From the frontlines – a recent case of severe COVID disease

- 51 year old Latino, immigrant from Mexico
- In primary care at a community health center – no major chronic illnesses
- 4/28: urgent care center with sore throat and malaise. Diagnosis – strep throat (COVID test ordered but not done)
- 5/1: ED, with severe shortness of breath, severe hypoxia. Intubation complicated by arrest
- 5/24: died of respiratory failure

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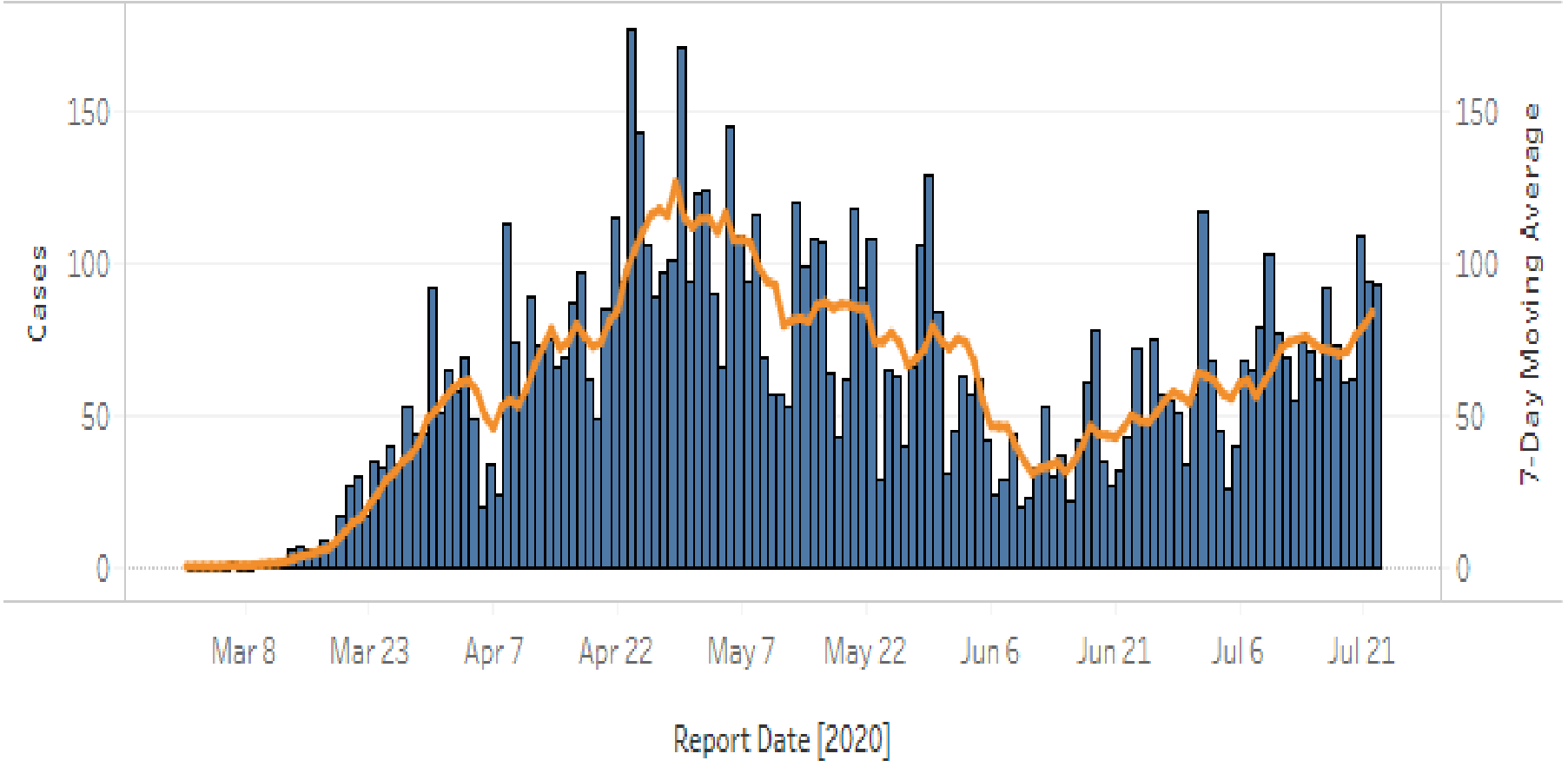
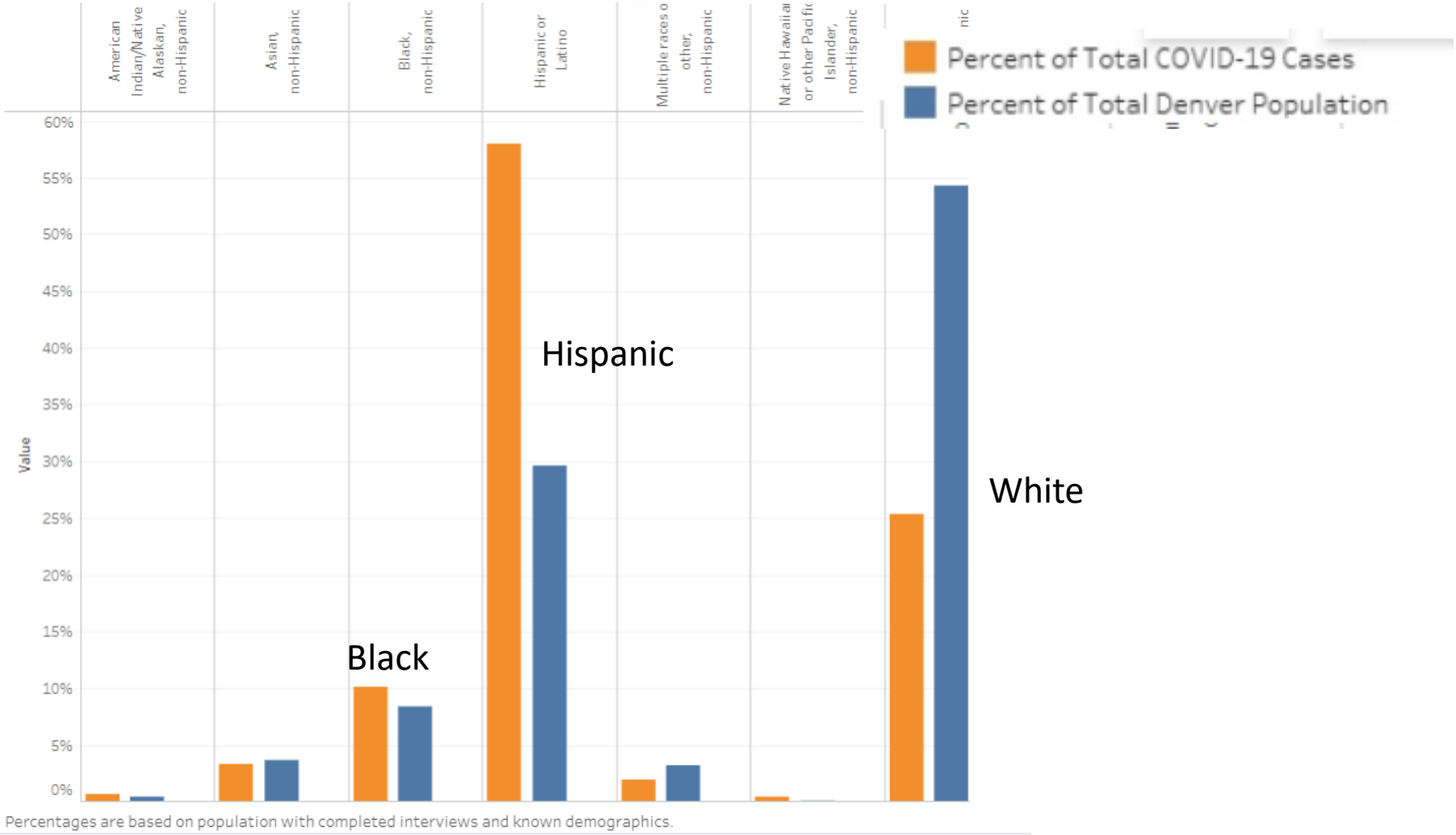
Denver County COVID-19 Cases by Day of Report



Congregate settings include long-term care facilities, jails, and cases in people experiencing homelessness.

Last Update: 7/22/2020 11:40:05 PM UTC

Disparities in COVID diagnoses in Denver County, by race/ethnicity



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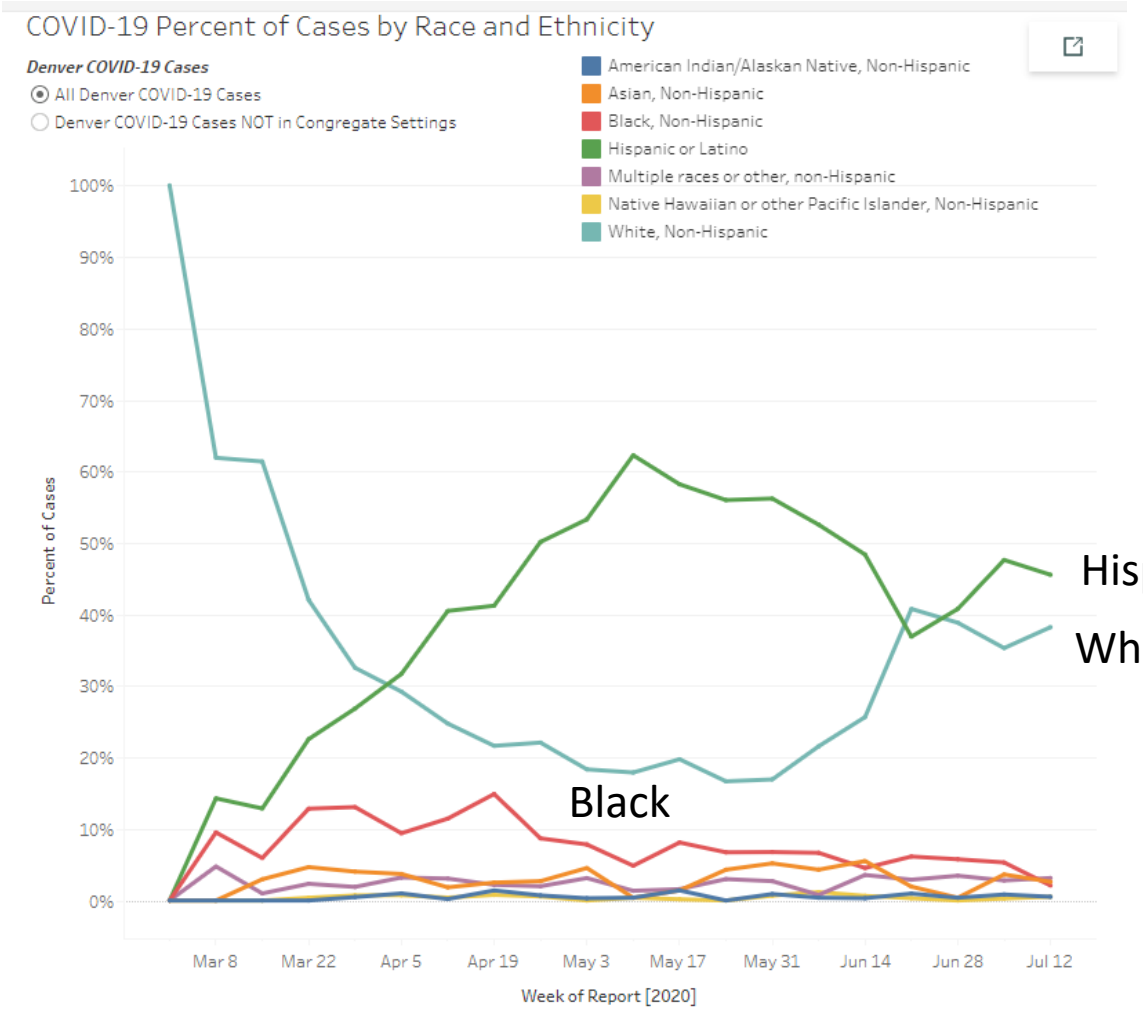
Changes in the COVID pandemic in Denver: race/ethnicity



