



Boston Medical Center HEALTH SYSTEM

Interrogating the Pipeline Through Community Partnerships, Intentionality, and Collaboration

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Highly Predictable

...and despite the fact that they do not differ greatly on geographic closeness to health services

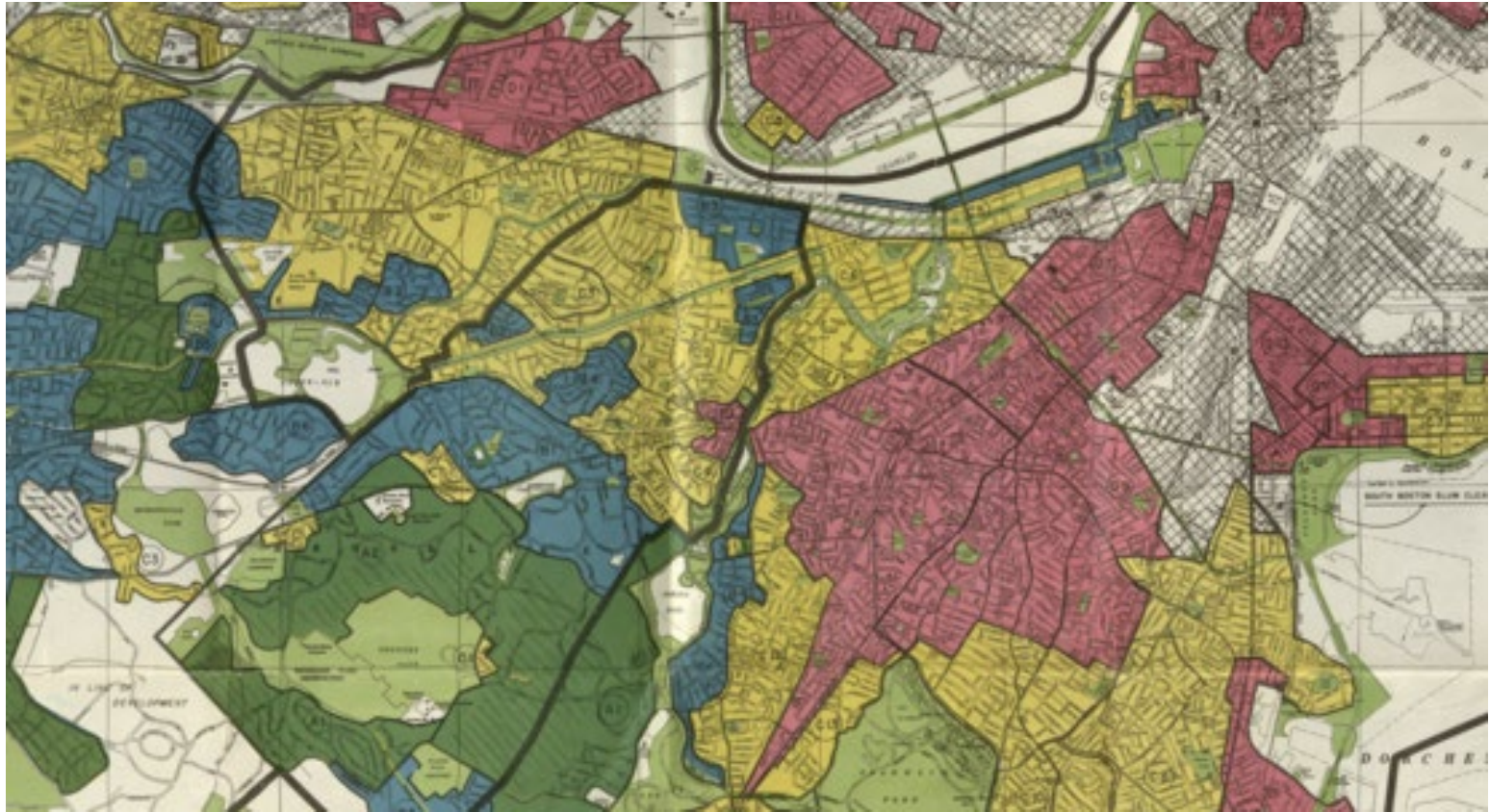


- Lower income
- Premature death
- Lower education
- Lower life expectancy
- Homicide rates

Google Maps. <<https://www.google.com/maps/>> Accessed March 17, 2015.

Understanding how disparities have been created is the foundation for seeking long term solutions

Federal Housing Authority practice of redlining denied mortgages to African American and Low Income Populations



