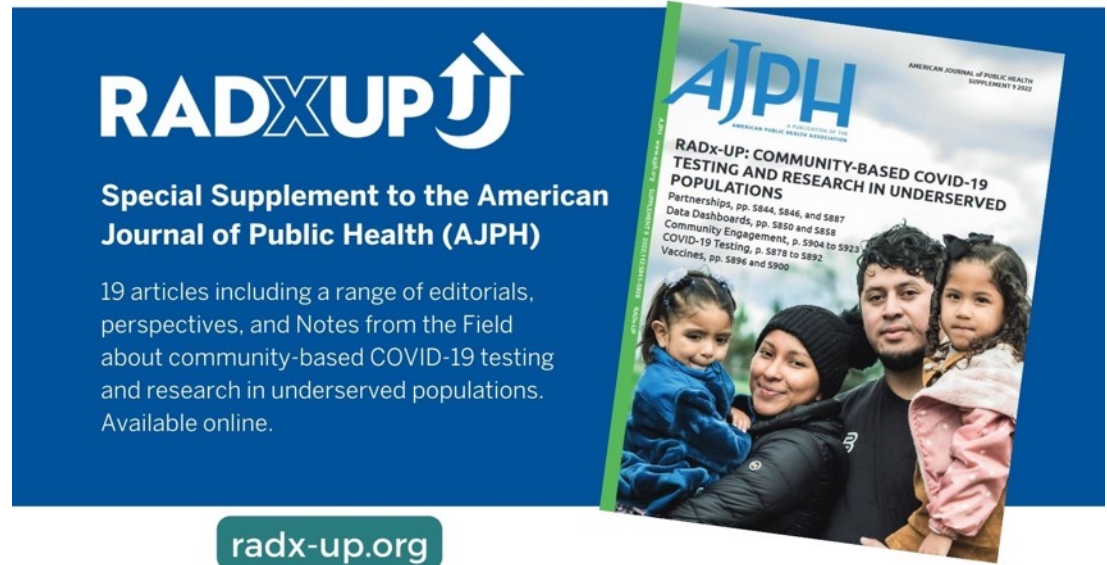
# Legislative Updates

- **Tuesday, October 4, 2022:** Eliseo Pérez-Stable, M.D., NIEHS Director Rick Woychik, Ph.D., and NINR Director Shannon Zenk, Ph.D., MPH, RN, FAAN, briefed the office of **Rep. Josh Harder (D-CA)** on the NIH Climate Change and Health Initiative and climate health research efforts
- **Tuesday, December 20, 2022:** Eliseo Pérez-Stable, M.D., and Monica Webb Hooper, Ph.D., briefed the office of **Senator Ben Cardin (D-MD)** on major NIMHD research highlights over the past two years, updates on the NIH Minority Health and Health Disparities Strategic Plan, and collaborative initiatives on health disparities research



# Rapid Acceleration of Diagnostics Underserved Populations (RADx-UP)

- Special supplement of the *American Journal of Public Health*
- RADx-UP project investigators and NIH and CDC leaders contributed data results and insights
- Includes 19 articles about community-based COVID-19 testing and research in underserved populations



[Read Special AJPH Supplement](#)



# American Public Health Association (APHA) 2022 Annual Meeting

## Community Engagement Alliance (CEAL) Against COVID-19 Disparities Presence

- **CEAL Workshop:** 3 moderated panels and networking opportunities
- **APHA TV Interview:** Featuring Drs. Pérez-Stable and Gary Gibbons (NHLBI Director)
- 27 presentations on NIH CEAL



