# COVID-19: Health Equity and Vulnerable Populations

**Cheryl R. Clark, MD, ScD and Bram Wispelwey, MD, MS**

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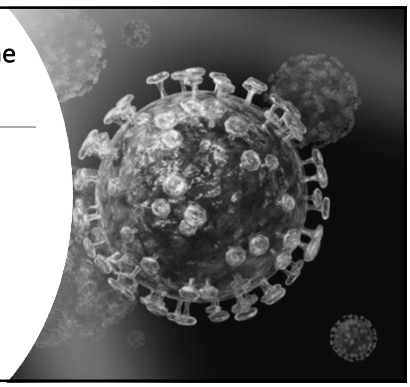
## Centering Equity in the Clinical Response to Covid-19

**Cheryl R. Clark MD, ScD**
**Brigham & Women's Hospital**
**Harvard Medical School**



## Today's Discussion

*Centering Equity in the Clinical Response to COVID-19*

- **Topic focus**:
  - Social and structural patterning of COVID-19
  - Principles for an equitable response
  - Lessons for institutionalizing equity learned during the pandemic

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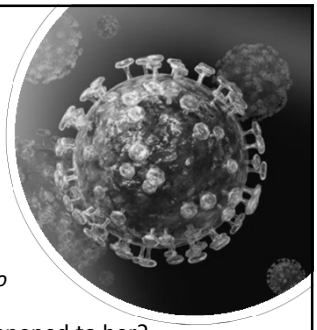
## A Case

- *A vibrant 60-year-old woman is admitted with severe difficulty breathing.*
- *She could not get tested in her community.*
- *A language divide delayed care*
- *She asks what you are going to do to ease suffering.*



Why has this happened to her?
What should we do?

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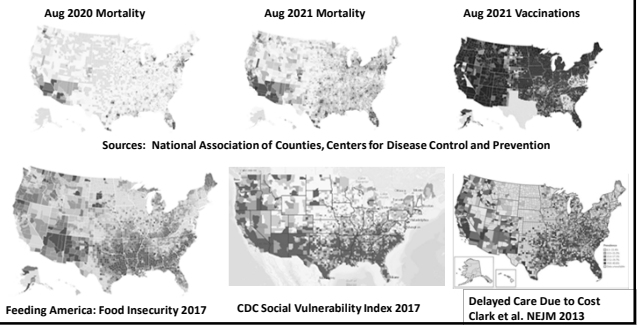
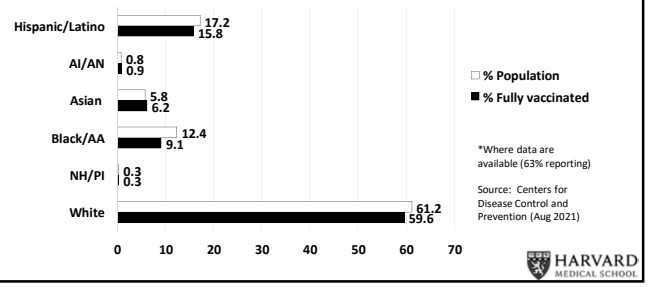
## US Geography of COVID-19




## COVID-19 Vaccination Inequities by Race/Ethnicity*

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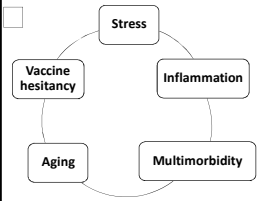
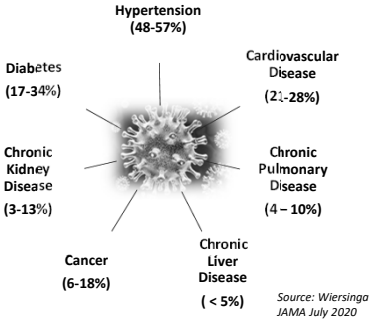
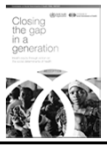
## Clinical Risk Factors for COVID-19 Severity




*Source: Wiersinga JAMA July 2020*

## Social Risk Factors for COVID-19



### What are Social Determinants of Health?

- **Circumstances** in which people are born, grow, live, work, and age
- **Systems** put in place to deal with illness.
- Circumstances and systems shaped by people and our choices: **economics, social policies, and politics**