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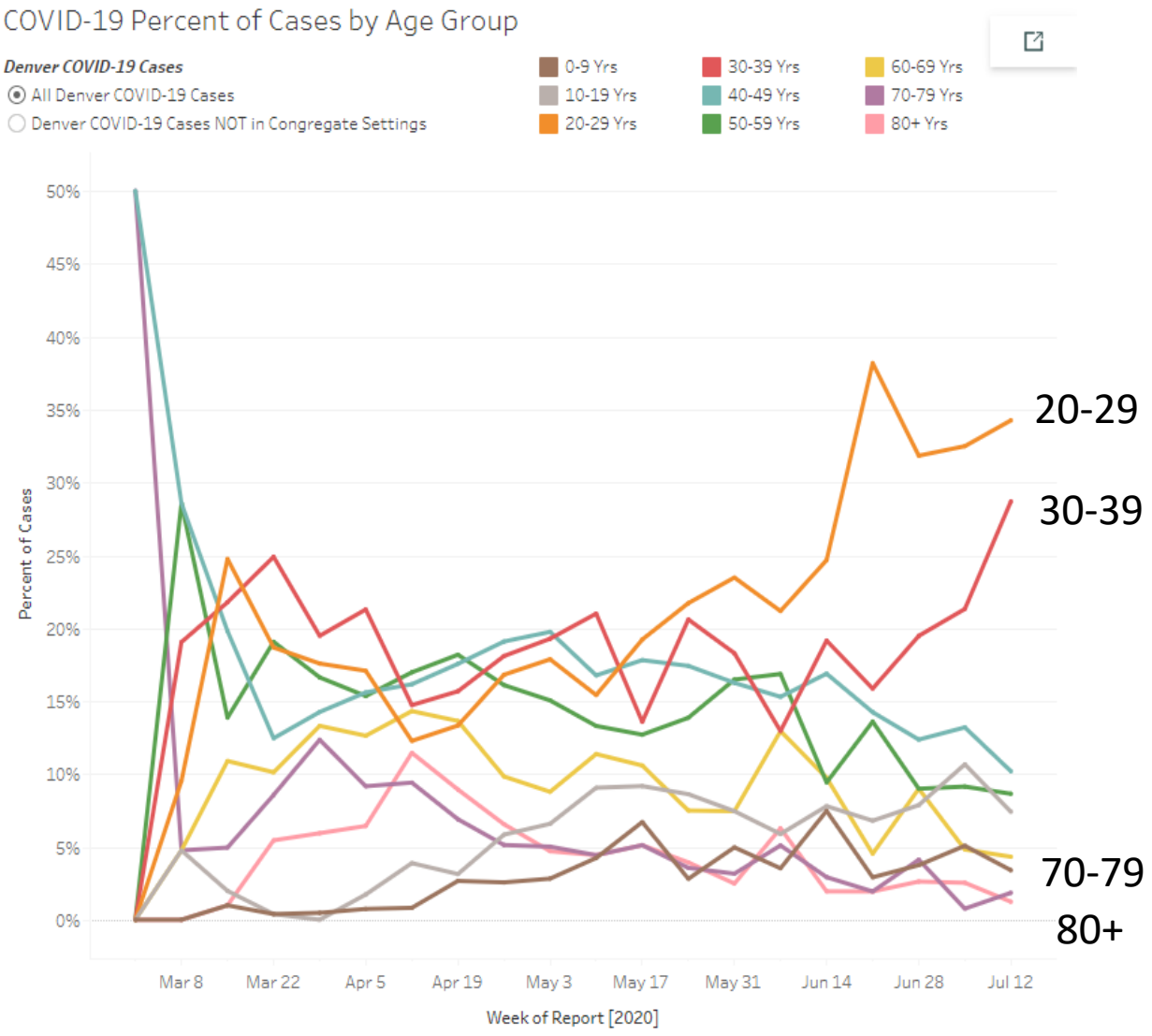
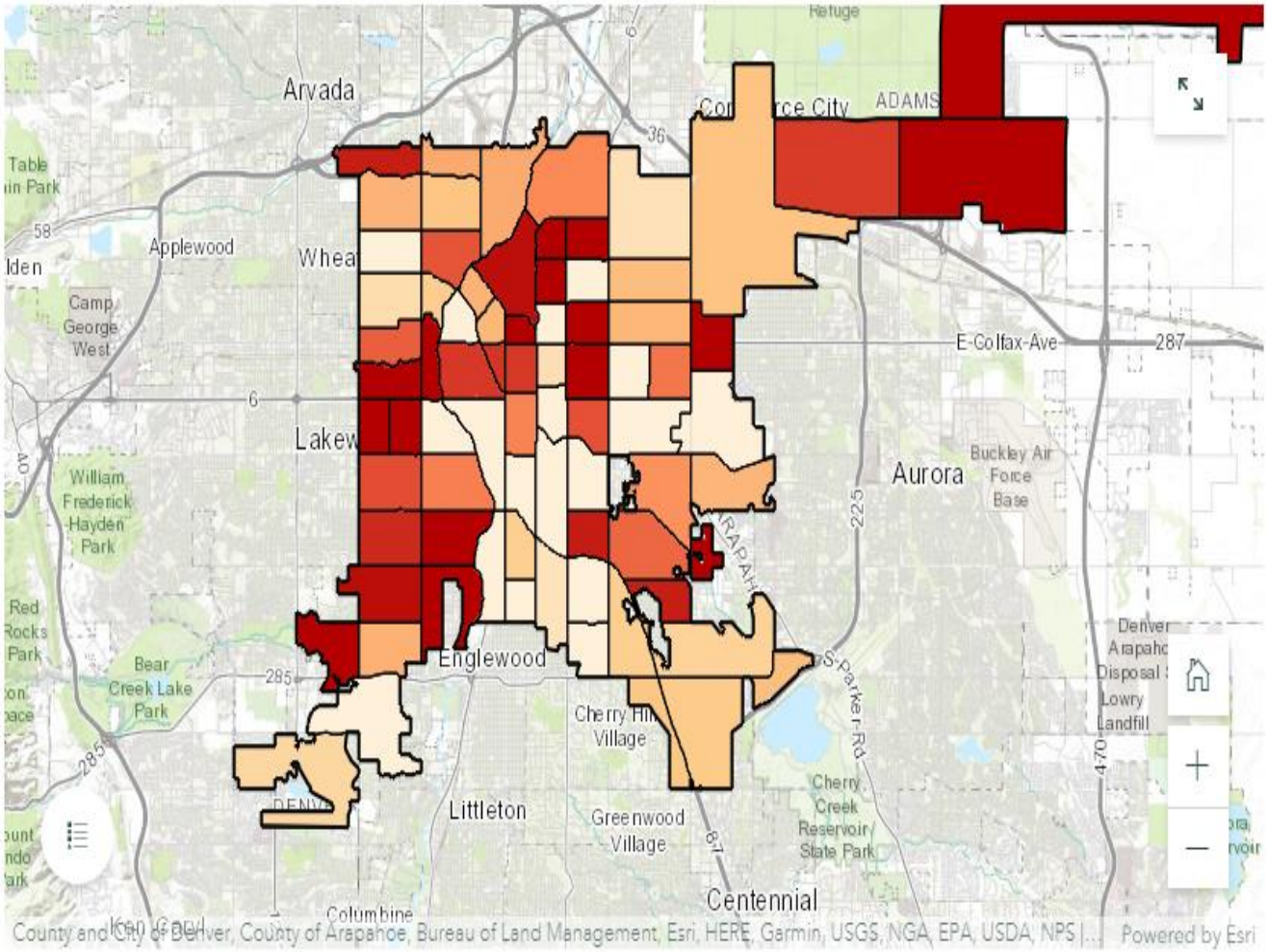
COVID among school-aged children and youth, by ethnicity (Denver)

		Age (years)		
		5-11	12-15	16-18
Ethnicity	Hispanic/Latino	89%	63%	88%
	Non-Hispanic/Latino	11%	28%	8%
	Not specified	0%	9%	4%

Changes in ages of persons diagnosed with COVID, Denver



Recent COVID cases (7/12-7/18), by neighborhood



COVID-19 Case Rate per 1,000 persons by Denver Neighborhood: July 12 - July 18, 2020

COVID-19 Case Rate per 1,000 Persons by Census Tract: May - June, 2020
Ages 5 - 18