## NIMHD Presence

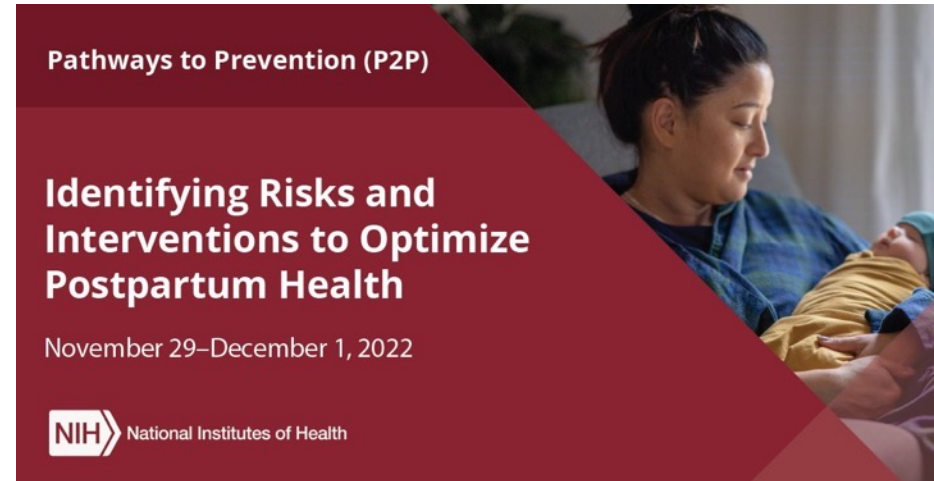
- NIMHD staff presentations
- Promote workforce development
- Meet NIMHD experts
- Share resources and training opportunities





# Identifying Risks and Interventions to Optimize Postpartum Health Workshop

- Showcased and characterized risk factors on postpartum health to inform the scientific community on approaches to reduce these risks and improve health outcomes in the postpartum period
- Key findings:
  - Better care transition from hospital to home
  - Care coordination between specialists and primary care
  - Community-level interventions
  - Examine programs/policies resulting in inequitable outcomes



[Webinar link](#)



# Expansion of PhenX Toolkit SDOH Collection

## December 2022: 15 New SDOH Protocols

Affordability accessing dental care and prescriptions, health care communications, internet access, water quality access, neighborhood walking environment, housing instability, minimum wage, residential concentrations of income

- SDOH Core Collection-16 protocols recommended for all studies
- Individual SDOH-22 protocols
- Structural SDOH-15 protocols

Adoption of Common Data Elements (CDEs) and standard measures will promote and facilitate data harmonization and cross-study analysis



[PhenX Toolkit link](#)



# 2023 Health Disparities Research Institute

**Applications accepted February 6 – March 13, 2023**

- Week-long intensive and engaging training experience
- Aims to support the research career development of promising early-stage investigators interested in minority health/health disparities research
- Back in person!

Health Disparities Research Institute

August 7-11, 2023

Applications Accepted  
February 6 – March 13, 2023

**Apply today!!**

Questions: [HDRI@nih.gov](mailto:HDRI@nih.gov)

[Learn more](#)



# Science Collaborative for Health Disparities and Artificial intelligence bias Reduction



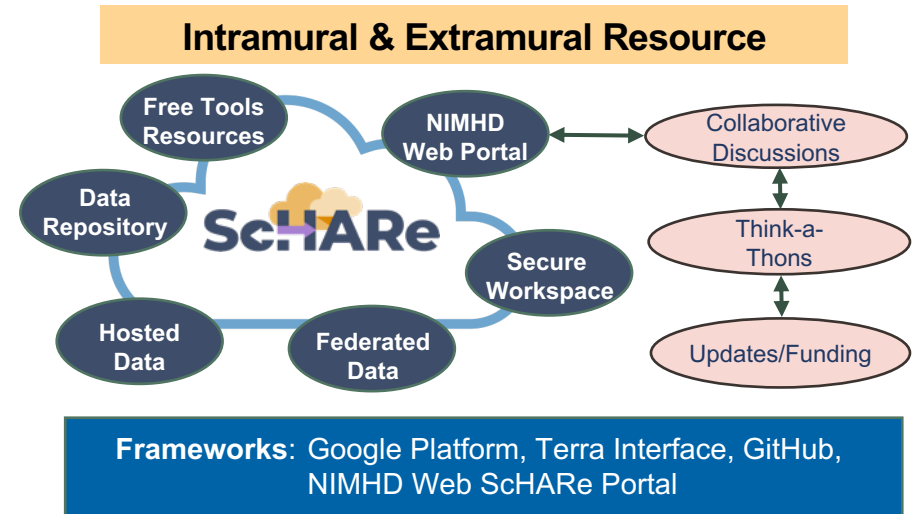
SchARE is a cloud-based data platform designed to accelerate research in health disparities, health care outcomes, and artificial intelligence bias mitigation strategies

- Access to social determinants of health and other datasets
- The ability to collaborate as they apply artificial intelligence, machine learning, and other advanced analytical techniques to these datasets in a secure setting