Best



Still
Desirable

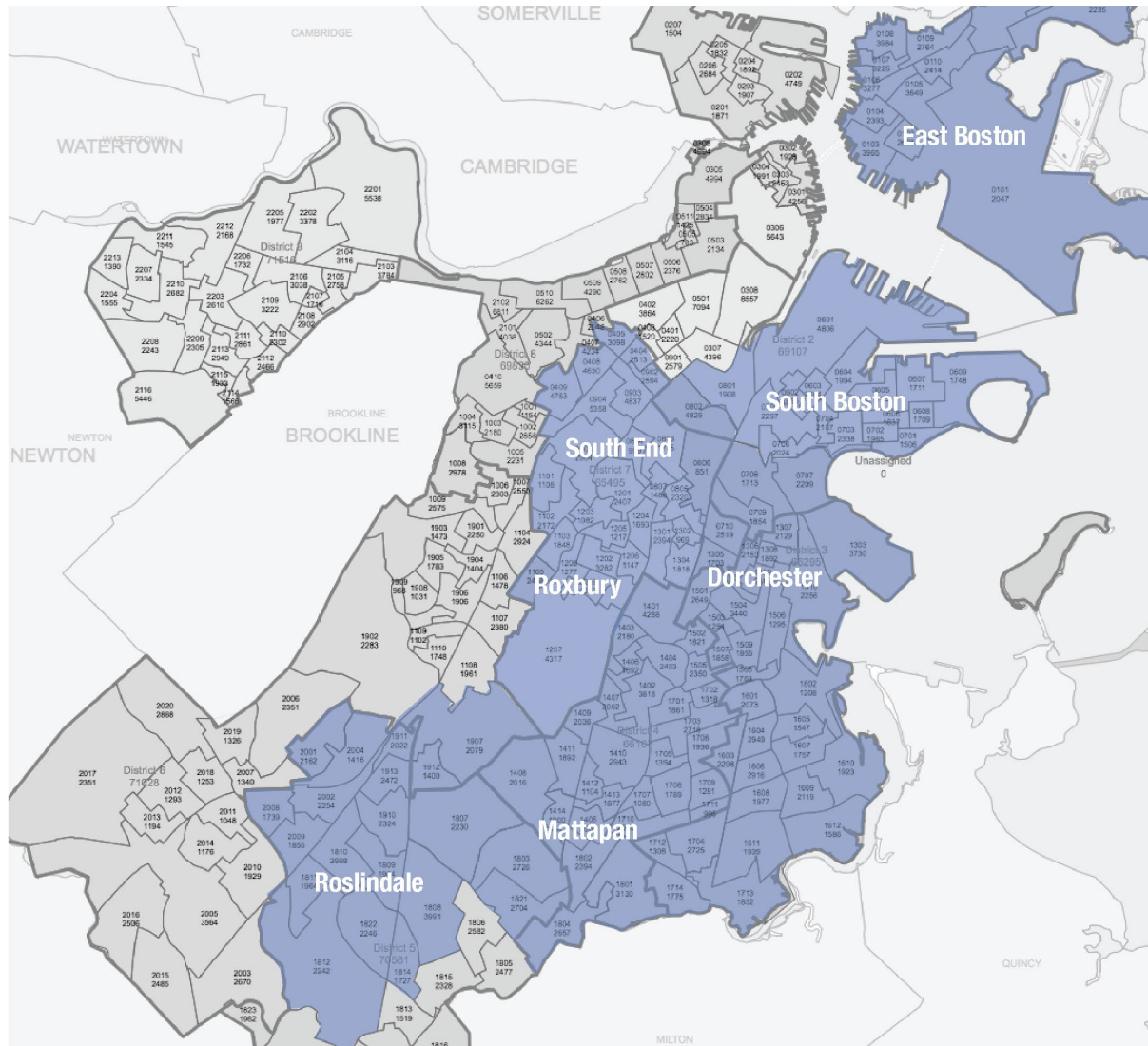


Definitely
declining



Hazardous

Boston Medical Center Health System's Patient Catchment Area



The Data

GUNSHOT AND STABBINGS BY HOSPITAL



Hospital	2020	2021	Total
Boston Medical Center	465	359	824
Mass General Hospital	176	114	290
Brigham and Women's Hospital	83	67	150
Tufts Medical Center	57	69	126
Beth Israel Lahey Health	40	27	67
Boston Children's Hospital	7	8	15
TOTAL:	821	604	1432

From the start, the pandemic has had a disproportionate impact on the patients we serve

Inside Boston Medical Center: The heart of the coronavirus storm

In the city's safety-net hospital, seven out of 10 admitted patients are sickened by COVID-19

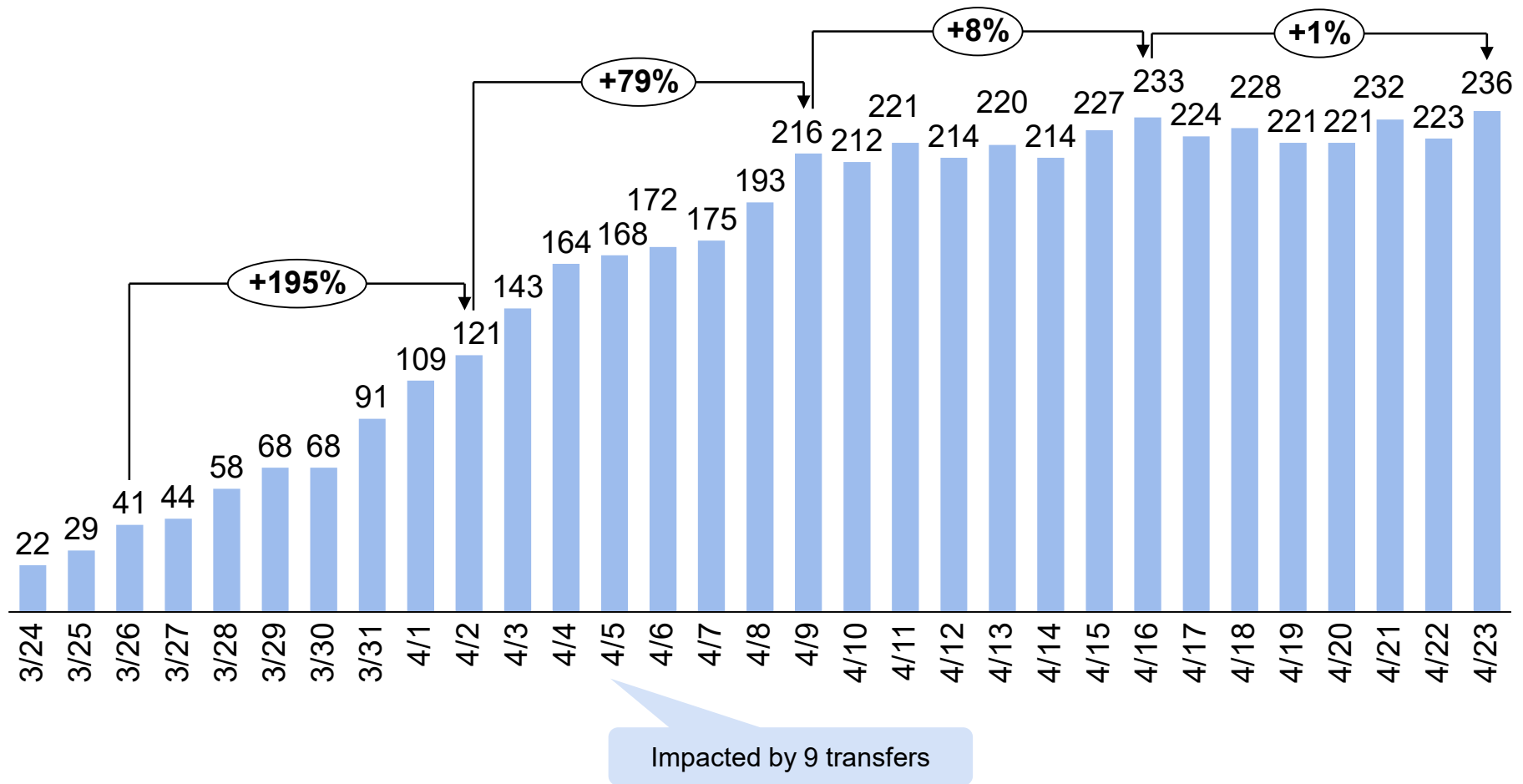
By Felice J. Freyer Globe Staff, Updated April 18, 2020, 2:40 p.m.



A nurse wore full personal protective gear while caring for an intubated COVID-19 patient at Boston Medical Center. ERIN CLARK/GLOBE STAFF

“For more than 150 years, the hospital at the edge of Boston’s South End has taken pride in caring for the city’s most vulnerable patients. But now as the coronavirus ravages the communities BMC serves, **the city’s safety net hospital by necessity has become essentially a COVID-19 hospital. The pandemic hit here first and hit here hardest.**”¹

Our COVID positive census grew to 236 patients in 30 days in the first surge – BMC had the highest percent of Covid positive patients in Boston



1. Assumes 100% of pending results are positive.
2. Includes patients admitted but who are in ED awaiting bed

Boston Medical Center Health System

COVID-19 Weekly Data Report

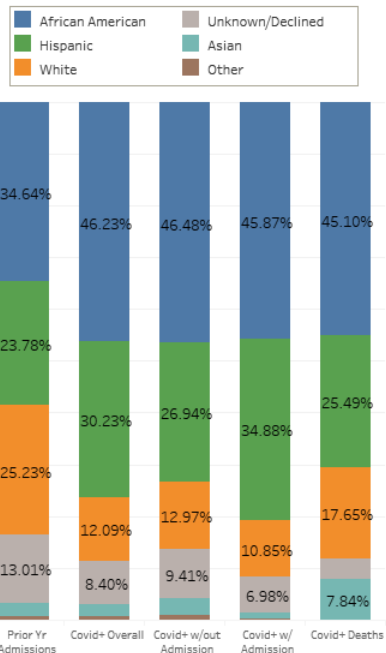
4-22-20

Demographics Breakdown (Covid+ with Prior Year Averages)