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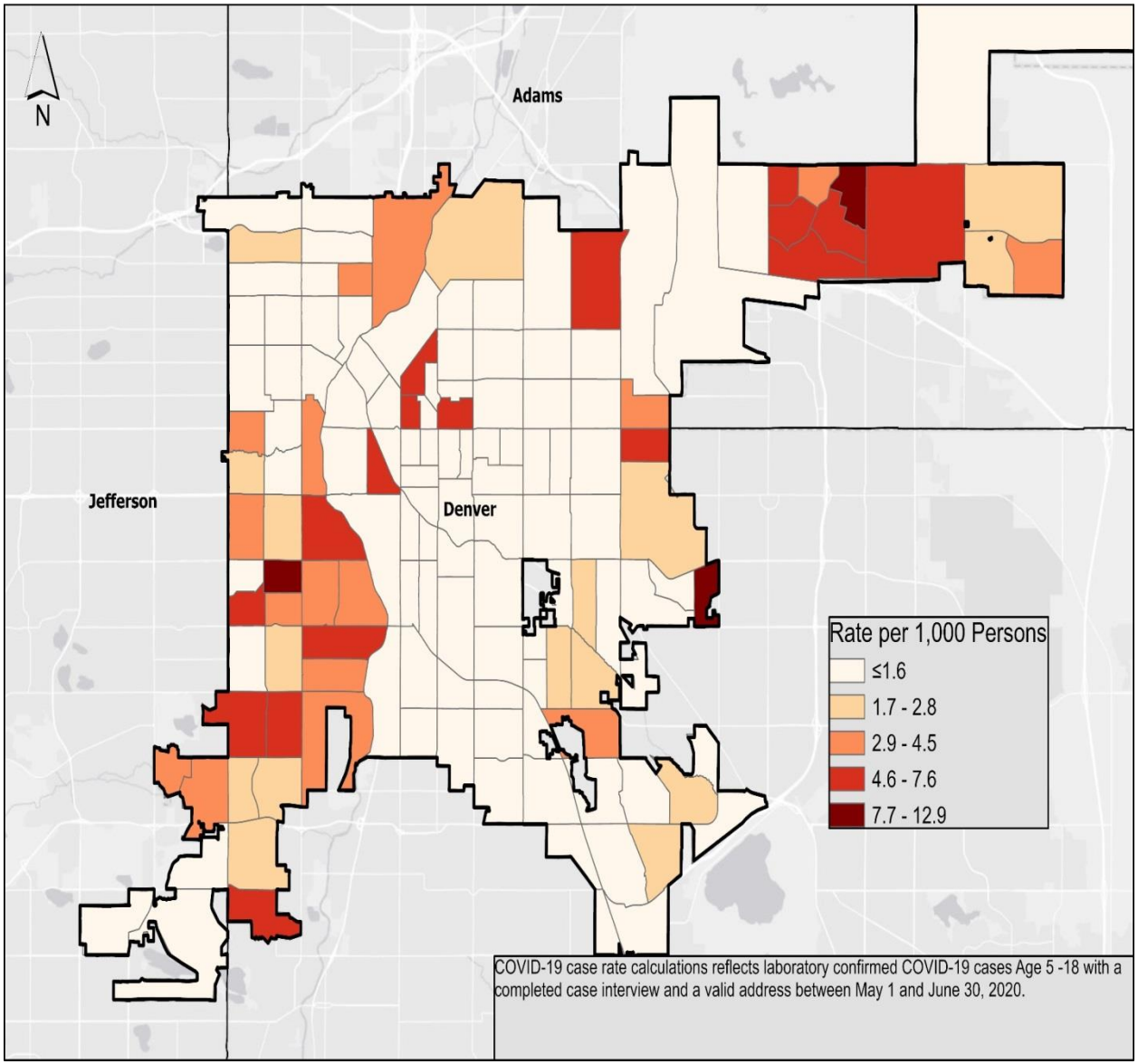
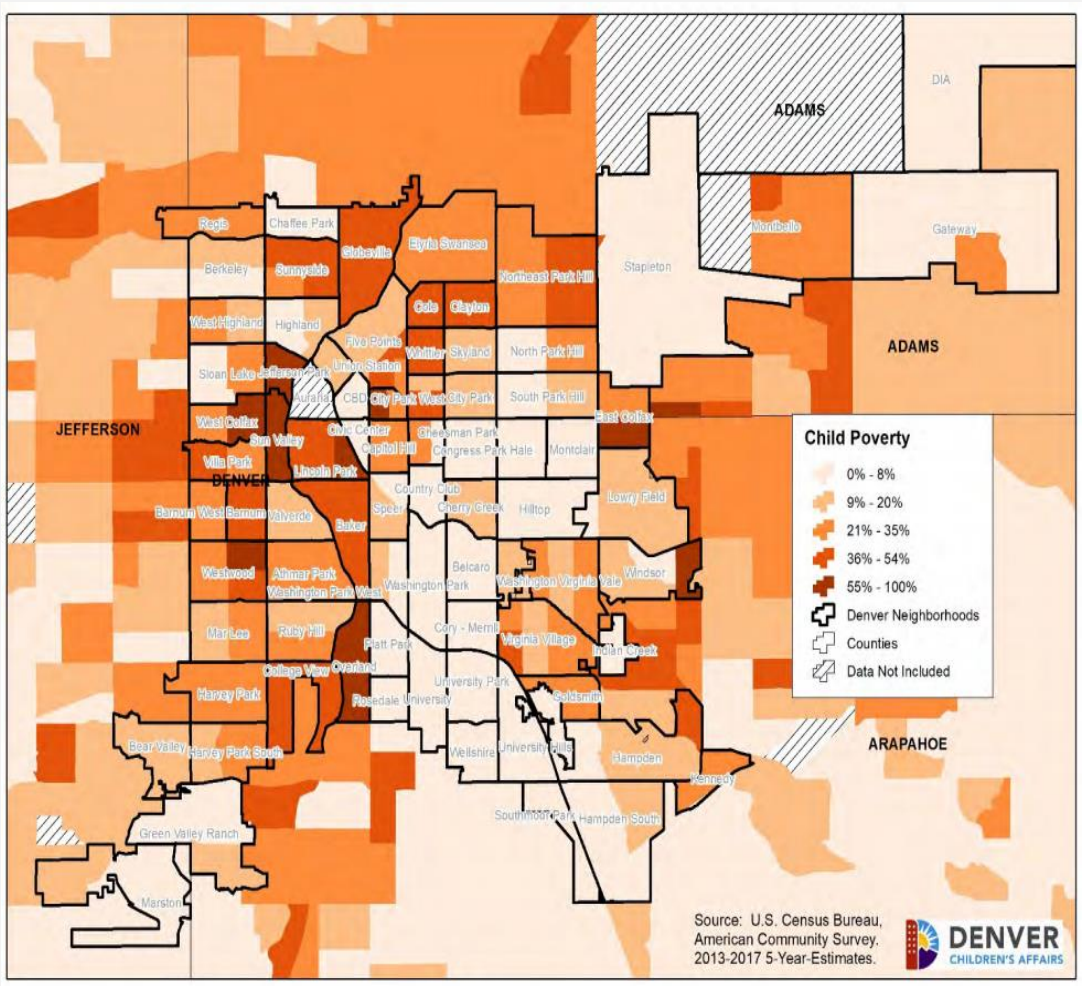
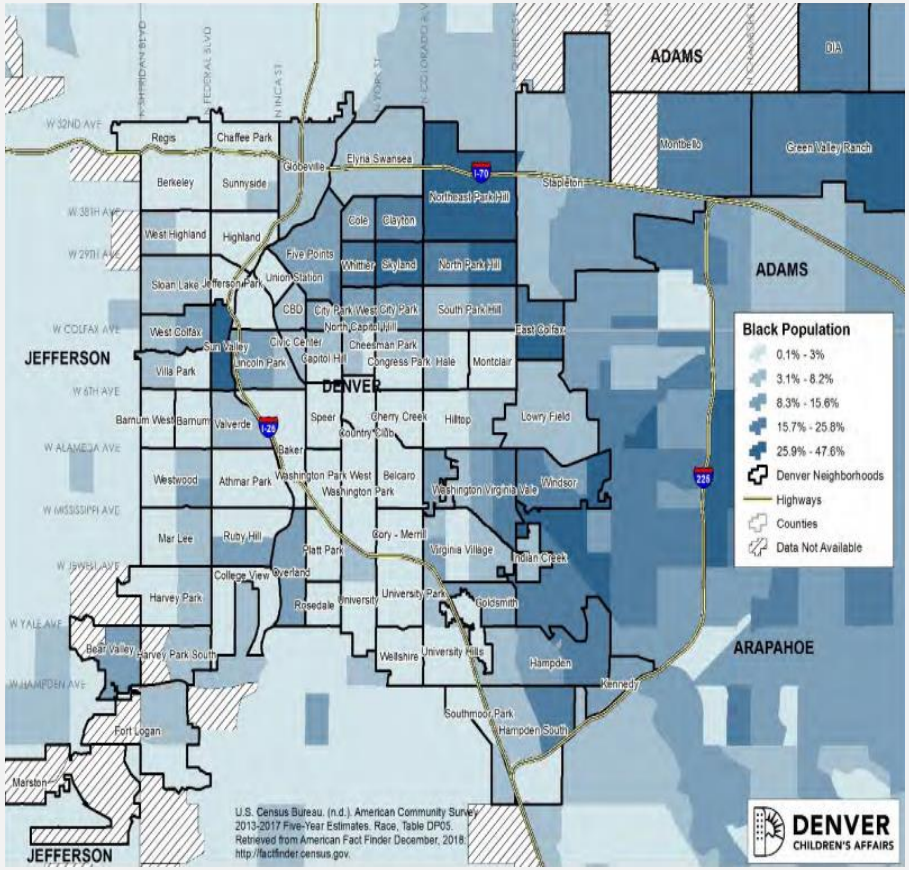


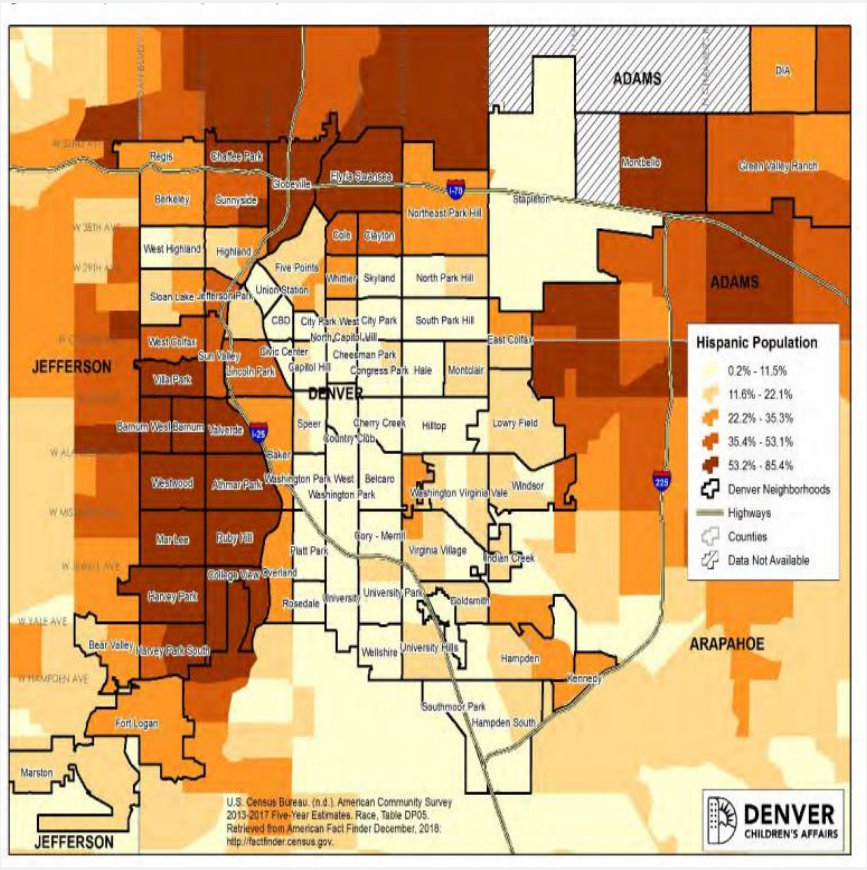
Geography of poverty in Denver County



https://www.denvergov.org/content/dam/denvergov/Portals/713/documents/data-resources/StatusOfDenversChildren_ADA_2019.pdf