Source: World Health Organization 2008

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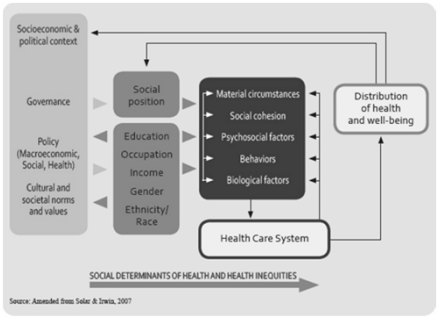
## WHO Framework for Social and Structural Determinants of Health




Source: WHO, Centers for Disease Control and Prevention

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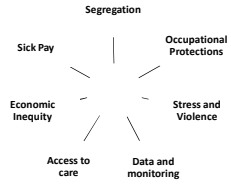
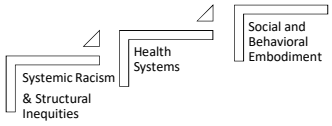
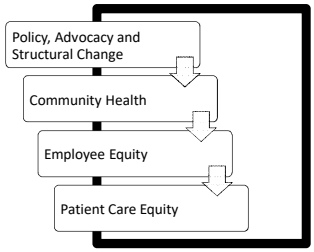
## COVID-19 Risk Viewed with a Framework on Social and Structural Determinants of Health




Williams and Cooper *JAMA* May 2020
Krieger JECH 2005

## Brigham Health COVID19 Equity Response Principles




Source: Cheryl Clark MD, ScD

Chair, BH COVID19 Health Equity and Community Health Response Team

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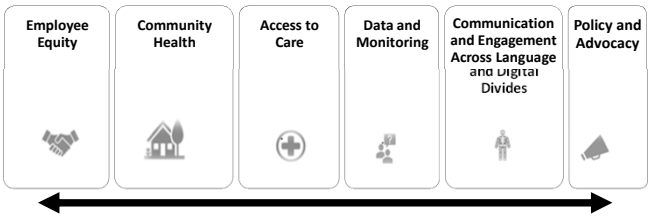
## Brigham Health COVID-19 Equity Response Team Work Streams




**Embed Equity Roles in Hospital Incident Command System Leadership**

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## Data Solutions: It Took Time to Identify COVID-19's Disproportionate Impact on Black and LatinX Communities

**Coronavirus may be hitting harder in Black and Latino communities**

Massachusetts does not release racial and ethnic data, making impact unclear

By Andrew Ryan and Kay Lazar Globe Staff, Updated April 7, 2020, 6:22 p.m.




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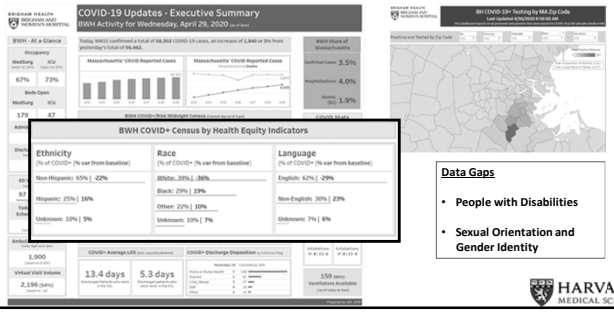
## Brigham Health Data: Race, Ethnicity, Language & Geography




**Data Gaps**

- **People with Disabilities**
- **Sexual Orientation and Gender Identity**

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## Care Delivery: Language Solutions for Patients

Yilu Ma, Director of Interpreter Services Brigham and Women's Hospital

Esteban Gershanik, Director of Quality & Safety Brigham and Women's Hospital

- Optimize Interpreter Use
  - Workflows for COVID
- Increase Virtual Care
  - New interpreter electronic tablets
  - *Virtual Care language integration

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## Equity and Universal Design

**Successful Communication with People with Disabilities**

Dr. Cheri Blauwet MD, MPH
Chair, Mass General Brigham Disability Task Force

**Tips for Specific Situations**


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## Communicating Equitably with Employees

Tina Gelsomino
Director, Center for Diversity and Inclusion, Brigham Health




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## Employee Health

- Advocating for affordable childcare
- Equitable access to equipment
- Responding to diverse communication needs
- Connecting employees with resources

