Disparities in COVID-19 by Race-ethnicity and SES during Stay at Home: Connecticut

J Hadler, MD, MPH

CSTE Health Disparities subcommittee

July 23, 2020

Background

- Epidemiology of hospitalizations with lab-confirmed SARS-CoV-2 infection should not be heavily biased by testing policies/availability.
- One data source for examining race/ethnic and SES disparities.
- COVID-NET - active surveillance for lab-confirmed hospitalizations with SARS-CoV-2
- begun March 1 in 14 jurisdictions including 2 counties in CT (New Haven, Middlesex: population ~1 million)

Objectives

Determine:

- Magnitude of race/ethnic disparities in rates in cases occurring in the community prior to ReOpen CT.
- Whether there was an association of hospitalization incidence with census tract-level SES (poverty, household crowding).
- Whether SES differences could largely explain any race/ethnic differences

Methods

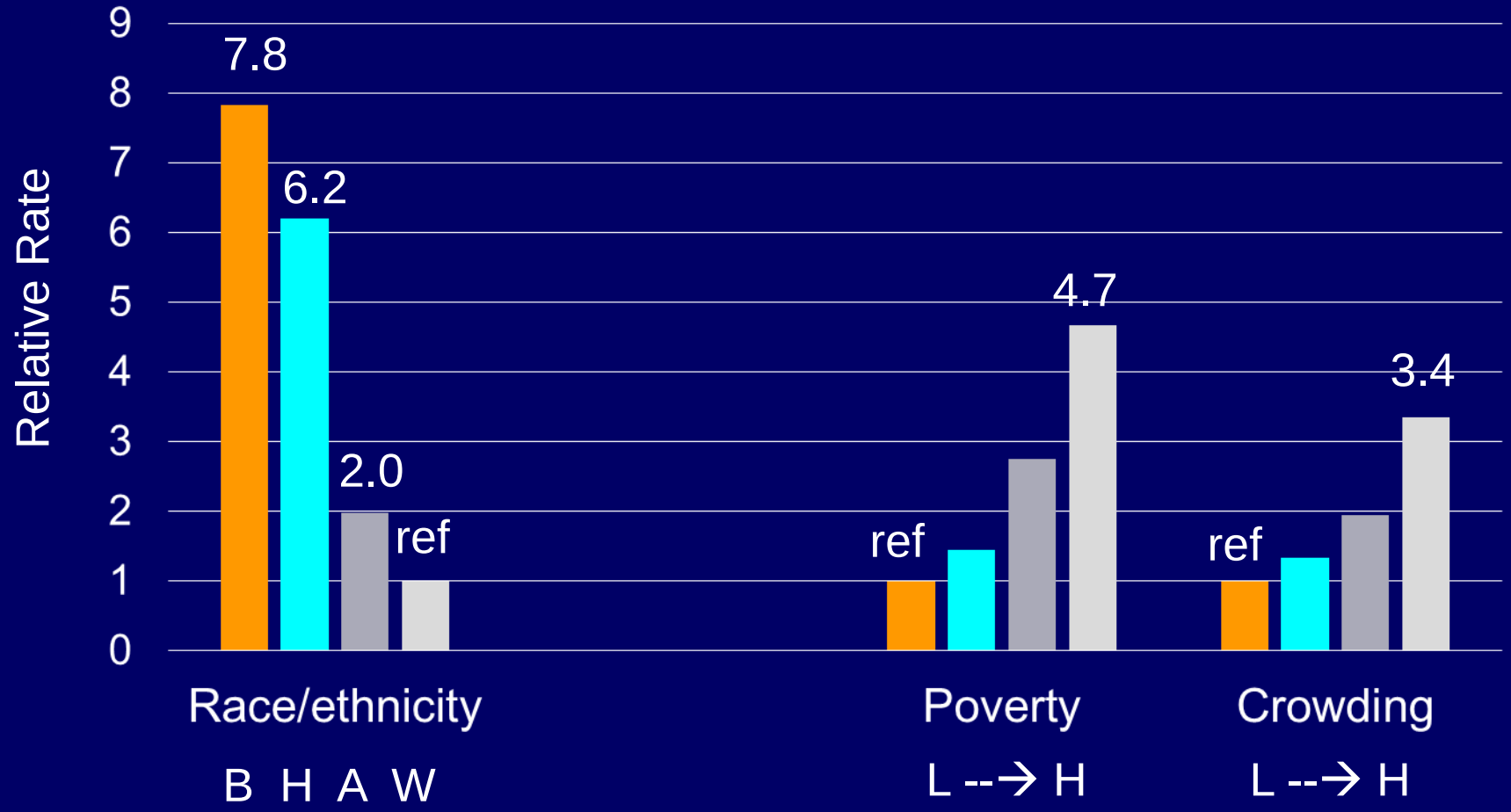
- Cases from active surveillance with all hospitals in CT – chart review of cases residing in 2 counties
- Geocode residential addresses
- Eliminate addresses of LTCF, correctional institutions.
- Determine census tract poverty (CTP) and crowding from ACS 2014-18
- Aggregate individual CTP and crowding into 4 categories each.
- Compare population-level hospitalization rates by demographic groups.