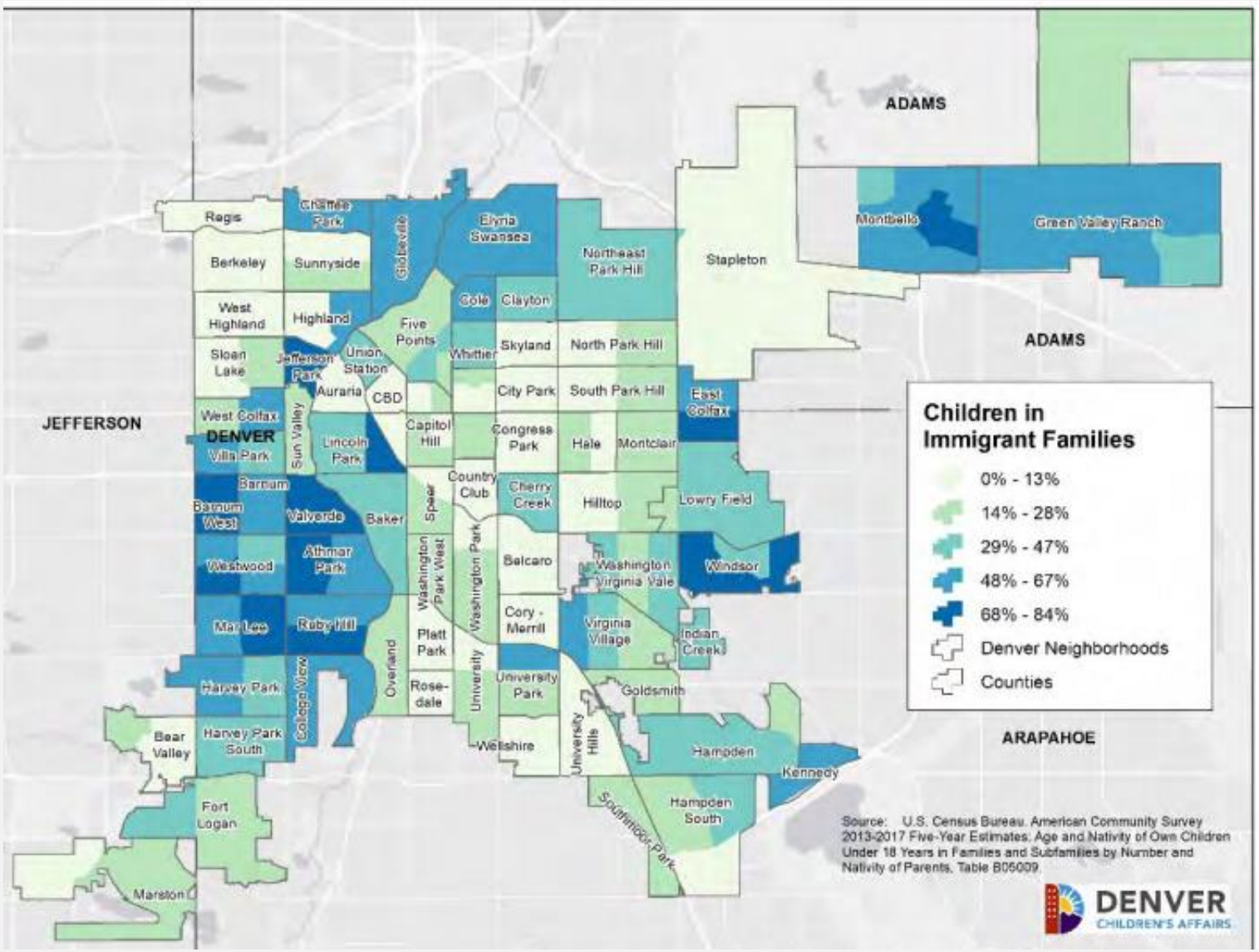
Geography of race in Denver County



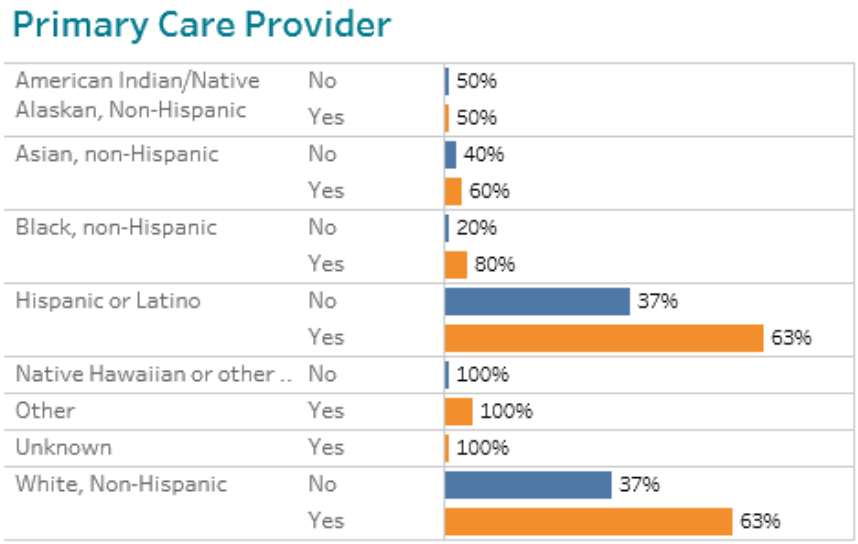


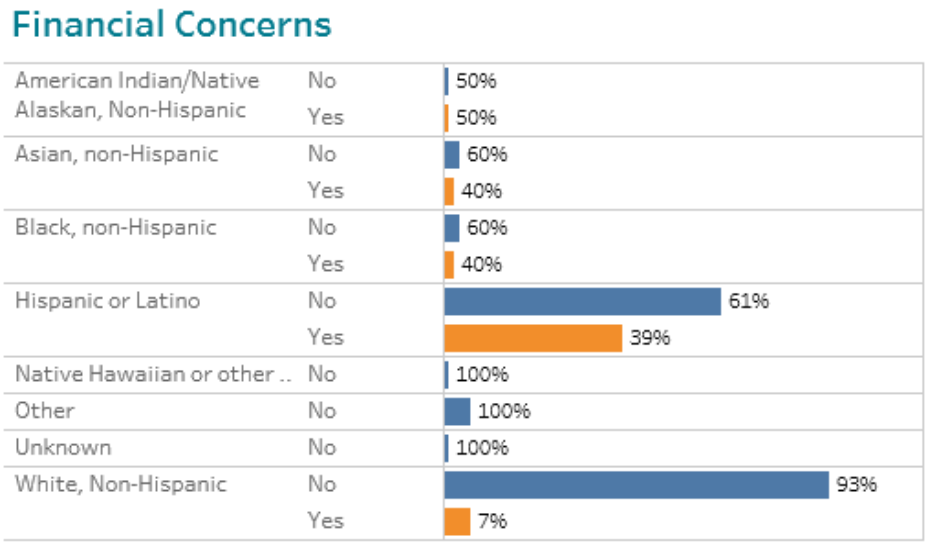
https://www.denvergov.org/content/dam/denvergov/Portals/713/documents/data-resources/StatusOfDenversChildren_ADA_2019.pdf

Geography of immigrant families (2019)



Needs for support among persons recently diagnosed with COVID, (Denver County)





