



# Board of Supervisors The Novel Coronavirus (COVID-19)

December 14, 2021

# Briefing Topics

- Current rates
- Vaccination & booster data
- CDPH guidance
- Omicron variant



# Santa Barbara County By the Numbers

December 13, 2021

Updated M-F except holidays

New Cases 21

↓ -71% from 2 week avg of 73

New Deaths 0

↓ -100% from 2 week avg of 1

Active Cases 416

↑ 6% from 2 week avg of 391

Hospitalized 39

↑ 11% from 2 week avg of 35

Total Cases  
46,655

Total Deaths  
554

Case Rate per 100k as of December 9, 2021

12.8

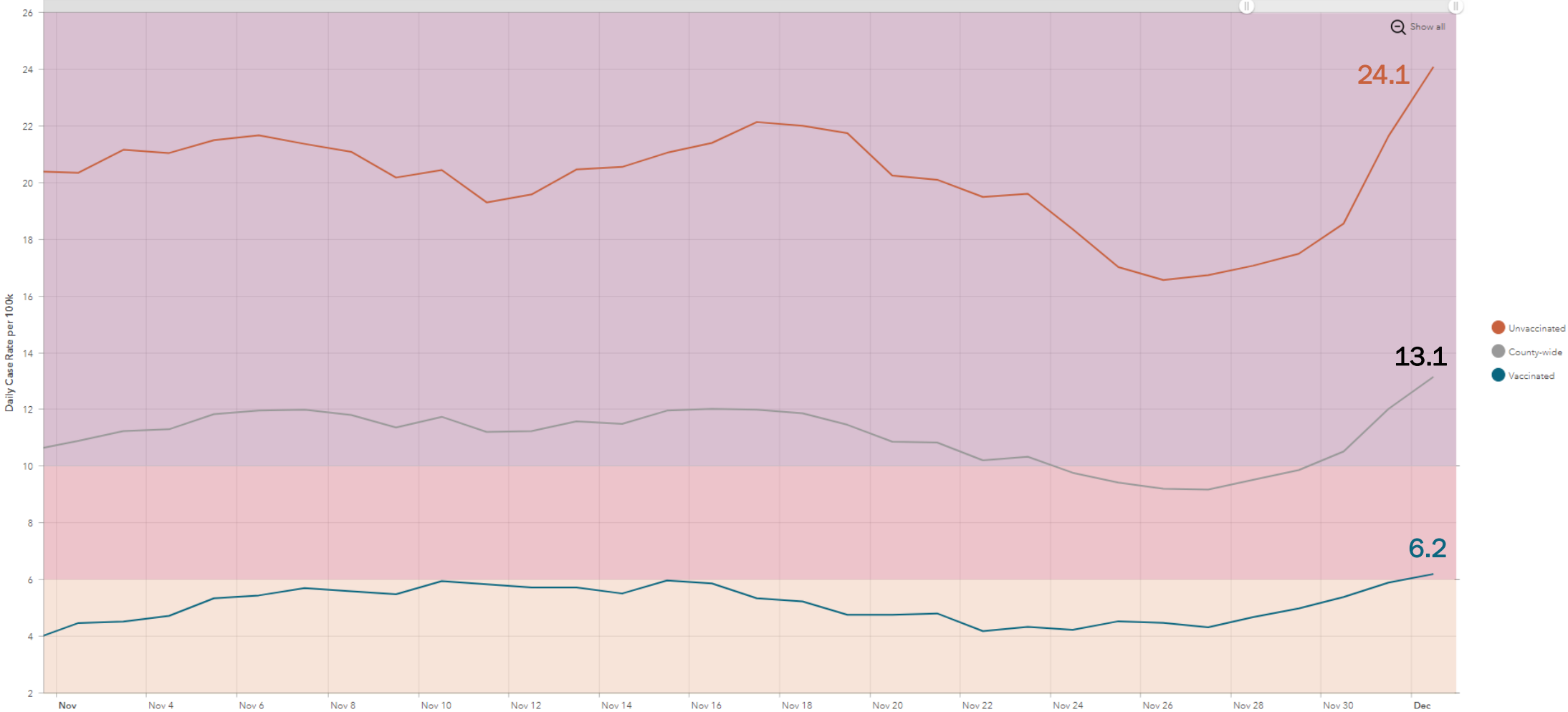
Test Positivity as of December 9, 2021

3.5%



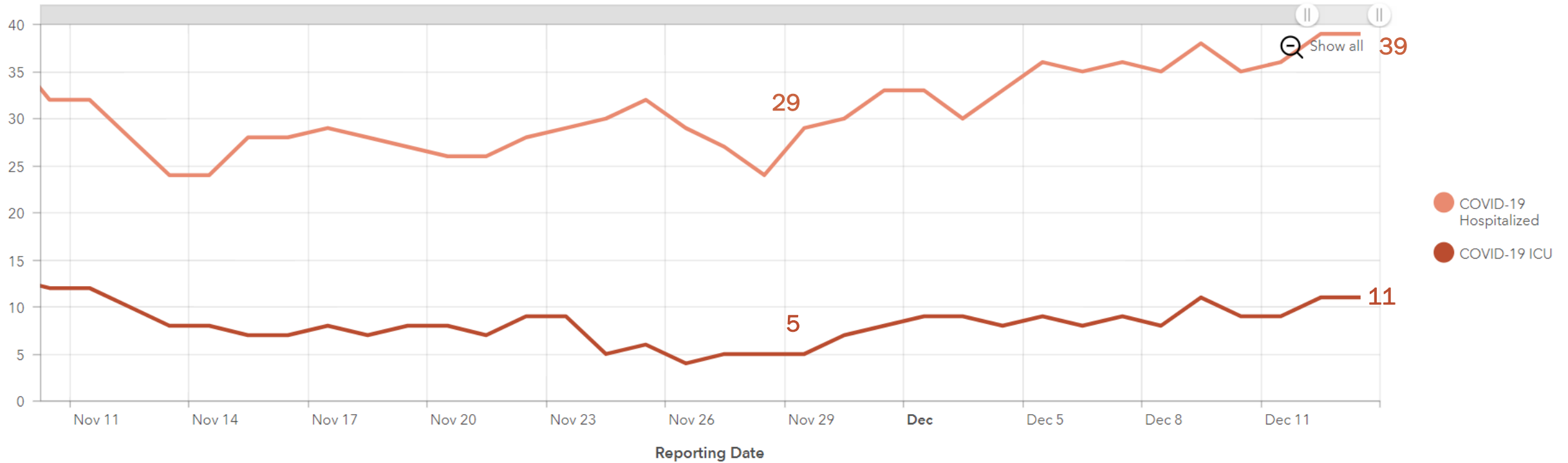
# Case Rates by Vaccination Status

Daily Case Rate of Unvaccinated vs Vaccinated in Santa Barbara County



# Hospitalization

## Adult COVID-19 Patients Hospitalized



# CDC Level of Community Transmission

Community Transmission Levels	Low Transmission	Moderate Transmission	Substantial Transmission	High Transmission
Total new cases per 100,000 persons in the past 7 days	0-9.99	10-49.99	50-99.99	≥100
Percentage of NAATs that are positive during the past 7 days	0-4.99%	5-7.99%	8-9.99%	≥10.0%

- Current SBC daily case rate: 12.8/100,000
  - or 89.6/100,000 for 7 days
- SBC has substantial transmission per CDC standards



