

COVID-19 RELATED INFORMATION ON MASKING, COVID-19 TESTING, VACCINATIONS AND OPENING OF SCHOOL UPDATES

Wake County Board of Education Work Session

September 7, 2021

Cathy Moore, Superintendent



Desired Outcomes

By the end of this presentation the Board will have been provided:

- legislative information on Senate Bill 654
- updates from the ABC Science Collaborative,
- updates from Wake County Health and Human Services
- WCPSS COVID-19 dashboard review
- updates from various departments
- information about recent WCPSS changes to face covering guidance
- information about COVID-19 testing and vaccinations



Senate Bill 654

Wake County Board of Education Work Session

Cathy Moore, Superintendent



Senate Bill 654

- School Performance Grades
- Low Performing Schools
- Remote Instruction and Virtual Instruction
- Definition of Year-Round Schools
- Local Face Covering Policy



ABC Science Collaborative

Wake County Board of Education Work Session

Dr. Danny Benjamin

Dr. Kanecia Zimmerman

WCPSS School Board

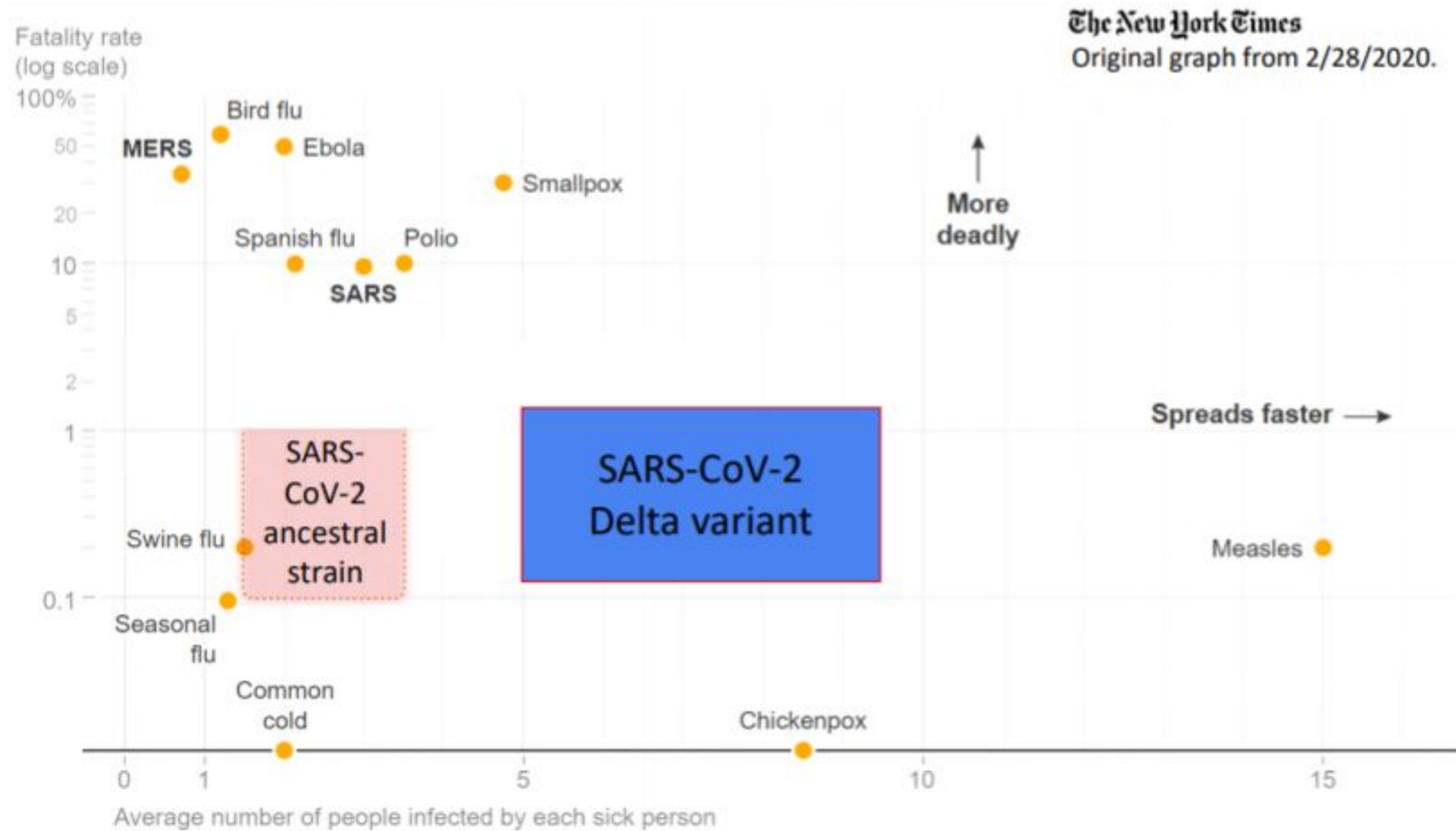
ABC Science Collaborative Presentation on Recent COVID-19 Data
September, 2021