Results

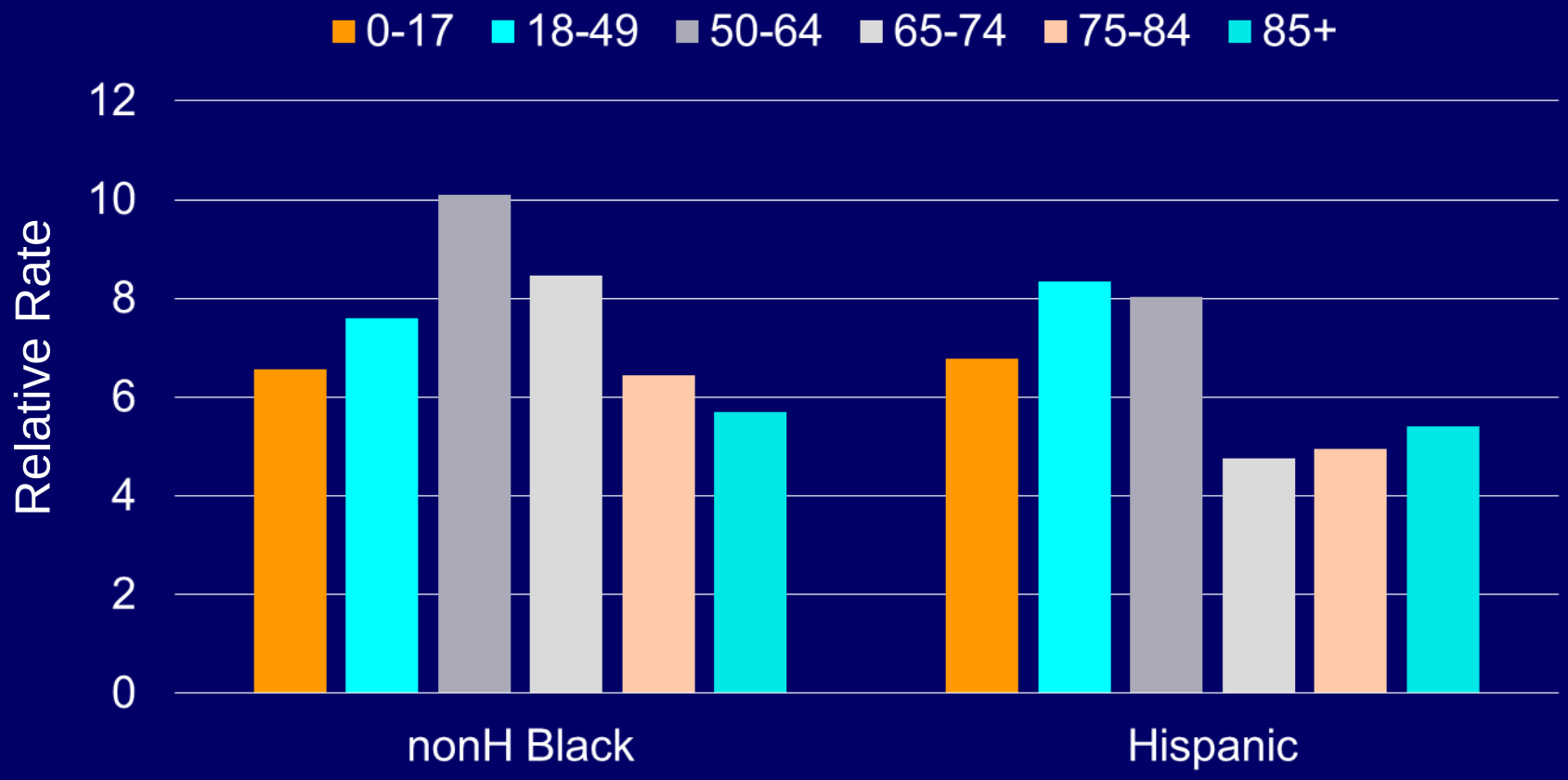
- March 10 – May 8: 2,173 hospitalized cases
- 1,511 (69.5%) were community residents.
- Strong association with increasing age

