Racial Inequities in the Hospital

Case Studies in Antiracism Research and Action

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Objectives

- Definitions
- Institutional Racism: Security Responses
- Institutional Racism: ED Boarding
- 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**

"Racism…is the state-sanctioned or extralegal production and exploitation of group-differentiated vulnerability to premature death."

Ruth Wilson Gilmore. *The Golden Gulag: Prisons, Surplus, Crisis, and Opposition in Globalizing California.* U of Cal Press. 2007.

Reductions in 2020 US life expectancy due to COVID-19 and the disproportionate impact on the Black and Latino populations

Theresa Andrasfay and Noreen Goldman Authors Info & Affiliations

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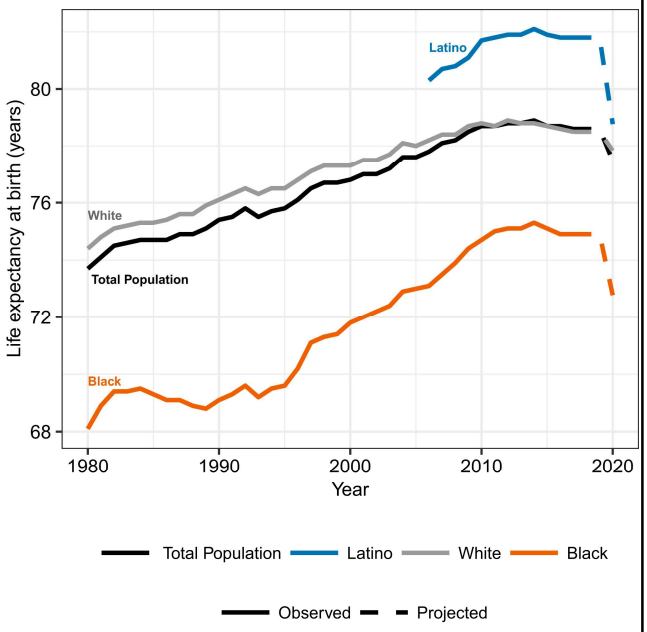


Source PNAS

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

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

What does "socially constructed" mean?

Races can be understood as a "traces of history," since racialization acts to reflect, justify, and reproduce—into the present—the unequal relationships engendered by historical processes of colonization and domination.

WOLFE, P. TRACES OF HISTORY: ELEMENTARY STRUCTURES OF RACE, VERSO, 2016

Definitions

Race is "a technology for the management of human difference, the main goal of which is the production, reproduction, and maintenance of white supremacy on both a local and a planetary scale."

-Alana Lentin

Why Race Still Matters

How does race function today?

"Race [has] a complex dimension, serving as both a technology of oppression and a vehicle for resistance to that oppression. This…is part of the messiness we must consider."

-Cheryl Harris

Of Blackness and Indigeneity. Critical Ethnic Studies , Vol. 5, No. 1-2.

Public Health Critical Race Praxis

- Draws on Critical Race Theory, key tenets of which include:
  - 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

Public Health Critical Race Praxis

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.

Goals of PHCRP:

1) Utilize this appraoch to become an “outsider within,” able to readily identify racism at work and unearth discoveries from marginalized perspectives.

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

Objectives

- Definitions
- Institutional Racism: Security Responses
- Institutional Racism: ED Boarding
- Institutional Racism: Hospital Admissions

Security Emergency Responses (SERs) and Patient Trauma

SERs are utilized to deal with threats in the hospital…

Definition: Security Emergency Response (SER/Code Grey) – the summoning of security officers to a a patient's bedside to maintain safety

SERs are called for multiple reasons at BWH

- Patient or visitor is perceived as threat to staff, other patients, or other visitors
- Patient is perceived as a threat to themselves

…but patients often experience restraints as dehumanizing

All I did was ask them to just release my arms. I don't care about being restrained. Leave them on my legs, it doesn't bother me on my legs. Let me wipe my face or itch my nose or whatever. ***There's no need to treat me like an animal. It's uncalled for. Honestly."***

