PUBLIC HEALTH RESPONSE TO COVID-19 IN MASSACHUSETTS

MASSACHUSETTS MEDICAL SOCIETY
JUNE 30, 2020
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COMMISSIONER
COVID 19 In Massachusetts

Number of New Confirmed and Probable COVID-19 Cases by Week in Massachusetts

Week Beginning

Number of New Cases

Massachusetts has slowest COVID-19 Spread
COVID-19 AND SOCIAL DETERMINANTS OF HEALTH
VISION
Optimal health and well-being for all people in Massachusetts, supported by a strong public health infrastructure and healthcare delivery.

MISSION
The mission of the Massachusetts Department of Public Health (DPH) is to prevent illness, injury, and premature death; to ensure access to high quality public health and health care services; and to promote wellness and health equity for all people in the Commonwealth.

DATA
We provide relevant, timely access to data for DPH, researchers, press and the general public in an effective manner in order to target disparities and impact outcomes.

DETERMINANTS
We focus on the social determinants of health - the conditions in which people are born, grow, live, work and age, which contribute to health inequities.

DISPARITIES
We consistently recognize and strive to eliminate health disparities amongst populations in Massachusetts, wherever they may exist.

EVERYDAY EXCELLENCE
PASSION AND INNOVATION
INCLUSIVENESS AND COLLABORATION
Mission:
Leverage public and private partnerships to collect, use and disseminate high quality data and documentation and inform and influence policies, programs, practices, prevention strategies and resource allocation that address inequities in the social determinants of health. The Office of Health Equity was established at DPH in the 1980s and was expanded in 2018 through an Interagency Services Agreement from the Executive Office of Health & Human Services.
Social Determinants of Health and State Health Priorities

- Mental Health and Wellness
- Homelessness and Housing Stability
- Substance Use Disorder
- Preventable chronic disease

Source: Massachusetts State Health Assessment, 2017
A working framework for DPH’s equity activities

- DPH “House” and Mission as principles guiding the road to eliminating health inequities
- Data Day, Epi Conference, Equity Labs and Reframes, DPH policies & practices (e.g. procurement and hiring)
- Racial Equity trainings, Diversity Council, Racial Equity Initiatives in Bureaus (e.g. Racial Equity Leadership Team)
- Public Health Data Warehouse, Population Health Information Tool, Refining and Defining Population Data Standards

Strategic Vision
Culture
Capacity Building
Data Infrastructure
Poor conditions prevent people from practicing healthy behaviors and achieving good health.
Massachusetts Department of Public Health COVID-19 Dashboard - Wednesday, June 17, 2020

Cases, Hospitalizations, & Deaths by Race/Ethnicity

The following caveats apply to these data:
1. Information on race and ethnicity is collected and reported by laboratories, healthcare providers and local boards of health and may or may not reflect self-report by the individual case.
2. If no information is provided by any reporter on a case’s race or ethnicity, DPH classifies it as missing.
3. A classification of unknown indicates the reporter did not know the race and ethnicity of the individual, the individual refused to provide information, or that the originating system does not capture the information.
4. Other indicates multiple races or that the originating system does not capture the information.

Note: COVID-19 testing is currently conducted by dozens of private labs, hospitals, and other partners and the Department of Public Health is working with these organizations to improve data reporting by race and ethnicity, to better understand where, and on whom, the burden of illness is falling so the Commonwealth can respond more effectively. On 4/8, the Commissioner of Public Health issued an Order related to collecting complete demographic information for all confirmed and suspected COVID-19 patients.

Total Cases by Race/Ethnicity

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic</td>
<td>29.5%</td>
</tr>
<tr>
<td>Non-Hispanic Asian</td>
<td>34.9%</td>
</tr>
<tr>
<td>Non-Hispanic Black/African American</td>
<td>19.1%</td>
</tr>
<tr>
<td>Non-Hispanic Other</td>
<td>13.3%</td>
</tr>
<tr>
<td>Non-Hispanic White</td>
<td>7.8%</td>
</tr>
<tr>
<td>Unknown/Unknown</td>
<td>11.6%</td>
</tr>
</tbody>
</table>

Total Case Count: 106,151

Total Cases Reported as Hospitalized

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic</td>
<td>48.0%</td>
</tr>
<tr>
<td>Non-Hispanic Asian</td>
<td>16.1%</td>
</tr>
<tr>
<td>Non-Hispanic Black/African American</td>
<td>16.1%</td>
</tr>
<tr>
<td>Non-Hispanic Other</td>
<td>11.6%</td>
</tr>
<tr>
<td>Non-Hispanic White</td>
<td>7.8%</td>
</tr>
<tr>
<td>Unknown/Unknown</td>
<td>11.6%</td>
</tr>
</tbody>
</table>

Total Cases Reported as Hospitalized: 10,925

Total Deaths by Race/Ethnicity

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic</td>
<td>73.5%</td>
</tr>
<tr>
<td>Non-Hispanic Asian</td>
<td>8.2%</td>
</tr>
<tr>
<td>Non-Hispanic Black/African American</td>
<td>6.7%</td>
</tr>
<tr>
<td>Non-Hispanic Other</td>
<td>4.8%</td>
</tr>
<tr>
<td>Non-Hispanic White</td>
<td>2.7%</td>
</tr>
<tr>
<td>Unknown/Unknown</td>
<td>2.7%</td>
</tr>
</tbody>
</table>

Total Deaths: 7,734

Data Sources: COVID-19 Data provided by the Bureau of Infectious Disease and Laboratory Sciences and the Registry of Vital Records and Statistics; Demographic data on hospitalized patients collected retrospectively; analysis does not include all hospitalized patients and may not add up to data totals from hospital survey; Tables and Figures created by the Office of Population Health.