35% - no primary care provider

23% - current financial concerns

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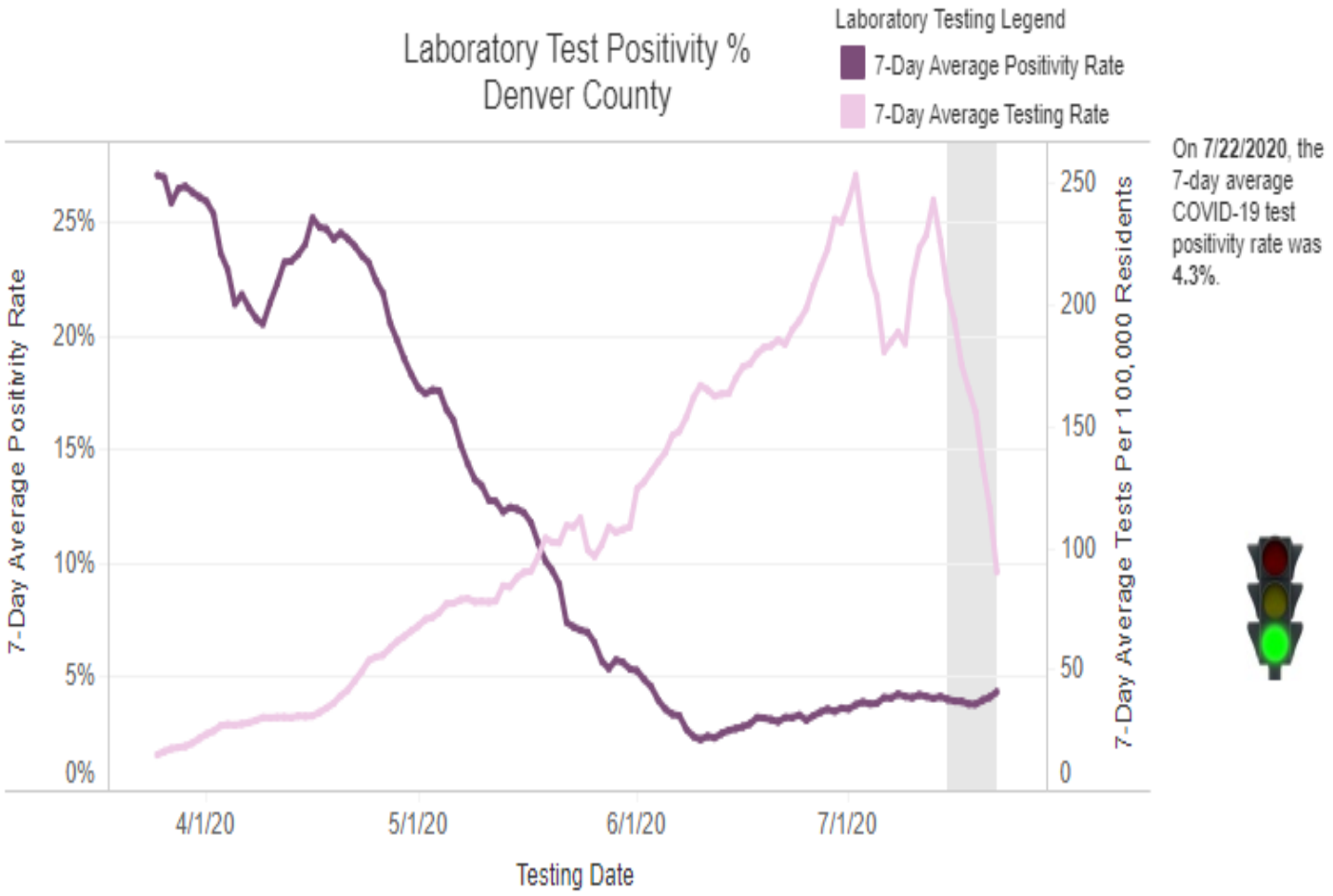
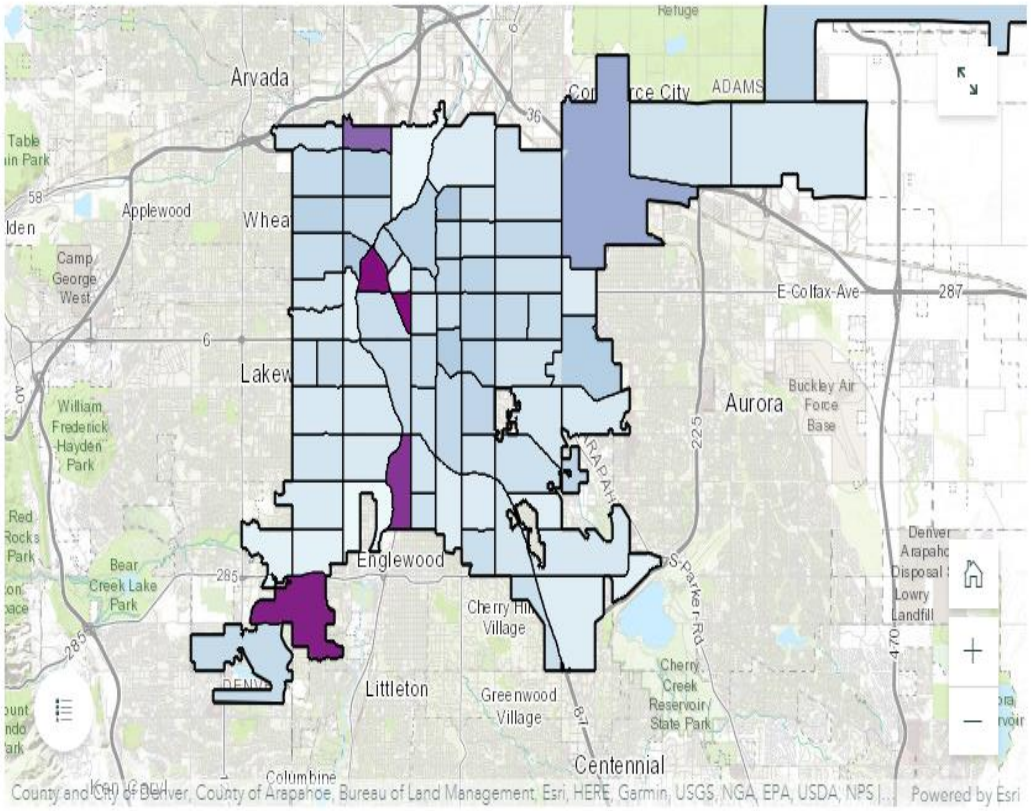
Testing in Denver County and percent positive



Recent COVID testing (7/12 – 7/18), by neighborhood

Denver COVID-19 Data Summary



COVID-19 Testing Rate per 1,000 persons by Denver Neighborhood: July 12 - July 18, 2020

Controlling COVID – trying to overcome decades of systematic racism in the midst of a pandemic

- COVID infection and severe disease are highly associated with race, poverty, and immigrant status
  - Lack of culturally-appropriate communication
  - Lack of trust in government
  - Lack of access to healthcare
  - Lack of paid sick leave
  - Poverty
  - Crowded households

Making the test, support, and trace strategy work

Challenge	Intervention
Assuring access to testing by those at highest risk	• Free, convenient, quick testing • Outreach events in high-risk communities
Needs for support among persons with COVID	• Targeted home visitation – assess and test • Partnership with Denver Human Services – access to assistance
Reluctance to share information on close contacts	• Communication through trusted cultural brokers (promotoras, patient navigators) • Case supporters and tracers from affected communities
Low vaccination rates	• Expanded in-school vaccination program • Outreach vaccination to underserved adults