**SchARE is a collaboration of NIMHD and NINR**

<https://nimhd.nih.gov/schare>



# Science Advances



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# Expanding the Earned Income Tax Credit to Americans Without Dependent Children

- 5,969 New York City residents eligible for EITC
  - 59% male, 53%  $\leq$  35 years, 30% Latino, 58% Black, 54% high school diploma or equivalent
- **Intervention:** Eligible for 4x increase in EITC
- **Comparison:** Ineligible for EITC increase
- Intervention Group at 32-month follow-up:
  - 1.9% increase in employment
  - 6% increase in after-bonus earnings
  - For women and noncustodial parents, decrease in psychology distress

Courtini et. al, [American Journal of Epidemiology](#), Aug 2022



# Effect of COVID-19 Vaccine Messaging Platforms in Emergency Departments on Vaccine Uptake

- Data from 496 adults at 7 EDs in WA, PA, CA, and NC
  - Median age=39 years, 41% female, 39% Black, 20% Latino, 44% no primary care physician
- Intervention content:
  - 4-min video featuring race-concordant physician
  - 1-page informational flyer with images of race-concordant patients and clinicians
  - 6-sentence message from ED physician or nurse
- Among intervention participants:
  - Greater vaccine acceptance after 0.5-6 hours
  - Greater vaccine uptake within 30 days of ED visit
- Larger effect sizes for Latinos and for participants without a primary care physician

Rodriguez R, et. al, [JAMA Internal Medicine](#), Dec 2022



# Race-Dependent Association of HDL Cholesterol Levels With Incident Coronary Artery Disease

23,901 coronary heart disease (CHD)-free participants with median follow-up of 10.7 years in REGARDS Study

- 57.8% White, 58.4% female, mean 64 years, 63% at least some college
- 1,615 CHD events (MI or death), 41% among Black participants and 46% among women

Lipid Profiles	Association with CHD Risk
High LDL Cholesterol	For all: Increased risk
Low HDL Cholesterol – HR=1.22	For Whites only: Blacks 0.94
High HDL Cholesterol HR=0.96 / 0.91	For all: No decreased risk

Zakai et. al, [Journal of the American College of Cardiology](#), Nov 2022





# Association of Residential Racial and Economic Segregation With Cancer Mortality in the U.S.

- Sociodemographic and mortality data from 3,110 U.S. counties for 2015-2019
- Residential racial and economic segregation measured via Index of Concentration at the Extremes (ICE)

ICE Quintiles	Mean Age-Adjusted All-Cancer Mortality Rate*
1 <sup>st</sup> (Least Privileged)	179.8
2 <sup>nd</sup>	177.3
3 <sup>rd</sup>	167.6
4 <sup>th</sup>	159.6
5 <sup>th</sup> (Most Privileged)	146.1

\*Rate per 100,000 population

Zhang et. al, [JAMA Oncology](#), Nov 2022



# Computerized Intervention to Improve Health Literacy for Older Latinos with Diabetes

- 41% of Latinos have some of the lowest levels of health literacy and medication adherence to diabetes treatments
- Developed a culturally adapted, computerized health literacy intervention for older Latinos with diabetes
- Assessed usability/acceptability of the intervention by patients and by pharmacists providing comprehensive medication management
- 25 patients  $\geq 50$  years, 5 clinical pharmacists; study occurred in 3 phases

***Computerized health literacy interventions tailored to patients' needs allow precision counseling during medication management, and may optimize adherence***



# Tele-behavioral Interventions for Homebound Older Adults with Depression

- Homebound older adults have limited access to psychosocial treatments
- RCT of 277 participants aged  $\geq 50$  years compared cost-effectiveness of depression treatment delivered by lay counselors (short-term behavioral activation or Tele-BA) to treatment delivered by clinicians (problem-solving therapy or Tele-PST) or attention control or telephone support calls
- Compared to attention control, both Tele-Behavioral interventions were more cost effective (with incremental cost-effectiveness ratios well below \$50,000)
- ✓ ***Short-term Tele-BA by lay counselors can improve homebound older adults' access to cost effective depression care***
- ✓ ***Lay counselors may have potential to fill the shortage in the geriatric mental health workforce***

