Strategies to Mitigate Disparities in COVID-19 Diagnostics

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NASEM – Lessons Learned from the COVID Pandemic to Improve Diagnosis: A Workshop
Session 2: Exacerbation of Inequities During the COVID-19 Pandemic
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Note

The views expressed during this presentation do not necessarily state or reflect those of NIH or the U.S. Government.

Just an FYI.

National Institute on Minority Health and Health Disparities

The presenter has no relevant financial relationships with any commercial interests to disclose

Racial and Ethnic Minorities are Disproportionately Affected by COVID-19*

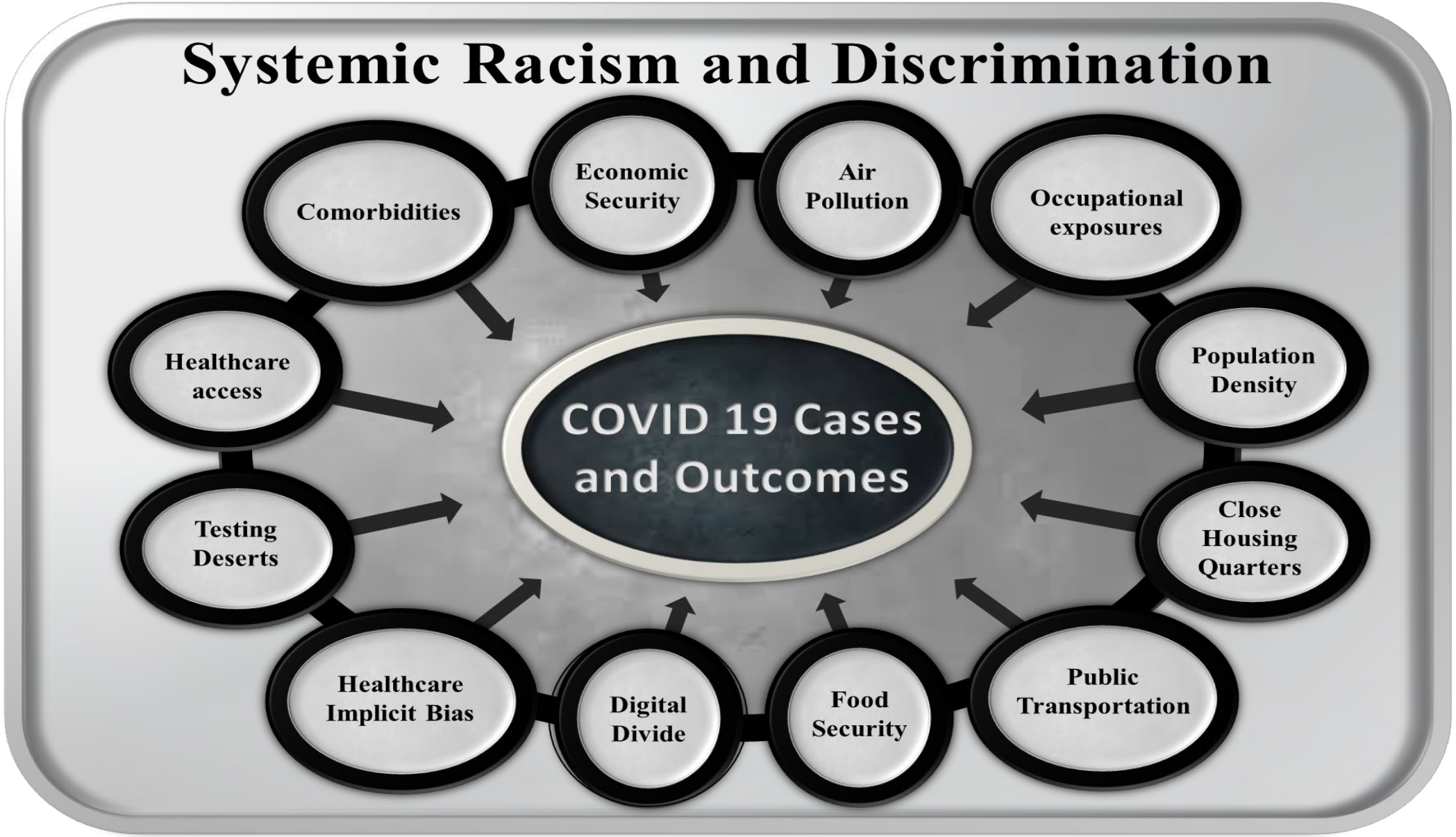
Risk for COVID-19 Infection, Hospitalization, & Death by Race/Ethnicity[1]