Normella Walker, Director, Diversity & Inclusion, BWH

Karthik Sivashanker MD, Medical Director, Quality, Safety & Equity, BWH

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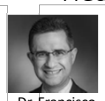
## Health Care Equity : Access to Clinical Trials



Dr. Francisco Marty

**Equitable Access to Remdesivir**

***Race/Ethnicity***

**59%** African American, Hispanic, Asian, Multiple race/ethnicities

**41%** non-Hispanic white

***Language***

**31%** Spanish, Mandarin, Haitian Creole, Portuguese, Russian

**69%** English

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## Building on Community Assets for Achieving Health Equity

| Combined COVID-19 and Social Care in Community Settings | Numbers as of Spring 2021 |
|---|---|
| SARS-COV2 Tests administered | 16,743 |
| Social Determinants of Health Screenings performed | 13,932 |
| Care Kits distributed | 19,377 |
| Food Boxes/Bags distributed | 10,448 |
| COVID Vaccination | 2,302 |
| Voters Registered | 428 |

Source: Ms. Tracy Sylven, Dr. Christin Price, Ms. Mimi Joliffe Brigham Health

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## Precision Health Equity for COVID Vaccination


- Community organization leaders
- Education sessions
- Accessible/mobile locations
- Multiple languages
- Multicultural teams
- Branding

**Collaborative design**

Smaller scale locally-tailored vaccination clinics

Source: Dr. Cheryl Clark MD, ScD

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## Lessons Learned

Reimagining Health Systems

**Diverse Senior Leadership & Technical Staff**
- Hospital administration
- Clinical care operations
- Community health leadership

**Data systems**
- Health care
- Public health

**Multisector Partnerships**
- Health systems
- Community organizations
- Private sector & innovation
- Local, state, federal government

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Brigham and Women's Hospital
Founding Member, Mass General Brigham

# RACIAL INEQUITIES IN THE HOSPITAL

## CASE STUDIES IN ANTIRACIST RESEARCH AND ACTION

**Bram Wispelwey, MD MS MPH**

## Objectives

- Definitions
- Institutional Racism: Opioid Prescribing
- Institutional Racism: Hospital Admissions

## Definitions

- **Health Disparities**
  - The differences between the health of one population and another in measures of who gets diseases, who has a disease, who died from disease, and other adverse health conditions that exist among specific population groups in the US.
- **Health Inequities**
  - The differences in health status or in the distribution of health determinants between different population groups, and ***these differences are systematic, avoidable, unfair and unjust, and are rooted in racial, social and economic injustice***, and are attributable to social, economic, and environmental conditions in which people live, work and play.

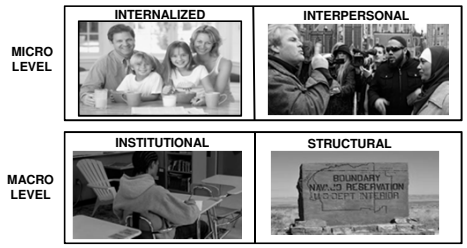
Bharmal, N., Derose, K. Felician, M. (2015) Understanding the upstream social determinants of health. *Encyclopedia of Public Health: RAND Health.* And "Fact File on Health Inequities." (2016). *World Health Organization.*

## Definitions

- **Racism**
  - A system of structuring opportunity and assigning value based on the social interpretation of how one looks (which is what we call "race") that
    - Unfairly disadvantages some individuals and communities
    - Unfairly advantages other individuals and communities
    - Saps the strength of the whole society through the waste of human resources
- **Race**
  - A socially constructed way of grouping people, based on skin color and other apparent physical differences, which has no genetic or scientific basis.

Jones CP. Levels of Racism: A Theoretic Framework and a Gardener's Tale. American Journal of Public Health. 2000; 90(8): 1212-1215.

## Levels of Racism




Jones CP. Levels of Racism: A Theoretic Framework and a Gardener's Tale. American Journal of Public Health. 2000; 90(8): 1212-1215.

## Definitions

- Internalized Racism
  - The set of private beliefs, prejudices, and ideas that individuals have about the superiority of Whites and the inferiority of people of color. Among people of color, it manifests as internalized racial oppression. Among Whites, it manifests as internalized racial superiority.
- Interpersonal Racism
  - The expression of racism between individuals. These are interactions occurring between individuals that often take place in the form of harassing, racial slurs, or telling of racial jokes.