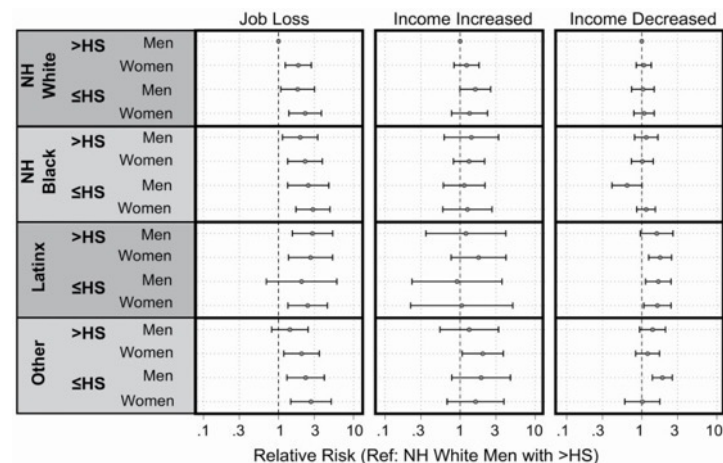
Grant No. R01MD009675

Chen, Guoqing J., et al., [BMC Psychiatry](#). 2022.



# COVID-19 Impact on Older Workers in U.S.

- Study examined COVID-19 impacts on employment conditions based on race/ethnicity, gender, and educational attainment and their associations with the wellbeing of older working adults
- Health and Retirement Study data on 4,107 participants, aged  $\geq 55$  years working for pay at the start of the pandemic (May 2020 – May 2021)
  - **Blacks and Latinos had higher likelihood of job loss, regardless of education**
  - Black and Latino men or “Other” race with  $\leq$ High School (HS) were  $>90\%$  less likely to transition to remote work
  - Those who experienced job loss with decreased income had poorer wellbeing — greater financial hardship, food insecurity, and poor/fair self-rated health)



**Figure 1.** Association between intersecting group identity and COVID-19-related job loss or changes in income



# Unequal COVID-19 Death Exposure Among U.S. Adults

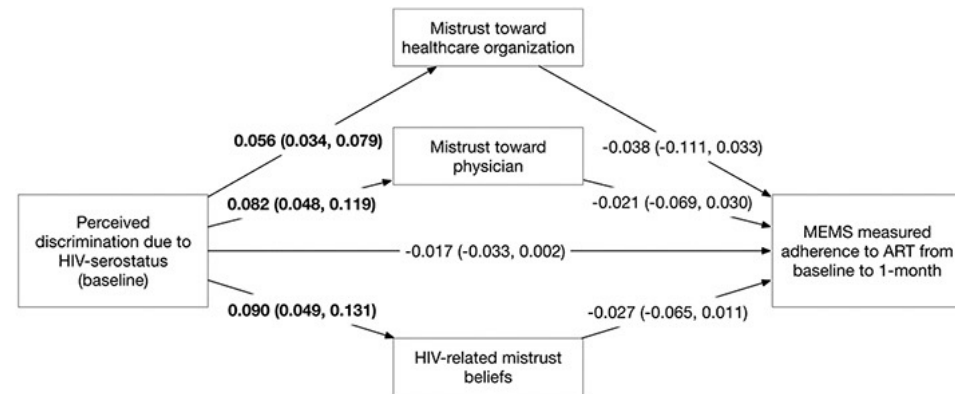
- Study assessed self-reported COVID-19 death exposure (i.e., loss of a close friend or family member) based on race and ethnicity and other sociodemographic factors among U.S. adults
- 2,022 U.S. adults surveyed between September and October 2021
- ✓ *The likelihood of losing a close friend or family member due to COVID-19 were greater for those  $\geq 60$  years, those from most racial/ethnic minority groups, married/coupled respondents, those who had foregone care due to cost in the past year, and those who reported a COVID-19 infection*
- ✓ *Differential exposure to COVID-19 deaths reflects COVID-19's disproportionate impact in the U.S. and may exacerbate health disparities over time*



# How Discrimination and Medical Mistrust Contributes to HIV Inequities Among Blacks

- 304 Black adults with HIV were recruited from AIDS Project Los Angeles Health between January 2018 to July 2020 (81% men; 74% sexual minority; Average age = 48 years)
- Examined the associations of medical mistrust with perceived discrimination (intersectionality of HIV serostatus, minority race, sexual minority orientation), poor antiretroviral therapy (ART) adherence and lower care engagement among U.S. Black adults with HIV
- Significant effects of perceived discrimination on ART adherence and care engagement through medical mistrust was observed