Rate ratios compared to White Persons	American Indian or Alaska Native	Asian	Black or African American	Hispanic or Latino
Cases	1.6x	0.6x	1.0x	1.6x
Hospitalization	3.3x	0.8x	2.6x	2.5x
Death	2.2x	0.9x	1.9x	2.1x

https://www.cdc.gov/coronavirus/2019-ncov/community/health-equity/racial-ethnic-disparities/infographic-cases-hospitalization-death.html

**Note that the CDC data shown does not include Pacific Islander populations which is another population disproportionately affected by COVID-19*

[1] Table Source CDC as of Nov 22, 2021: Risk for COVID-19 Infection by Race/Ethnicity (CDC)



Webb Hooper, M,, Marshall, V., & Perez-Stable, E. (in press). COVID-19 Health Disparities and Adverse Social Determinants of Health. Behavioral Med.

The NIH Response to Address COVID-19 Health Disparities

Key resources:

1. ***Testing access and uptake***
2. Vaccine access and uptake

Key concerns:

1. Mitigation strategies
2. Social, behavioral, and economic impacts
3. Ethical implications
4. Misinformation
5. Distrust

Community Engaged Research

Rapid Acceleration of Diagnostics (RADx) Initiative

RADx Tech – $908M*

Highly competitive, rapid three-phase challenge to identify the best candidates for at-home or point-of-care tests for COVID-19

RADx Underserved Populations (RADx-UP) – $533M

Interlinked community-engaged research projects focused on implementation strategies to enable and enhance testing of COVID-19 in vulnerable populations

RADx Radical (RADx-rad) – $187M

Develop and advance novel, non-traditional approaches or new applications of existing approaches for testing

RADx Advanced Testing Program (RADx-ATP) – $192M

Rapid scale-up of advanced technologies to increase rapidity and enhance and validate throughput — create ultra-high throughput laboratories and "mega labs"

Data Management Support – $70M

Build an infrastructure for and support coordination of the various data management needs of many of the COVID-19 efforts

At-Home Diagnostic Testing– $20M

Evaluate the effectiveness of existing diagnostic technologies and platforms in at-home environments

* Includes $185M in BARDA funds for development of RADx tests (funds were not transferred to NIH)

RADx-UP Components

Testing

- ✓ Increase testing access and uptake of COVID-19 diagnostic testing
- ✓ Understand and address disparities associated with COVID-19 diagnostic testing

Social, Ethical & Behavioral Implications (SEBI)

- ✓ Assess ethical, structural, social, behavioral, environmental, and contextual factors around COVID-19 testing
- ✓ Investigate multilevel testing barriers, cultural beliefs, expectations, mistrust, and communication preferences