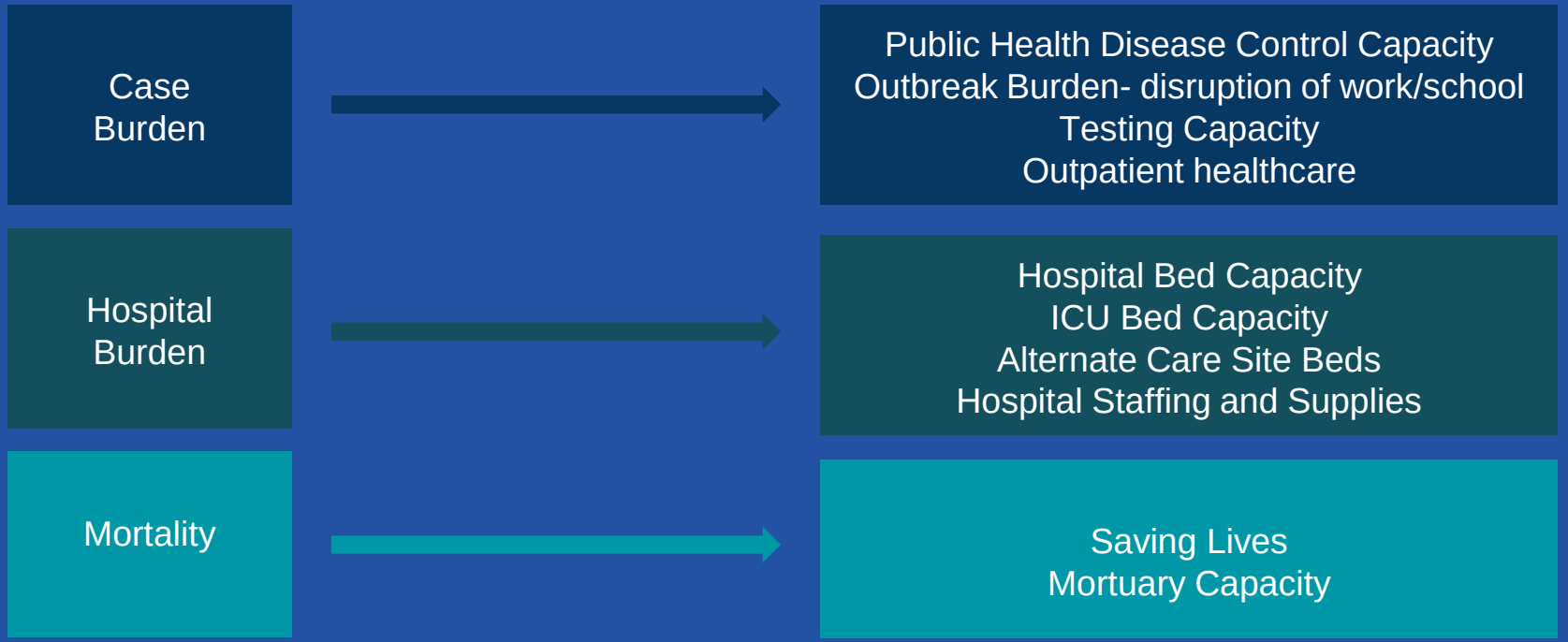
DENVER PUBLIC HEALTH

July 23, 2020 - Department of Medicine Town Hall

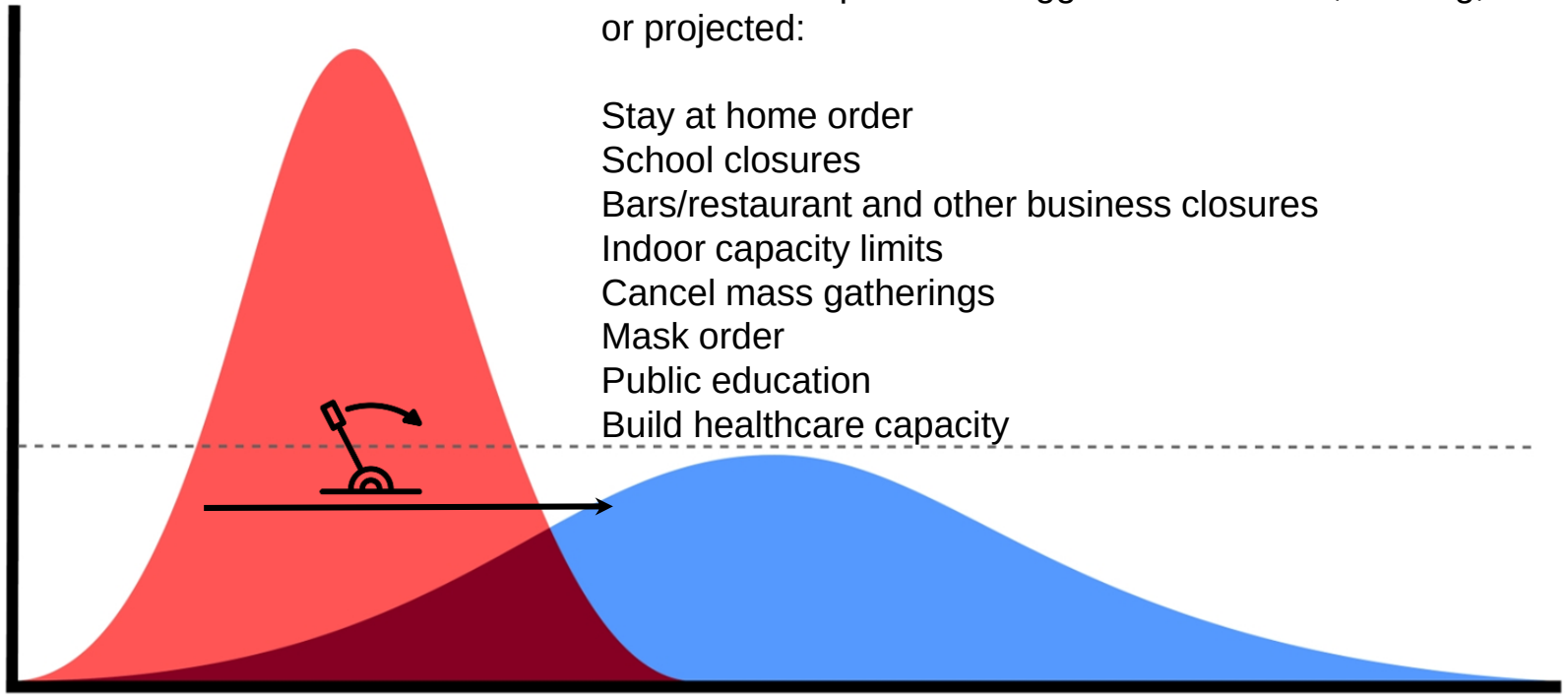
Rachel Herlihy, MD, MPH
State Epidemiologist

Colorado Department of Public Health & Environment

What are we measuring and why?



What do we do when burden is too high?



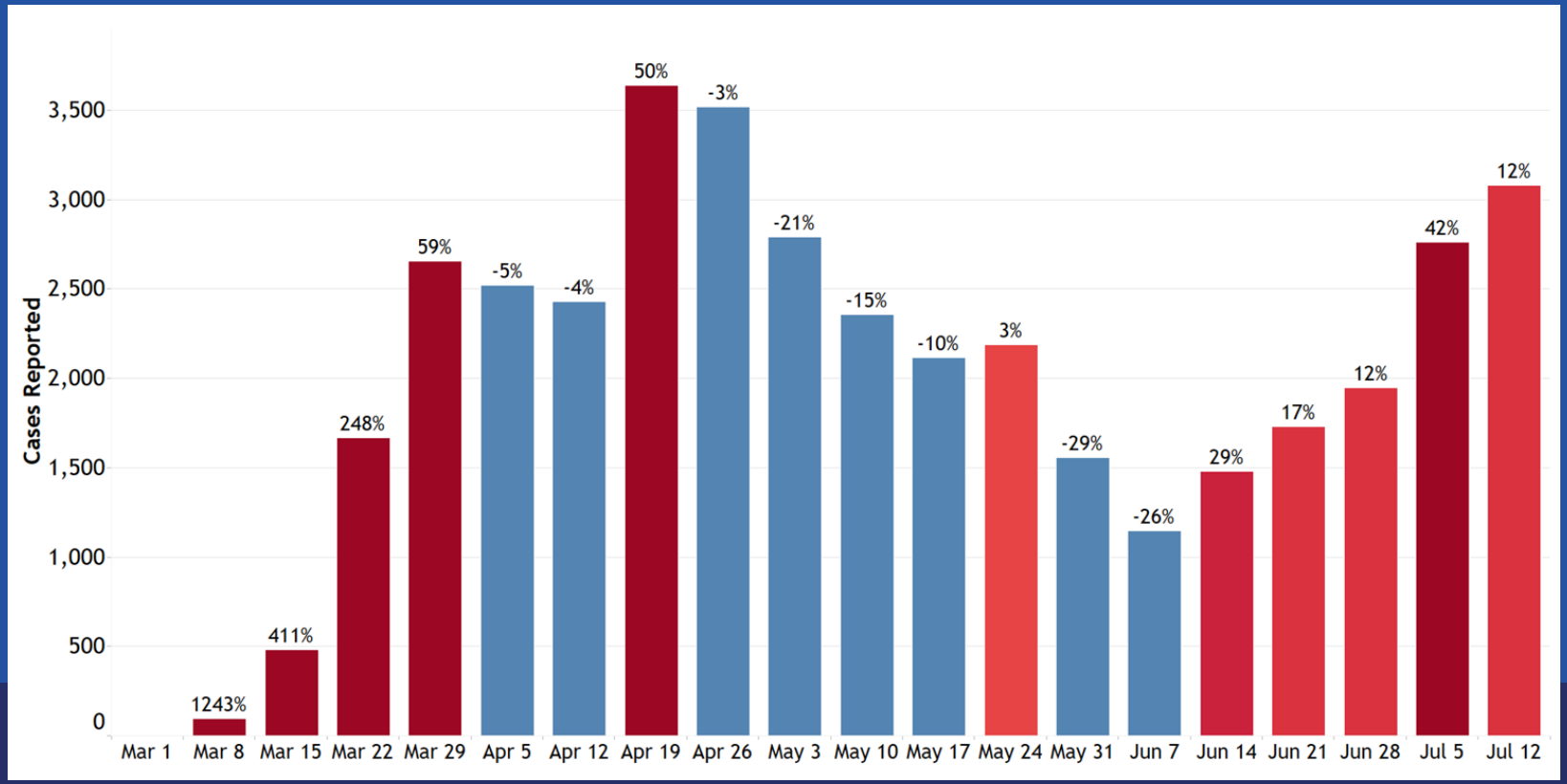
The levers we pull when triggers are reached, nearing, or projected:

Stay at home order
School closures
Bars/restaurant and other business closures
Indoor capacity limits
Cancel mass gatherings
Mask order
Public education
Build healthcare capacity