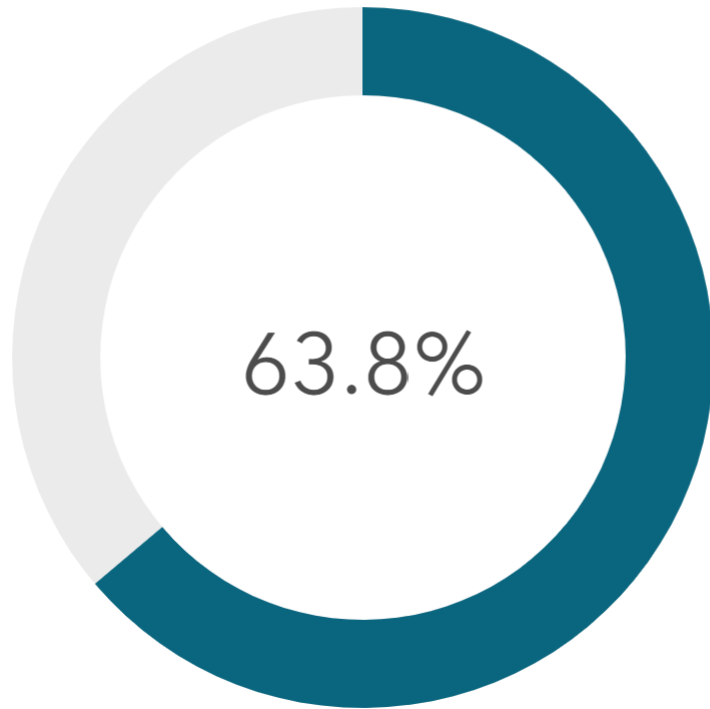
# Vaccination Data

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# SBC Vaccination Rates

% of SB County  
Fully Vaccinated



% of Eligible Fully Vaccinated

