

Advancing Inclusive Excellence & Health Equity

Lessons Learned from the COVID-19 Pandemic

George A. Mensah, M.D.
Director, Center for Translation Research
and Implementation Science
NHLBI, NIH

**DIVERSITY
GRAND ROUNDS**

Presented at the Annual Grand Round Diversity Lecture

UAB Heersink School of Medicine

February 4, 2022



Disclaimer and Disclosure Statements

- I have no conflicts of interest to disclose.
- The contents of this presentation should not be construed as representing an official position of the NIH or the United States Department of Health and Human Services.

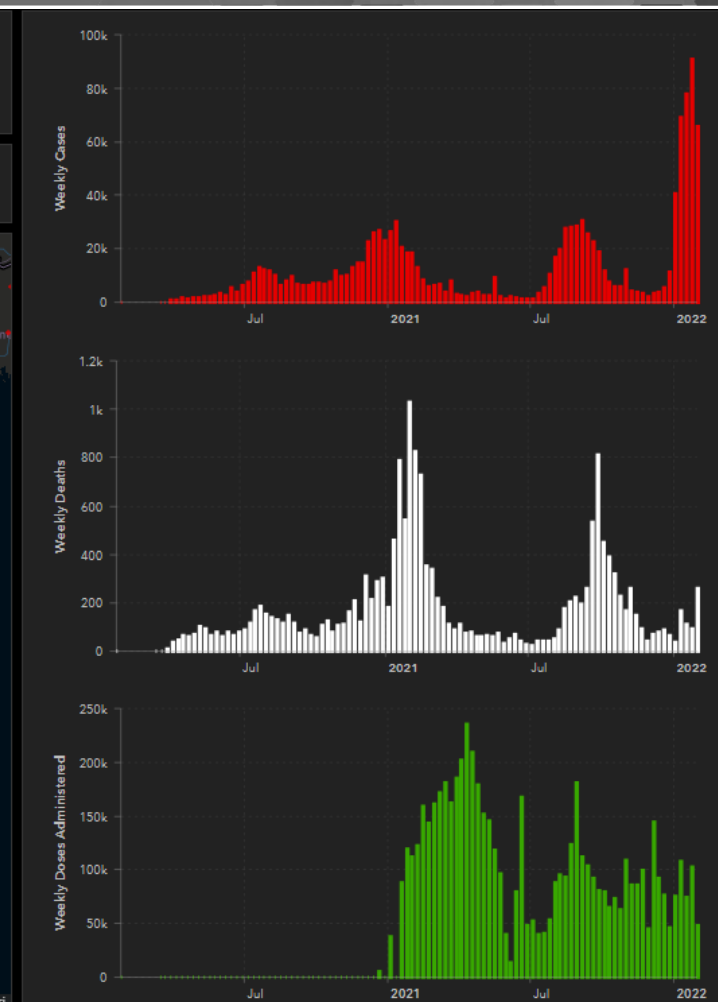
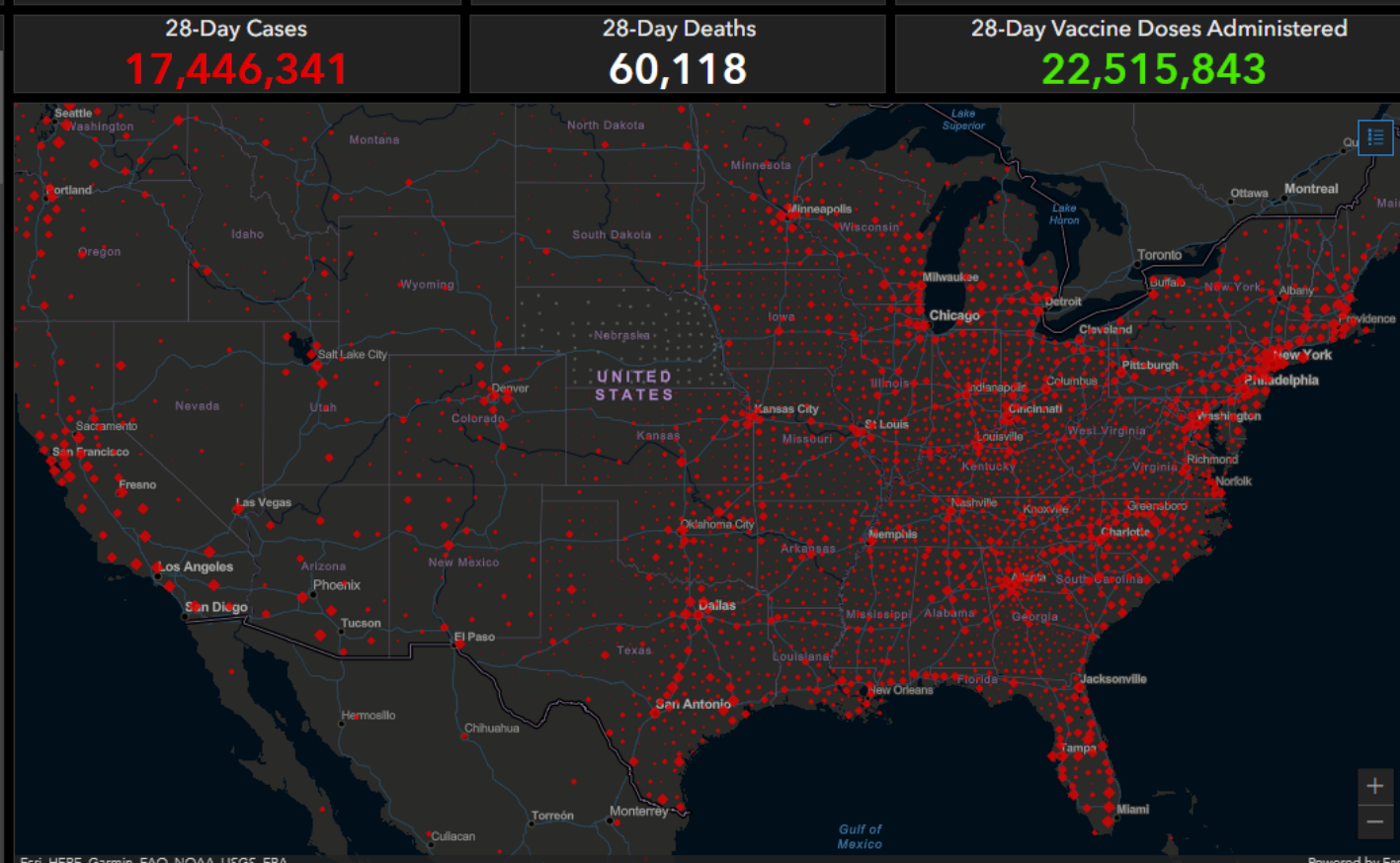
COVID-19 Total Cases, Deaths, and Vaccine Doses Administered in the US as of February 4, 2022

Last Updated at (M/D/YYYY):
2/4/2022, 12:20 AM

Total Cases 75,962,005	Total Deaths 896,583	Total Vaccine Doses Administered 538,682,076
---	---------------------------------------	---

Cases | Deaths by US County

Jefferson, Alabama, US 28-Day: 41,163 60 Totals: 176,555 2,089
Mobile, Alabama, US 28-Day: 23,847 71 Totals: 108,108 1,468
Madison, Alabama, US 28-Day: 22,069 48 Totals: 83,501 821
Shelby, Alabama, US 28-Day: 13,214 21 Totals: 56,816 402
Tuscaloosa, Alabama, US 28-Day: 12,703 27 Totals: 52,074 691
Montgomery, Alabama, US 28-Day: 11,417 15 Totals: 52,692 815
Baldwin, Alabama, US 28-Day: 11,228 18 Totals: 53,083 616
Morgan, Alabama, US 28-Day: 9,232 24 Totals: 34,153 452
Lee, Alabama, US 28-Day: 7,894 17 Totals: 36,514 288
Lauderdale, Alabama, US 28-Day: 6,170 18 Totals: 22,783 338
Calhoun, Alabama, US 28-Day: 6,060 26 Totals: 30,342 558



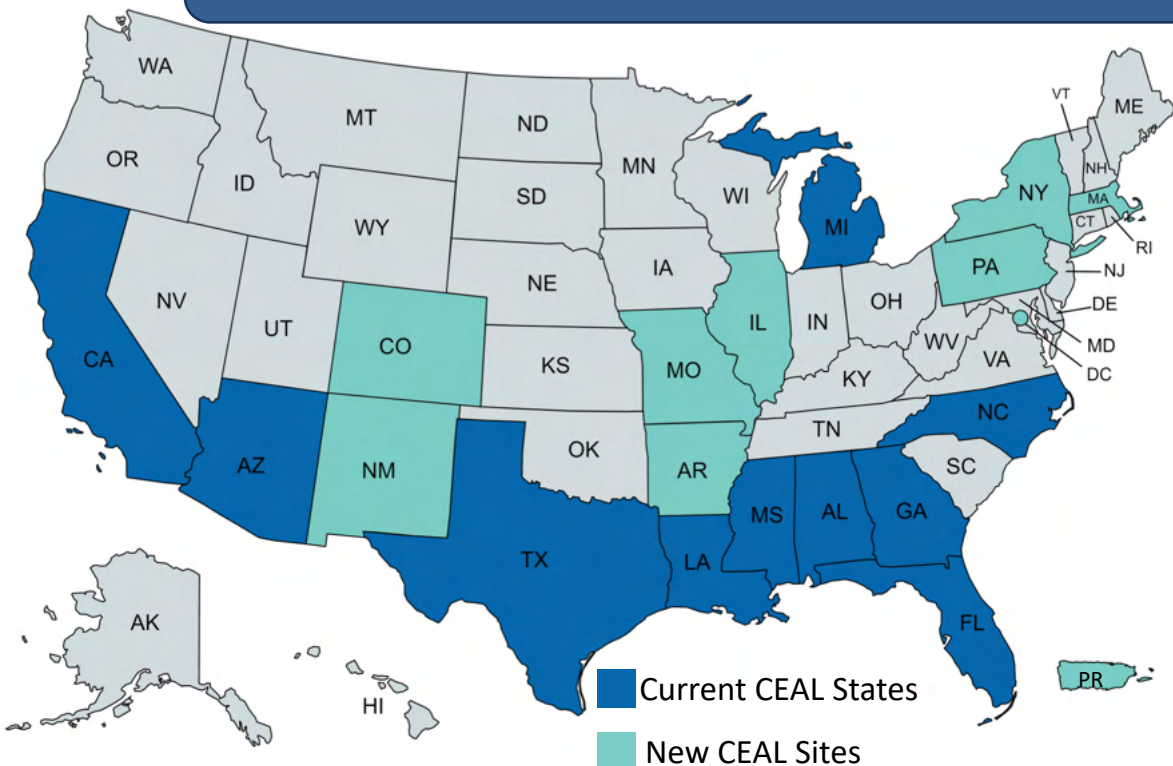
Admin0 Admin1 Admin2

28-Day Totals Incidence Case-Fatality Ratio Global Vaccinations US Vaccinations Terms of Use

Weekly 28-Day

Community Engagement Alliance (CEAL) Against COVID-19 Disparities

A trans-NIH initiative leading outreach, engagement, and inclusive participation efforts in ethnic and racial minority communities disproportionately affected by the COVID-19 pandemic.