Data current as of: 4/23/2020 12:00:00 AM
Source: BMC Data Warehouse

MEDICAL

Race/Ethnicity



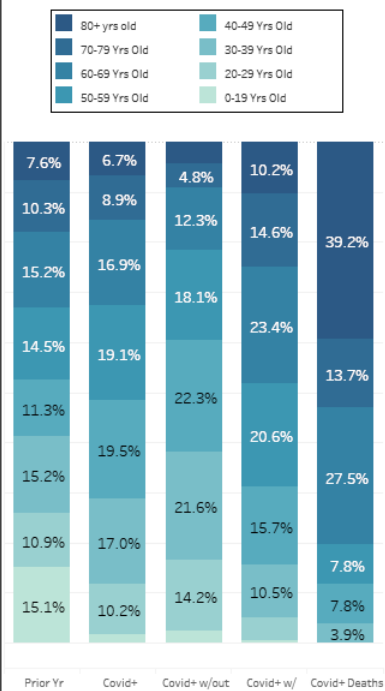
Cohort Sizes (Unique Patients)

Cohort	# Pts	Avg Age	Deaths
Prior Yr Admissions	25,782	45	832
Covid+ Overall	1,869	51	51
Covid+ w/out Admission	1,095	46	9
Covid+ w/ Admission	774	58	42
Covid+ Deaths	51	71	51

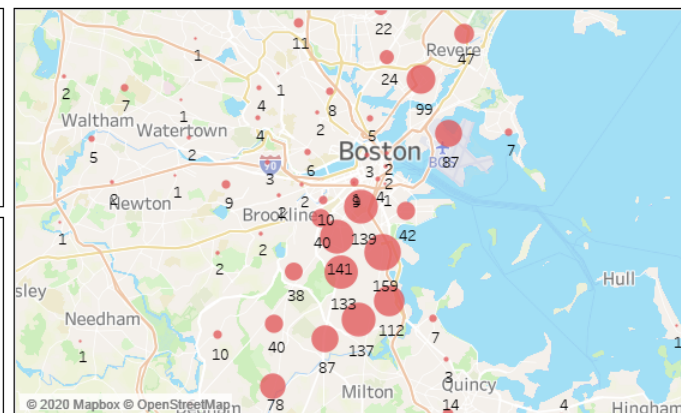
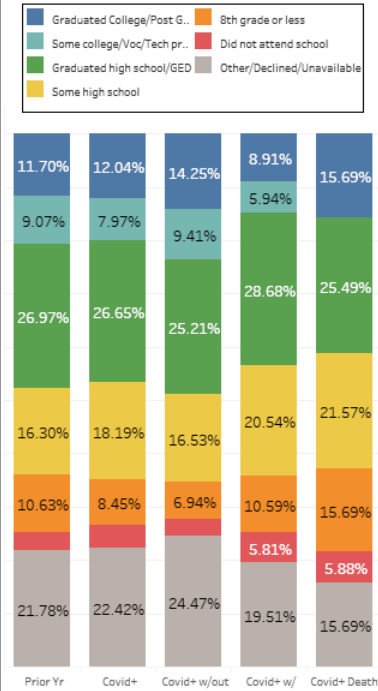
Gender

	F	M
Prior Yr Admissions	54.9%	45.1%
Covid+ Overall	52.0%	48.0%
Covid+ w/out Admission	58.5%	41.5%
Covid+ w/ Admission	42.6%	57.4%
Covid+ Deaths	33.3%	66.7%

Age Brackets



Level of Education



Neighborhood - Compare

Neighborhood	Covid+ w/ Admission		Covid+ w/out Admission		Prior Yr Admissions	
	Count	% Cohort	Count	% Cohort	Count	% Cohort
BOSTON (DORCHESTER)	174	22.48%	230	21.00%	3,619	14.04%
BOSTON (ROXBURY)	73	9.43%	68	6.21%	1,541	5.98%
BOSTON (SOUTH END)	71	9.17%	68	6.21%	1,690	6.55%
CHELSEA	62	8.01%	37	3.38%	813	3.15%
BOSTON (EAST BOSTON)	54	6.98%	33	3.01%	1,206	4.68%
BOSTON (DORCHESTER CENTER)	49	6.33%	88	8.04%	1,829	7.09%
BOSTON (MATTAPAN)	38	4.91%	49	4.47%	960	3.72%
BOSTON (HYDE PARK)	34	4.39%	44	4.02%	710	2.75%
BOSTON (SOUTH BOSTON)	24	3.10%	19	1.74%	753	2.92%

Comorbidities

Cohort	Obesity	Hypertens..	Diabetes	CADs	CKD	CHF	COPD/Ast..	Cancer
Prior Yr Admissions	60.2%	30.5%	17.3%	46.3%	16.7%	7.4%	5.0%	9.0%
Covid+ Overall	69.9%	35.2%	22.1%	44.9%	14.6%	5.2%	3.6%	5.4%
Covid+ w/out Admiss.	66.8%	26.0%	15.0%	37.4%	8.9%	2.1%	1.4%	3.1%
Covid+ w/ Admission	74.4%	48.2%	32.2%	55.6%	22.7%	9.6%	6.7%	8.7%
Covid+ Deaths	68.6%	72.6%	43.1%	74.5%	47.1%	39.2%	13.7%	13.7%

% Homeless in the Last Year

Cohort	Homeless	Housed
Prior Yr Admissions	9.5%	90.5%
Covid+ Overall	8.5%	91.5%
Covid+ w/out Admission	4.9%	95.1%
Covid+ w/ Admission	13.4%	86.6%
Covid+ Deaths	2.0%	98.0%

We have decades of experience developing models of care that address upstream drivers of health



Improving children's health in America by informing policies that address and alleviate economic hardships



Extending tangible outreach to patients' families such as nutritious foods, clothing, transportation, proper housing and other necessities

MLP | Boston

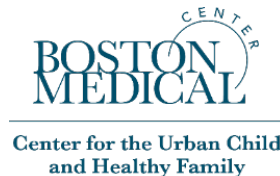
Integrating the expertise of lawyers into healthcare settings to help clinicians address structural problems at the root of health inequities



Equipping patients with the skills, services and opportunities to make positive changes in their lives and their communities



Building a national movement to incorporate financial wellbeing into healthcare



Empowering families to define their health priorities and design their own care

No change in outcomes



Mother and child

Rationale

In Boston, **infant mortality** is **4.1x** higher for **Black infants** and **3.4x** higher for **Latinx infants** than white infants
In the US, **pregnancy-related deaths** are **3.2x** higher for Black women than white women