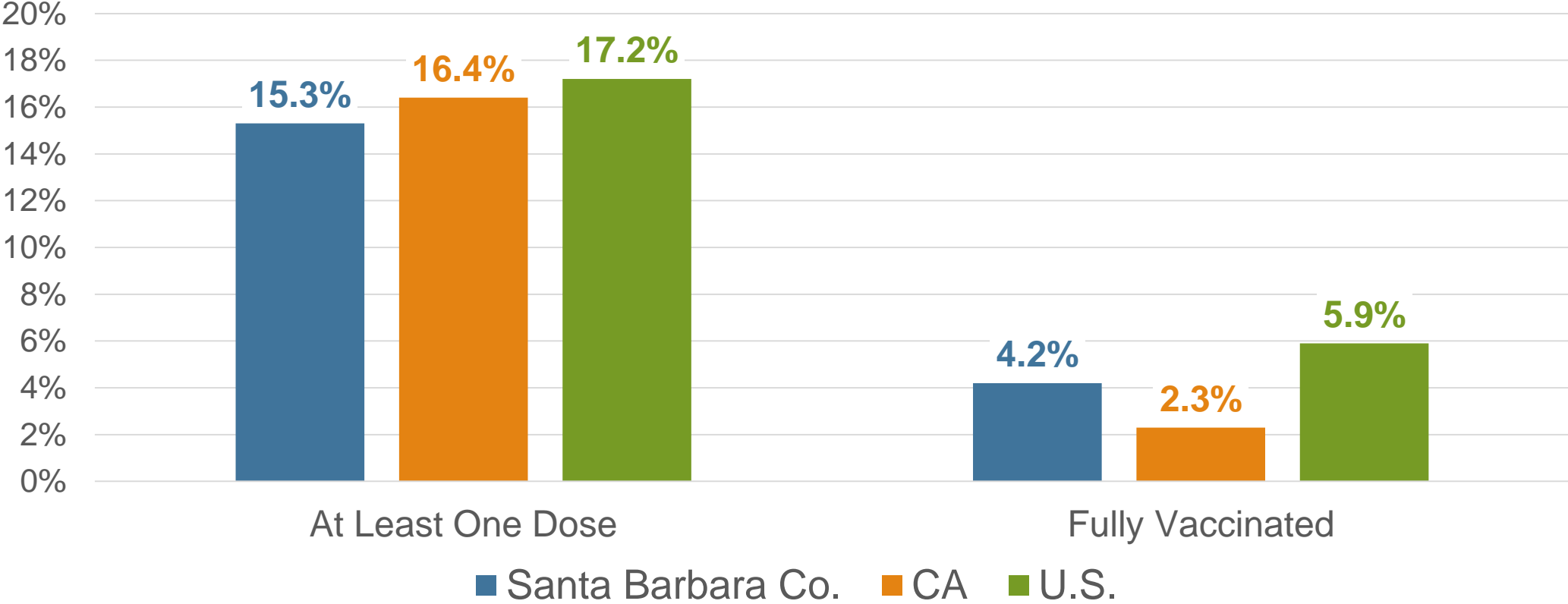
**67.8%**

County residents 5+ years old

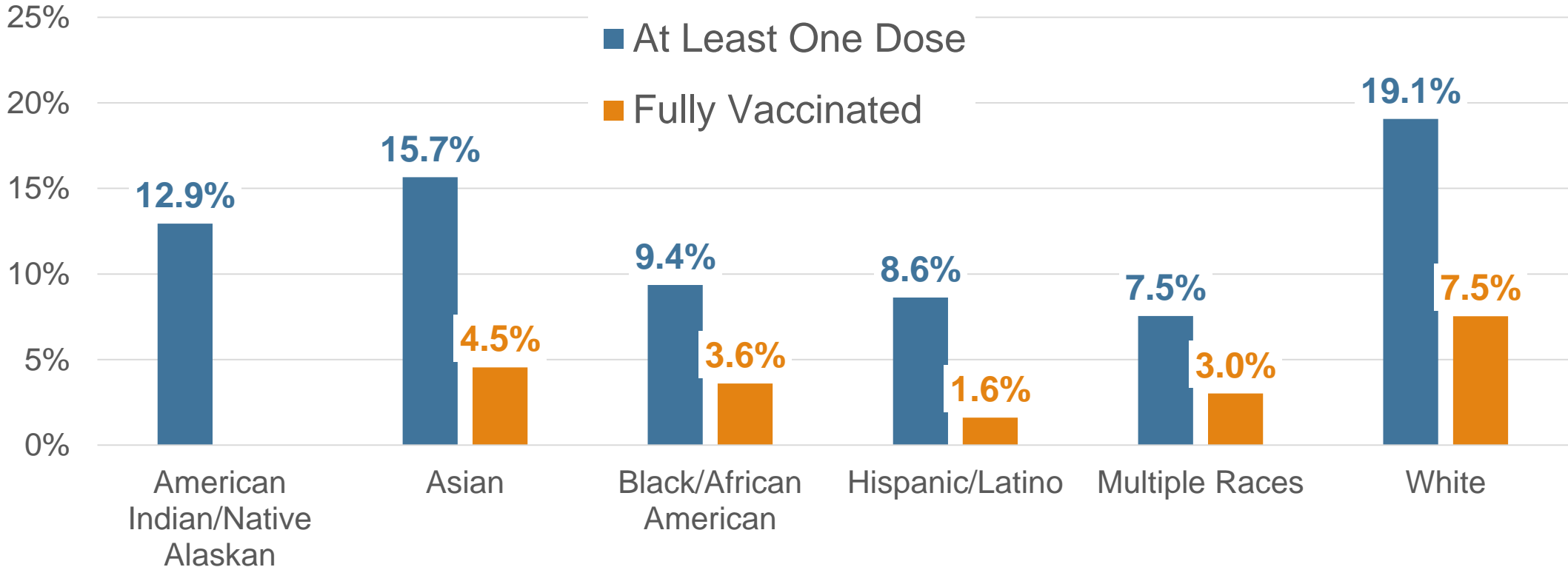




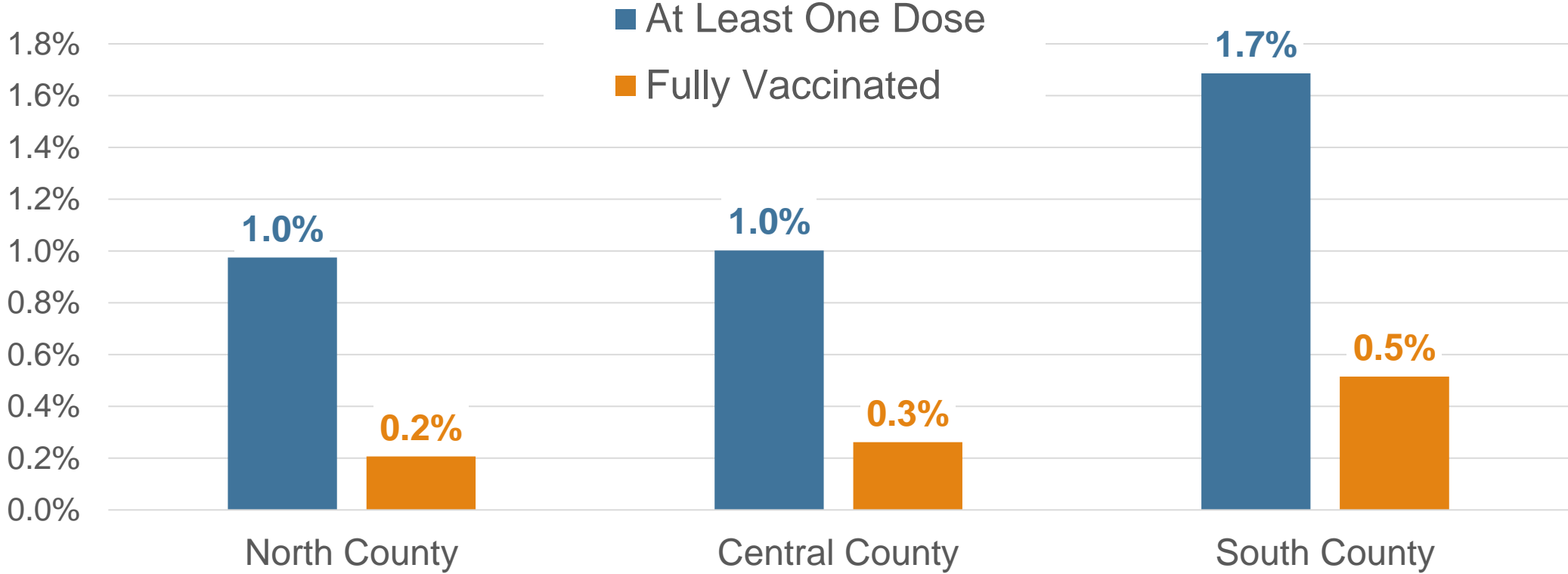
# Vaccination Rates Among 5-11 Years Old