Academic Partners



Community-Based Organizations



Healthcare Centers & Providers



Faith-Based Organizations



State & Local Government Agencies



Pharmacy Networks

CEAL teams partnering with national and local organizations

<https://covid19community.nih.gov/>



CEAL Communications Metrics Summary

Across different mediums of digital and traditional media, CEAL communications have **over 2 billion cumulative views**

Website



319,215
Web Visits

E-Newsletter



1,289
E-Newsletter
Subscribers

Social Media



52.65M
Potential
Impressions

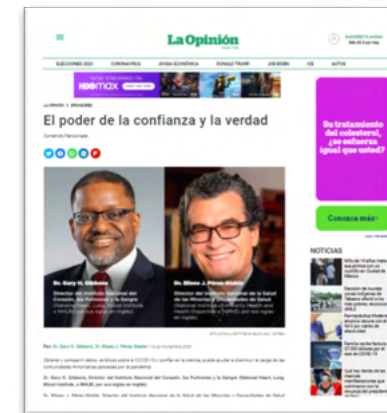
1.52M
Paid Event
Views

Digital Campaign



51.96M
Paid
Impressions

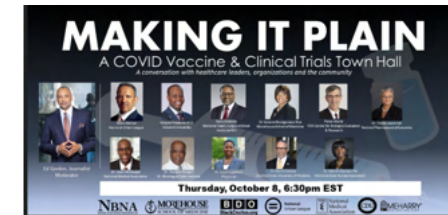
News Media



515.5M
Earned Media
Impressions

368M+
Paid
Impressions

Stakeholder & Congressional Engagement

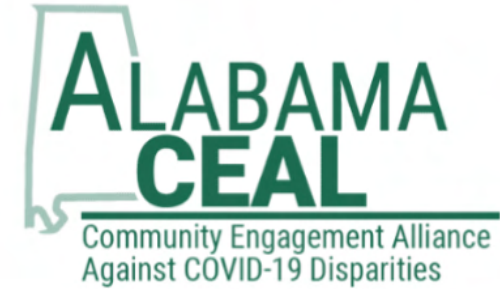


>1.05M
Views

Special thanks to the NIH-Funded Alabama CEAL Team

Principal Investigator: Mona N. Fouad, MD, MPH

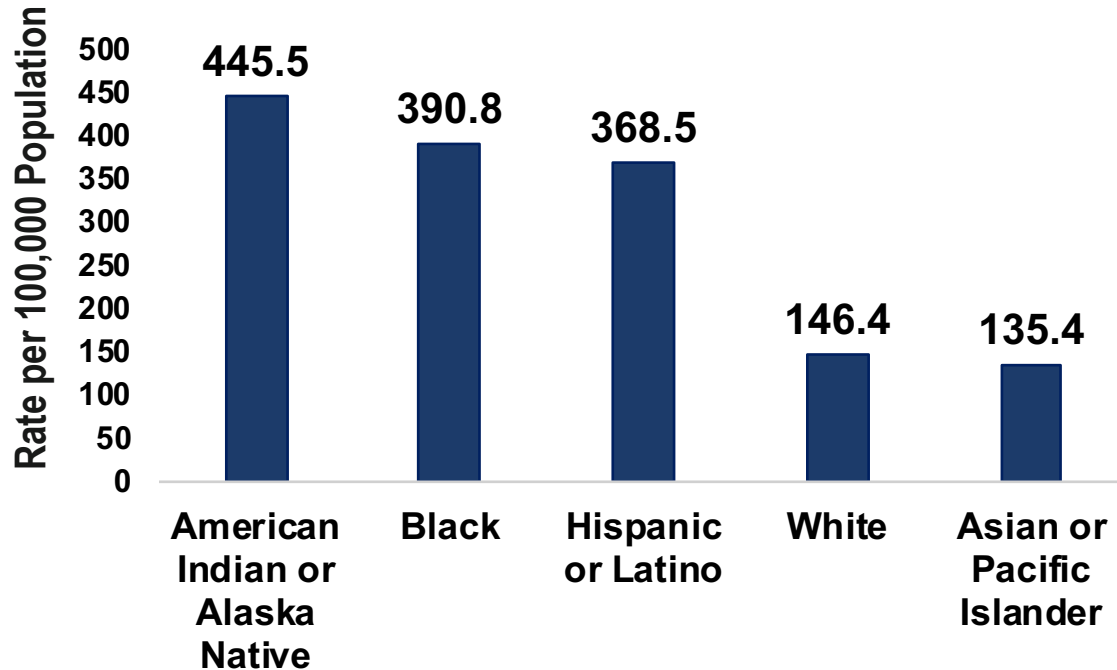
- Shauntice Allen
- William Anderson
- Lori Bateman
- Andrea Charrington
- Jennifer Croker
- Susan Driggers
- Michelle East
- Jack Fanning
- Randi Gilinson
- Allyson Hall
- Lisle Hites
- Tiffany Jordan-Whitlow
- Suzanne Judd
- Robert Kimberly
- Melissa Love
- Gabriela Oates
- Tiffany Osborne
- Rosemary Robinson
- Julie Schach
- Delmonize "Del" Smith



<https://covid19community.nih.gov/community-engagement-teams/alabama-ceal>

The COVID-19 Pandemic in the U.S. Disproportionately Affects Communities of Color

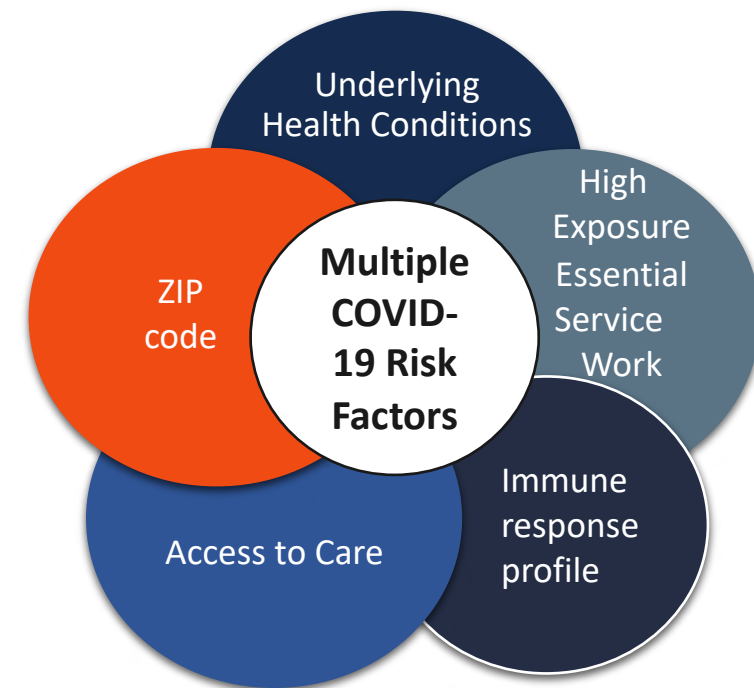
COVID-19-Associated Hospitalization Rates
March 7–November 21



Among some racial and ethnic minority groups, evidence points to higher rates of hospitalization or death from COVID-19 than among non-Hispanic white persons.

COVID-NET

Interplay of clinical characteristics and social & environmental determinants of health puts minority communities at high risk for COVID-19 complications



CDC, National Center for Health Statistics (NCHS), National Vital Statistics System, 2019; Yan R, et al., *Science*, 2020.