Chronic conditions¹

In Boston the **diabetes mortality rate** is **1.6x** higher for Latinx residents and **2.3x** higher for Black residents compared to white residents
Sickle cell disease impacts almost exclusively Black patients



Oncology

In Boston, Black residents are **1.5x more likely to suffer premature death from cancer**
In Boston, Black residents are **2.6x more likely to die from prostate cancer**
In Boston, Black residents are **1.2x more likely to die from breast cancer**



Infectious diseases

In Boston, **COVID-19 cases** are **1.5x higher** in Black communities² and **2.2x higher** in Latinx communities
In Boston, **HIV incidence** is **3.3x higher** in Black communities



Behavioral health

In Boston, Black residents are **1.4x more likely** and Latinx residents are **1.7x more likely to suffer persistent sadness**
In the US, Black residents are **1.8x more likely to attempt suicide**



Violence and trauma

In Boston, **the homicide by firearm rate** is **50x higher** for Black males
Boston Accountable Care Organization's Black child members are **1.8x as likely to be identified as having experienced abuse or neglect**

1 Focus: diabetes, hypertension, heart disease, asthma, and sickle cell disease. 2. As of 1/27/21.
SOURCE: 2019 Boston CHNA, 2016-2017 Health of Boston Report, SAMHSA, CDC

The Pipeline: What is our role? Charity? Equity?

- Correlations between health and wealth: *we are ineffective*
- Patients cannot prioritize health: *prioritizing survival*
- Vicious cycle of instability (not ideal investment and business model)
- Lower income and lower health status
- Lower education (> 25 years old)
- Life expectancy
- Median net wealth gap (BOSTON)



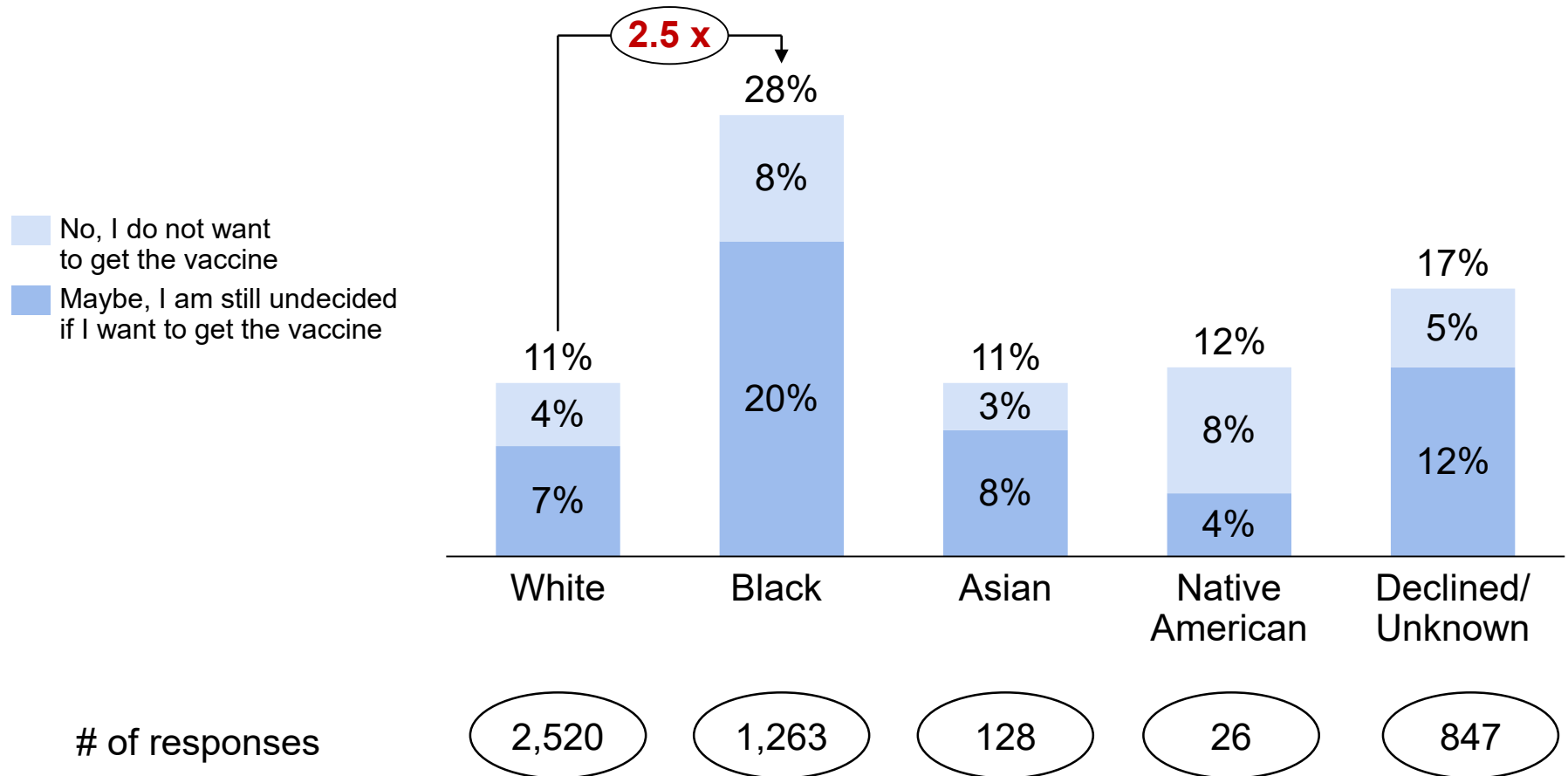
COVID-19 Response:

Inequity in plane site

- Hesitancy
- Access

Patient survey: vaccine hesitancy – Black patients are 2.5x more likely to be undecided or negative about the COVID-19 vaccine

Question 1: Will you get the COVID-19 vaccine when it is available to you?



In our employee data we saw how significant a challenge we faced in supporting vaccine acceptance in Black and Latino/a communities

NMHS employees by vaccination status, 1st dose

Includes employees, LIPs, Residents, per-diem and contingent workers, as of 1/13/21

Race	Total offered	Scheduled	Vaccinated	Total scheduled + vaccinated	No response	Refused
White	3,245	2%	71%	72%	19%	9%
Black or AA (Not Hispanic or Latino)	1,824	2%	34%	36%	48%	16%
Blank	1,501	1%	67%	69%	25%	6%
Asian (Not Hispanic or Latino)	691	2%	74%	76%	17%	7%
Hispanic or Latino	678	1%	52%	53%	35%	12%
2+ Races	159	2%	53%	55%	35%	11%
American Indian or Alaska Native	13	0%	77%	77%	8%	15%
Native Hawaiian or Other Pacific Islander	5	0%	40%	40%	60%	0%
Grand Total	8,116	1%	60%	62%	28%	10%

We are partnering with community leaders to ensure an equitable distribution of the COVID vaccine...