## Definitions

- Institutional Racism
  - Discriminatory treatment, unfair policies and practices, and inequitable opportunities and impacts within organizations and institutions, based on race.
- Structural Racism
  - Racial bias across institutions and society over time. It's the cumulative and compounded effects of an array of factors such as public policies, institutional practices, cultural representations, and other norms that work in various, often reinforcing, ways to perpetuate racial inequity.

## Critical Race Theory

"The critical race theory movement is a collection of activists and scholars engaged in studying and transforming the relationship among race, racism, and power."
-Delgado and Stefancic

"Critical race theory is a practice—a way of seeing how the fiction of race has been transformed into concrete racial inequities."
-Kimberlé Crenshaw

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## Critical Race Theory

- Some Key Tenets:
  - Racism is embedded in society – it is ordinary
  - Racism serves the material and psychic interests of the dominant group
  - Race is socially constructed
  - Differential racialization
  - Intersectionality
  - Unique voice of color
  - Interest Convergence

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**Table 3. PHCRP model by focus and its related CRT-based affiliated principles**

| Focus | Affiliated Principles |
|---|---|
| Focus 1: Contemporary Racialization | Primacy of racism – racism is a dominant social force in society |
| | Race as social construct – phenotypic characteristics have meaning because of socio-political, not biological, factors |
| | Ordinariness of racism – racism exists in all facets of everyday life, even if not perceived |
| | Structural determinism –systems of power preserve the interests of dominant group members |
| Focus 2: Knowledge Production | Social construction of knowledge – study findings reflect research-related biases (eg, a priori assumptions) |
| | Critical approaches – to challenge initial understandings, "question the question" and perform self-critiques |
| | Voice – to privilege the perspectives of marginalized communities |
| Focus 3: Conceptualization & Measurement | Race as social construct – socio-political factors give meaning to phenotypic characteristics |
| | Intersectionality – oppressive social forces produce interlocking effects and social identities |
| Focus 4: Action | Critical approaches – to challenge initial understandings, questioning the questioner and perform self-critiques |
| | Disciplinary self-critique - collective assessment by members of a discipline of unintended racial influence on assumptions, methods, etc. |
| | Intersectionality – oppressive social forces produce interlocking effects and social identities |
| | Voice – to privilege the perspectives of marginalized communities |

Ford C and Airhihenbuwa C. Just What is Critical race theory and What's it doing in a Progressive Field like Public health? *Ethn Dis.* 2018; 28 (Suppl 1): 223-230.

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## Goals:

1) Utilize PHCRP to become an "outsider within," able to readily identify racial biases in the work and unearth discoveries from marginalized perspectives.

2) Build a body of knowledge that can challenge existing policy and practice.

## Objectives

- Definitions
- Institutional Racism: Opioid Prescribing
- Institutional Racism: Hospital Admissions

## Pain management and equity: what we know

- Non-White patients are less likely to have sufficient pain management, regardless of clinical context or healthcare setting
- Inequity is most pronounced for Black patients, who are 22% less likely than White patients to receive any pain medication
- CRT assumption: our institution is not uniquely exempt from this problem

Meghani SH, Byun E, Gallagher RM. Time to take stock: a meta-analysis and systematic review of analgesic treatment disparities for pain in the United States. Pain Med. 2012 Feb;13(2):150-74. doi: 10.1111/j.1526-4637.2011.01310.x. Epub 2012 Jan 13. PMID: 22239747.

## Intervention: standardizing treatment

- Brigham Inpatient Opioid Stewardship Initiative (BIOSI)
- Pre/Post with total of 281 patients

Your orders should be based on a **functional pain assessment**

| Mild Pain | Moderate Pain – Add |
|---|---|
| • Opt for co-analgesia (APAP + ibuprofen) when not contraindicated<br>• Lidocaine patch (use up to 3)<br>• Heat/cold therapy<br>• Reiki | • Ketorolac IV<br>• Lidocaine Patch<br>• PR Tylenol |