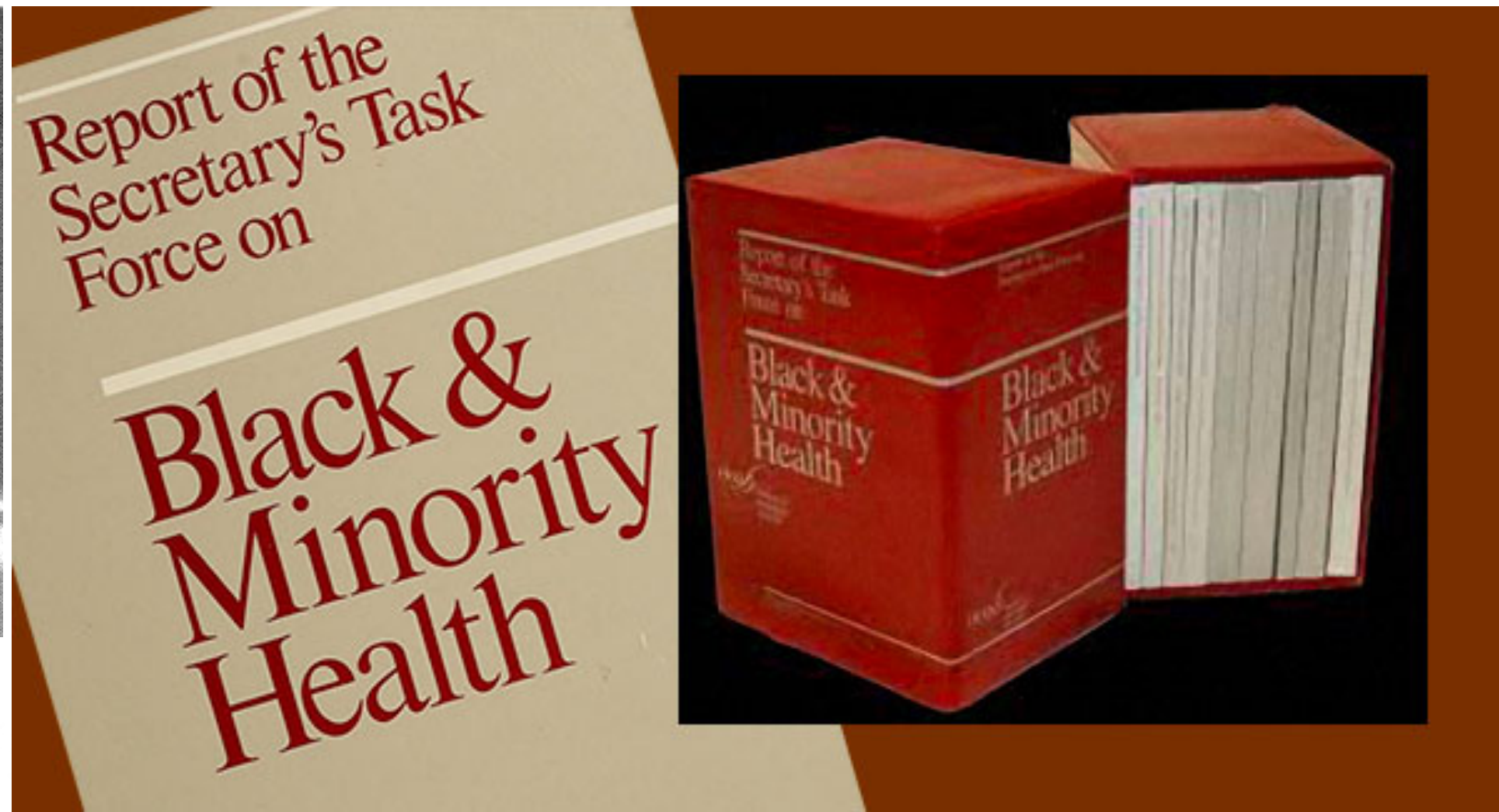
For more than 120 years, researchers have been documenting healthcare disparities in racial/ethnic minority patients



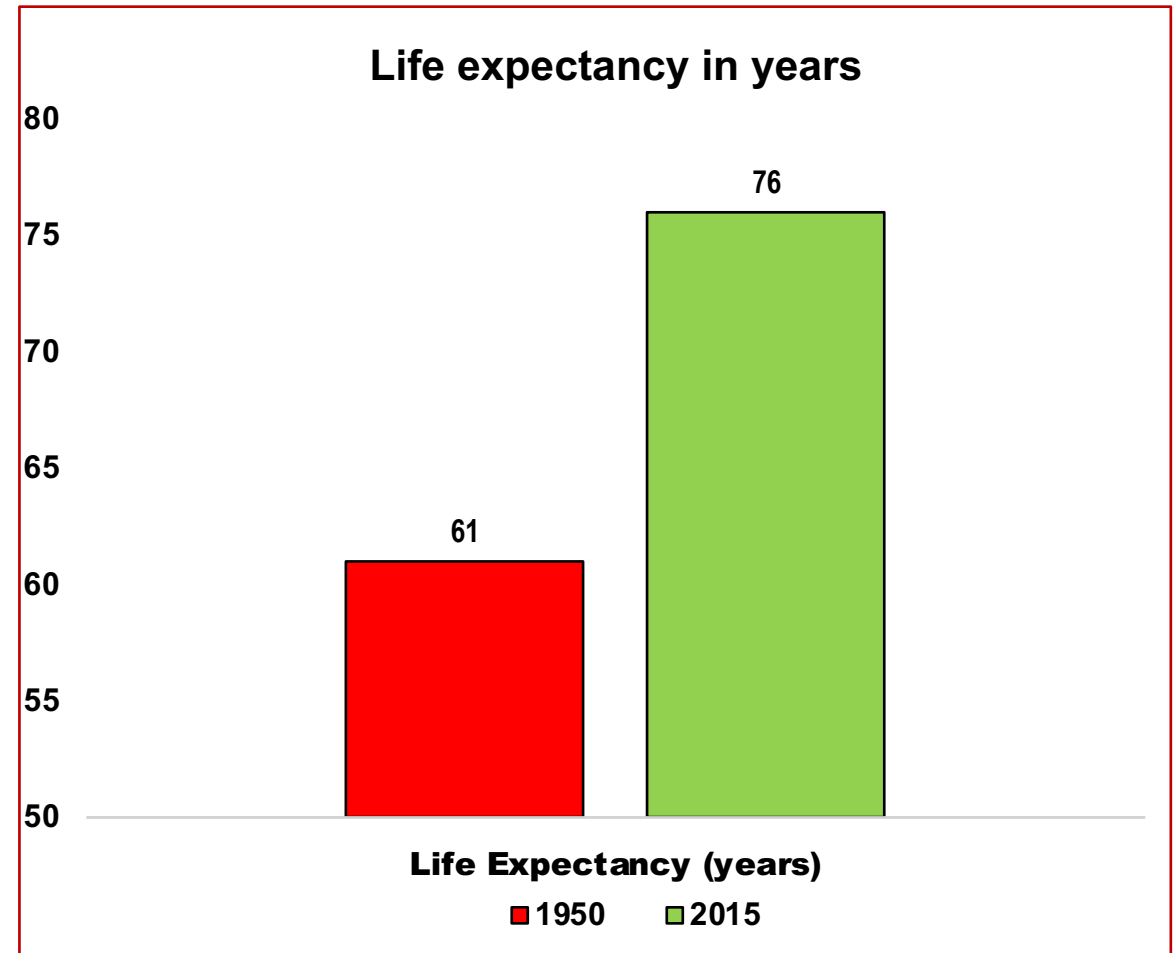
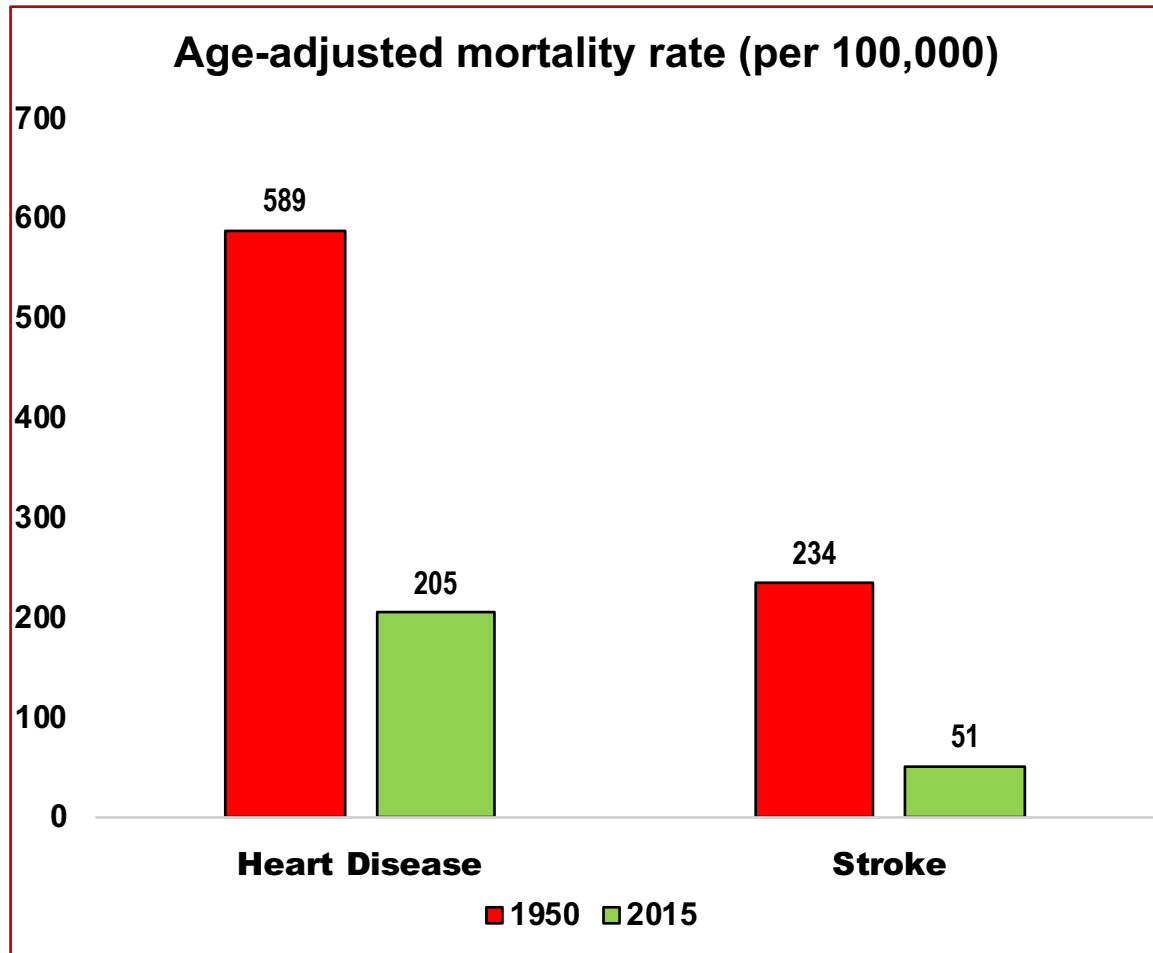
Report of the Secretary's Task Force on Black and Minority Health, United States, 1985