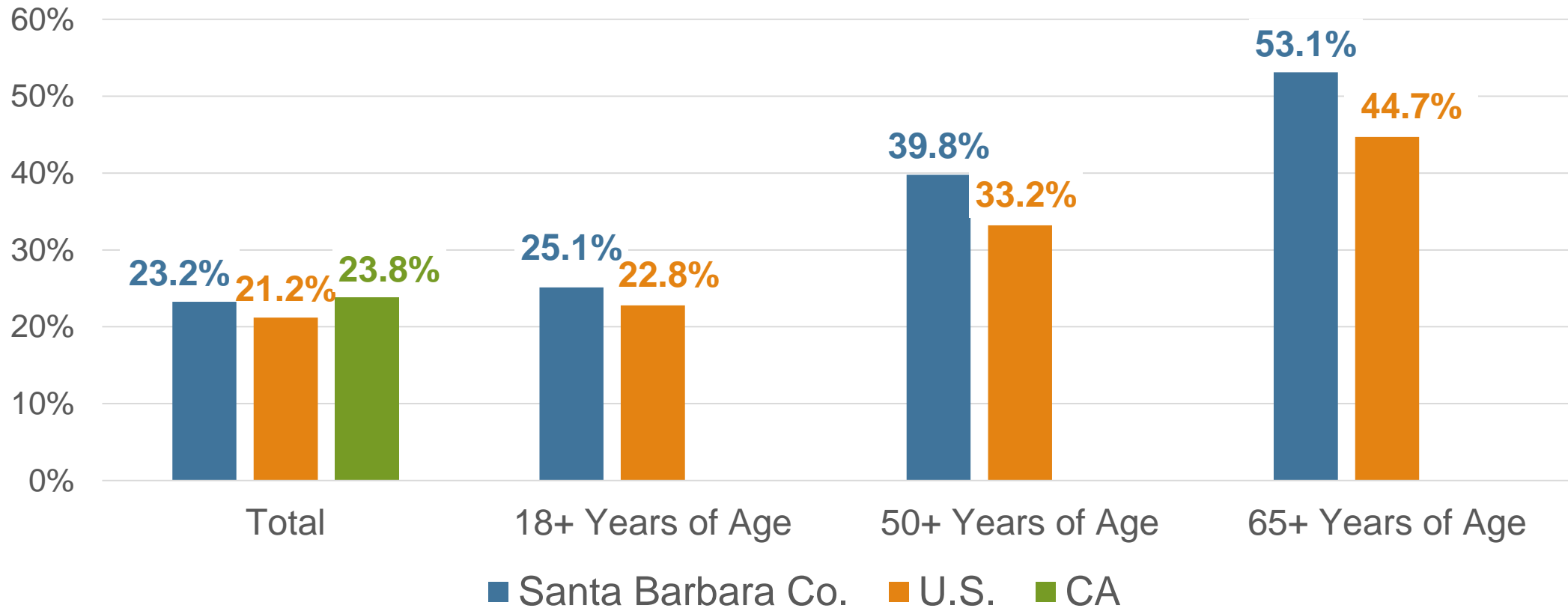
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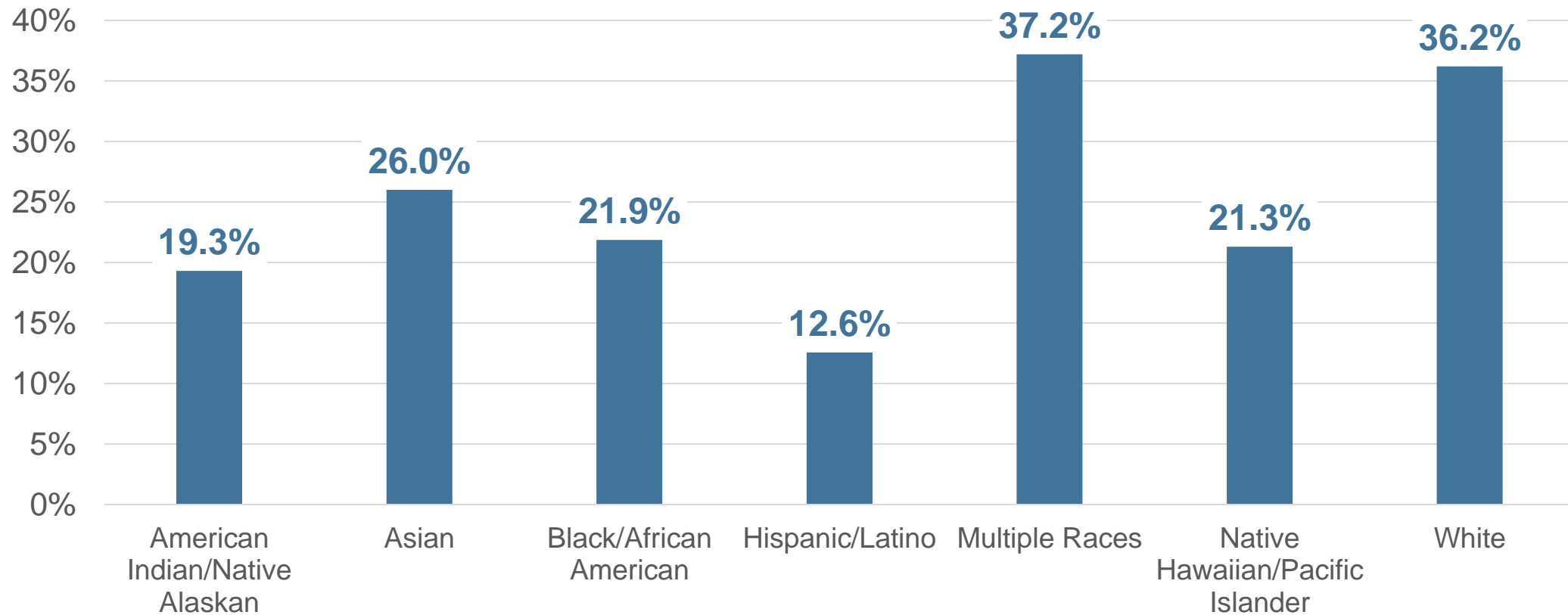