When my sisters call the paramedics. Oh it's going to be a while. I just go kiss my son, see you later. The experience in the emergency room, ***It's traumatic as hell and it makes me feel like a piece of sh-t."***

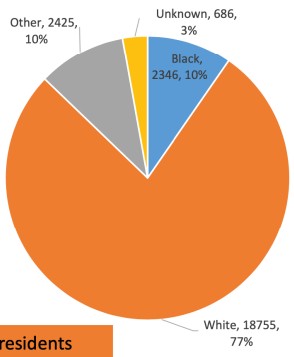
Source: Ambrose et al., *JAMA Network Open*, 2020.

Slide credit: Yannis Valtis, MD

Study time period: 9/1/2018-12/31/2019

24,212 unique patients were discharged from the BWH Tower: 10% identified as Black

White patients:
- Median age: 65
- 51% Female
- 2% Hispanic
- 7% on Medicaid
- Mental health dx: 18%
- Substance use dx: 12%



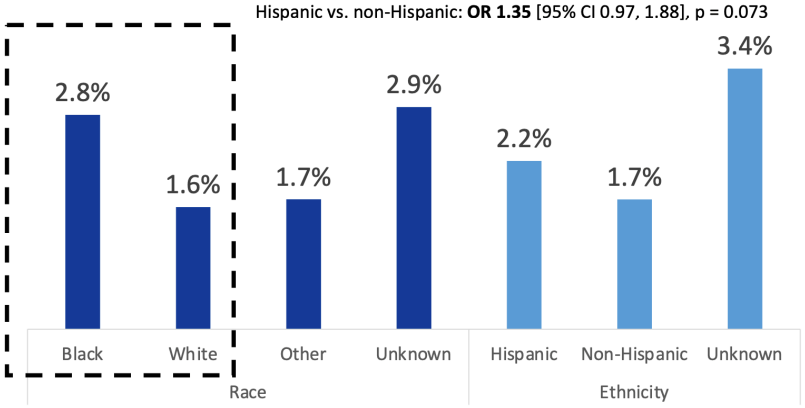
Black patients:
- Median age: 58
- 57% Female
- 5% Hispanic
- 25% on Medicaid
- Mental health dx: 17%
- Substance use dx: 19%

Of note, 28% of Boston residents identify as Black (US Census ACS, 2014)

Slide credit: Yannis Valtis, MD

In univariate analysis, Black patients were almost twice as likely to have SER called as white patients

Univariate Firth Logit Model:
Black vs. white: **OR 1.82** [95% CI 1.39, 2.39], p < 0.001
Hispanic vs. non-Hispanic: **OR 1.35** [95% CI 0.97, 1.88], p = 0.073



Slide credit: Yannis Valtis, MD

In multivariable analysis, Black patients had higher odds of SER

Outcome: SER
n = 24,212

	Multivariable (1) Firth Logit* OR [95% CI]	P	Multivariable (2) Firth Logit* OR [95% CI]	P
Race				
Black vs. White	**1.55 [1.17, 2.05]**	**0.002**	**1.36 [1.02, 1.81]**	**0.037**
Other vs. White	0.92 [0.61, 1.39]	0.69	0.85 [0.56, 1.29]	0.45
Unknown vs. White	1.41 [0.86, 2.33]	0.18	1.34 [0.81, 2.22]	0.25
Ethnicity				
Hispanic vs. non-Hispanic	1.33 [0.88, 2.03]	0.18	1.20 [0.78, 1.83]	0.41
Unknown vs. non-Hispanic	1.73 [1.13, 2.65]	0.011	1.71 [1.12, 2.62]	0.014
Age	1.00 [0.99, 1.00]	0.26	1.00 [0.99, 1.01]	0.43
Sex M vs. F	2.25 [1.82, 2.79]	<0.001	2.24 [1.81, 2.78]	<0.001
Mental Health Dx	1.56 [1.24, 1.95]	<0.001	1.51 [1.21, 1.90]	<0.001
Substance Abuse Dx	4.86 [3.95, 5.97]	<0.001	4.28 [3.46, 5.30]	<0.001
Length of Stay	1.03 [1.02, 1.03]	<0.001	1.03 [1.02, 1.03]	<0.001
Medicaid vs. Other			2.20 [1.70, 2.84]	<0.001