Margaret M. Heckler
Margaret M. Heckler
Secretary



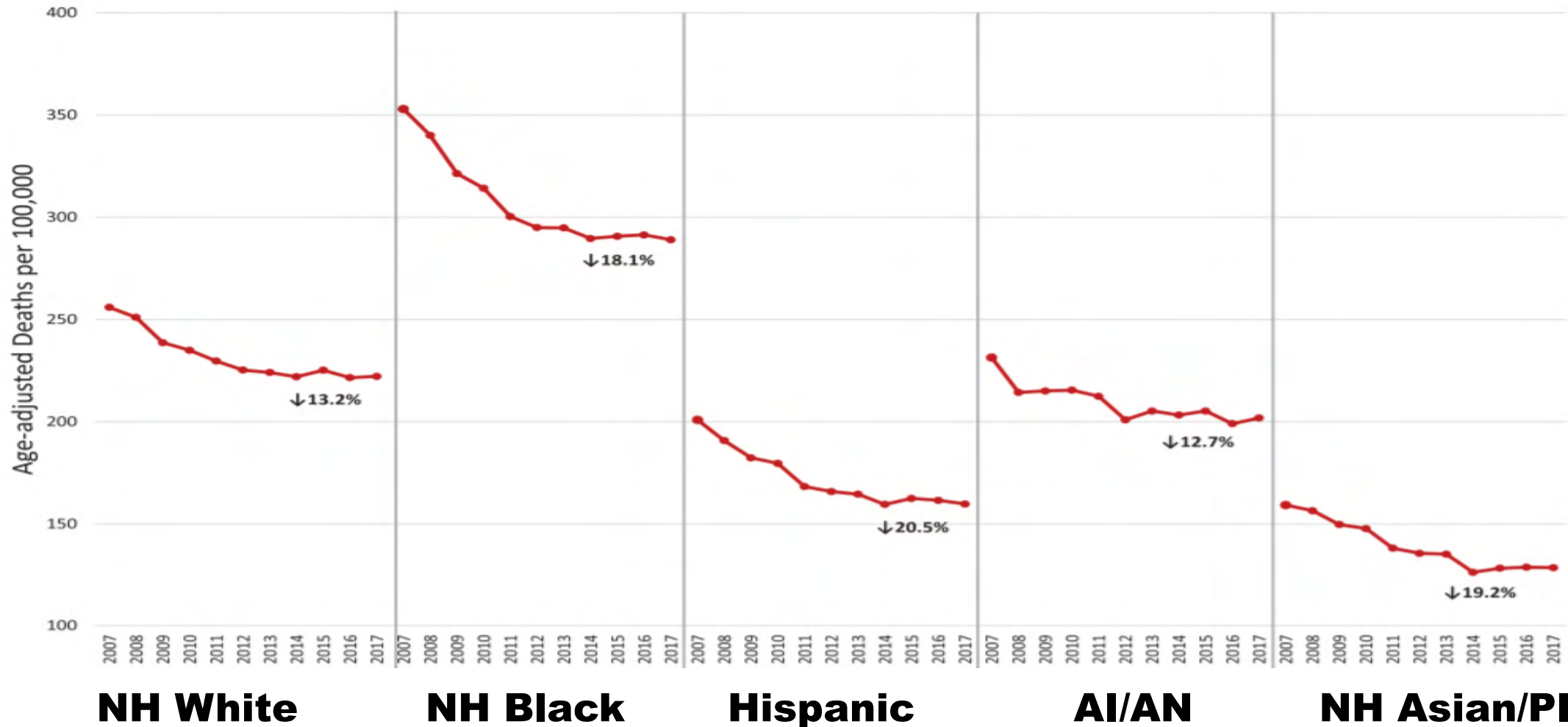
We have seen dramatic declines in mortality, coupled with improvements in life expectancy, in African Americans