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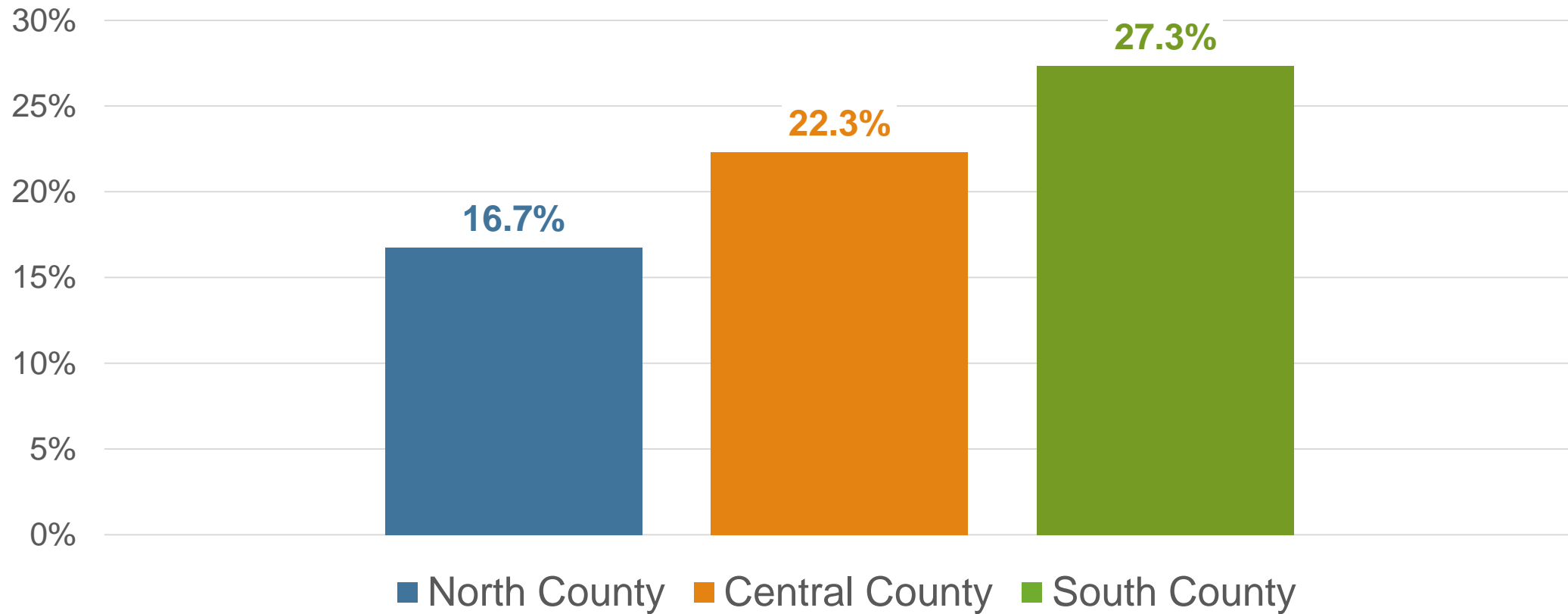
# Boosters Among Fully Vaccinated