Note: all data are cumulative and current as of 10:00am on the date at the top of the page. *Hospitalization refers to status at any point in time, not necessarily the current status of the patient/demographic data on hospitalized patients collected retrospectively; analysis does not include all hospitalized patients and may not add up to data totals from hospital surveys. Includes both probable and confirmed cases.
Following the Executive Order on April 8th, race/ethnicity data reporting has improved for cases, deaths, and hospitalizations.
The Rate of Positive Cases is Highest for Black and Hispanic Residents

- Black non-Hispanics represent 7.2% of the MA population but double that proportion of cases at 14.4% of cases.
- Hispanics represent 12.2% of the MA population but more than twice that proportion of cases at 29.3% of cases.

The highest rates of positive cases are among Black non-Hispanics and Hispanics which are more than 3x higher than the rate for White non-Hispanics.

Data as of 06/17/2020

Cities with the Highest Rates of COVID-19 are Primarily Communities of Color

The ten communities with the highest rates of COVID-19 are shown below. The overall rate in MA of COVID-19 Cases is 1,459.1 per 100,000 people as of 06/17/2020. Almost all of these communities have high (>50%) percentage of residents who are people of color (shaded blue).

<table>
<thead>
<tr>
<th>Town</th>
<th>Case Count</th>
<th>Percent of Residents who are People of Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chelsea</td>
<td>2885</td>
<td>80%</td>
</tr>
<tr>
<td>Brockton</td>
<td>4172</td>
<td>68%</td>
</tr>
<tr>
<td>Lawrence</td>
<td>3443</td>
<td>87%</td>
</tr>
<tr>
<td>Everett</td>
<td>1724</td>
<td>61%</td>
</tr>
<tr>
<td>Lynn</td>
<td>3548</td>
<td>66%</td>
</tr>
<tr>
<td>Revere</td>
<td>1733</td>
<td>52%</td>
</tr>
<tr>
<td>Randolph</td>
<td>938</td>
<td>75%</td>
</tr>
<tr>
<td>Worcester</td>
<td>5112</td>
<td>51%</td>
</tr>
<tr>
<td>Danvers</td>
<td>719</td>
<td>7.6%</td>
</tr>
<tr>
<td>Lowell</td>
<td>2807</td>
<td>55%</td>
</tr>
</tbody>
</table>

The Rate of Hospitalizations is Highest for Black and Hispanic Residents

- White non-Hispanics represent 71.5% of the population but only 57.2% of the hospitalizations, whereas the percentages of Black Non-Hispanic and Hispanics who are hospitalized are greater than their proportions in the population.

- The rate of hospitalizations for Black non-Hispanics and Hispanics is 2.4x and 1.6x higher (respectively) than for White non-Hispanics.

Age-Adjusted Death Rates by Race/Ethnicity Reveal Inequities

- The age-adjusted death rate is highest for Black residents, at 161.4 deaths/100,000.
- Age-adjusted death rates are recommended for comparisons among race groups given differences in the underlying age distribution of the MA population by race, and differences in COVID-19 death trends by age.

Data as of 06/19/2020.

- Count and Rate (per 100,000) of Reported Deaths among COVID-19 Confirmed and Probable Cases by Race and Ethnicity and Age Group in MA (N=7800).
- Data are current as of 6/19/2020 and are subject to change.


Rates are per 100,000 population. Age-adjusted to the 2000 US standard population. See weights used at: https://www.cdc.gov/nchs/data/statnt/statnt20.pdf
COVID-19 EQUITY SURVEY

MASSACHUSETTS MEDICAL SOCIETY
COVID-19 Community Impact Survey

• This would be a survey of needs, knowledge and issues related to COVID-19 based on a large, tailored convenient sample that will:
  • Collect detailed demographic information
  • Support short and long term action
  • Will be translated into multiple languages
  • Include a strong community engagement strategy.

• Aim to field survey in the near term to get actionable information from communities and populations disproportionately impacted by COVID-19
COVID-19 Health Equity Youth and Adult Survey

**Purpose:** To better understand the needs of residents of the Commonwealth arising from the COVID-19 crisis and the mitigation efforts, in order to help address those needs now and plan for longer-term support.