**Addressing mistrust among clinicians may improve ART adherence and care for Black adults living with HIV**



Total indirect effects: -0.006, 95% Bootstrap CI: -0.012, -0.002



# Impact of COVID-19 on Perceived Vulnerability to Immigration Policies among Postpartum Latinas

- Examined perceived immigration policy vulnerability (i.e., discrimination, social isolation and family threats) before and during COVID-19
- Perceived Immigration Policy Effects Scale (PIPES) questionnaire completed by 187 low-income Latinas in Los Angeles during early postpartum (1 month post birth) pre-COVID-19 (Sep 2018-Mar 2020) and during COVID-19 (Mar 2020-Nov 2021)
- Early pandemic participants vs pre-pandemic participants had higher rates:
  - Perceived vulnerability to immigration policies (Odds Ratio [OR]=3.36)
  - Perceived discrimination (OR=5.05)
  - Increased social isolation (OR=6.47)
  - Family threats (OR=2.66)

***Higher perceived immigration policy vulnerability during the early period of COVID-19 suggests greater social inequities among U.S. Latinas during the pandemic***



# Jackson Heart Study

## Religiosity and Spirituality on Cardiovascular Health

- Examined associations between religiosity (religious attendance, private prayer, religious coping) and spirituality (theistic, nontheistic, total) and the American Heart Association Life's Simple 7 (LS7) among 2,987 participants
- Religious attendance associated with increased likelihood of achieving intermediate/ideal levels of physical activity, diet, smoking, blood pressure, and LS7
- Religious coping associated with increased odds of achieving intermediate/ideal levels of physical activity, diet, smoking, and LS7 composite score
- Higher levels of religiosity/spirituality associated with intermediate/ideal cardiovascular health across multiple LS7 indicators

***Reinforcement of religiosity/spirituality in lifestyle interventions may help reduce CVH risk and disparities in this group***





# Diabetes, Cognitive Impairment and Mortality Risk in U.S. Latinos

**Objective:** Assess influence of cognitive function and type 2 diabetes (T2D) on mortality in Latinos

**Secondary Analysis of Health and Retirement Study 1995-2014**

- N=4013 U.S. Latinos aged >50 years
- 57% female; 35% with T2D; 24% uninsured; 60% non-U.S. citizens

Cox regression models for the relationship between cognitive function and mortality stratified by T2D status

	Latinos with Diabetes	Latinos — Others
	Model 3	Model 3
Mild Impairment	1.61*	1.87**
Dementia	2.14**	3.25***

Normal cognitive function used as reference group; \*significant p-value; Model 3 adjusted for sociodemographic variables, lifestyle factors, and comorbidities

## Conclusion/Impact

- *Neighborhood factors* explained 11% of variance in rate of cognitive decline
  - Living in ethnic enclaves related to slower cognitive decline
  - Living in areas of economic disadvantage related to faster decline
- Cognitive impairment linked to higher mortality; higher in those **without DM**
  - CVD risk factors, SDoH may explain results

Grant No. R01MD01382

Martinez, M., et al., [Alzheimers Dement.](#) 2022



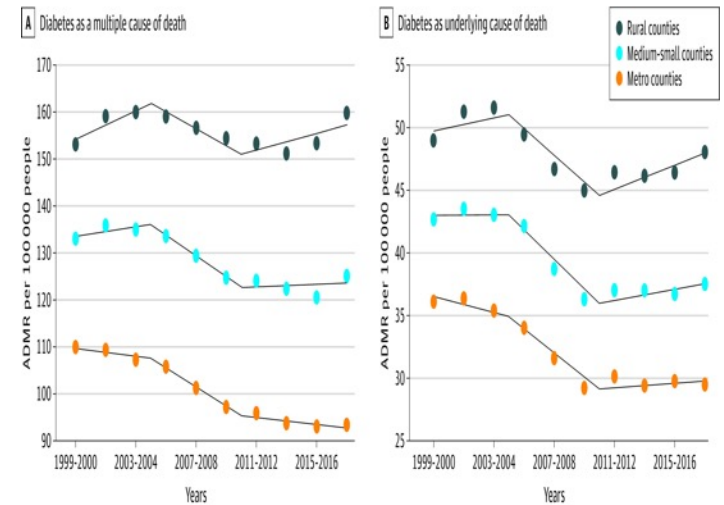
# Community Members as Reviewers of Medical Journal Manuscripts