Because of collinearity of race and insurance in our dataset, models were run both with and without insurance as a co-variate, without altering the conclusion

Slide credit: Yannis Valtis, MD

Among those with SER, race/ethnicity & restraints were not statistically associated

Outcome: Physical restraint
n = 423 (patients on whom SER was called)

	Multivariable (1) Poisson IRR [95% CI]	P	Multivariable (2) Poisson IRR [95% CI]	P
Race				
Black vs. White	0.64 [0.34, 1.19]	0.16	0.64 [0.34, 1.20]	0.17
Other vs. White	1.29 [0.50, 3.33]	0.60	1.30 [0.50, 3.37]	0.59
Unknown vs. White	0.44 [0.13, 1.48]	0.19	0.45 [0.14, 1.51]	0.20
Ethnicity				
Hispanic vs. non-Hispanic	0.85 [0.31, 2.32]	0.75	0.85 [0.31, 2.32]	0.75
Unknown vs. non-Hispanic	1.03 [0.41, 2.63]	0.94	1.02 [0.40, 2.59]	0.97
Age	1.03 [1.01, 1.04]	<0.001	1.03 [1.01, 1.04]	<0.001
Sex M vs. F	1.39 [0.87, 2.23]	0.17	1.39 [0.86, 2.23]	0.18
Mental Health Dx	1.05 [0.63, 1.75]	0.85	1.06 [0.64, 1.77]	0.82
Substance Abuse Dx	0.74 [0.46, 1.18]	0.21	0.76 [0.47, 1.24]	0.28
Length of Stay	1.02 [1.01, 1.04]	0.004	1.02 [1.01, 1.04]	0.004
Medicaid vs. Other			0.86 [0.48, 1.53]	0.60

Because of collinearity of race and insurance in our dataset, models were run both with and without insurance as a co-variate, without altering the conclusion

Slide credit: Yannis Valtis, MD

We hypothesize there are multiple mechanisms contributing to our two main findings

1 Black patients are more likely to have SER called on them…

***Potential** mechanisms*

- Hospital staff racism leading to perception of Black patients as threatening
- Language or cultural barriers between providers and patients
- Stigmatizing language in the medical record
- Prior negative experience of Black patients with healthcare system leading to guarded approach towards providers

2 …but less likely to be physically restrained as a result

***Potential** mechanisms*

- Lower threshold to call SER on Black patients – many of them not an actual threat
- Multiple decision makers involved in decision to place patient in restraints – decreased impact of implicit bias

Slide credit: Yannis Valtis, MD

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Racial inequities in ED boarding for hospitalized patients

1. **The rapid rise in Emergency department (ED) boarding has been declared a national public health crisis and is known to be associated with increased patient harm and dissatisfaction.**

1. **Despite this growing and widespread impact, little is known about the racial and ethnic inequities in ED boarding.**

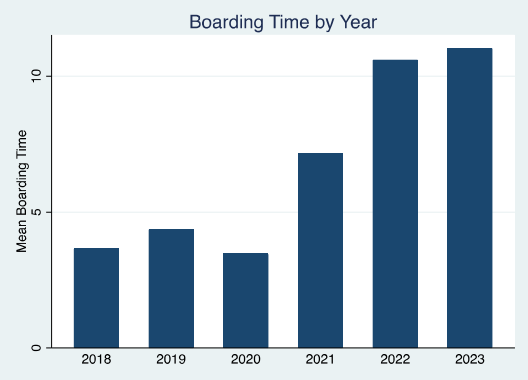
Slide credit: Rose Olson

Project Overview

- **Timeline: 2018- 2023**
- **Population (N= 38,766):**
  - **Adult patients admitted to internal medicine services who presented to ED**
- **NH Black, Hispanic/LatinX, or Other compared to NH White**
- **Covariates: age, sex, primary language, acuity (ESI + ambulance arrival), Elixhauser comorbidity index, precaution status**
- **Outcome:**
  - **Odds of ED boarding 4 or more hours in the ED during inpatient admission (binary outcome)**