- Section 1: Awareness and Perceptions of COVID-19
- Section 2: Experiences of COVID-19
- Section 3: Comorbid Conditions/Risk Factors for COVID-19
- Section 4: Impact of COVID-19 on Basic Needs (includes tech questions)
- Section 5: Impact of COVID-19 on Mental Health
- Section 6: Impact of COVID-19 on Family
- Section 7: Impact of COVID-19 on Substance Abuse
- Section 8: Impact of COVID-19 on Education
- Section 9: Impact of COVID-19 on Employment/Income
- Section 10: Impact of COVID-19 on Safety/Violence
- Section 11: Protective Factors
- Section 12: Demographics
What we can do today about social determinants of health and COVID-19

- Document race and ethnicity; demographic information
- Document the social determinants of health, including occupation
- Refer patients to appropriate support services
- Educate ourselves on racial inequity and bias
- Advocate for equitable policies at institutional, local, state, federal level

- Educate and share information
  - Mass.gov/COVID
  - Mass.gov/gettested
  - 211
SALUTE TO HEALTHCARE WORKERS
SALUTE TO HEALTHCARE WORKERS
OUTLINE

• Racial/ethnic disparities in cases and deaths
• Higher risk of death in younger Black and Latino populations
• Possible explanations for these disparities
• What this epidemiology means for clinicians, and what should be done about it
COVID-19 RACIAL/ETHNIC DISPARITIES EMERGED IN MARCH 2020

• Milwaukee reports over-representation of Blacks among COVID-19 deaths
• Other jurisdictions follow
  – Cities: Chicago, New York, New Orleans
  – States: LA, IL, MA, CT, many others
• No national data
  – CDC initially reports only by age and gender
NATIONAL MORTALITY DATA NOW AVAILABLE BY RACE/ETHNICITY (FEB-MAY)

• Age-adjusted rate ratios (compared to Whites):
  – Blacks: 3.6
  – Latinos: 2.6
  – Asian/PI: 1.7
  – AI/AN: 1.2

• “After adjusting for age, Blacks are 3.6 times more likely than Whites to die of COVID-19”

Source: Analysis of NCHS data on COVID-19 deaths by race/ethnicity and age, and population data drawn from the US Census.
AGE-SPECIFIC MORTALITY RATES BY RACE/ETHNICITY

Source: Analysis of NCHS data on COVID-19 deaths by race/ethnicity and age, and population data drawn from the US Census.
## RISK RATIOS BY AGE & RACE/ETHNICITY (COMPARED TO WHITES)

<table>
<thead>
<tr>
<th>Age</th>
<th>Black</th>
<th>Latino</th>
<th>AI/AN</th>
<th>Asian/PI</th>
</tr>
</thead>
<tbody>
<tr>
<td>25-34</td>
<td>7.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35-44</td>
<td>9.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45-54</td>
<td>6.9</td>
<td>5.8</td>
<td>3.5</td>
<td>2.8</td>
</tr>
<tr>
<td>55-64</td>
<td>5.7</td>
<td>4.1</td>
<td>2.1</td>
<td>2.7</td>
</tr>
<tr>
<td>65-74</td>
<td>5.1</td>
<td>3.5</td>
<td>1.4</td>
<td>2.2</td>
</tr>
</tbody>
</table>

Among adults ages 35-44, Blacks are 9 times more likely than Whites to die of COVID-19.
• Age is the most powerful determinant of death risk
  – Among all racial/ethnic populations, ~80% of deaths are among people age 65 or older
• Age-standardized mortality rates obscure racial disparities among young and middle-aged adults
  – Among adults ages 25-54, Black, Latino and Indigenous people have much higher risk of death than Whites

IN SUM

Source: Analysis of NCHS data on COVID-19 deaths by race/ethnicity and age, and population data drawn from the US Census.
IMPLICATIONS

• For clinicians:
  – Awareness that younger age carries disproportionate risk among people of color

• In terms of causes:
  – Comorbid conditions
  – Failure to follow public health advice
  – Difference in exposure, principally at work
ESSENTIAL WORKERS

• ~40% of all US workers are deemed essential
• 41% of frontline workers are people of color
• <30% of all workers can work from home
  – <1 in 5 Black workers can work from home
  – 1 in 6 Latino workers can work from home

• In NYC, 75% of all frontline workers are BIPOC
  – 82% of cleaning services workers are BIPOC
  – >40% of transit workers are Black
  – >60% of cleaning workers are Latino

Thank you!
Massachusetts Medical Society Resources

• Massachusetts Medical Society COVID-19 webpage
  http://massmed.org/covid-19

• New England Journal of Medicine (NEJM) Race and Medicine
  https://www.nejm.org/race-and-medicine

• New England Journal of Medicine (NEJM) Resource Site
  https://www.nejm.org/coronavirus
MMS on Social Media

• Twitter - @MassMedical - https://twitter.com/MassMedical

• Facebook – Massachusetts Medical Society - https://www.facebook.com/massmed/

• LinkedIn – Massachusetts Medical Society - https://www.linkedin.com/company/massachusetts-medical-society/

• Instagram - @massmedicalsociety - https://www.instagram.com/massmedicalsociety/