

Racial Disparities in COVID-19 in Massachusetts: The Role of Data in Advancing Health Equity

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BU CISWH Webinar: COVID-19, Black Communities, and Health Justice

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A Story in 3 (Brief) Parts

- The problem of no data
 - The early weeks of the pandemic
- The problem of missing data
 - Collecting data on race/ethnicity
- The problem of insufficient data
 - What (if anything) explains racial/ethnic disparities and can be addressed in the near term?

As COVID-19 Cases Mount In Chelsea, City Leaders Cry For Help

April 10, 2020

By [Simón Ríos](#) and [Tibisay Zea](#)



Reymer Pineda hands a box of donated food to Gladys Vega to leave on the front porch of the house. All members of the household have contracted COVID-19, and will come out after Vega calls them to let them know. (Jesse Costa/WBUR)

PUBLIC HEALTH


BU Public Health Researchers Aid Chelsea, Epicenter of State's COVID- 19 Outbreak

"Every person counts," says epidemiologist whose data show the city's rate of confirmed cases is higher than rates in Manhattan and Brooklyn

April 28, 2020



By [Sara Rimer](#) Photos by [Cydney Scott](#)

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Confirmed COVID-19 Infection Rate per 10,000 Inhabitants

Updated data April 22, 2020

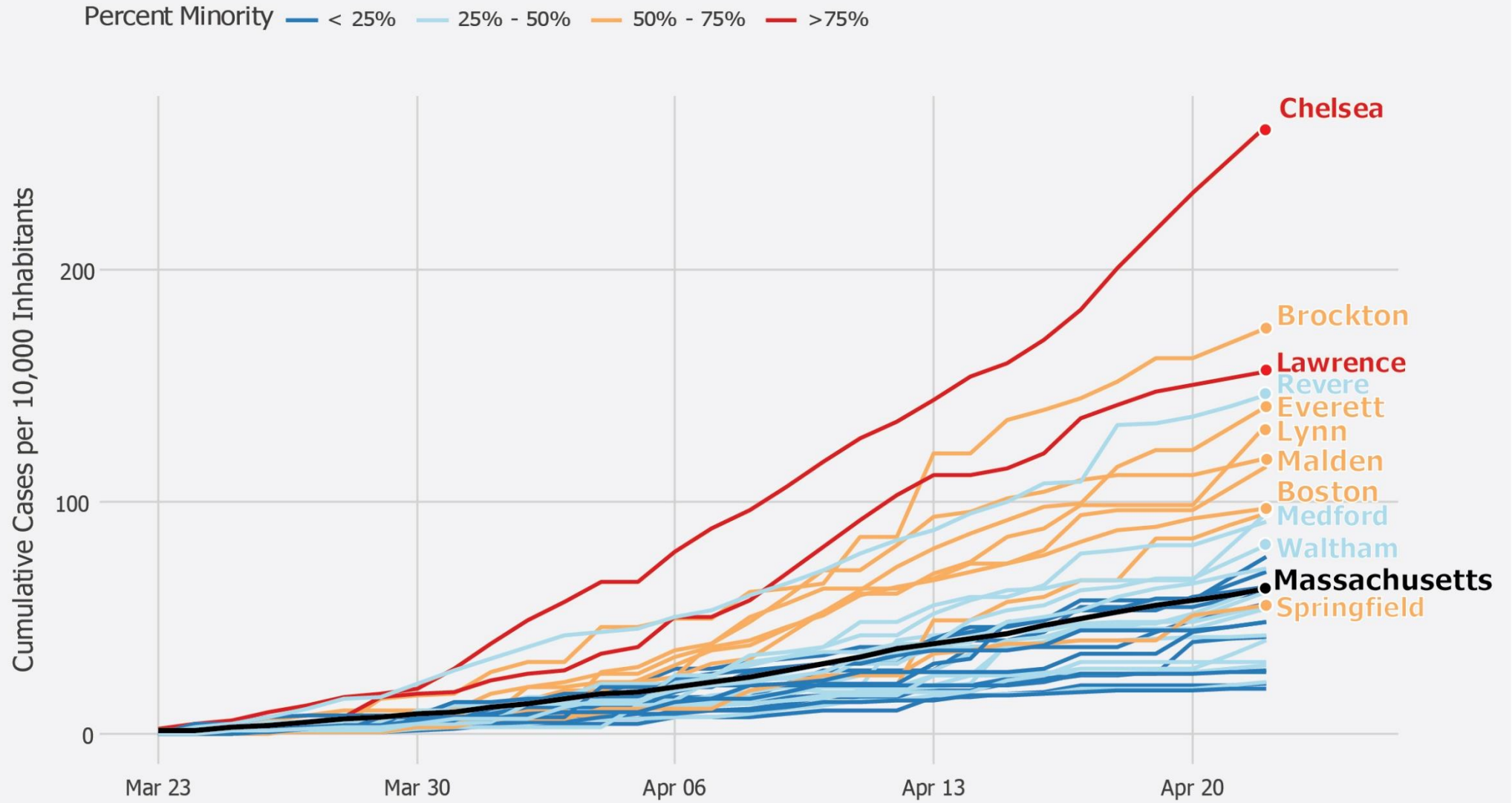


Figure by: Koen F. Tieskens, PhD, Raquel Jimenez Celsi, MSc., Boston University School of Public Health
Information provided by the Massachusetts Major City Chiefs of Police and compiled by the Massachusetts Attorney General's Office, US Census, 2010