- RCT with/without CMs serving as reviewer for 578 original research manuscripts submitted to 2 medical journals from June 2018 to November 2021; 28 CMs were trained, supervised, and compensated
- Editors rated CMs reviews 3.1/5 and scientific reviews 3.3/5
- CMs reviews identified Viewpoints: 1) diversity of study participants, 2) relevance to patients and communities, 3) cultural considerations and social context, 4) implementation of research by patients and communities



# Disparities in Diabetes Mortality in U.S. Rural vs Nonrural Counties

- In 2017-2018 vs 1999-2000 age-standardized diabetes mortality rates per 100,000 people were
  - Unchanged in rural counties (157.2 vs 154.1)
  - Significantly lower in medium-small counties (123.6 vs 133.6) and metro counties (92.9 vs 109.7)
- In 2017-2018 vs 1999-2000, mortality rates:
  - Higher in rural men (18.2)
  - Lower in rural women (-14.0)
- Of all regions and urbanization levels, the mortality rate in 2017-2018 vs 1999-2000 was higher only in the rural South (+13.8)



***U.S. rural counties had the highest overall diabetes mortality rate***

Grant No. K23MD016230

Sagar B. Dugani, S. B., et al., [JAMA Network Open](#). 2022.



# Social Determinants of Health Influence Future Health Care Costs in a Medicaid Study

- Analyzed the role of SDOH in predicting future health care costs for Medicaid beneficiaries with similar past morbidity burdens and past costs
- **8,892 adult Medicaid beneficiaries** (female, 66%; Black, 91%) in EDs or clinics in Washington DC, September 2017 – Dec 2018
- Had **four social risk classifications** using SDOH at enrollment and controlling for past morbidity burden and past costs
- Future **morbidity burden was significantly higher in upper two social risk** classes compared to lowest class
- Future health care spending increased from the lowest social risk category to the highest risk category (\$14,906, \$19,156, \$30,882, and \$36,961, respectively)
- When concurrent morbidity is included in cost prediction models, SDOH was not significant predictor of costs. The impact of SDOH on future expenditures is largely accounted for by concurrent morbidity

***SDOH are predictors of future morbidity burden and future costs, controlling for past morbidity burden and past costs***

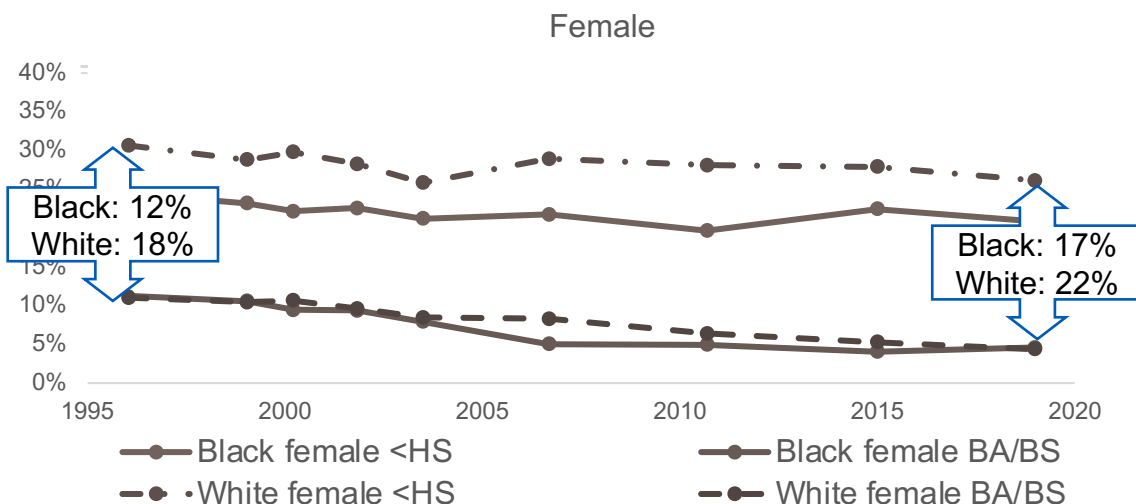
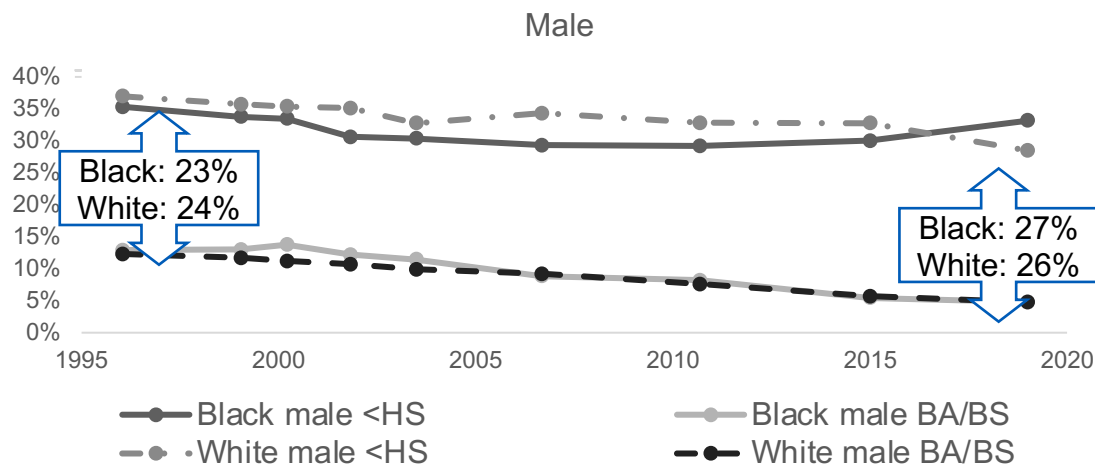
Grant No. R01MD011607