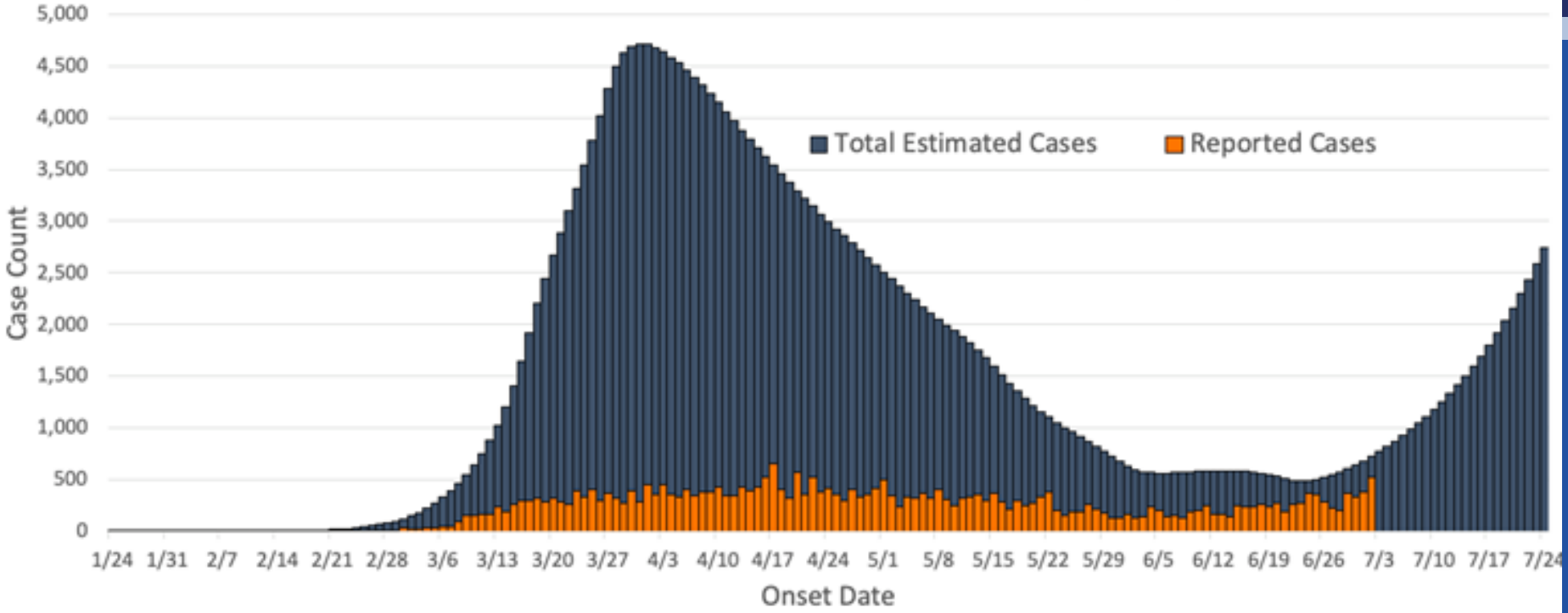
Surveillance Indicators/Tools

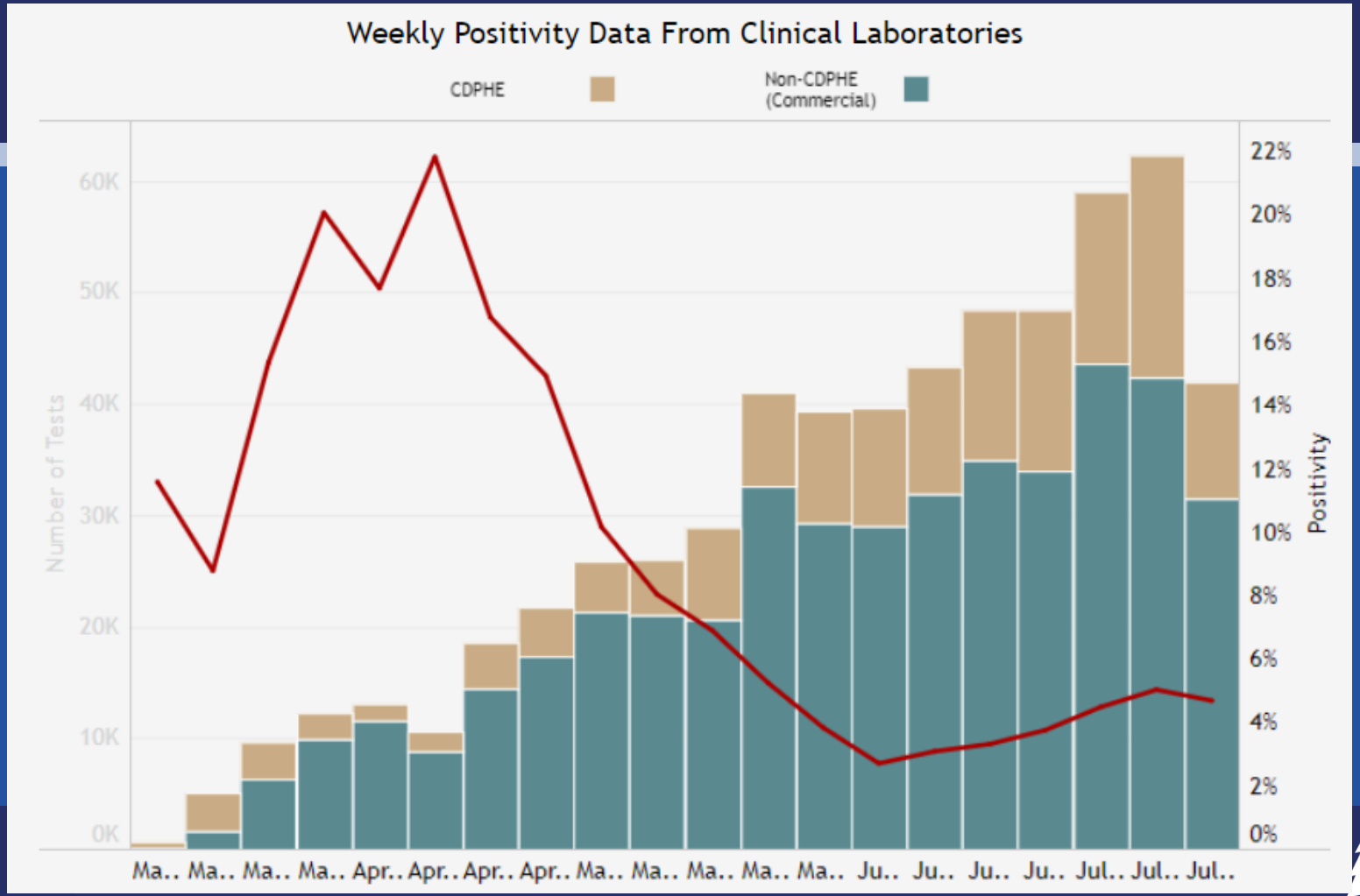
- Cases- daily counts, weekly/moving average trends including evidence of acceleration
- Laboratory testing- capacity and percent positivity
- Hospitalizations- currently hospitalized and new admissions
- Modeling
  - Forecast cases, healthcare need compared to capacity
    - Timing
    - Scale
  - Measure impact of previous interventions, identify need for interventions, estimate impact of potential interventions

Cases Reported - Percent Change by Week

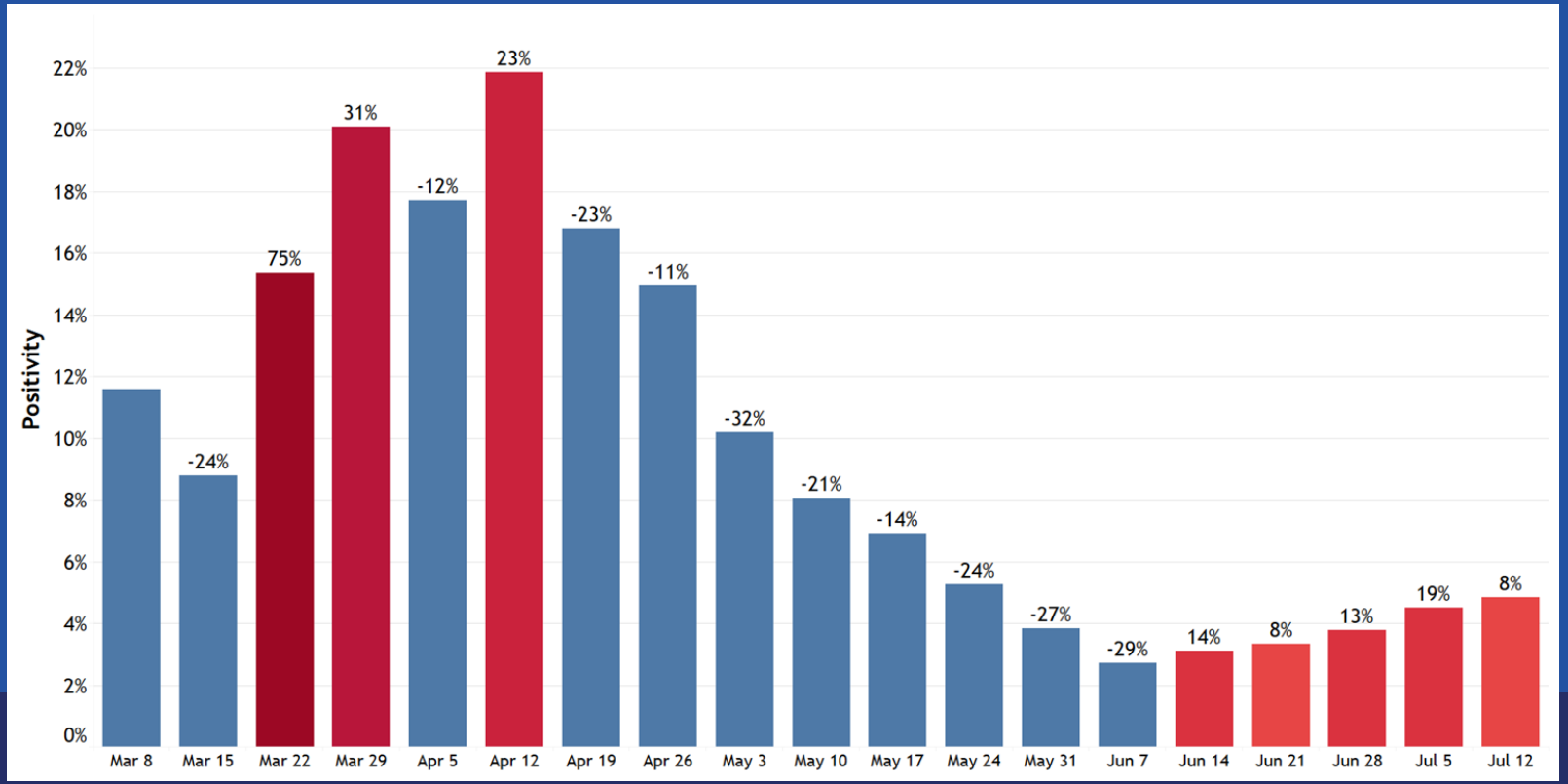


Model Estimate of Expected Incident Cases (Symptomatic + Asymptomatic) vs. Observed Cases of COVID-19 in Colorado, January - July 2020

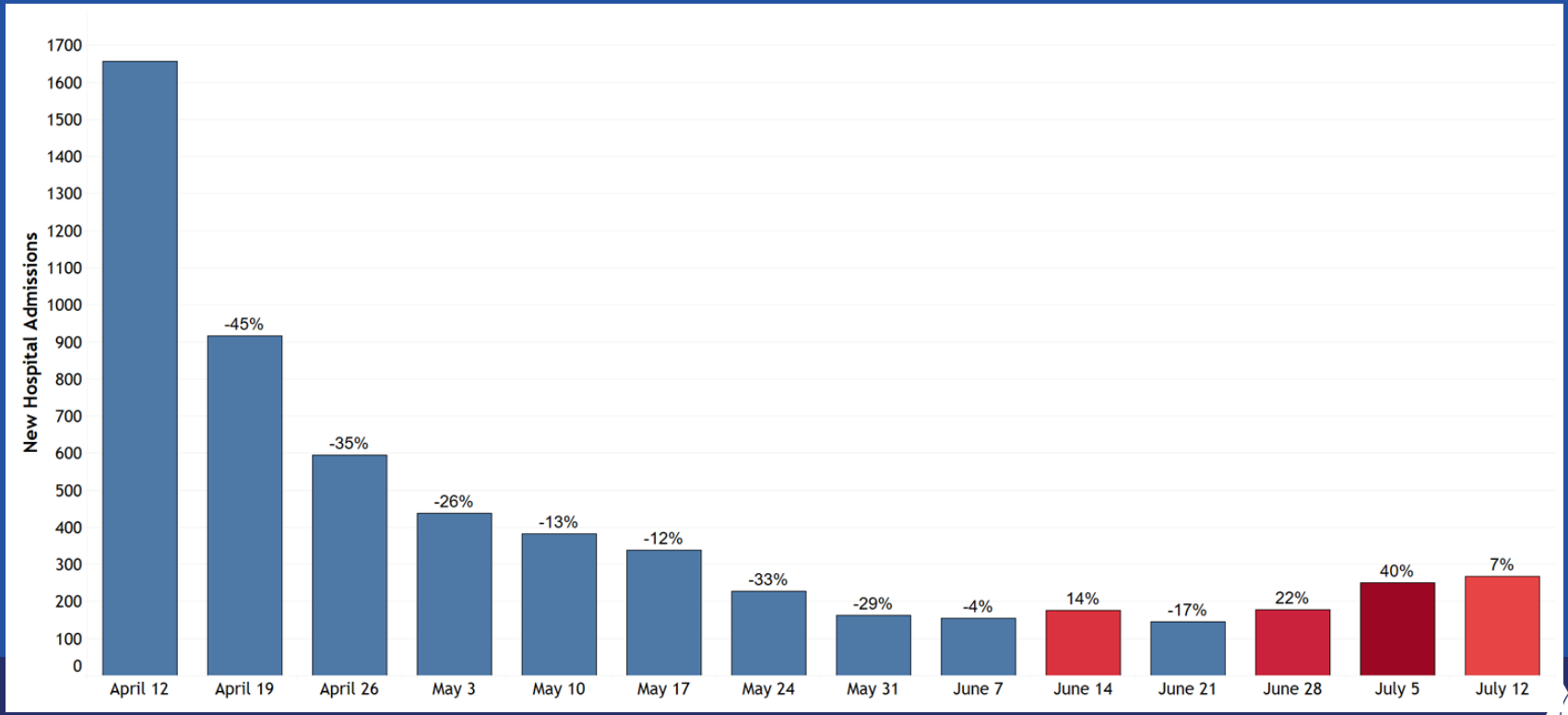



Weekly Positivity Data From Clinical Laboratories
CDPHE
Non-CDPHE (Commercial)
Number of Tests
60K
50K
40K
30K
20K
10K
0K
Positivity
22%
20%
18%
16%
14%
12%
10%
8%
6%
4%
2%
0%
Ma.. Ma.. Ma.. Ma.. Apr.. Apr.. Apr.. Apr.. Ma.. Ma.. Ma.. Ma.. Ma.. Ju.. Ju.. Ju.. Ju.. Jul.. Jul.. Jul..