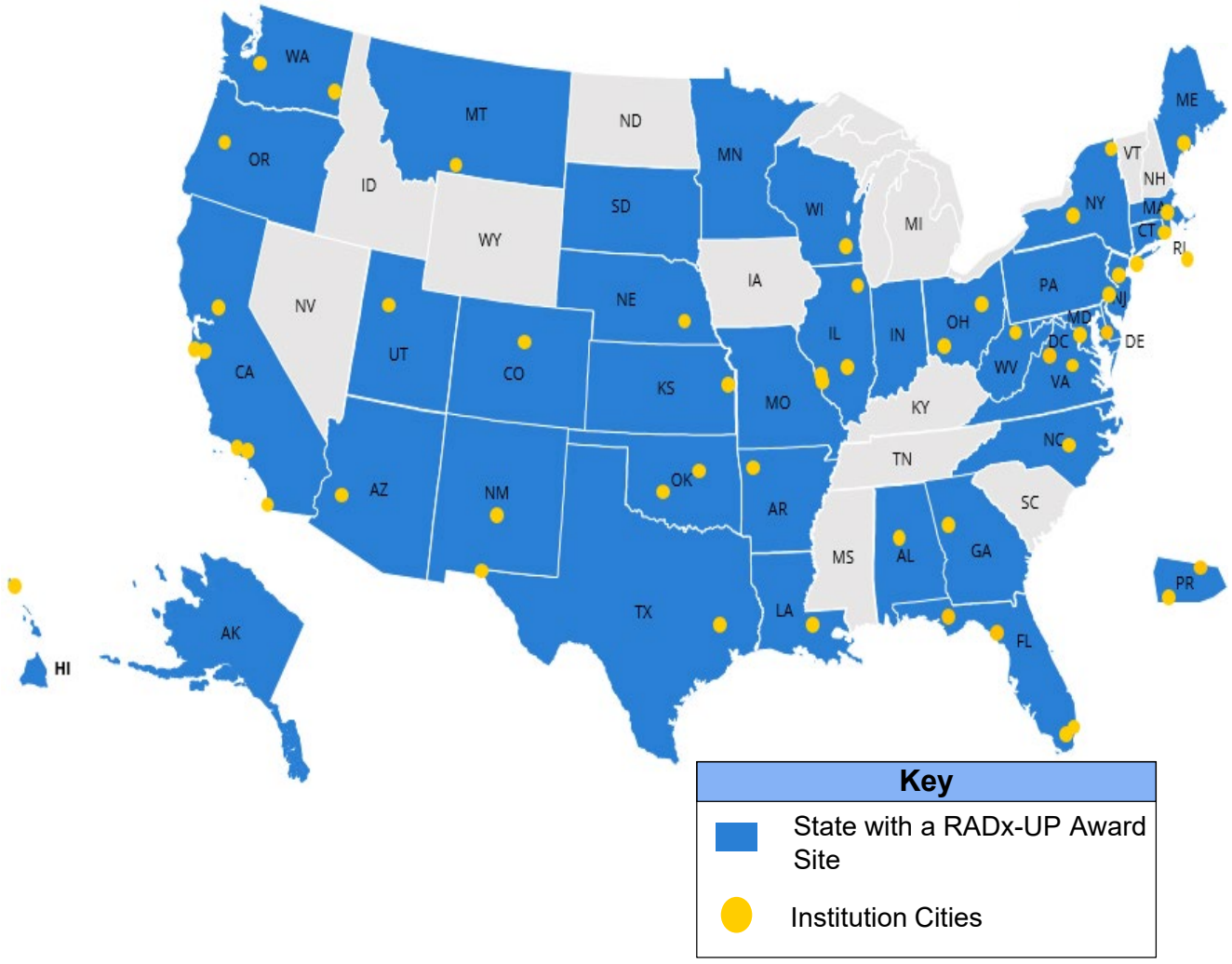
Return to School

- ✓ Implement specific, targeted testing approaches in educational settings serving underserved and vulnerable children and their families
- ✓ Identify scalable, and sustainable testing implementation strategies to maintain in-person learning