McCarthy, M. L., et al., [Milbank Q.](#) 2022.



# Trends in Education-Related Smoking Disparities Among U.S. Black and White Adults

- 1995-2019 Tobacco Use Supplement to the Current Population Survey
- Education-related smoking disparities increased over time, especially among Black male and female adults, followed by White female adults
- Small or no reductions in smoking among those with <high school education
- Patterns were worse in the Midwest and South region



Grant No. ZIA MD000006

Choi, K. et al., [Nicotine Tob Res.](#) 2022.



# Physical-Activity Mediated Associations Between Neighborhood Social Environment and Sleep Duration

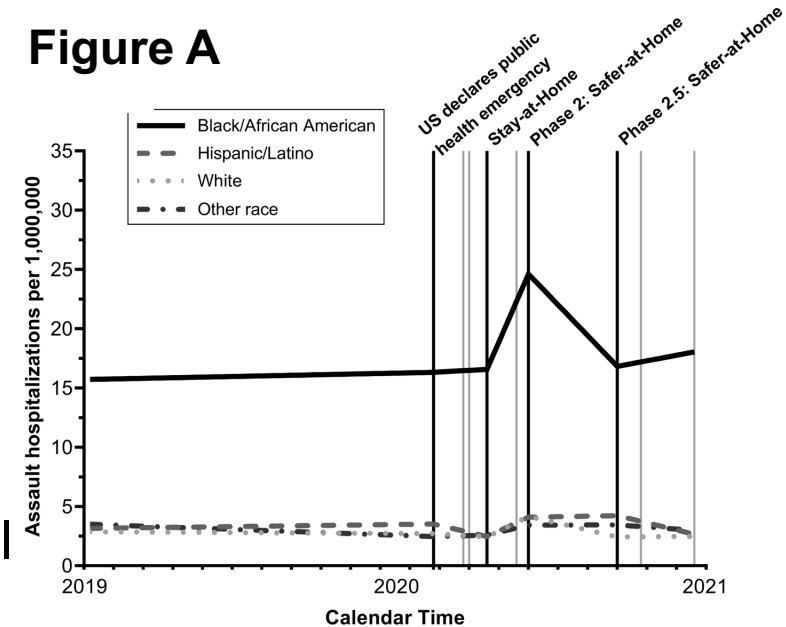
- Data on **4,705 Blacks** enrolled in the **2000-2004 Jackson Heart Study** (63% female; average age = 55 years); Measures:
  - Sleep duration (minutes/night), short sleep (short  $\leq 6$  h vs recommended = 7–8 h), and long sleep (long  $\geq 9$  h vs recommended)
  - Perceived neighborhood social environment included violence, problems (excessive noise), and social cohesion (trusting neighbors)
  - Total physical activity as a mediator
- Higher perceived neighborhood violence and problems associated with shorter sleep duration, mediated through lower total physical activity.
- Higher social cohesion related to longer sleep duration mediated through higher total physical activity
- Future interventions may aim to increase sleep duration through community-focused efforts to promote physical activity, create cohesive communities, and reduce neighborhood social stressors