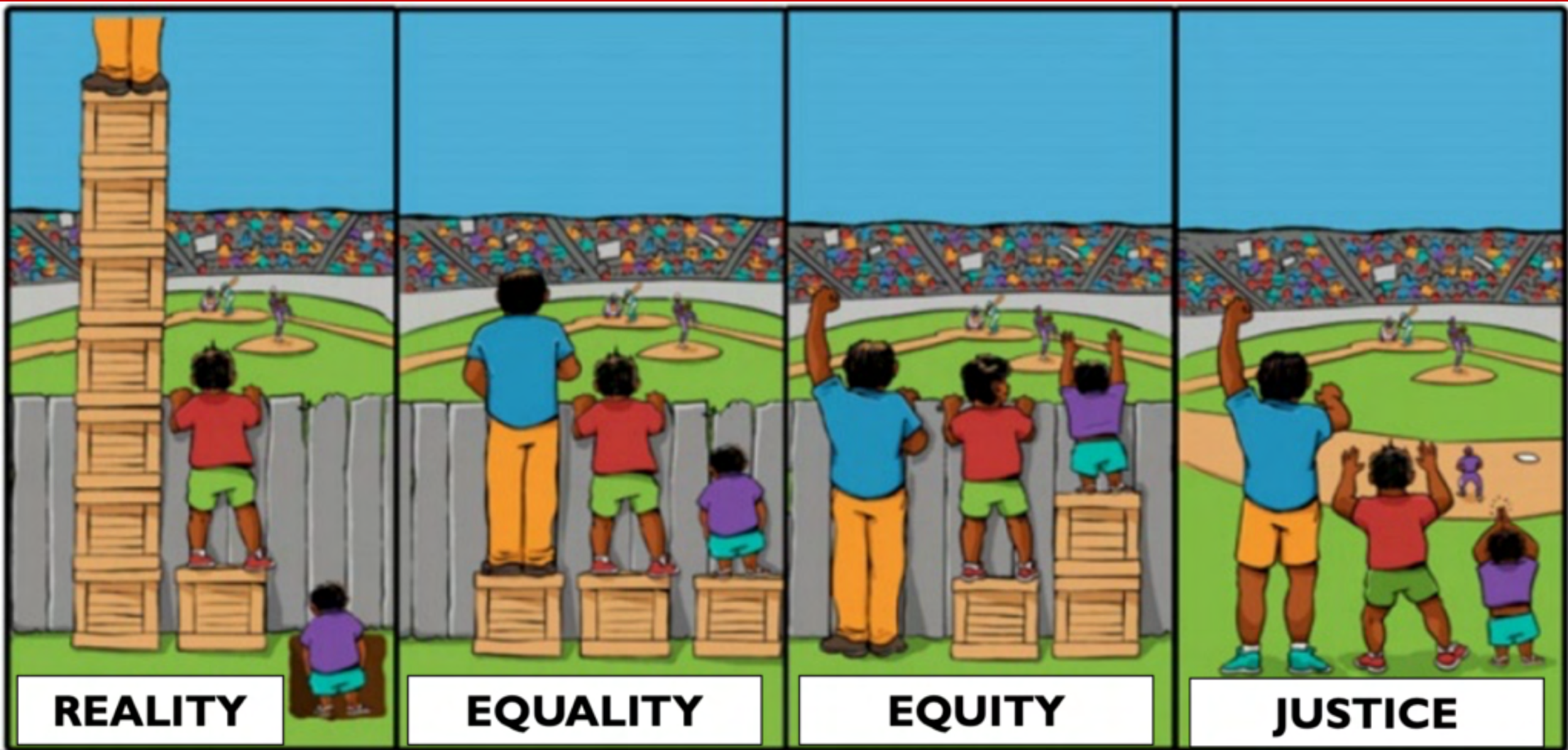


Source of Data: NCHS, 2018. *Health, United States, 2017*

Age-adjusted total CVD mortality rates, 2007-2017

Progress made, but huge disparities persist





REALITY

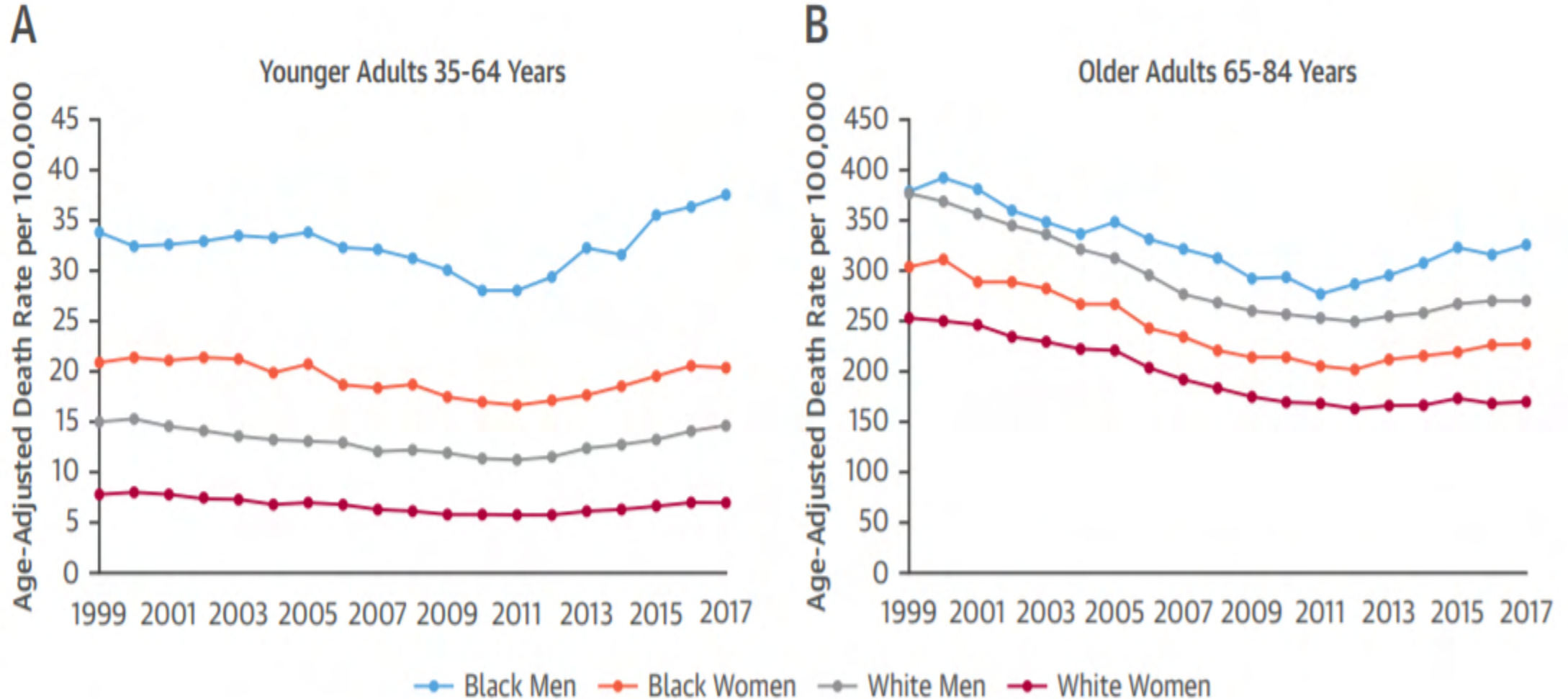
EQUALITY

EQUITY

JUSTICE

Source: Early Learning Alliance (2021) <http://earlylearningntx.org/our-work/racial-equity/>

Despite the progress made in the prevention and treatment of heart failure in the US, there are reasons for concern



2019 National Healthcare Disparities & Quality Report:

Racial/ethnic disparities in quality of care are common

2019 NATIONAL HEALTHCARE QUALITY & DISPARITIES REPORT



- For about 40% of quality measures, Blacks and American Indians/Alaska Natives received worse care than Whites.
- For more than one-third of quality measures, Hispanics received worse care than Whites.
- For nearly 30% of quality measures, Asians received worse care than Whites, but Asians received better care than Whites for nearly one-third (56 of 185) of quality measures.
- For one-third of quality measures, Native Hawaiians/Pacific Islanders received worse care than Whites.

The NIH Mission

NIH TURNING **DISCOVERY**
INTO **HEALTH**

To carry out its mission, NIH supports:

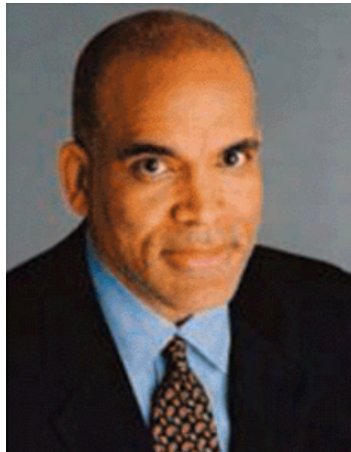
- Basic research
- Translational research
- Clinical research
- Scientific Workforce
- A balanced research portfolio



NIH-Commissioned Study Uncovers Racial Disparities in Grant Awards, 2000-2006



Donna Ginther



Raynard Kington

STUDY AT A GLANCE

83,188

R01 applications from Ph.D.s analyzed

40,069

Unique Ph.D. investigators

1149

R01 applications from black Ph.D.s

337

Expected awards to black applicants if same success chance as whites

185

Actual awards to black applicants

Race	Award probability
Native Am	29.3%
Asian	25.4%
Black	16.1%
Hispanic	28.1%
White	29.3%
Other	27.3%
Unknown	25.7%
Total	28.1%

SOURCE: Ginther et al. *Science* 333, 6045 (19 AUGUST 2011)

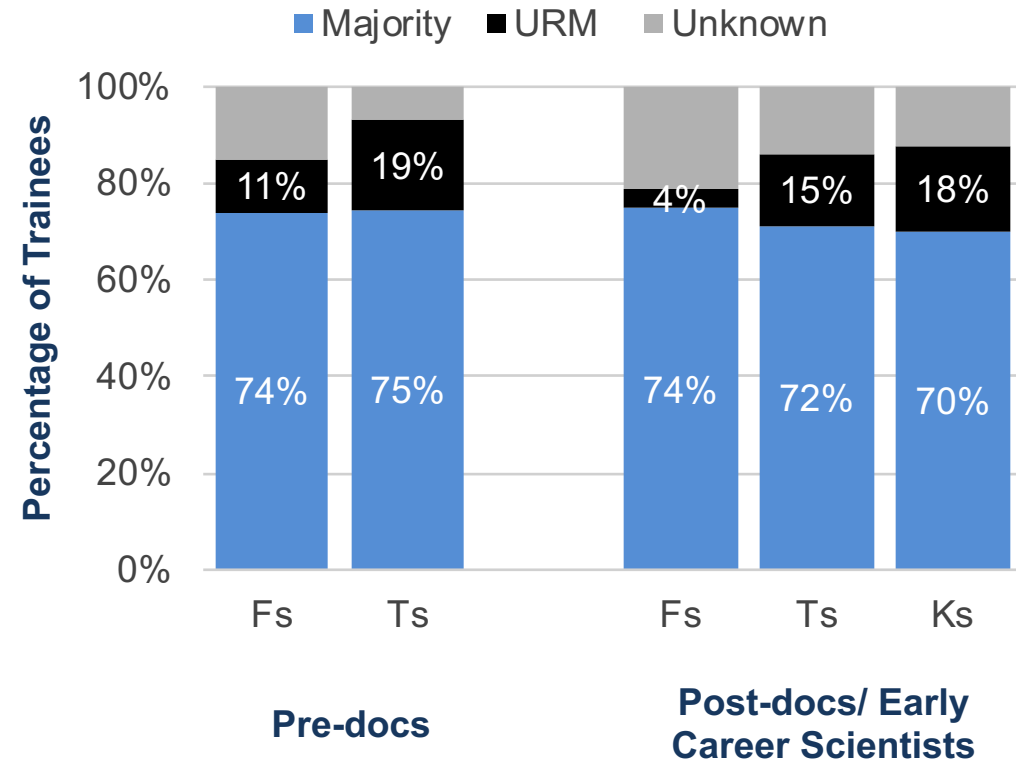
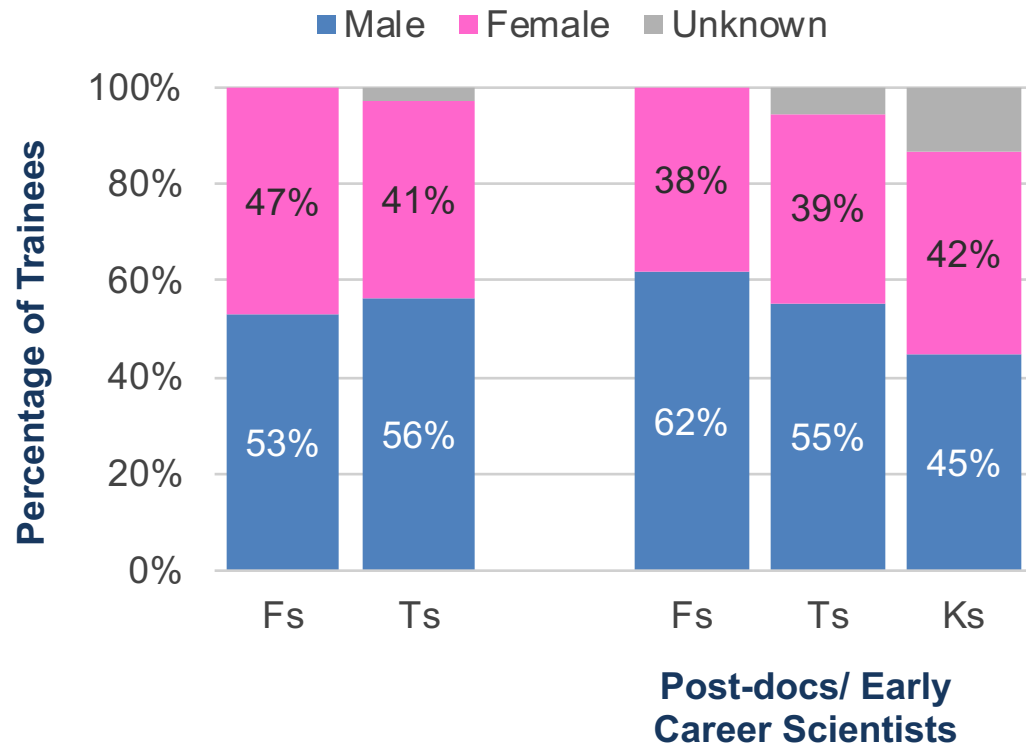
NIH responded to the Ginther Report findings



- Systematic evaluation of NIH training programs.
- Appointment of a Chief Officer for Scientific Workforce Diversity.
- Launch of a new 3-component program to provide the necessary resources:
 1. The Building Infrastructure Leading to Diversity (**BUILD**) initiative.
 2. The National Research Mentoring Network (**NRMN**)
 3. Coordination & Evaluation Center