Collection of race/ethnicity data

- Crucial to be comprehensive to accurately characterize disparities
- Substantial missing data
 - If missing at random, not a problem
 - If missing differentially over time or for different people, a problem

Results in MA

- Steady decline in missingness over time
- Race was more likely to be missing in lower-income, less-educated, rural communities
- Hispanic/Latinx status was more likely to be missing in communities with lower percent Hispanic/Latinx populations

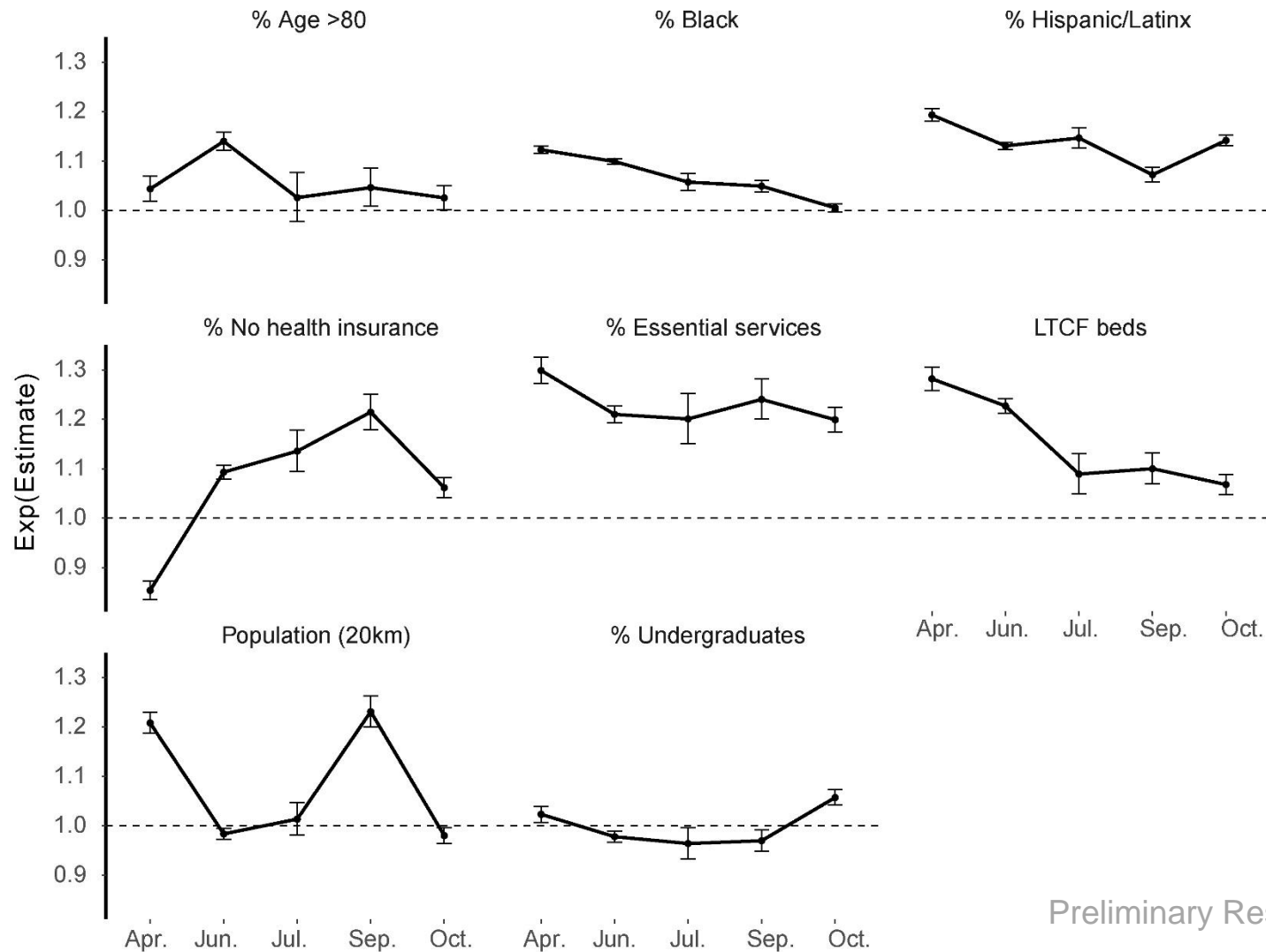
Implications (Labgold et al., 2021)