While state website crashed, a Mattapan Church opened to 'a huge line' on first day as a vaccination site

The
Boston
Globe



Religious leaders work to build trust in COVID-19 vaccine in communities of color

Many communities of color are distrustful of government and health institutions.

abc NEWS



ABC

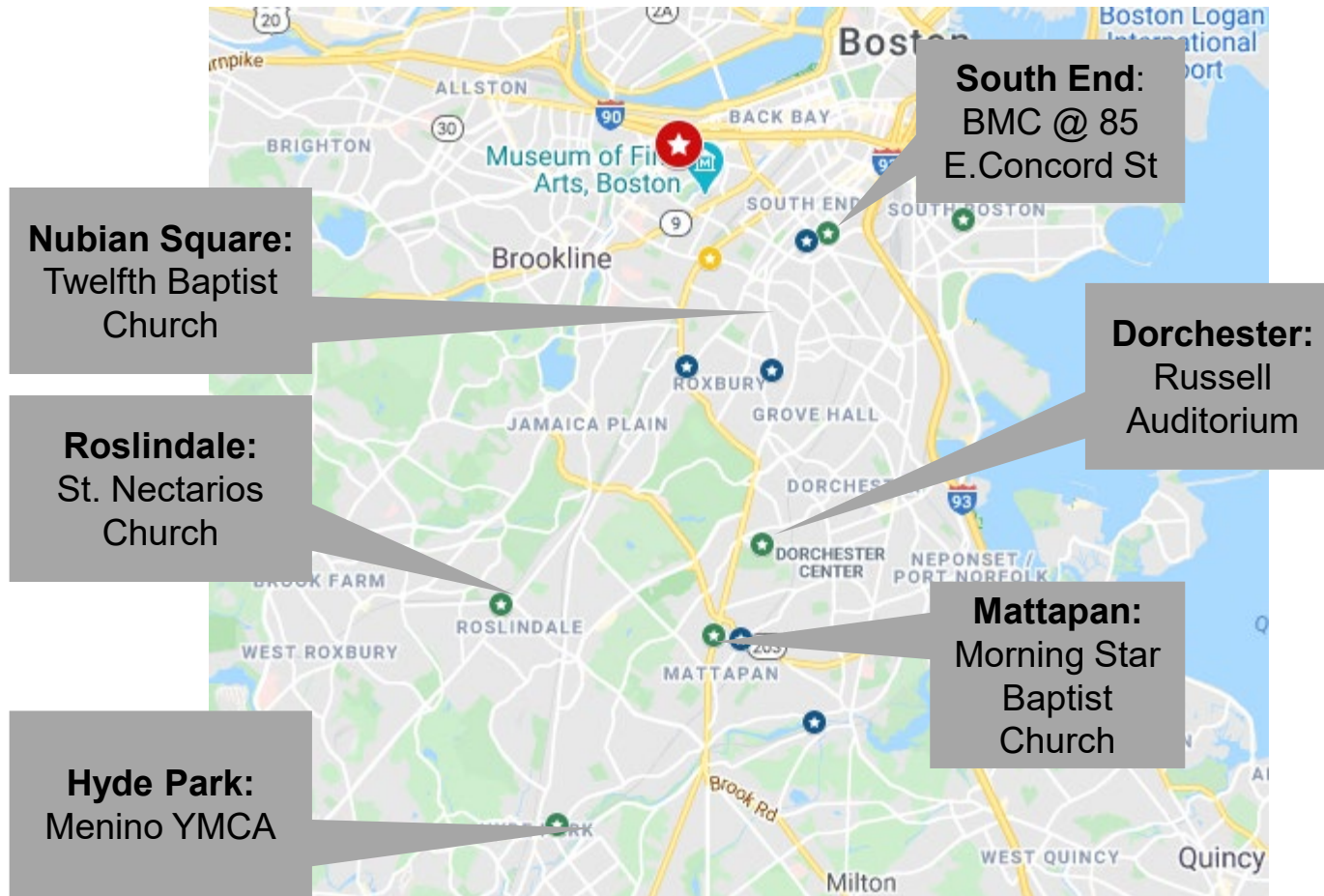
Bishop John Borders runs Morning Star Baptist Church, located in a...

[Read More](#)

How BMCHS is working towards equitable COVID vaccine distribution

- **Operating 6 sites around BMC** to ensure a site < 2 miles from target population
- **Partnering with leaders of Black and Hispanic / Latino communities** (e.g., ministers, social activists, school leaders) to share vaccine information, learn about key concerns from the community, and connect those interested with appointments
- **Proactive outreach** to eligible patients (including ahead of pre-scheduled visits), health plan members, and other lists of community members generated by community partners
- **Community scheduling / outreach** including 'door to door' campaign and volunteers at high traffic areas (e.g., grocery stores)
- **Sharing information from diverse clinicians and in multiple languages** directly with the public (e.g., FAQs on BMC's website, physician testimonials on social media, "Zoom with a Doc")
- **Media campaign** in multiple languages and media (e.g., radio, television, posters, social media)

We evaluated neighborhood populations and existing health system capacity to identify “vaccine deserts” that we could fill in with our network



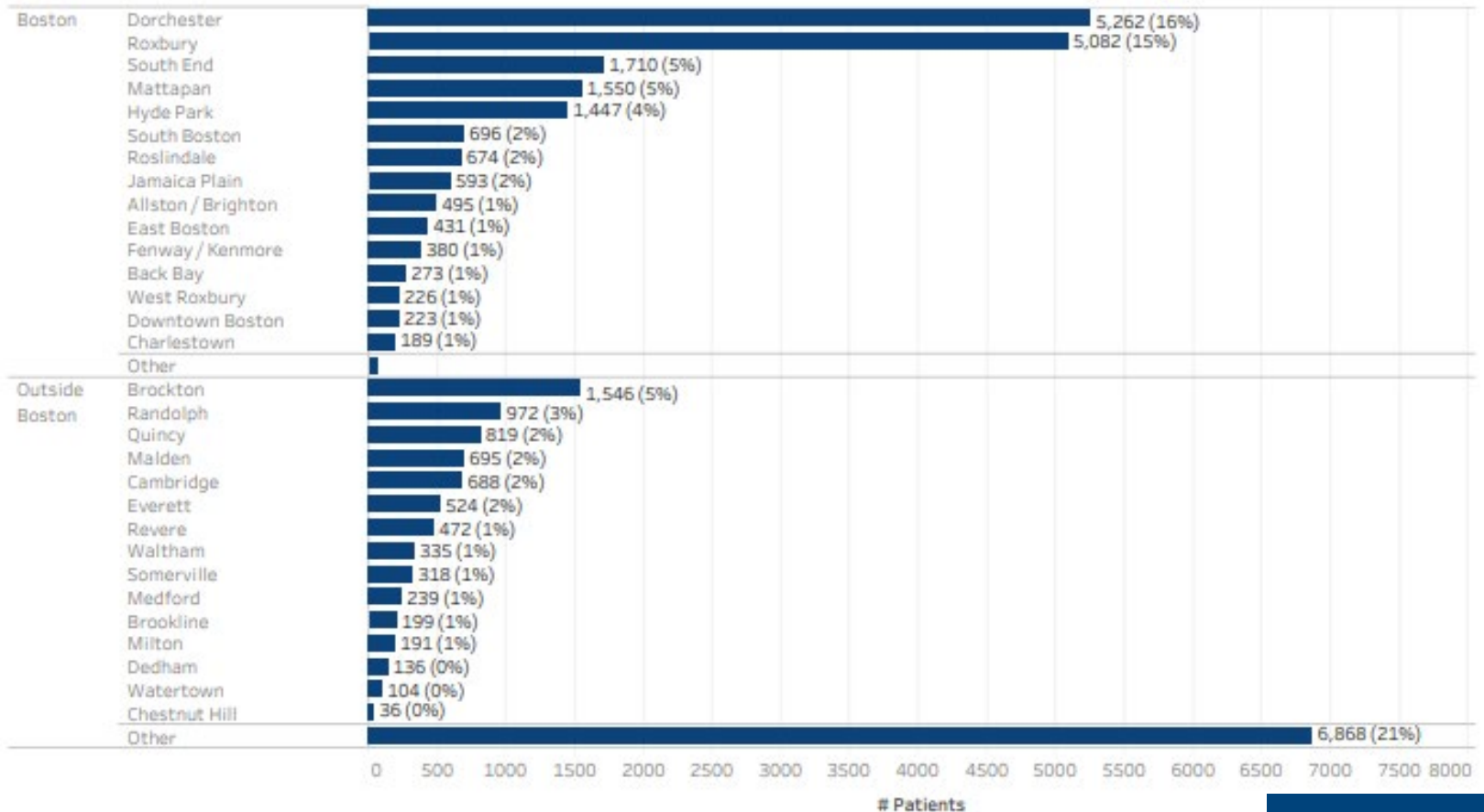
We established 6 New Community Vaccination Sites