Slide credit: Rose Olson

Project Findings

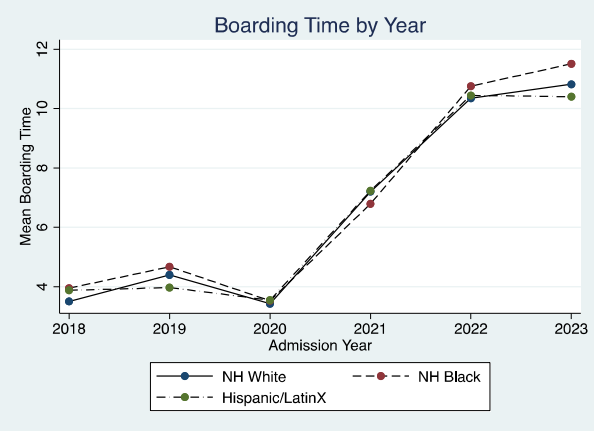


- **Boarding time is rising dramatically each year at BWH, BWFH, and nationally, demonstrating the urgency and relevance of this uncontrolled issue.**

- ***Boarding time is in hours**
- ***Data includes BWH and BWFH**

Slide credit: Rose Olson

Project Activities



- **Though year-to-year trends are similar, Black patients admitted to internal medicine services, as a whole, wait significantly longer for an inpatient medicine bed compared to NH White patients.**
- **This racial disparity is widening.**

Slide credit: Rose Olson

Table 2. Predictors of ED boarding 4 or more hours amongst hospitalized general medicine patients.

	OR	p value	aOR (adjusted for age, sex)	p value
Female sex	1.08 (1.04-1.13)	<.001	1.08 (1.03-1.13)	<.001
Age groups				
18 to <40	1 (ref)	NA	1 (ref)	NA
40 to <65	0.82 (0.77-0.88)	<.001	0.83 (0.77-0.88)	<.001
65 or more	0.74 (0.70-0.78)	<.001	0.74 (0.70-0.79)	<.001
Female sex				
Race				
NH White	1 (ref)	NA	1 (ref)	NA
NH Black	1.17 (1.11-1.24)	<.001	1.13 (1.07-1.19)	<.001
Hispanic/LatinX	1.05 (0.98-1.11)	0.16	1.00 (0.94-1.07)	0.99
NH Other	1.16 (1.05-1.27)	0.003	1.14 (1.04-1.25)	0.007

In exploratory regressions, several factors were associated with increased ED boarding time:

- **Female sex**
- **Younger Age**
- **Black or "Other" race**

Slide credit: Rose Olson

Insurance, n (%)				
Private	1 (ref)	NA	1 (ref)	NA
Medicare	0.34 (0.32-0.36)	<.001	0.32 (0.30-0.34)	<.001
Medicaid	1.78 (1.68-1.88)	<.001	1.78 (1.71-1.91)	<.001
Other*	1.05 (0.95-1.15)	0.32	1.05 (0.95-1.15)	0.33
No of comorbidities				
0 to 1	1 (ref)	NA	1 (ref)	NA
2 to 3	1.06 (0.98-1.14)	0.15	1.10 (1.02-1.19)	0.012
4 or more	1.14 (1.07-1.22)	<.001	1.24 (1.16-1.32)	<.001
Emergency Severity Index*				
2 to 5	1 (ref)	NA	1 (ref)	NA
1 to 2	1.39 (1.33-1.45)	<.001	1.41 (1.35-1.47)	<.001
Ambulance arrival	1.11 (1.06-1.16)	<.001	1.16 (1.11-1.21)	<.001

Additionally, these factors increased ED boarding:

- **Medicaid insurance**
- **More comorbidities**
- **Higher acuity**

Slide credit: Rose Olson

What about the patient experience of boarding?