THE ABC SCIENCE
COLLABORATIVE

Learning | Informed Decision-Making | Research

Transmission of Delta variant vs. ancestral strain and other infectious diseases



Note: Average case-fatality rates and transmission numbers are shown. Estimates of case-fatality rates can vary, and numbers for the new coronavirus are preliminary estimates.

The Delta variant is **more transmissible** than:

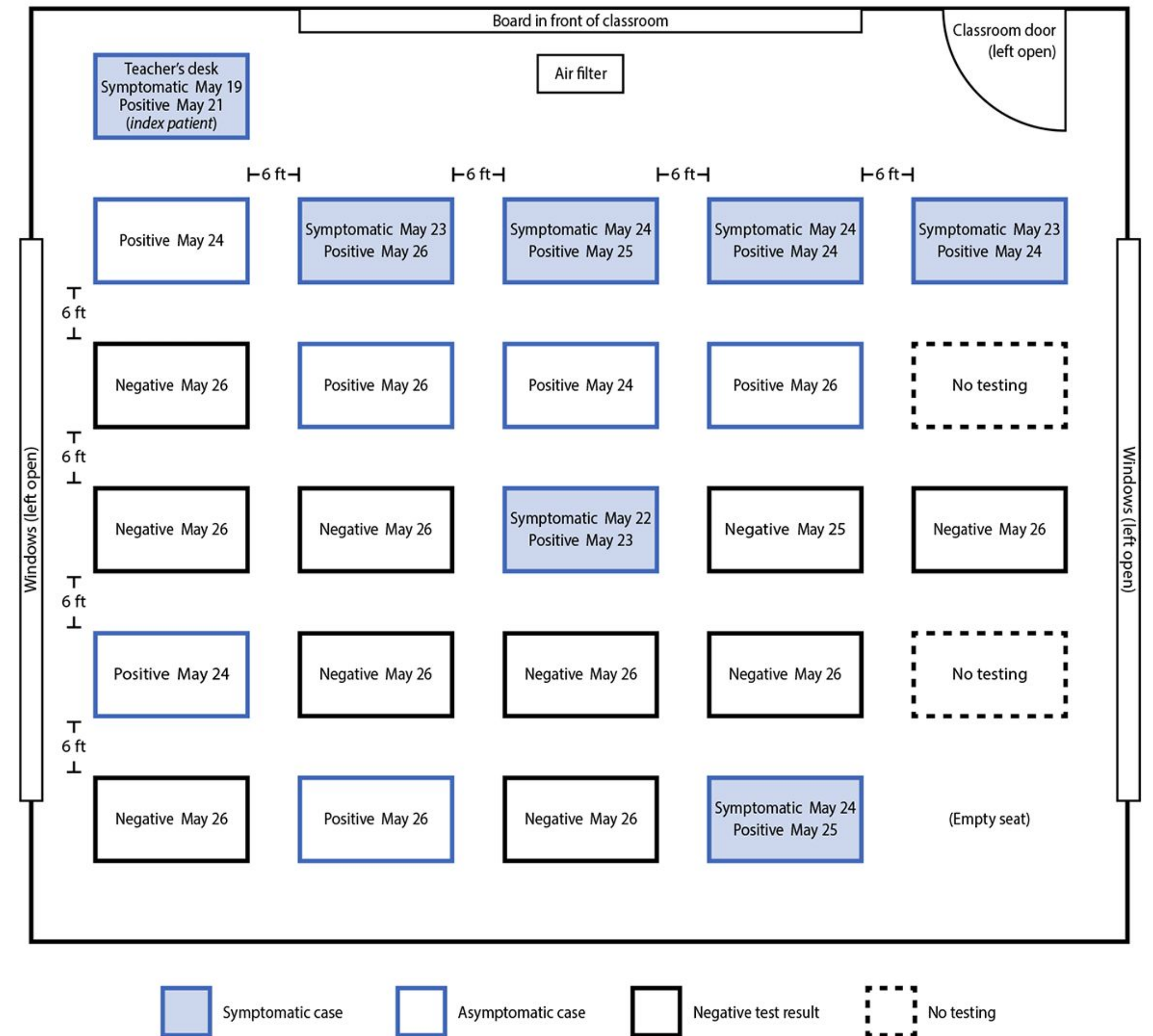
- MERS and SARS
- Ebola
- The common cold
- Seasonal flu
- 1918 (“Spanish”) flu
- Smallpox