- Study in Fulton County, GA
- Disparities in COVID cases underestimated by just using “complete case” data (factor of 1.3 for Black, 1.6 for Hispanic/Latinx)

What explains disparities? (Figueroa et al., 2020)

- Cross-sectional analysis of COVID-19 cases in MA through 5/6/20
- In multivariable models:
 - Disparities for Latinx population explained in part by job type, household size, and foreign-born non-citizen status
 - Disparities for Black population not explained by other factors

Town-level regression (cases) in MA



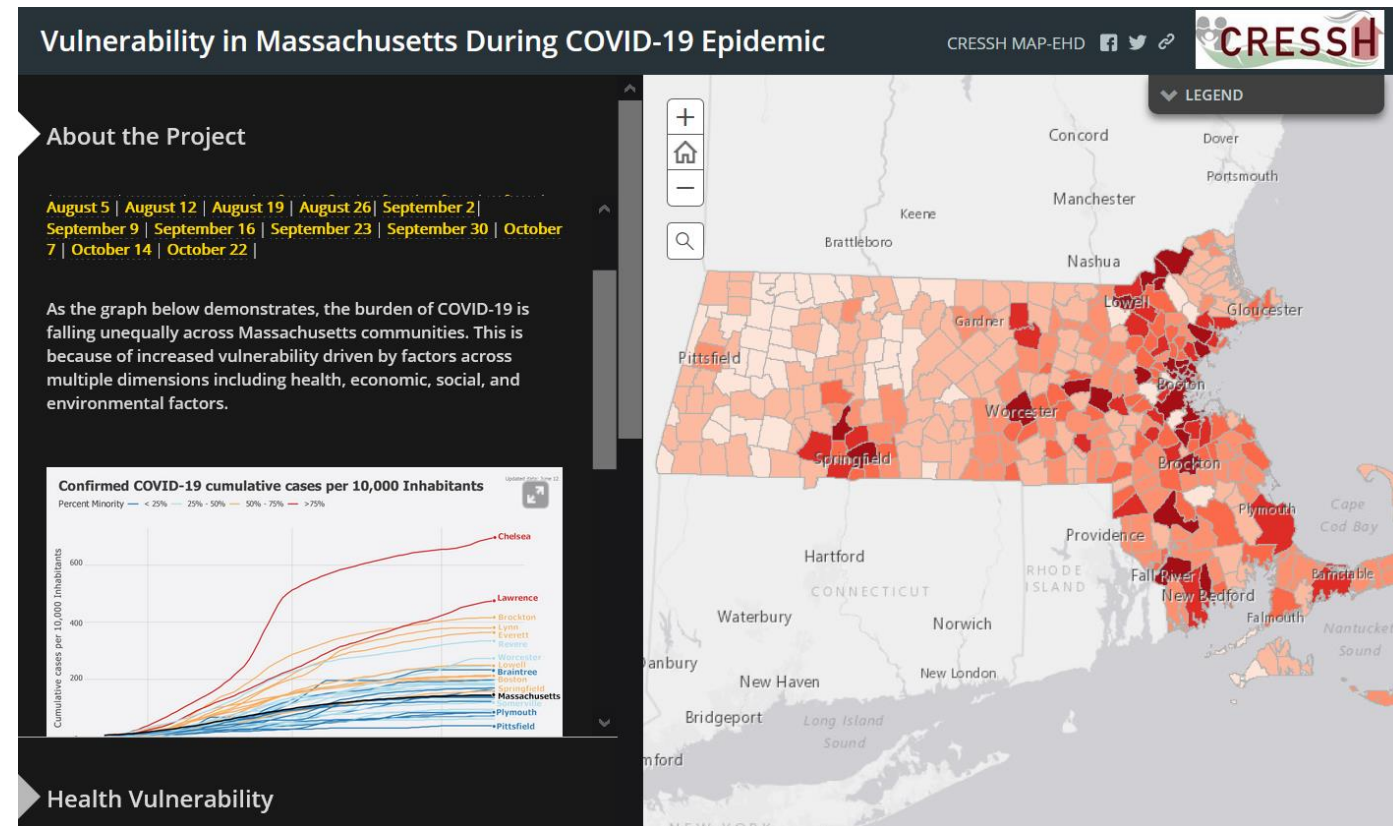
Preliminary Results Not for External Distribution

Moving toward solutions

Collaboration with MADPH

<https://arcg.is/1Oaej4>

- Individual COVID-19 data from Massachusetts Virtual Epidemiologic Network (MAVEN)
- Geocoding to address level to look at fine-scale spatial patterns, institutional vs. non-institutional cases, etc.
- Linkage with BUSPH database of social and environmental determinants of health



Conclusions

- With adequate collection of race/ethnicity data, we can characterize disparities in COVID-19 outcomes, vaccine access, etc.
- But this is not sufficient to solve disparities, since race/ethnicity proxy for a number of factors tied to historical and contemporary racism
- Root causes potentially include (but are not limited to) essential worker status, housing