RADx-UP Strategies

- **Expand capacity to test broadly** for SARS-CoV-2 in underserved and vulnerable populations, including asymptomatic persons, with FDA emergency use authorized or approved tests
- **Inform implementation of mitigation strategies** based on isolation, testing, and contact tracing to supplement mask wearing and physical distancing to limit community transmission and maximize implementation of vaccines
- **Understand factors** that contribute to COVID-19 disparities and **implement interventions** to reduce these disparities
- **Deploy surveys with common data elements** that will be applied across all RADx projects plus additional survey items that are defined for RADx-UP consortium
- **Establish research and data infrastructure** that to facilitate data sharing and current and future research questions

Communities Served by RADx-UP Projects



NUMBER OF PROJECTS

- 56 Hispanic or Latino/a
- 22 Asian American
- 4 Native Hawaiian
- 50 Black or African American
- 19 American Indian
- 2 Alaska Native
- 33 Older adults
- 18 Pregnant women
- 1 People who are incarcerated
- 32 Children
- 8 Pacific Islander

Self-reported data reflects RADx-UP Phase I and II projects as of 8/1/2021

Note: Some projects are operating in multiple states, or nationwide
Note: RADx-UP Awards include awards made from the following: NOT-OD-20-120, NOT-OD-20-121,NOT-OD-21-103, OTA-21-004 and OTA-21-007

RADx-UP At a Glance

>100
COVID-19 testing and SEBI projects

1
Coordination & Data Collection Center

56
States, Territories and D.C.

>850,000
Participants Enrolled (includes EHR)

>900,000
Tests conducted as of Oct. 2021
(includes prospective & EHR)

55
Projects submitting data to CDCC

23
Community Collaboration Grants

9
Rapid Research Pilot Awards

37
Journal articles
(acknowledged RADx-UP project grant #)

Findings from RADx-UP-Supported Project

- **Title: Community Testing and SARS-CoV-2 Rates for Latinxs in Baltimore**
  - Main findings: Racial/Ethnic differences in positivity rates (N = 1,786 patients)
    - Latino persons = 31.5%
    - White persons = 3.4%
    - African American/Black persons = 7.6%
    - Other racial/ethnic groups = 5.3%
  - Among Latino persons, positive tests associated with: Spanish as preferred language, younger age, larger household size
  - Importance: Helps identify areas for targeted, community competent and engaged interventions

Bigelow BF, Saxton RE, Flores-Miller A, et al. Community Testing and SARS-CoV-2 Rates for Latinxs in Baltimore. *Am J Prev Med*. 2021;60(6):e281-e286. doi:10.1016/j.amepre.2021.01.005

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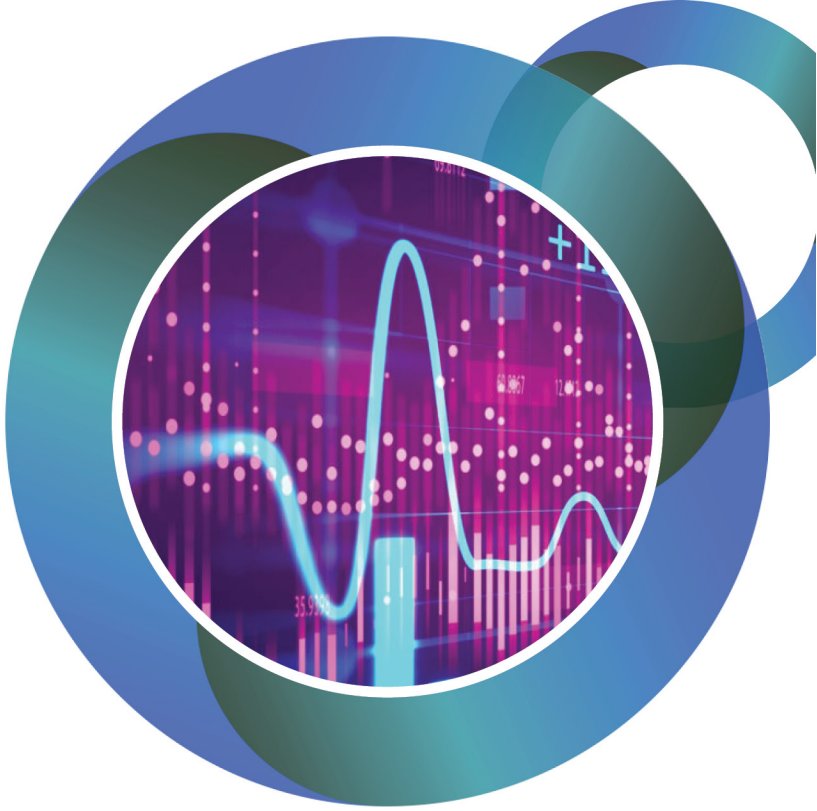
Findings from RADx-UP-Supported Projects