Non-vaccinated by neighborhood

BMC Patient Vaccination Dashboard
April 30, 2021

38/40

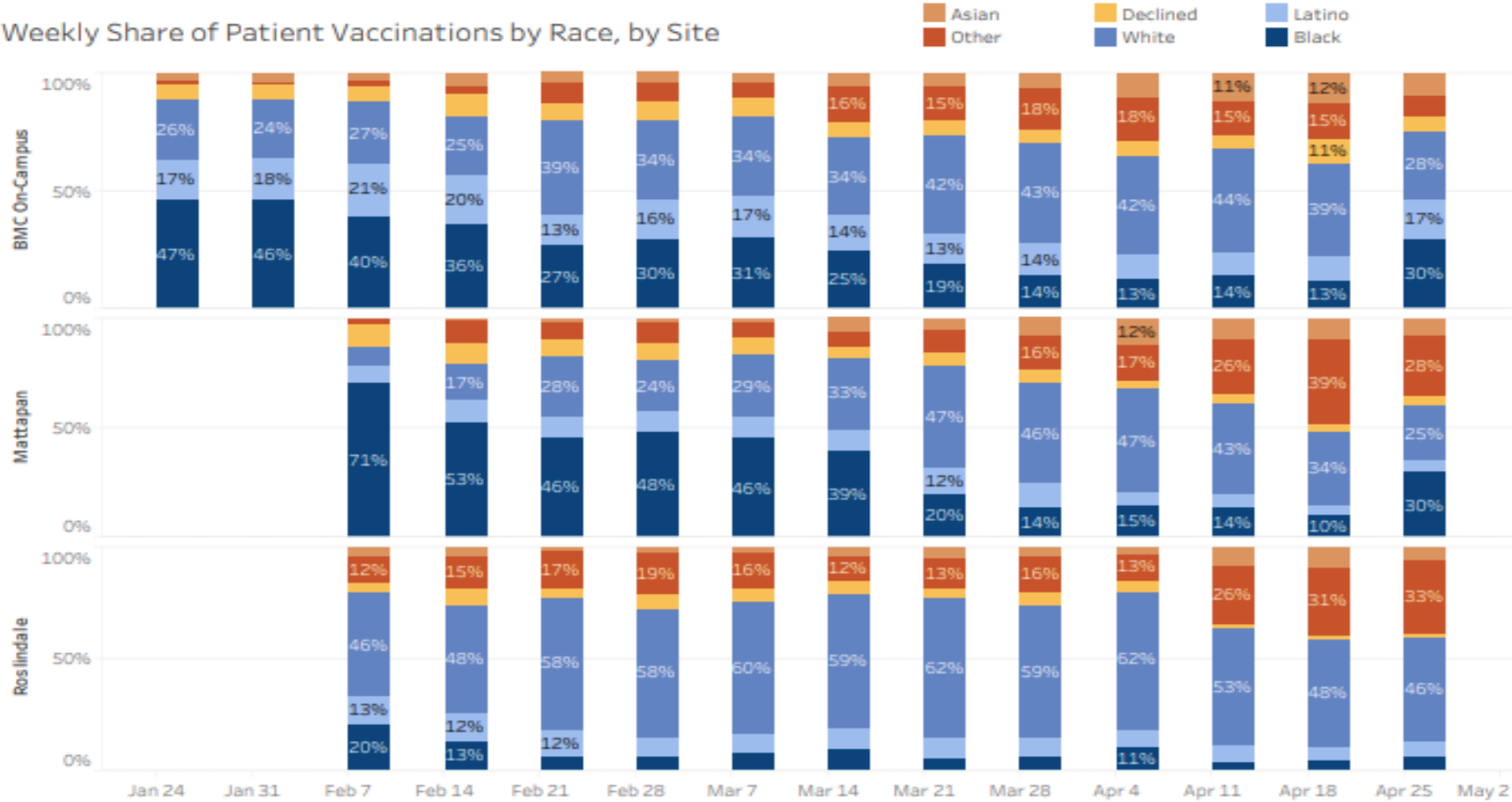
Non-Vaccinated BMC Patients >= 16 by Neighborhood