Inclusive Excellence in Trainees: Demographic Profiles

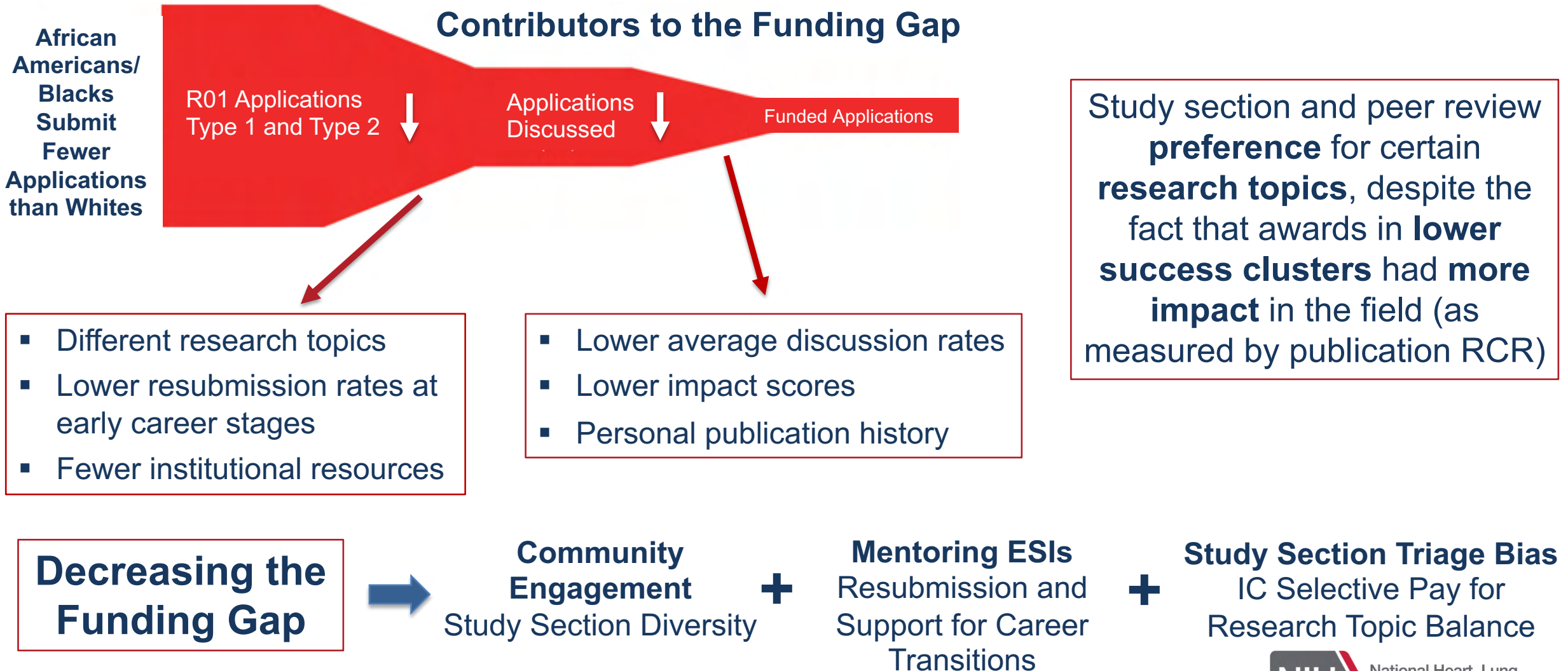
FY2019 NHLBI-supported T/F/K Trainees



There is still an NIH Funding Gap Between White and Black Researchers

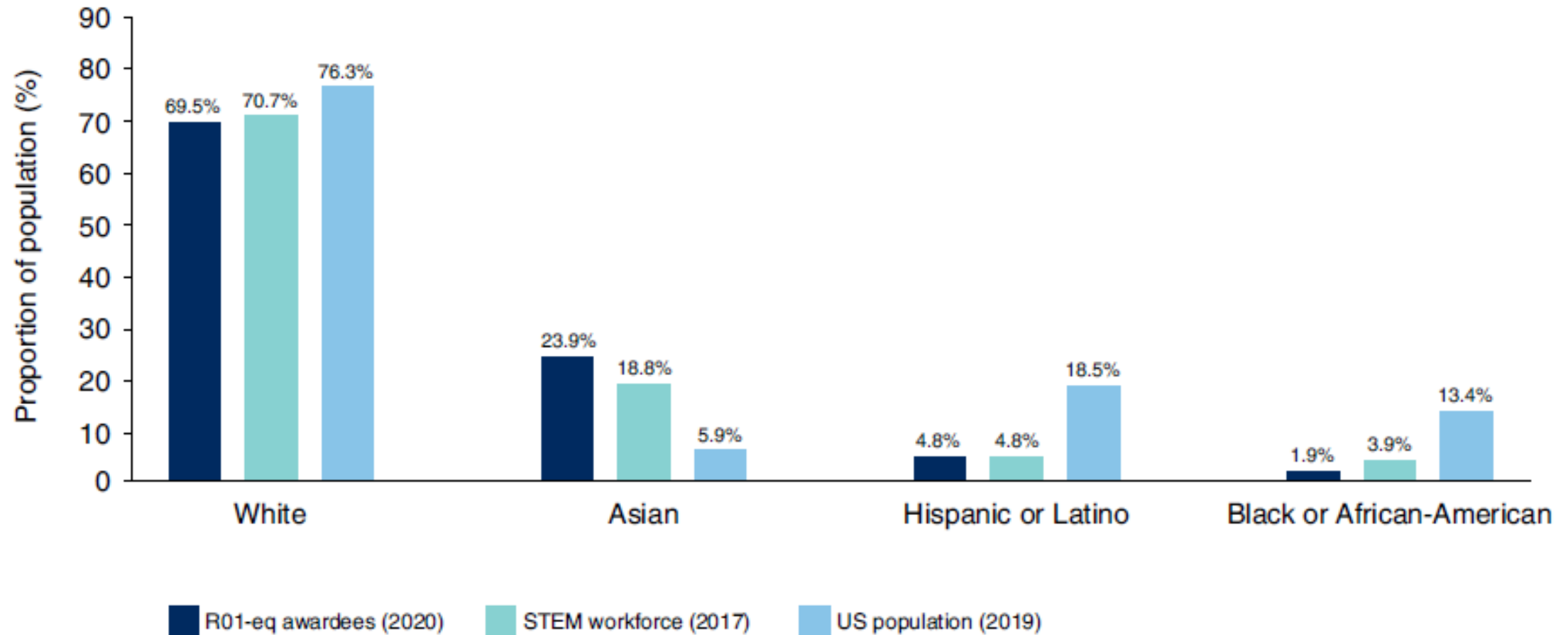
- From 2011–2015, black scientists submitted R01 applications at 83.7% the frequency of white applicants.
- **Applications from black scientists were less likely to be discussed and they also received lower impact scores.**
- Cumulatively, the lower submission rates, lower average discussion rates, and lower impact scores result in applications from black scientists receiving R01 funding at approximately **half the rate** of those from white scientist.

NIH Research Grant Funding Disparities: Black scientists receive R01 grant funding only half as often as their white peers



Hoppe et al. *Sci Adv.* 2019 Oct 9;5(10):eaaw7238A et al., *Science Advances.* 2019.

Racial and ethnic representation among NIH R01-equivalent grantees, STEM doctoral workforce, and US population (2017, 2019 and 2020)



NIH selects a Chief Officer for Scientific Workforce Diversity



Marie A. Bernard, M.D.

- In this role, she leads NIH's effort to promote Diversity, Equity, and Inclusiveness (DEI) throughout the biomedical research enterprise.
- She was the Deputy Director of the **NIH National Institute on Aging** from 2008–2021 and has been involved in a broad variety of NIH activities to further diversity.

The US National Institutes of Health approach to inclusive excellence

- The challenge of biomedical research is akin to the examination of an elephant while lacking sight.
- The more diverse the input from several vantage points, the more likely the problem will be fully examined, and appropriate solutions derived.



NIH Commits to Diversity, Equity, and Inclusion in Biomedical Research

- **U** — Understanding stakeholder experiences through listening and learning.
- **N** — New research on health disparities, minority health, and health equity.
- **I** — Improving the NIH culture and structure for equity, inclusion, and excellence.
- **T** — Transparency, communication, and accountability with our internal and external stakeholders.
- **E** — Extramural research ecosystem: changing policy, culture, and structure to promote workforce diversity.



**Ending
Structural
Racism**



nih.gov/ending-structural-racism

NIH Commits to Tackling Structural Racism



<https://www.nih.gov/ending-structural-racism>

Transformative Research to Address Health Disparities and Advance Health Equity

New Award
Announced
for 2021

Read More



New, highly innovative NIH research awards to address health disparities and advance health equity



The Common Fund

<https://commonfund.nih.gov/healthdisparitiestransformation>

Transformative Research to Address Health Disparities and Advance Health Equity

- [RFA-RM-21-021](#) Transformative Research to Address Health Disparities and Advance Health Equity (U01 Clinical Trial Allowed)
- [RFA-RM-21-022](#) Transformative Research to Address Health Disparities and Advance Health Equity **at Minority Serving Institutions** (U01 Clinical Trial Allowed)



On April 27, 2021, the NIH Common Fund hosted a pre-application webinar

<https://www.youtube.com/watch?v=MVT3sVNbnmE>

The Common Fund will begin developing a separate effort in health disparities research planned to launch in fiscal year 2023

NIH Rapid Acceleration of Diagnostics (RADx)



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: \$512 Million

- NIH has developed community engaged projects across the US to assess and expand COVID-19 testing for underserved or vulnerable populations
- <https://www.nih.gov/research-training/medical-research-initiatives/radx/radx-programs#radx-up>