Age Group	Number	Rate/100,000	RR
<18	10	4.4	0.06
18-49	344	77.9	Reference
50-64	439	209.9	2.69
65-74	339	457.3	5.87
75-84	243	493.5	6.33
85+	136	518.6	6.55

Age-adjusted Relative COVID-19 Hospitalization Rate by Race/ethnicity and SES, CT

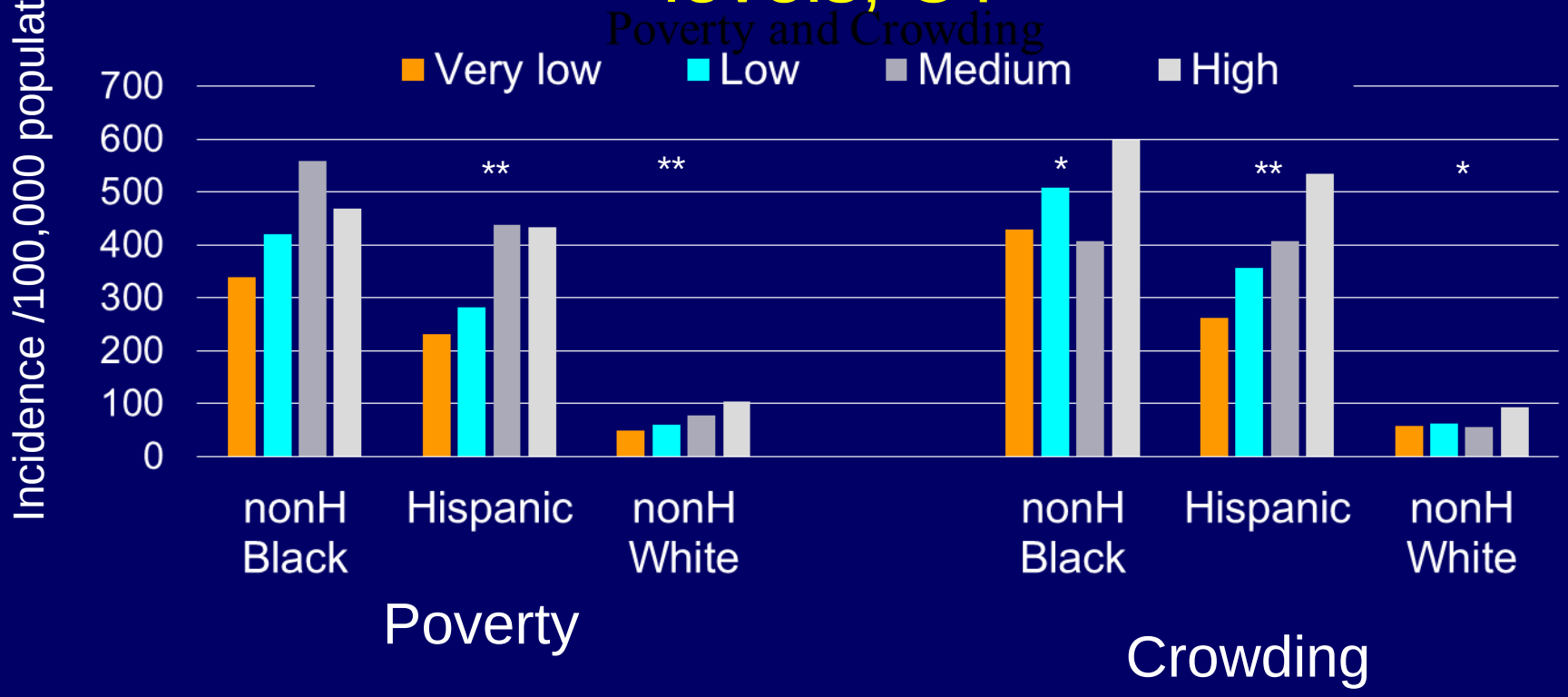


Age-specific Relative* COVID-19 Hospitalization Rates by Race/ethnicity



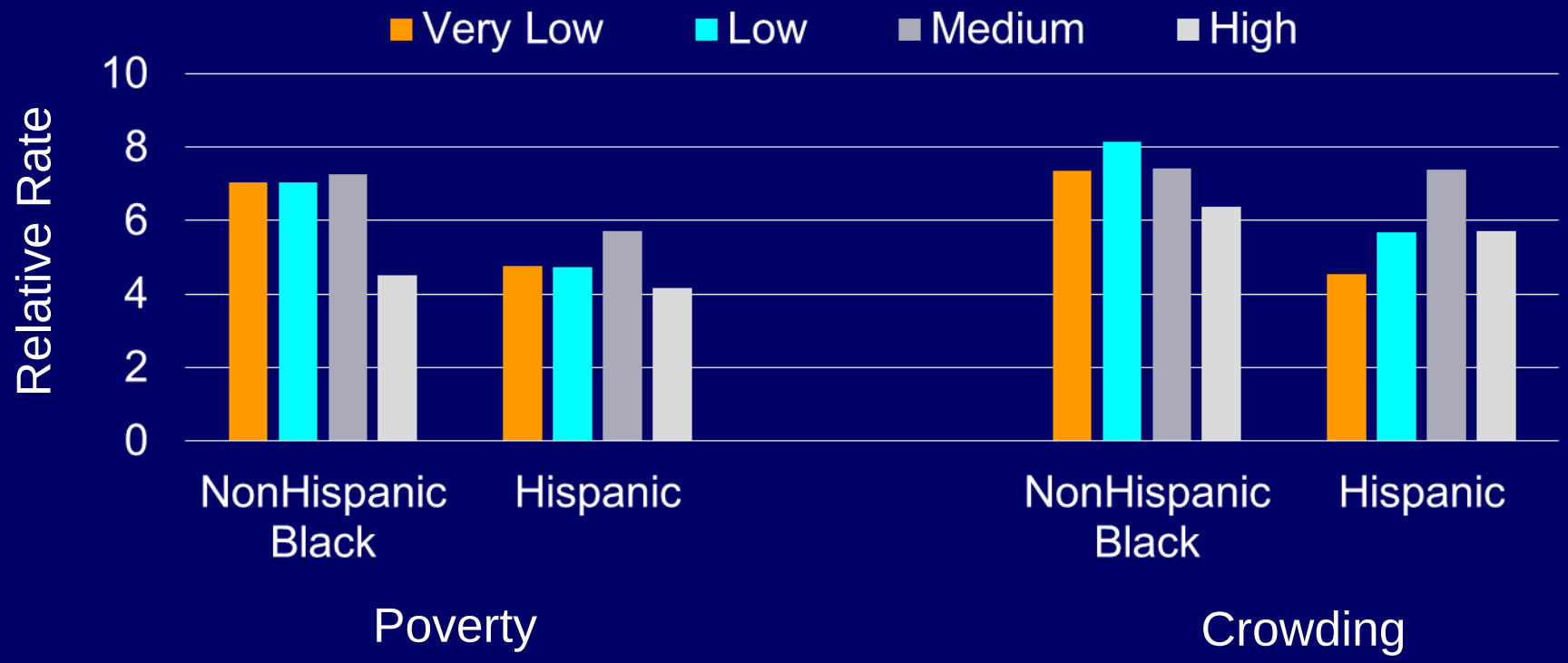
* Reference: nonH White

Age-adjusted incidence of COVID-19-related hospitalization by race/ethnicity, and census tract poverty and crowding levels, CT



* p-trend <0.05; ** p-trend <0.01

Age-adjusted Relative* Rate of COVID-19-related hospitalization of non-Hispanic blacks and Hispanics to non-Hispanic whites by census tract poverty and crowding categories



Reference: nonH White

Conclusions

- Higher rates of hospitalization occurred in those of older age, lower SES status and in non-Hispanic Blacks and Hispanics.
- Disparities vs non-Hispanic white were much greater by race/ethnicity than by SES

-

Possible Explanation

Transmission dynamics affected by Stay at Home policy:

- Exposure greatest for “essential workers” and their family members
- Much less risk for those who could work from home and their family members
- Essential workers were disproportionately Black and Hispanic
- Risk born by them and their families in CT was extraordinary, often involuntary and without PPE.

Recommendations for Providers and Businesses*

- Recognize that in a second wave, essential workers and their families, who are disproportionately non-Hispanic black and Hispanic, are at exceptional risk of involuntary exposure to SARS-CoV-2. They and their families should have ready access to adequate PPE and instruction on its use for work and in the home and to testing and social support.

- Clinics that serve minority populations, especially in poor neighborhoods, should have plans to actively offer influenza vaccine to their population and develop specific plans for vaccination against SARS-CoV-2 of essential workers and their families as an initial priority group.

* *CT Epidemiologist*: https://portal.ct.gov/-/media/DPH/EEIP/CTEPI/Vol40_No4.pdf