Weekly Vaccinations By Race and Site

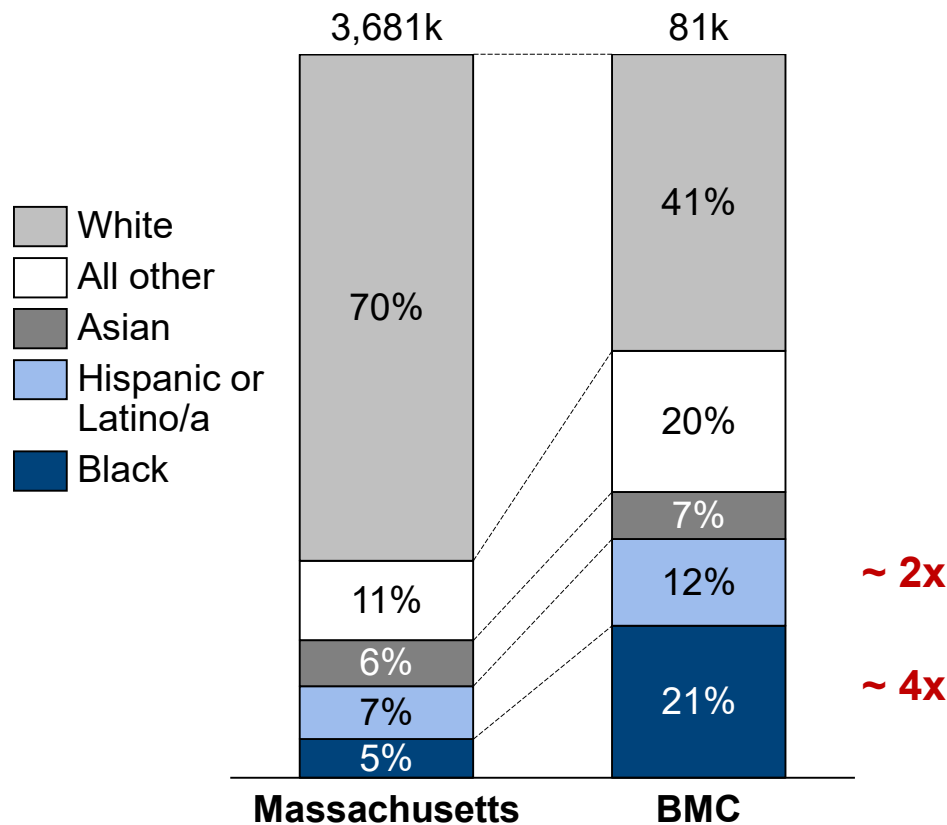
BMC Patient Vaccination Dashboard
April 30, 2021

15/40



... and our efforts have shown that we can make progress towards equity when we focus on addressing racial inequities: Intentionality

Vaccinations by race / ethnicity¹
MA through 4/27, BMC through 4/27



Local leaders visited our community vaccination sites, including:



Governor Charlie Baker at Morning Star Baptist Church



Attorney General Maura Healy at Russell Auditorium



Marty Martinez at the Menino YMCA

¹ Reflects first doses administered. For MA, "All other" includes multi-race, NH/PI, AI/AN, and unknown / other. For BMC, "All other" includes declined and other.

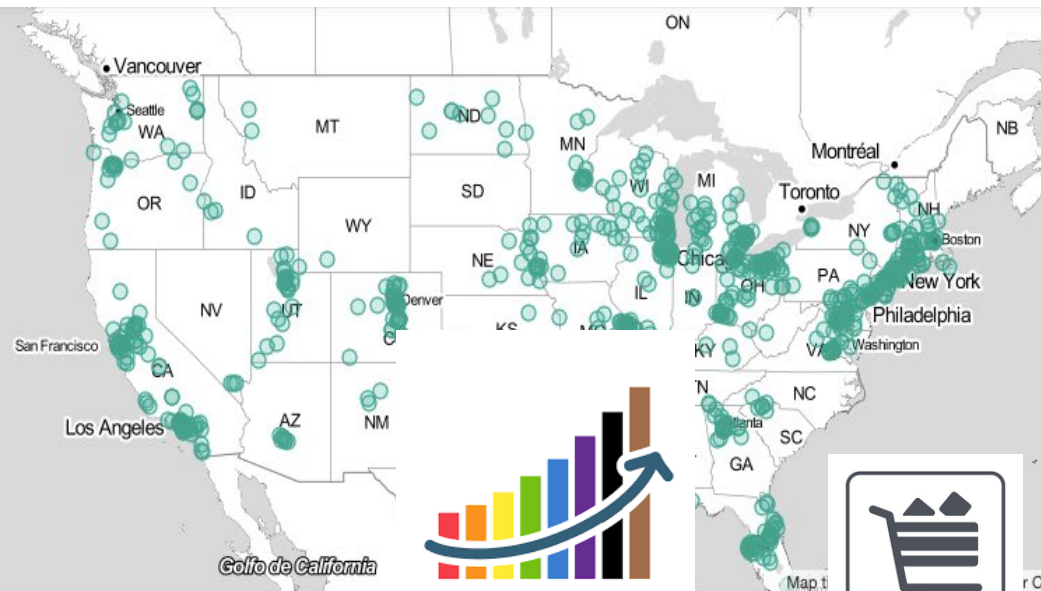
SOURCE: Mass.gov, BMC data

The Healthcare Anchor Network

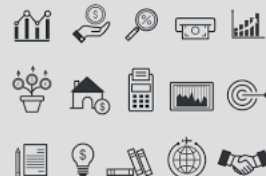
“Building more inclusive, sustainable, local economies...”

With 60 health systems (and counting) represented in the Network, we bring together anchor institutions from across the country that together employ more than 1.5 million people, purchase over \$50 billion annually, and have over \$100 billion in investment assets.

YCFIC
N



CAREER



PROCUREMENT

Determination of Need: Raise the Bar on What is Possible



Press Releases

Boston Medical Center to Invest \$6.5 Million in Affordable Housing to Improve Community Health and Patient Outcomes, Reduce Medical Costs