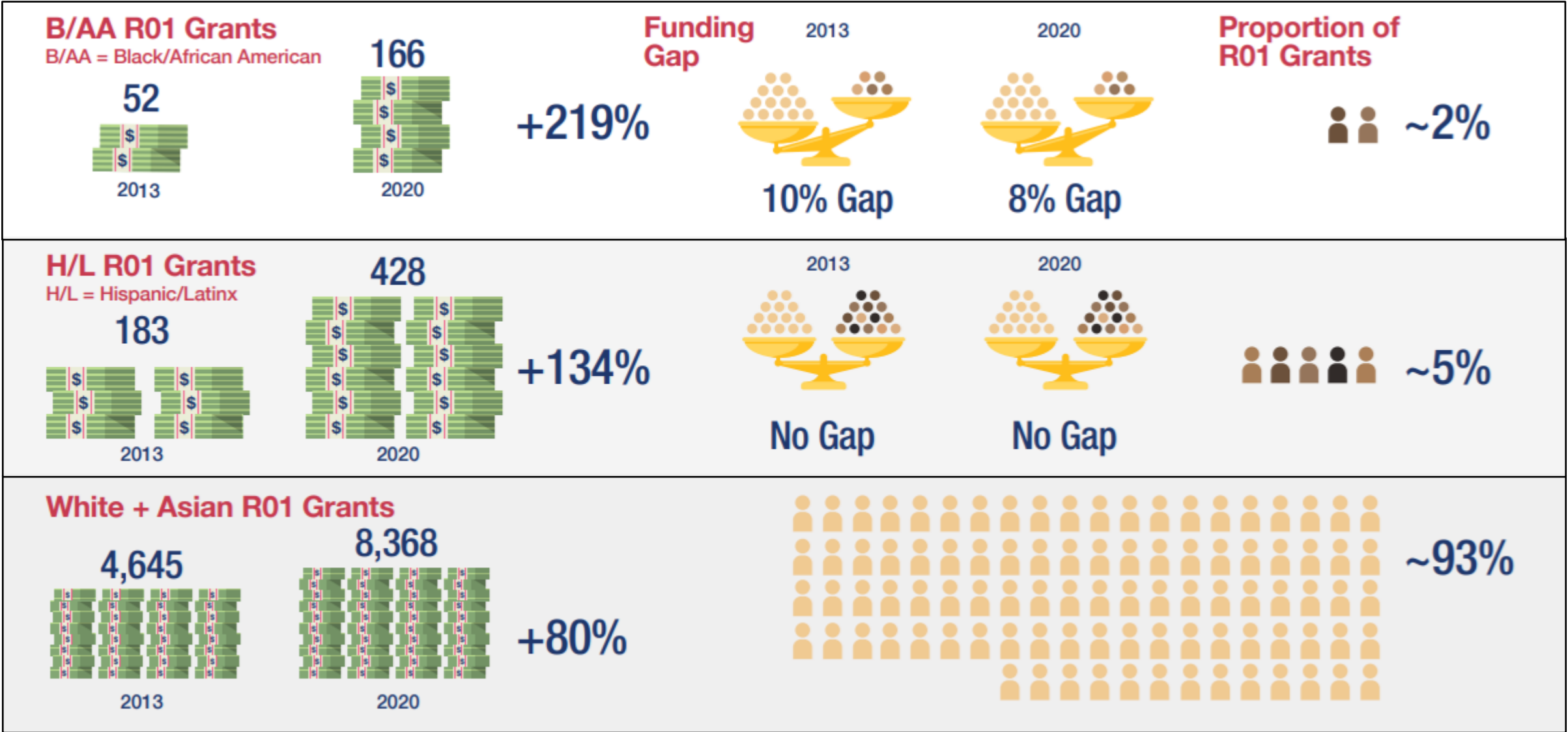
RADxSM Underserved Populations (RADx-UP)

- **Establishing multiple clinical research sites across the country** to evaluate, in real-time, a variety of testing methods in specific populations, areas, and settings
- **Encouraging collaboration between the program sites and the community** — tribal health centers, houses of worship, homeless shelters, and prison systems — to identify and address their unique needs
- **Developing testing strategies** to apply technological advances emerging from the various RADx efforts in real-world settings, examples include the “Say Yes! COVID Test” and Return to School testing initiatives

Relevant Research Funding Opportunities

- [RFA-RM-21-021](#): Transformative Research to Address Health Disparities and Advance Health Equity (U01 Clinical Trial Allowed)
- [RFA-RM-21-022](#): Transformative Research to Address Health Disparities and Advance Health Equity at Minority Serving Institutions (U01 Clinical Trial Allowed)
- [RFA-MD-21-004](#): Understanding and Addressing the Impact of Structural Racism and Discrimination on Minority Health and Health Disparities (R01 Clinical Trial Optional)
- [RFA-MD-21-008](#): NIMHD Multiple Chronic Disease Disparities Research Coordinating Center (RCC) (U24 Clinical Trial Not Allowed)

Scientific Workforce Diversity at NIH, 2013 and 2020: R01 Grants



Scientific Workforce Diversity at NIH, 2013 and 2020: K Awards

B/AA K Awards

26



2013

82



2020

+215%

Funding Gap

2013



12% Gap

2020



7% Gap

Proportion of K Awards



~7%

H/L K Awards

54



2013

97



2020

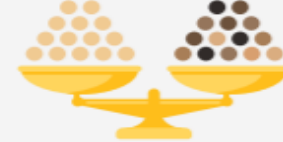
+80%

2013



4% Gap

2020



No Gap



~8%

White + Asian K Awards

776



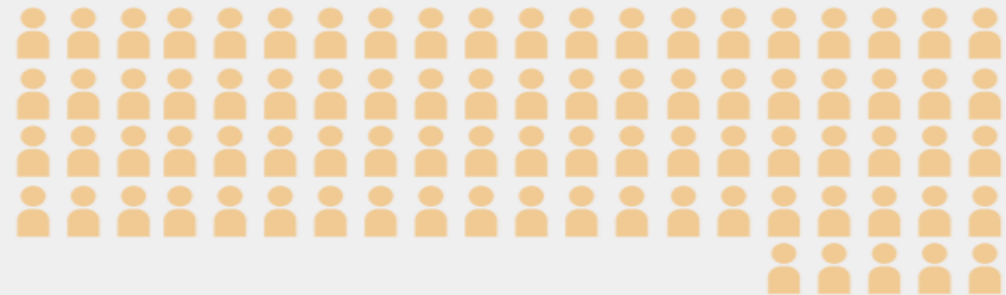
2013

1,006



2020

+30%



~85%

Inclusive Excellence: NHLBI Renews Commitment to Advance Diversity, Equity, and Inclusion (DEI)



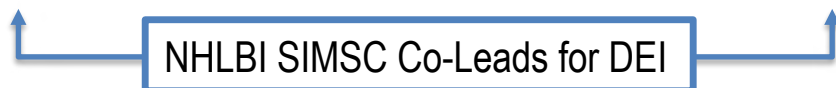
Dr. Laura Moen
Director, DERA



Dr. George Mensah
Director, CTRIS



Dr. Desirée L. Salazar
NHLBI DEI Program Director



NHLBI Approach to Advancing Inclusive Excellence

Objective 8: Workforce & Resources



Mentored Career Development Award to Promote Faculty Diversity/ in Biomedical Research (K01)

T32 Training Program for Institutions That Promote Diversity (T32)

Short-Term Research Education Program to Increase Diversity in Health-Related Research (R25)

Research Supplements to Promote Diversity (high school to early career investigators)



Programs Supporting Inclusive Excellence

- **Diversity supplements** – span the pathway from high school to investigator
- **R25 PRIDE program to promote faculty diversity**
- **Short-term R25-** summer research for undergraduate and health professional students (medical, dental and nursing school)
- **T32 to promote diversity**
- **K99/R00 MOSAIC to promote diversity**
- **Diversity K01** to support untenured faculty investigators
- **SuRE and SuRE First** research awards for faculty investigators

CONCLUSIONS

1. The continuing burden of disparities should no longer be news; but it should be a wake-up call for **interventions to reduce and eliminate all disparities**.
2. NIH is aware of racial **disparities in grant awards and research funding gaps** and has taken specific steps to address them. Many of these initiatives continue.
3. The **NIH UNITE Initiative** is the main vehicle for **Transformative Research** to address health disparities, eliminate structural racism, and advance health equity. RADx-UP is also accelerating diagnostic testing for COVID-19 in underserved communities.
4. NHLBI has made **advancing Equity and Inclusive Excellence** a major priority. Dr. Desirée Salazar, the newly-recruited DEI Program Director, would love to hear from you.
5. We are very proud of the NIH-Wide **CEAL Alliance** and the crucial role UAB is playing **at the community level** to address disparities and advance inclusive excellence.