## Intervention: standardizing treatment

**Severe Pain**

- Maximize the above medications- make sure non-opioids are written as ATC before escalating pain regimen.
- Give opioids ALWAYS with adjunctive analgesia (APAP / Ibuprofen) unless **contraindicated**
- Start with oral opioids unless the patient is unable to take POs
- Avoid long-acting or extended-release opioids for the treatment of acute pain
- If pain is uncontrolled, try up titrating the dose or switching to an alternative agent before switching the modality of administration. (Morphine PO-> Oxycodone PO rather than Morphine PO -> Morphine IV)
- Use the lowest possible dose to maintain adequate analgesia
- Trial SQ administration rather than IV if patient is unable to take PO
- If giving x1 for breakthrough, administer SQ rather than IV, then consider up titrating **oral dose**
- Avoid administering IV Benadryl with IV opioids
- **Reassess pain every 24 h and consider weaning opioids every day**
- Consult pain medicine to help you manage your patient's pain if you escalate the regimen for two consecutive days.

## Outcomes

- For all patients, MME/day decreased from 14.1 to 7.4

- Pre-intervention: White 15.8 vs Non-White 12
- Post-intervention: White 7.3 vs Non-White 7.9

- Pre-intervention: English 16.1 vs. Other Primary 0.35
- Post-intervention: English 7.6 vs Other Primary 6.2

## Objectives

- Definitions

- Institutional Racism: Opioid Prescribing

- Institutional Racism: Hospital Admissions

## General Medicine vs. Cardiology

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## Context: Specialty Care for CHF

- Patients admitted to the Shapiro Cardiovascular Center receive:
  - Specialty-trained nursing
  - Single rooms
  - Larger, more comfortable rooms
  - Spacious family zones
  - Increased natural light
  - Specialty pharmacy and discharge planning

- And yet, specialty cardiology care in Shapiro remains a limited resource (~2/3 CHF patients admitted here)

## Specialty Care for CHF

- Observational data from community and academic settings suggest differential outcomes for patients receiving specialty cardiology care during admissions for CHF:
  - Mortality
  - Re-admission rates
  - Cardiology clinic follow-up

Steinberg et al, Circulation 2012
Foody et al, AJM 2005
Jong et al, Circulation 2003
Salata et al, AJC 2018
Uthamalingam et al, AJC 2015

- At BWH, differential outcomes for CHF (GMS vs Cards):
  - Lower cardiology clinic follow up (25 vs 51%)
  - Higher 7 day readmissions (10 vs 5%)
  - Higher 30 day readmissions (24 vs 17%)

## Approaching the Problem

**Leading with a Racial Justice Framework**:

Consider the effects of racism as we analyze problems, develop solutions, and define success in the **four pillars** of academic medicine: Clinical care, research, education and community service. With this lens, **we can identify other inequities beyond racial inequities** in the process.

Adapted from Jones, Am J Public Health 2000

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Circulation: Heart Failure

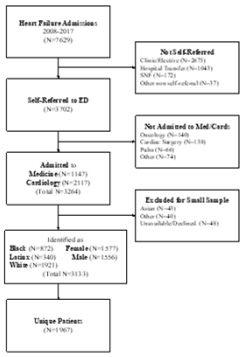
ORIGINAL ARTICLE

## Identification of Racial Inequities in Access to Specialized Inpatient Heart Failure Care at an Academic Medical Center

"This study was guided by Public Health Critical Race Praxis, an approach utilized by researchers to study and ameliorate instances of structural racism and resultant health inequities and developed out of the legal framework of Critical Race Theory. We considered race to be a social construct that captures the impacts of racism rather than innate biological differences and, therefore, hypothesized that differences in HF outcomes were due to structural drivers rather than biological causes."

## Heart Failure Admission Service Triage Study

- Data source:
  - BWH clinical and financial databases
  - All admissions 2008-2017 with principal diagnosis of heart failure
- Self-referred to ED
- Admitted to Medicine or Cardiology
- White, Black, or Latinx
- Outcome: admission to cardiology




**2/3 of White patients admitted to Cardiology compared with 1/2 of Black and Latinx patients.**

Cardiology Admission is associated with:
1) Significantly decreased likelihood of readmission to the hospital
2) Twice the likelihood of following up in outpatient Cardiology clinic