Question: Is prolonged Emergency Department (ED) boarding associated with racial discrimination and dissatisfaction?

Findings: In a cross-sectional study of 525 adults admitted to a large, urban medical center in Boston, Massachusetts, patients who boarded 24 hours or longer were 1.84 times more likely to report discrimination and 1.77 more likely to report dissatisfaction with care, compared to those who boarded less than 4 hours. **Racially marginalized patients were significantly more likely to report discrimination while boarding** ***(OR 2.36, 95% CI, 1.20-4.65; P = .01).***

Meaning: Patients who board in the ED 24 hours or longer may experience more racial discrimination and dissatisfaction with care.

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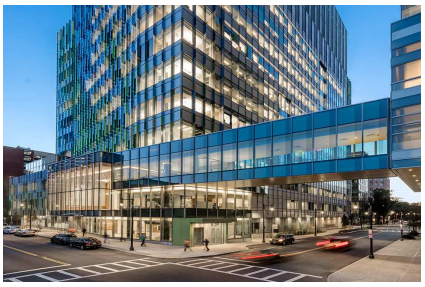
General Medicine vs. Cardiology

BRIGHAM AND WOMEN'S HOSPITAL

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



Specialty Care for CHF

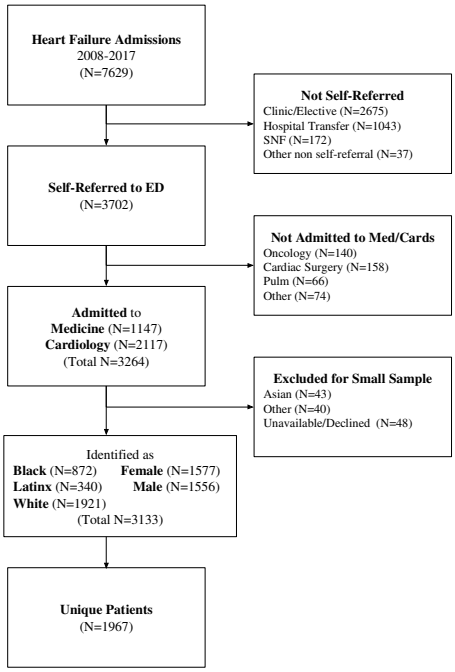
- Observational data from community and academic settings suggest differential outcomes for patients receiving specialty cardiology care during admissions for CHF:
  - Mortality
  - Re-admission rates
  - Cardiology clinic follow-up

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%)

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



Heart Failure: Study Outcomes

- **Raw data:**
- 67% of White vs 53% of Black and Latinx patients admitted to Cardiology
- **Primary Outcome, multivariate analysis:**
- Black and Latinx patients admitted to Cardiology less frequently than White peers
- **Secondary Outcomes, Cardiology admission associated with:**
- Significantly decreased likelihood of hospital readmission (hazard ratio = 0.84, 95%CI 0.72-0.97)
- Increased outpatient Cardiology follow up (46% vs 25% for GMS)

Characteristic	Multiply Imputed Analysis		
	Adjusted RR	95% CI	*P* Value
Race			
White	ref		
Black	0.91	0.84–0.98	0.015
Latinx	0.84	0.73–0.96	0.012

	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

Follow up study with providers

- White patients are perceived to push for specialty care more often and more strenuously, and providers admit they 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%).