National Heart, Lung,
and Blood Institute

**Advancing science.
Improving health.**

VISIT US AT
www.nhlbi.nih.gov



FOLLOW US ON

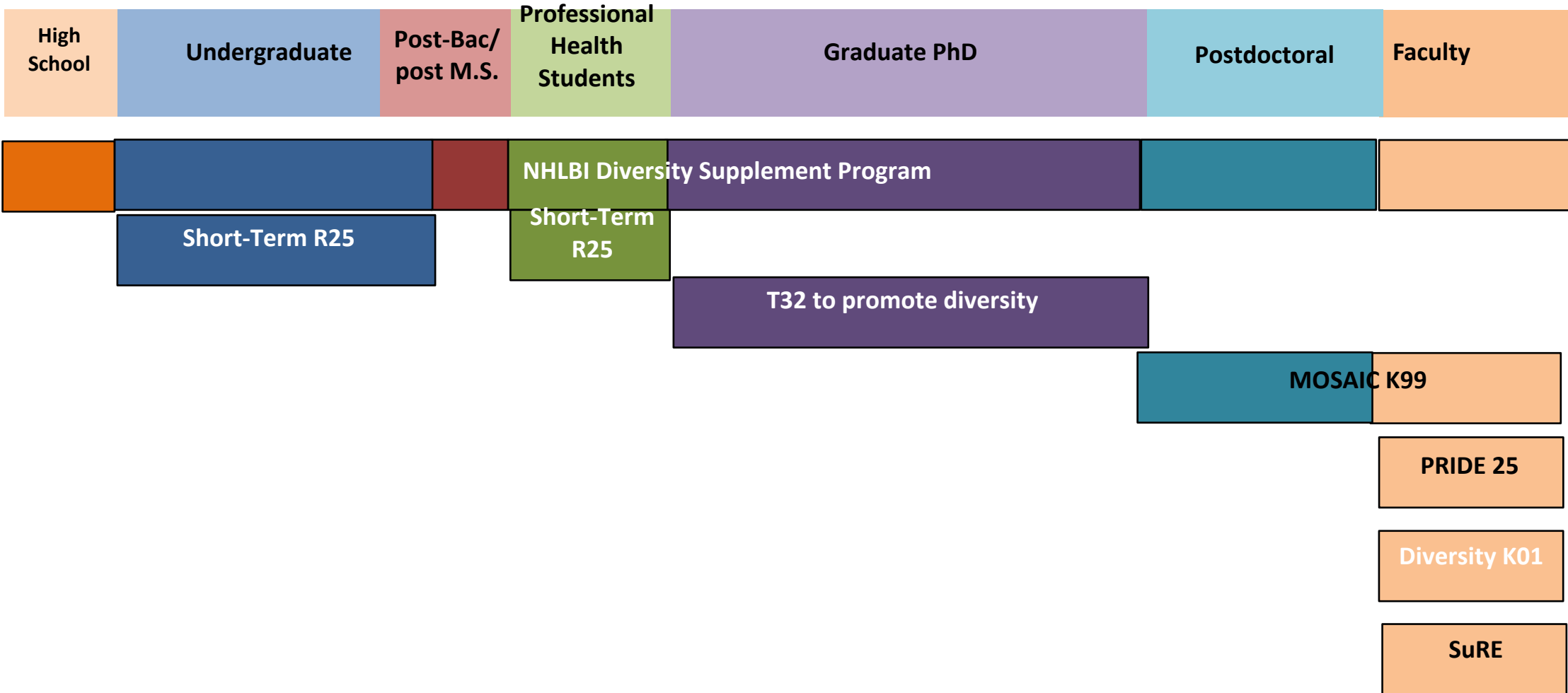
twitter

[Twitter.com/NHLBI_Translate](https://twitter.com/NHLBI_Translate)

Appendix

**Special thanks to Dr. Desirée Salazar
(NHLBI DEI Program Director) for putting
together the following slides (#46 - #55)**

NHLBI Programs to Advance Inclusive Excellence



Diversity supplements

[PA-21-071](#)

- **Goal**
 - To improve the diversity of the research workforce by recruiting and supporting students, postbacs, postdocs, and investigators developing independent projects from groups that have been shown to be underrepresented to participate in grant supported research
- **Eligibility**
 - Long list of eligible research grants
 - Candidates from groups underrepresented in biomedical research – [NOT-OD-21-134](#)
- **Provides**
 - Salary and stipend and funds for supplies and travel
 - Levels are set based upon the career stage of the candidate
- **Due dates**
 - Rolling deadlines

Short-Term Research Education Program to Enhance Diversity in Health-Related Research

[RFA-HL-22-012](#) (R25)

- **Goal**
 - Provides research experiences to undergraduate and health professional students
 - Prepares participants for admission to graduate school and research careers
 - Provides educational opportunities to enhance knowledge and interest in research-related careers

- **Eligibility**
 - Institutions that are proposing research experiences within the mission of NHLBI
 - Participants are undergraduates or health professional students

- **Provides**
 - Support trainees for summer research training, including salary, supplies, housing and travel to attend program
 - Program related expenses

- **Due dates**
 - August and February 2021-2024 (2x/year)

T32 Training Program for Institutions That Promote Diversity

[RFA-HL-22-001](#) (T32)

■ **Goal**

- enhance the participation of individuals from diverse backgrounds by providing support to institutions that promote diversity

■ **Eligibility**

- Should have an institutional mission focused on serving health disparity populations not well represented in scientific research, or having an institutional mission focused on these populations

■ **Provides**

- Support trainees for full-time training, portion of tuition and fees, and funds to attend scientific meetings

■ **Due dates**

- September and February 2021-2024 (2x/year)

Maximizing Opportunities for Scientific and Academic Independent Careers (MOSAIC)

[PAR-21-272](#) (MOSAIC K99/R00 Independent Clinical Trial **Required**)

[PAR-21-271](#) (MOSAIC K99/R00 Independent Clinical Trial **Not Allowed**)

- **Goal**

- Enhance **workforce diversity** by facilitating a timely transition of **postdoctoral** researchers from diverse backgrounds from their mentored, postdoctoral research positions to independent, tenure-track or equivalent research-intensive faculty positions
- Independent funding & path to professoriate (5 years of funding in 2 phases)
 - Mentored research experience as postdoctoral fellow (K99) 1-2 years
 - Independent research support as faculty (R00) (up to 3 years)

- **Eligibility**

- Applicant must have no more than 4 years of postdoctoral research experience

- **Due dates**

- Standard due dates (3x/year)

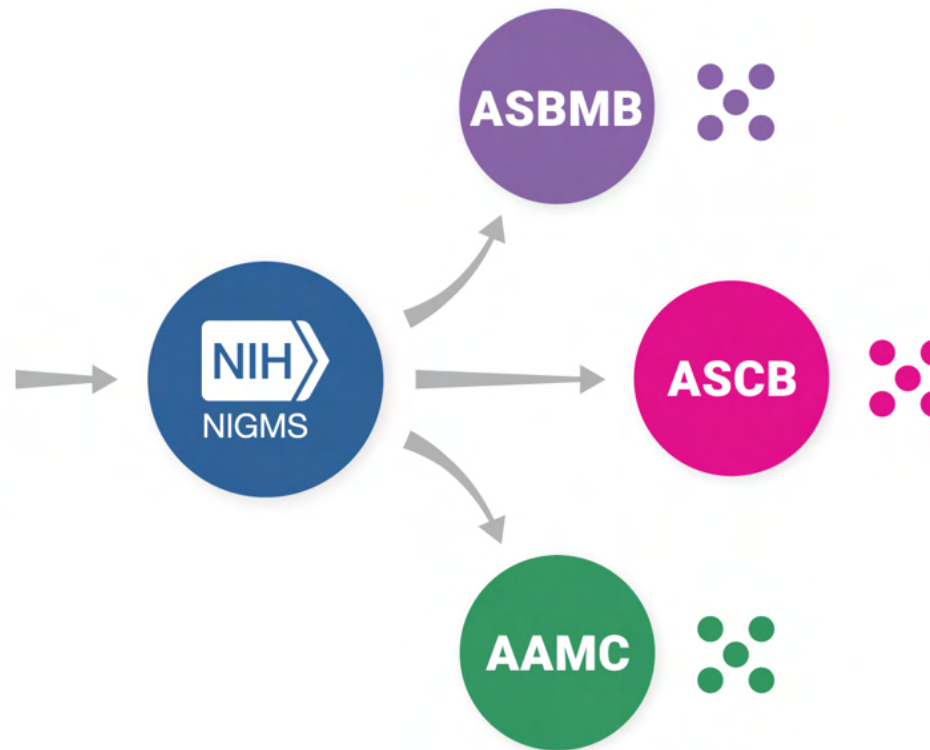
Maximizing Opportunities for Scientific and Academic Independent Careers (MOSAIC)

Postdoctoral Career Transition Award to Promote Diversity (K99/R00) – [PAR-21-271](#), [-272](#),
Institutionally Focused Research Education Cooperative Agreement to Promote Diversity (UE5) – [PAR-21-277](#)

MOSAIC K99/R00 Awardees



MOSAIC K99/R00 Scholars Participate in Cohorts Organized by UE5



Programs to Increase Diversity Among Individuals Engaged in Health-Related Research (PRIDE)

[RFA-HL-19-002](#) (PRIDE R25)

[RFA-HL-19-001](#) (PRIDE U24 Coordinating Center)

■ Goal

- to support mentoring and research education activities that enhance the diversity of the biomedical, behavioral and clinical research workforce.
- to establish long-term mentoring that will enable **junior faculty** who are underrepresented, to develop a research program and obtain NIH funding

■ Provides

- Summer training for 2 summers
- Annual meetings and conferences
- Mentorship and grant writing skills training
- Ability to compete for pilot funds

■ Eligibility

- Applicant must be a junior-level faculty, US citizen or permanent resident, come from an underrepresented background

Programs to Increase Diversity Among Individuals Engaged in Health-Related Research (PRIDE)

- Are currently 9 PRIDE [programs](#)
- Individuals Complete Online Pre-Application Form
 - <https://pridecc.wustl.edu/>
- Currently funded SIs include the following scientific areas:
 - Behavioral and Sleep Medicine
 - Cardiovascular Genetic Epidemiology
 - Functional and Translational Genomics of Blood Disorders
 - Obesity, Cardiovascular and Lung Health Disparities
 - Implementation Science Research
 - Impact of Ancestry and Gender On Omics of Lung Diseases
 - Cardiac and Vascular Biology

NHLBI Diversity K01 Award

[RFA-HL-22-010](#) (K01 Independent Clinical Trial **Required**)

[RFA-HL-22-011](#) (K01 Independent Clinical Trial **Not Allowed**)

- **Goal**
 - Provide research career development opportunities for non-tenured science **faculty** from diverse backgrounds, including those from underrepresented groups
- **Career stage**
 - A full-time and non-tenured science faculty appointment by the time of award
- **Program provides**
 - salary and research support for 3-5 years for research career development, under the guidance of a mentor, leading to research independence
- **Due dates (two/year)**
 - October/February due dates
 - Current RFAs expire on May 8, 2024

Support for Research Excellence (SuRE) Award R16 and SuRE-First

[PAR-21-169](#) (SuRE R16)

[PAR-21-173](#) (SuRE-First R16- First independent research award)

- **Goal**

- to develop and sustain research excellence in U.S. higher education institutions that receive limited NIH research support and serve students from groups underrepresented in biomedical research with an emphasis on providing students with research opportunities

- **Provides**

- SuRE – \$100,000 per year/4 years
- SuRE-First- \$125,00 per year/4 years

- **Eligibility**

- SuRE – faculty investigators not currently funded by NIH Research Project Grants, but who have had prior external research funding
- SuRE First – faculty investigators who have no prior external research funding

- **Due dates**

- SuRE - 1 due date per year, May 26, or Sept 07 (AIDS applications)
- SuRE First - 1 due date per year, Sep 27, or January 07 (AIDS application)