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## Outcome 1

**Table 2. Multivariable GEE Analysis* Showing Factors Associated With Admission to the Cardiology Service for People Admitted With a Principal Diagnosis of HF After Self-Referral to the Emergency Department of the Brigham and Women's Hospital From 2008 to 2017**

| Characteristic | Complete Case Analysis | | | Multiply Imputed Analysis | | |
|---|---|---|---|---|---|---|
| | Adjusted RR | 95% CI | P Value | Adjusted RR | 95% CI | *P* Value |
| Race | | | | | | |
| White | ref | | | ref | | |
| Black | 0.91 | 0.84–0.98 | 0.019 | 0.91 | 0.84–0.98 | 0.015 |
| Latinx | 0.83 | 0.72–0.97 | 0.017 | 0.84 | 0.73–0.96 | 0.012 |

**Table 3. Rate Ratios for Admission to Cardiology for Propensity-Matched Cohorts**

| | Rate Ratio of Admission to Cardiology | 95% CI | *P* Value |
|---|---|---|---|
| Black vs white | 0.74 | 0.63–0.87 | 0.0001 |
| Latinx vs white | 0.75 | 0.60–0.95 | 0.014 |
| Female vs male | 0.86 | 0.77–0.96 | 0.0055 |

## Outcome 2

| Readmissions | Hazard Ratio | 95% CI |
|---|---|---|
| Admission to Cardiology | 0.84 | 0.72, 0.97 |
| Age | | |
| <50 | ref | |
| 50-75 | 0.61 | 0.49, 0.76 |
| >75 | 0.54 | 0.43, 0.69 |
| Seen in institutional cardiology clinic in last year | 1.27 | 1.09, 1.49 |
| Seen by institutional PCP in last year | 1.17 | 1.01, 1.36 |
| HFpEF | 0.81 | 0.70, 0.94 |
| Comorbidity | | |
| Valvular Disease | 1.24 | 1.07, 1.44 |
| Chronic Kidney Disease | 1.36 | 1.15, 1.60 |

Also in model: race, Boston Metro resident, psychiatric disease, chronic liver disease, Elixhauser index

## Outcome 3

**Cardiology clinic follow up within 30 days**

- General medicine - 25%
- Cardiology - 46% (P<0.0001)

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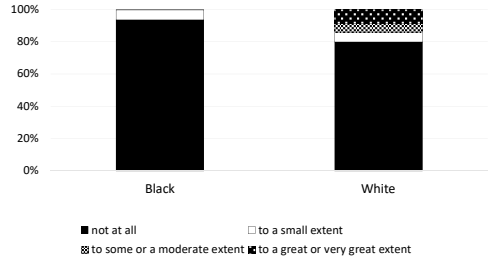
ORIGINAL ARTICLE PEER-REVIEWED

# Heart Failure Admission Service Triage (H-FAST) Study: Racialized Differences in Perceived Patient Self-Advocacy as a Driver of Admission Inequities

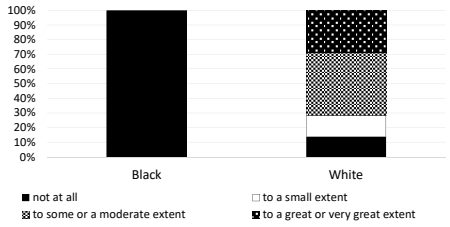
Emily C. Cleveland Manchanda, Regan H. Marsh, Chidinma Osuagwu, Jennifer Decopain Michel, Julianne N. Dugas, Michael Wilson, Michelle Morse, Eldrin Lewis, Bram P. Wispelwey

**Published:** February 16, 2021

**Did the patient and/ or their family indicate a preference for admission location?**




**If preference indicated, to what extent did this affect your decision for location of admission?**




## H-FAST: Results and Implications

- White patients push for specialty care more often and more strenuously, and providers are responsive to this.
- Clinicians were more likely to report having spoken with this outpatient provider for White patients than for Black or Latinx patients (24.3 vs 16.7%).

RACE

## An Antiracist Agenda for Medicine

Colorblind solutions have failed to achieve racial equity in health care. We need both federal reparations and real institutional accountability.

BRAM WISPELWEY, MICHELLE MORSE

## Healing ARC: reparative justice in response to institutional racism

1) *Acknowledgement* is when the institution voices ownership and responsibility for inequities to the communities impacted

2) *Redress* requires a compensatory step in addressing patients and communities harmed by institutional racism

3) *Closure* will explore community oversight as a means of ensuring fair restitution for inequities