- **Title: Factors Associated With US Public Motivation to Use and Distribute COVID-19 Self-tests**
  - Main findings: High motivation to distribute self-test kits (N = 584)
    - Motivated to distribute self-testing to contacts = 90.1%
    - Motivated to self-test if kit received from contact = 86.1%
  - Motivation to *distribute self-tests* associated with: above-average income, college completion
  - Motivation to *use self-test* received from contact associated with: above-average income, Hispanic ethnicity
  - Importance: Secondary distribution of COVID-19 self-tests may increase uptake, detection. Behavioral interventions may help increase motivation for lower SES persons.

Bien-Gund C, Dugosh K, Acri T, et al. Factors Associated with US Public Motivation to Use and Distribute COVID-19 Self-Tests. *JAMA Netw Open*. 2021;4(1):e2034001. doi:10.1001/jamanetworkopen.2020.34001

Return to School Preliminary Results



- COVID-19 testing is feasible and acceptable in the school setting across a range of populations and settings
- After implementing a testing program for students and staff after SARS-CoV-2 exposure, there was increased access to testing (37% increase) and the number of days in quarantine for students/staff decreased overall (28% moved from >10 days to <10 days)
- Low rates of within-school transmission were observed with COVID-19 testing and mitigation strategies in place (*data predates Delta variant dominance)
- Both surveillance and post-exposure testing are important strategies to return and keep students in school, especially for those children with disabilities who may not be able to effectively use other mitigation methods
- Preliminary results from Phase I projects recently published in *Pediatrics*

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Lessons Learned to Date

Phase I RADx-UP Projects

- ✓ For encouraging testing & vaccination, *culturally appropriate education* is important to increase trust in evidence-based sources of COVID-19 information
- ✓ *Community Advisory Boards* have provided key recommendations and support
- ✓ *Community engagement and trust* are essential to ensure the success of COVID-19 testing and vaccination programs
- ✓ *Flexibility and the ability to adapt* is critical
- ✓ *Partnerships* with community health clinics provide a necessary connection to underserved populations

Return to School Lessons Learned

- Framing COVID-19 testing as a school safety measure with other mitigation strategies increases research participation
- Trusted school champions are instrumental in recruiting students and staff for testing
- Communication directly with parents is most effective for increasing testing uptake
- Engagement with communities about the who, what, when, and where, of testing ensures families receive accurate information
- Strong relationships with school nurses and other medical consultants is vital for dissemination of testing results
- Examples from our Phase I projects were shared in a public workshop in August of 2021

RADx-UP – Future Directions

https://grants.nih.gov/grants/guide/notice-files/NOT-OD-22-051.html

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RADx-UP Phase III

Partnership-driven research to implement and evaluate rapid testing, and prevent and control COVID-19 transmission:

NIH plans to publish two RFAs:

1. To seek community-engaged and partnership-driven research to implement and evaluate SARS-CoV-2 rapid testing (e.g., antigen testing) among underserved and vulnerable populations

2. To seek research to understand the social, ethical, and behavioral implications (SEBI) of COVID-19 testing in these populations

https://grants.nih.gov/grants/guide/notice-files/NOT-OD-22-051.html

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