# Percent Boosters Among Fully Vaccinated



# Percent Boosters of Fully Vaccinated



# CDPH Guidance

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# New CDPH Guidance

- Universal indoor masking statewide, effective 12/15 until 1/15
- Events with more than 1,000 people: Proof of vaccination or negative test
  - 48 hours before event with PCR test
  - 24 hours before event with antigen test
- Testing recommendation for all travelers to CA or returning to CA: within 3 to 5 days upon arrival





# Omicron

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WHAT WE KNOW AND WHAT WE DO NOT KNOW

# Mutations in Omicron

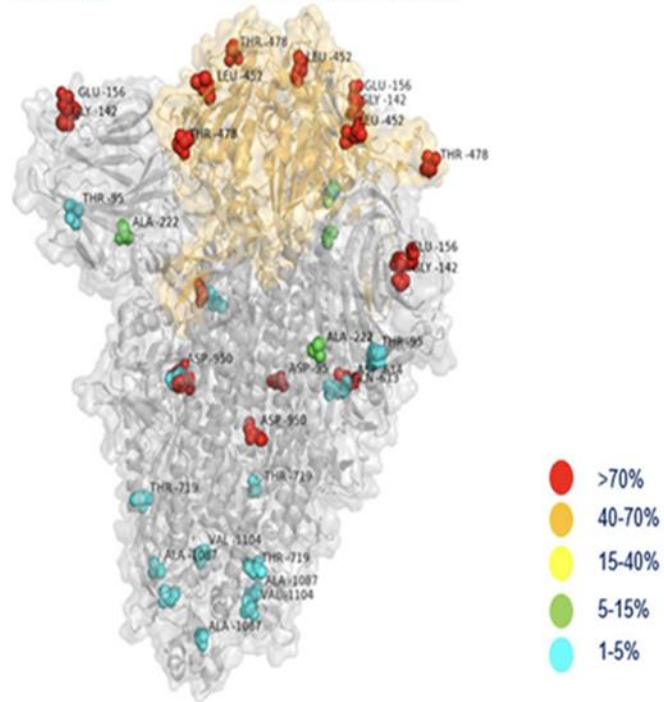
- At least 50 mutations, many of them new
- Some of these mutations likely lead to more rapid spread
- As many as 30 or more mutations on the Spike protein section
- Changes in the Spike protein configuration has the potential to make the virus less vulnerable to antibodies (from vaccine or from previous infection)



# Mutations in Omicron

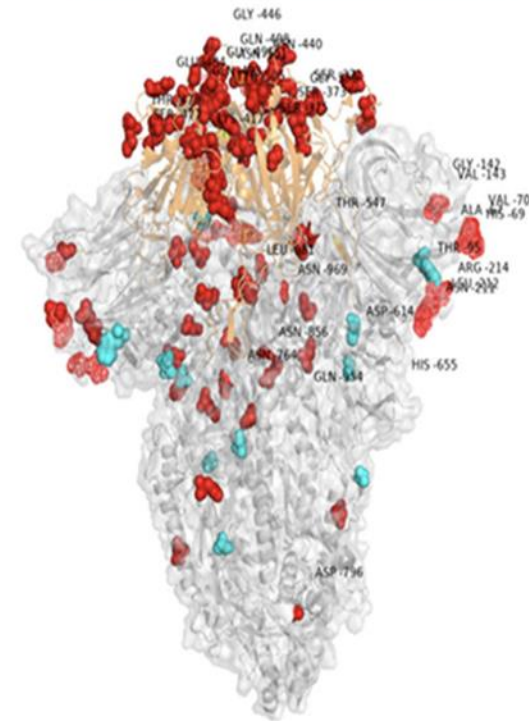
## Delta

18 aa mutated residues in the Spike protein  
8 residues in >60% of available sequences



## Omicron

43 aa mutated residues in the Spike protein  
34 residues in >60% of available sequences



The structure of SARS-CoV-2 spike protein showing the active site in orange and the residues coloured against different mutational rate.