Cleveland Manchanda E C, Marsh R H, Osuagwu C, et al. (February 16, 2021) Heart Failure Admission Service Triage (H-FAST) Study: Racialized Differences in Perceived Patient Self-Advocacy as a Driver of Admission Inequities. Cureus 13(2): e13381. doi:10.7759/cureus.13381

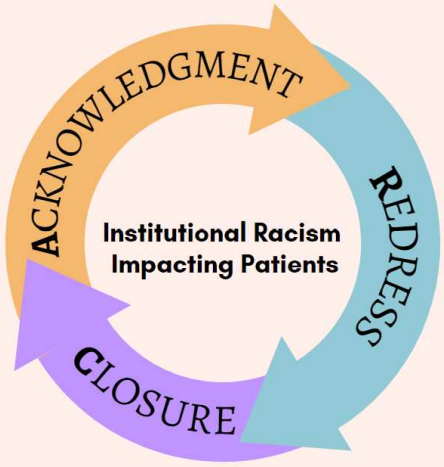
RACE

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



A Reparative Approach

1. **Acknowledgment**
   Voice responsibility
2. **Redress**
   Take compensatory action
3. **Closure**
   Ensure community agreement and oversight

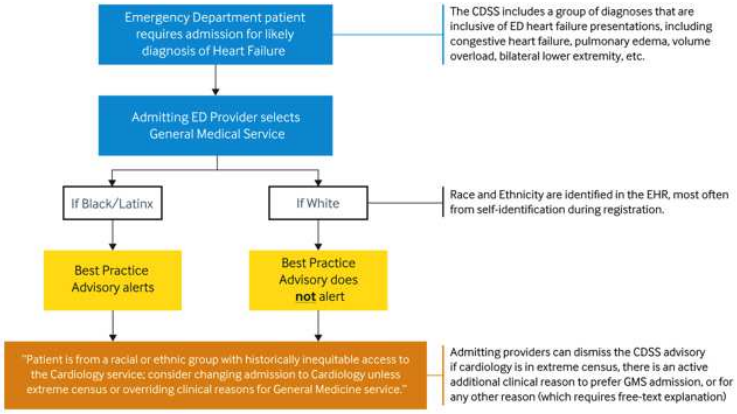
Wisdom Councils Guide Healing ARC Implementation for Institutional Accountability

This figure shows how the Wisdom Council facilitates the implementation of the Healing ARC model of addressing institutional racism.

Source: Content supplied by A. Kirsten Mullen, William A. Darity, and authors
NEJM Catalyst (catalyst.nejm.org) © Massachusetts Medical Society

Best Practice Advisory Protocol to Redress Racial Inequities in Access to Cardiology Service

This use of the clinical decision support system is designed specifically to redress and mitigate institutional racism in heart failure admissions. The tool would trigger a Best Practice Advisory message to consider cardiology rather than the general medicine service. The clinician can decline the advisory if cardiology is in extreme census, if they specify clinical reasons that make general medicine preferable, or if they specify some other reason.



Source: The authors

NEJM Catalyst (catalyst.nejm.org) © Massachusetts Medical Society

Why Repair?

As providers, we often take trust for granted.

Should we?

Medical Mistrust and Its Impacts

Trust in health care among Americans has declined in recent decades, and it's worse among Black Americans.

Black Americans are more likely than whites to say they don't trust their physician

In an October 2020 poll, 7 of 10 Black Americans say they're treated unfairly by the health care system and 55% percent say they distrust it.

Mistrust may prevent people from getting care.

People who say they mistrust health care organizations are less likely to take medical advice, keep follow-up appointments, or fill prescriptions.

People who say they mistrust the system are much more likely to report being in poor health.

Commonwealth Fund: https://www.commonwealthfund.org/publications/newsletter-article/2021/jan/medical-mistrust-among-black-americans

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Appendix

Pain management and equity nationally: 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 • Lidocaine patch (use up to 3) • Heat/cold therapy • Reiki	• Ketorolac IV • Lidocaine Patch • PR Tylenol

Credit: Agustina Saenz, MD MPH

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.

Credit: Agustina Saenz, MD MPH

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

Credit: Agustina Saenz, MD MPH