# Impact of COVID-19 Policies on Trauma Hospitalizations in North Carolina

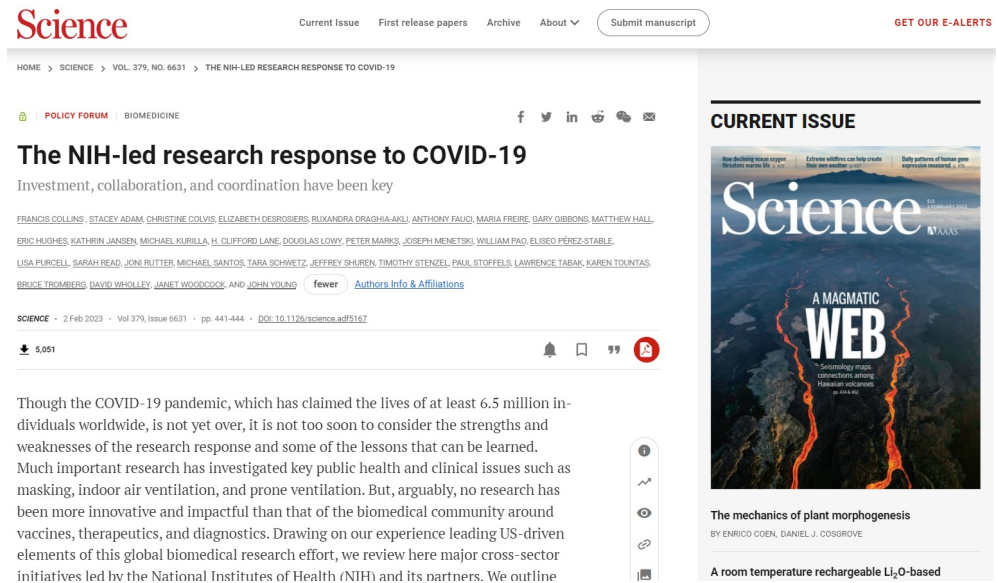
- COVID-19 policies have impacted non-COVID healthcare utilization and may have worsened healthcare disparities
- Study examined impact of COVID policies on trauma hospitalizations, stratified by race/ethnicity, age, and sex
- 2019-2020 hospitalization data from the North Carolina Trauma Registry; estimated changes in hospitalization rates after several COVID-19 policies
- Assault hospitalization increased after Stay-at-Home among Black individuals and 18–44-year-old males; rates still elevated after restrictions were lifted (Figure A)
- Stay-at-Home placed Black individuals at higher risk of assault hospitalizations, exacerbating pre-existing disparities. Impact continued even after orders were lifted

**Figure A**



# Lessons Learned from the NIH-led Research Response to COVID-19

- Article published in a policy forum in the journal *Science*, February 2, 2023
- NIH leaders and partner organizations outline NIH's COVID-19 research response to develop vaccines, therapeutics, and diagnostics
- Provides crucial lessons learned to inform the public health research response to future pandemics



*“Perhaps the most valuable lesson that COVID-19 has taught the research community—and hopefully society more broadly—is the importance of collective effort and continuous investment in basic and applied research.”*

Collins, F., et al., [Science](#). 2023.





# NIMHD Director's Seminar Series

## Black History Month Presentation

### *The Intractability of Health Disparities: Where Do We Go From Here?*

**Consuelo H. Wilkins, M.D., MSCI**  
Vanderbilt University Medical Center

Thursday, February 9, 2023  
2:00 – 3:30 p.m. ET  
Virtual Presentation



[Learn More](#)



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# NIMHD Vacancy Announcements

**JOIN OUR  
AMAZING  
TEAM!**

NIMHD seeks outstanding candidates to support our vision of an America in which all populations have an equal opportunity to live long, healthy and productive lives.

Learn more at <https://nimhd.nih.gov/about/employment.html>



<https://nimhd.nih.gov/about/employment.html>



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# Discussion



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