# Omicron Transmissibility

- Doubling time 2-3 days (vs Delta 4-5 days)
- More contagious than Delta
- Higher rate of breakthrough cases than Delta
- Requires 3rd vaccine dose (vs Delta requires 2nd dose) for protection against more severe disease
- Yet unclear if morbidity and mortality less severe than Delta



# Omicron in UK

- UK currently has by far most confirmed Omicron cases worldwide.
- Omicron is apparently causing a new surge in the UK.
- Already 40% of new infections in the UK are due to Omicron.
- It clearly has the potential to replace Delta due to speed of transmission (doubling time about 3 days compared to 4 1/2 days with Delta).
- The rate of breakthrough infections so far seems to be greater than with Delta.
- At this point it is not possible to determine if the level of need for hospitalization is decreased with Omicron compared to Delta.
- A few small studies out of South Africa, Israel, as well as from Pfizer report that a 3rd vaccine dose improves the protection against Omicron greatly.
- Given that we usually trail the UK by 6-8 weeks, we will only be dealing mainly with Delta for the next 2 months.

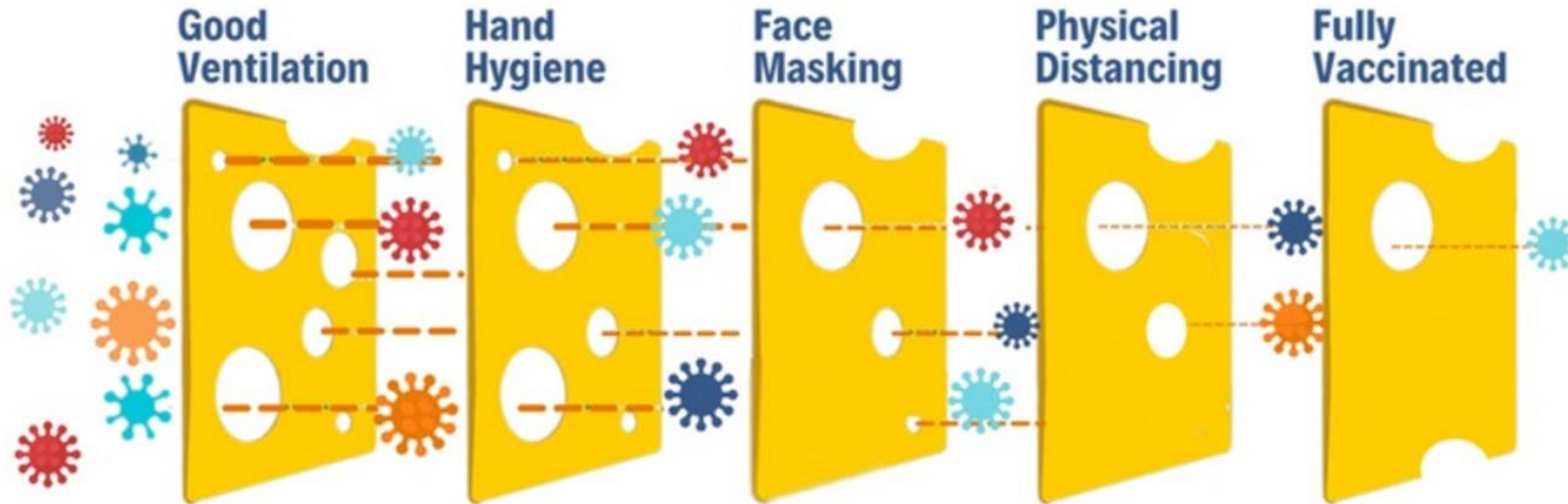


# Multiple Layers of Protection

## HOW TO STOP COVID-19:

### THE SWISS CHEESE MODEL

The more steps you take, the safer you are against COVID-19.





# Happy Holidays!