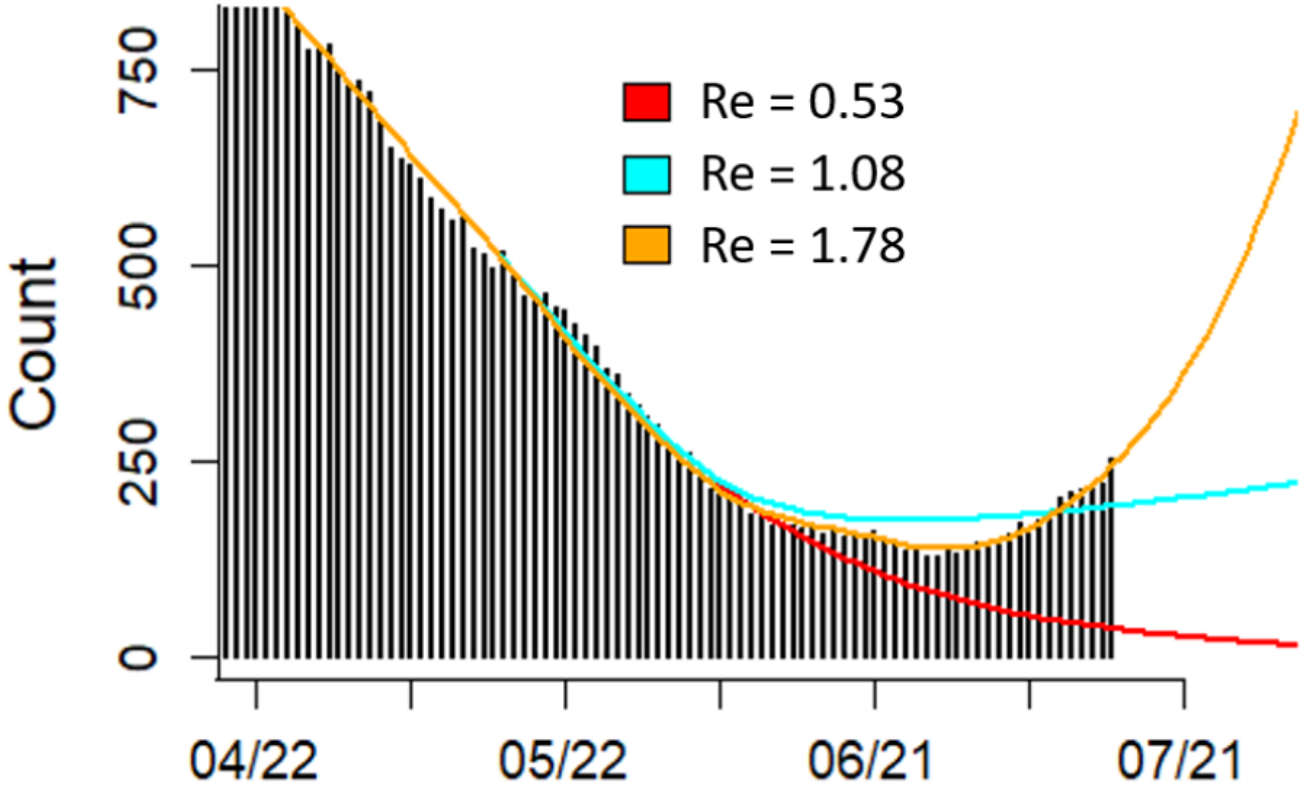
Diagnostic Test Positivity - Percent Change by Week

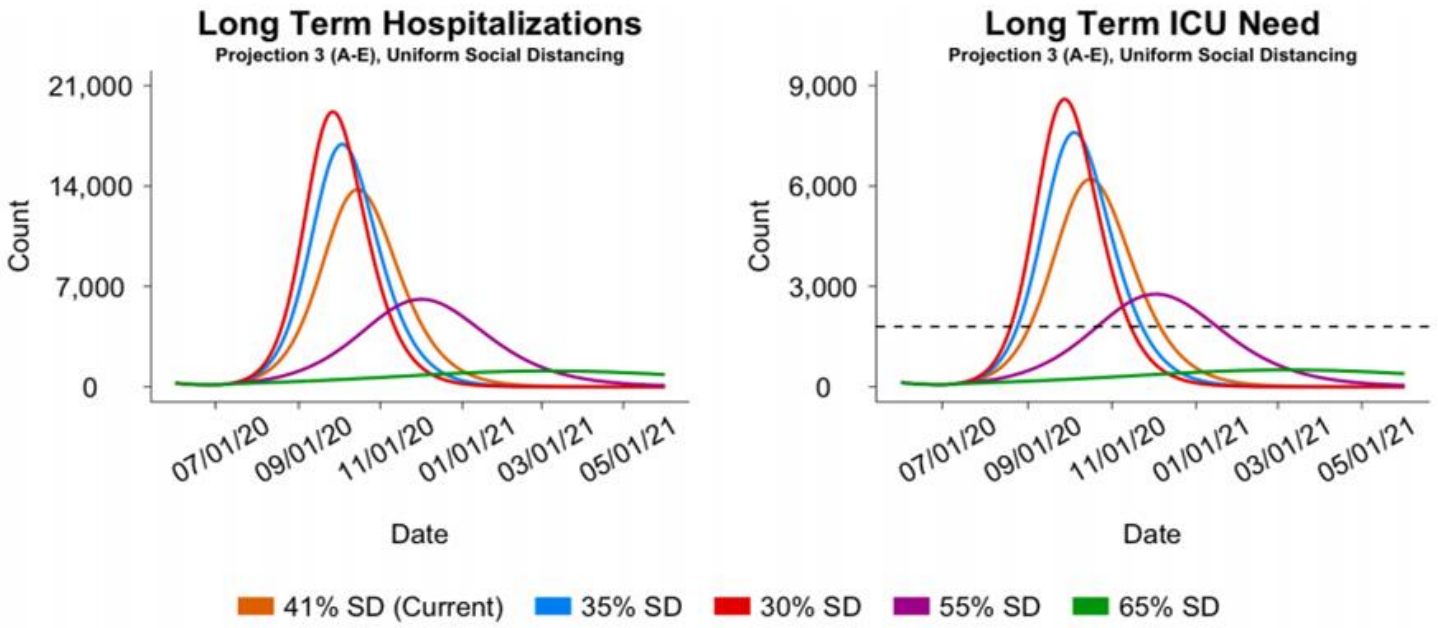


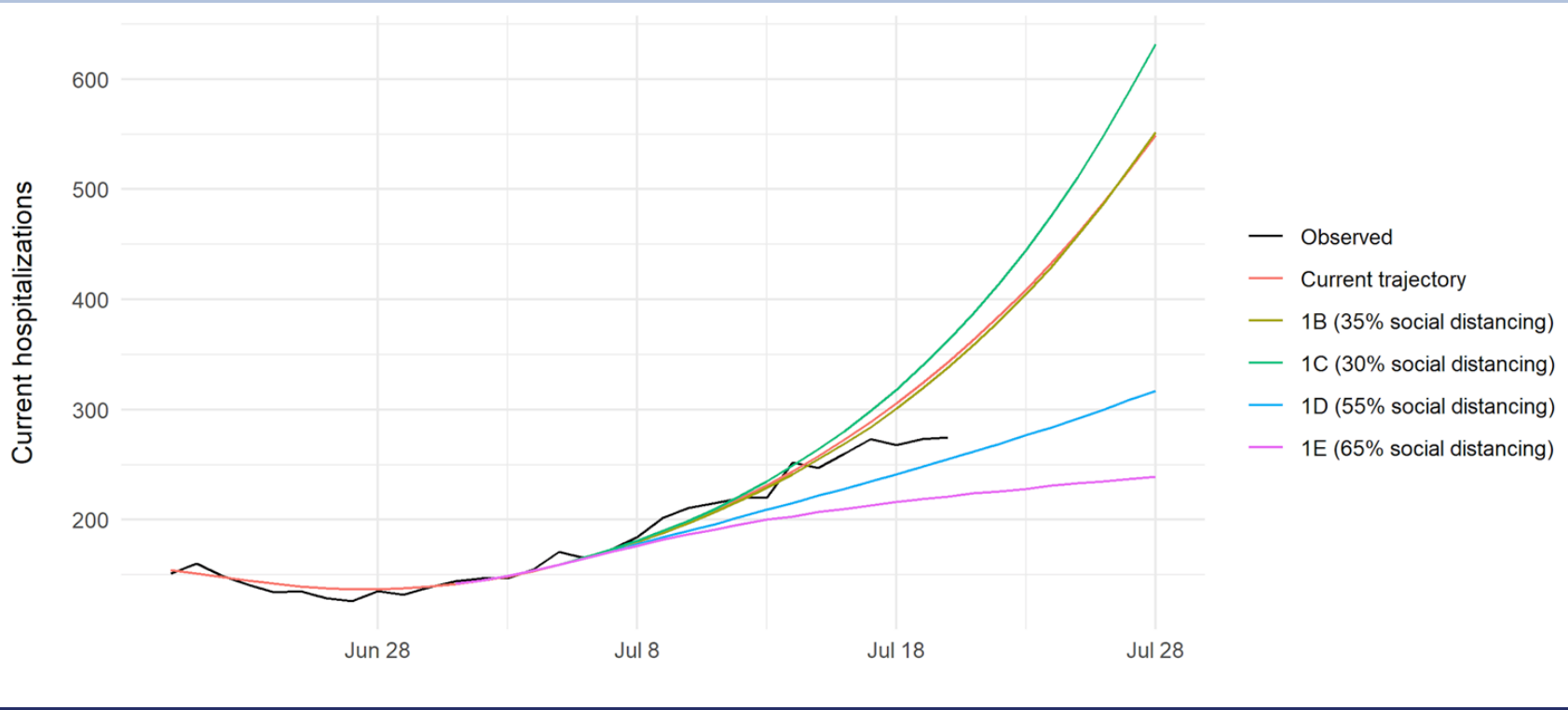
Hospital Admissions - Percent Change by Week



Trajectory of COVID-19 Hospitalization by Levels of Social Distancing





This scenario assumes all mask wearing, and case isolation remains at current levels. Based on CDC recommendations, the 65%, 55%, 35% and 30% scenarios assume half of older adults practice high levels of social distancing.

Observed versus Projected Hospitalizations