December 07, 2017

■ Investment: Bartlett Place



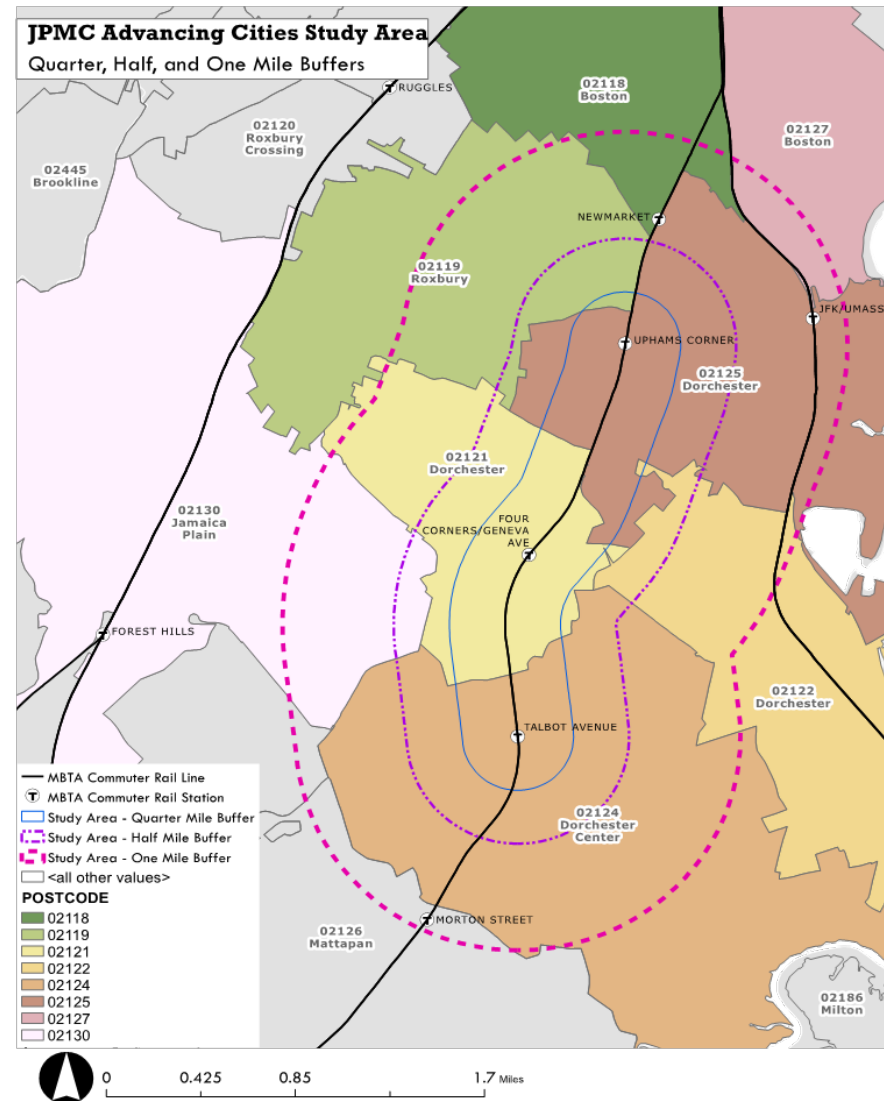
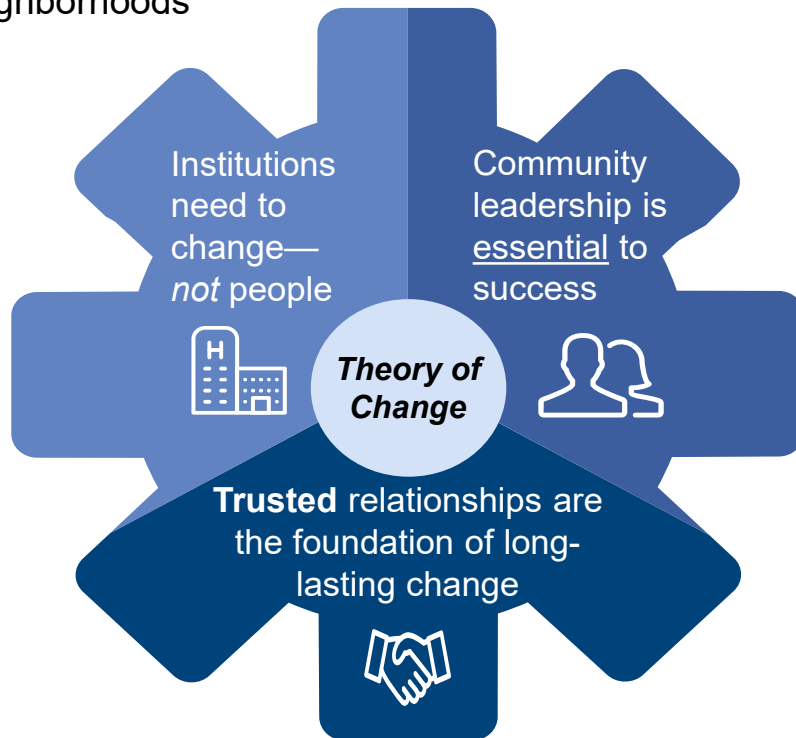
Nubian Markets: *Rethinking Equity with Intentionality*

- Original plan
- True Equity



The BOS Collaborative is testing a *Systems Change* approach in a place-based way (JPMC \$5m Grant)

Beginning in the Bowdoin-Geneva, Codman Square, Upham's Corner, and Nubian Square neighborhoods of Boston and expanding to other adjacent neighborhoods, The BOS Collaborative is working to **address systemic problems that drive differences in economic opportunity** within segregated neighborhoods, while leveraging vibrant social connections within those neighborhoods



Beginning in Fall 2020, leaders across Boston Medical Center (BMC) started to define the foundational elements of our approach to equity

We have initiated a rigorous process starting with a lens toward racial health equity

- **Engaged 80+ leaders across the organization** to develop a comprehensive initial approach to advancing health equity
- **Explored 100+ analyses of baseline data** to understand where the greatest inequities exist and initiate understanding of main drivers to address
- **Conducted in-depth patient interviews** to better understand the experience of our patients and potential drivers of the observed inequities
- **Developed a long-term vision** to advance health equity as well as clear strategic goals
- **Built a prioritized list of 60 initial initiatives** embedded across all areas of the system, where we hope to see progress in the first 12-24 months

Working groups covered:

- Clinical operations
- High inequity clinical areas
- Social determinants of health and community partnerships
- Research
- Education
- Advocacy
- Talent, workplace, and culture

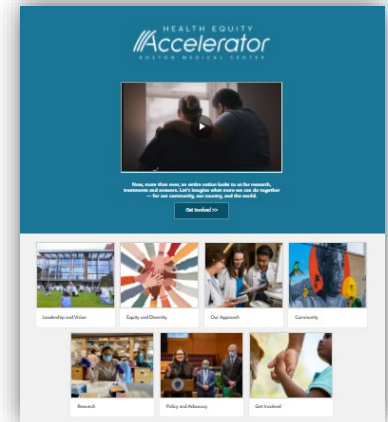
The Health Equity Accelerator at BMC



Transform healthcare
to deliver health
justice
and well being



Accelerator report



Accelerator website

Our aim is to close inequities across the breadth of our System

BMCHS Health Equity Vision

**Transform
healthcare to
deliver health
justice and well
being**

Clinical care

Research & education

Community & SDoH

Policy and advocacy

**Health
inequity
areas**



**Maternal and
child health**



**Infectious
diseases**



**Behavioral
health**



**Chronic
conditions**



**Oncology &
ESRD**

We are progressing against a set of 2021 health equity priorities for BMCHS organized into six workgroups

1. General clinical operations



Diabetes management



FYI flags and public safety



Improving inpatient experience

2. High inequity areas



Maternal and child health



COVID-19



Behavioral health

3. Social determinants of health



Community engagement



Housing & Economic Mobility

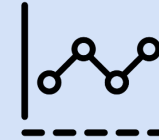


THRIVE 2.0

4. Research and education



Resident diversity



Equity data and publications



Health equity research grants

5. Advocacy



Maternal and child health

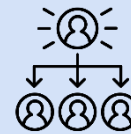


Economic justice



Environmental justice

6. Talent, workplace, and culture



Leadership diversity



Diversity & bias training



Diversity, Equity & Inclusion report

We launched an Equity Partnership Network to ensure we are being informed by community voice to execute our work

Equity Partnership Network: a diverse, engaged group of Boston leaders and community members who provide guidance for BMC's equity and community-based initiatives

- **Meet 1-2 times per year as a full group**
- EPN members will serve on a sub-committee or specific initiative where they can provide detailed guidance

Accelerator

Community Advisory Committee (ACAC): a group of Boston leaders who advise the Accelerator on how to approach the community and surface community needs

- **Meet 3-4 times per year**

~10-12 members total

Initiative-specific Community Advisory Boards – not exhaustive

Determination of Need

~10 members total

Health Equity in COVID Research

~17 members total

Mental Health in the Black community

~TBD members total

Youth Advisory Board

~10 members total

Additional sub-committees / CABs as needed...

- Pregnancy
- Housing
- Economic mobility
- Grayken

~100 members total