The Delta variant is **as transmissible as**:

- Chicken Pox

Marin County California MMWR

- May 23, an unvaccinated teacher COVID-19
- The teacher read aloud unmasked to the class despite school requirements to mask while indoors.
- Beginning May 23, additional cases of COVID-19 were reported among other staff members, students, parents, and siblings connected to the school.
- Health Department: contact tracing that included whole genome sequencing of available specimens.
- 27 cases were identified, of the teacher's 24 students (all ineligible for vaccination) 22 were tested 12/22 positive test results.
- May 24–June 1, six of 18 students in a separate grade at the school, COVID positive
- Eight additional cases were also identified, all in parents and siblings of students in these two grades



Sometime between May 2022 and May 2023 virtually every American will either:

- Have been infected with COVID; or
- Vaccinated for COVID; or
- Both

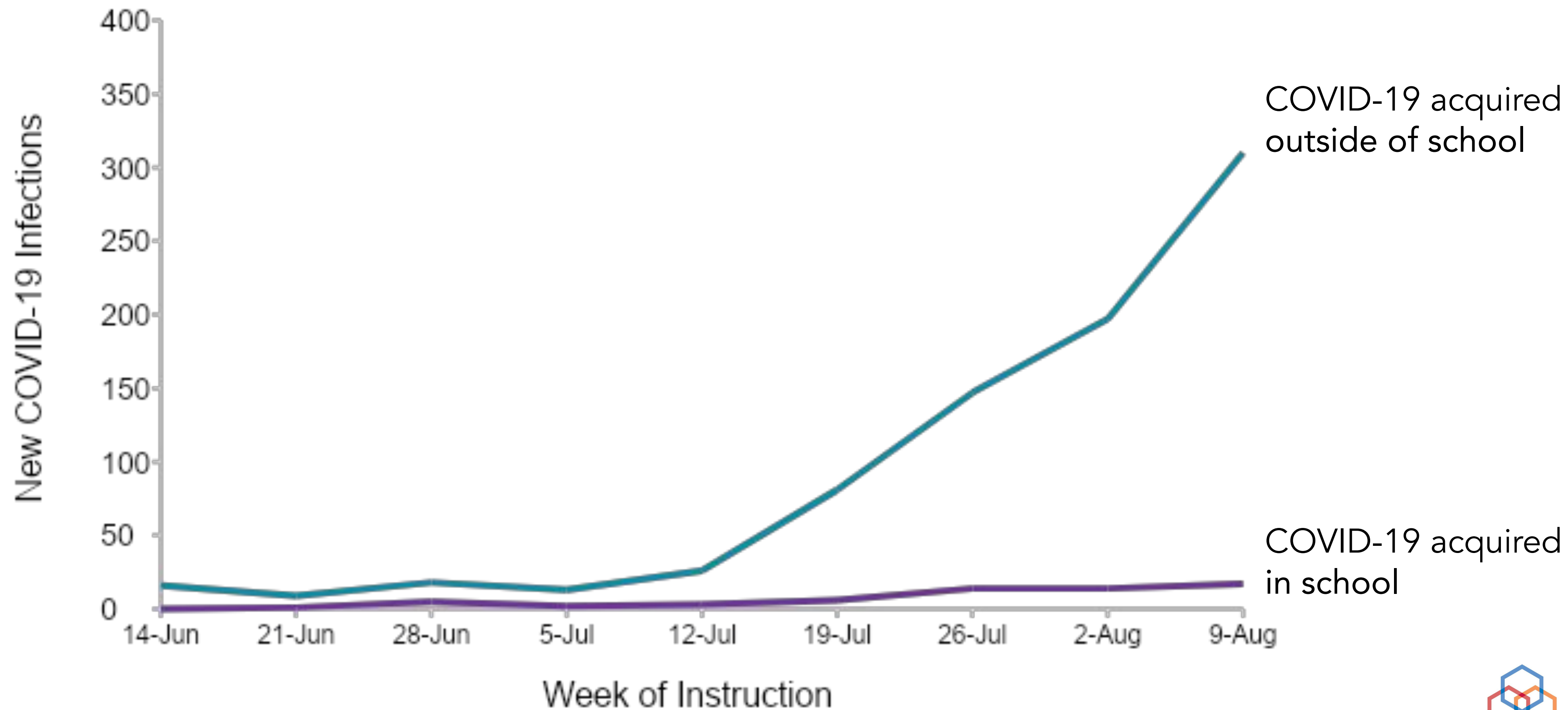
ABCs and North Carolina Summer School: Delta variant

- We repeated our work from Spring 2021 this summer
- 20 school districts in NC; 59,561 students and 11,854 staff; June-August 2021 (over 70,000)
- North Carolina schools did an outstanding job preventing within-school transmission of COVID-19 during the summer despite facing the Delta variant
 - Very limited within-school transmission of COVID-19 in our Summer Data Collection program
 - 627 students and 190 primary staff acquired infection **outside of school**
 - 60 students and 5 secondary staff acquired infection **at school**
 - Estimated secondary attack rate (of all people quarantined who acquired COVID) was <3%
 - Ratio of outside of school infections to infections acquired in school 13.4
- Another way of thinking about the data from the mask environment:
 - One infected person with Delta infects 8 others
 - It takes 13 people infected with Delta to come to school with mandatory masking to infect one other person
 - Alternatively, in the prevention of COVID, the safest public buildings for children in North Carolina are in health care buildings. The second safest public buildings are schools
- The data, combined with recent experiences in school districts without masks (see also experience in North Carolina in August (https://www.cdc.gov/mmwr/volumes/70/wr/mm7035e2.htm?s_cid=mm7035e2_w)) indicate that proper masking is the most effective mitigation strategy to prevent secondary transmission in schools when COVID-19 is circulating and when vaccination is unavailable, or there is insufficient vaccine uptake.

Delta variant and transmission summer school 2021

COVID-19 Infections Among >70,000 NC Summer School Staff and Students: Weekly Cases Acquired in School vs. Cases Acquired Outside of School

(Universal masking; 2021)



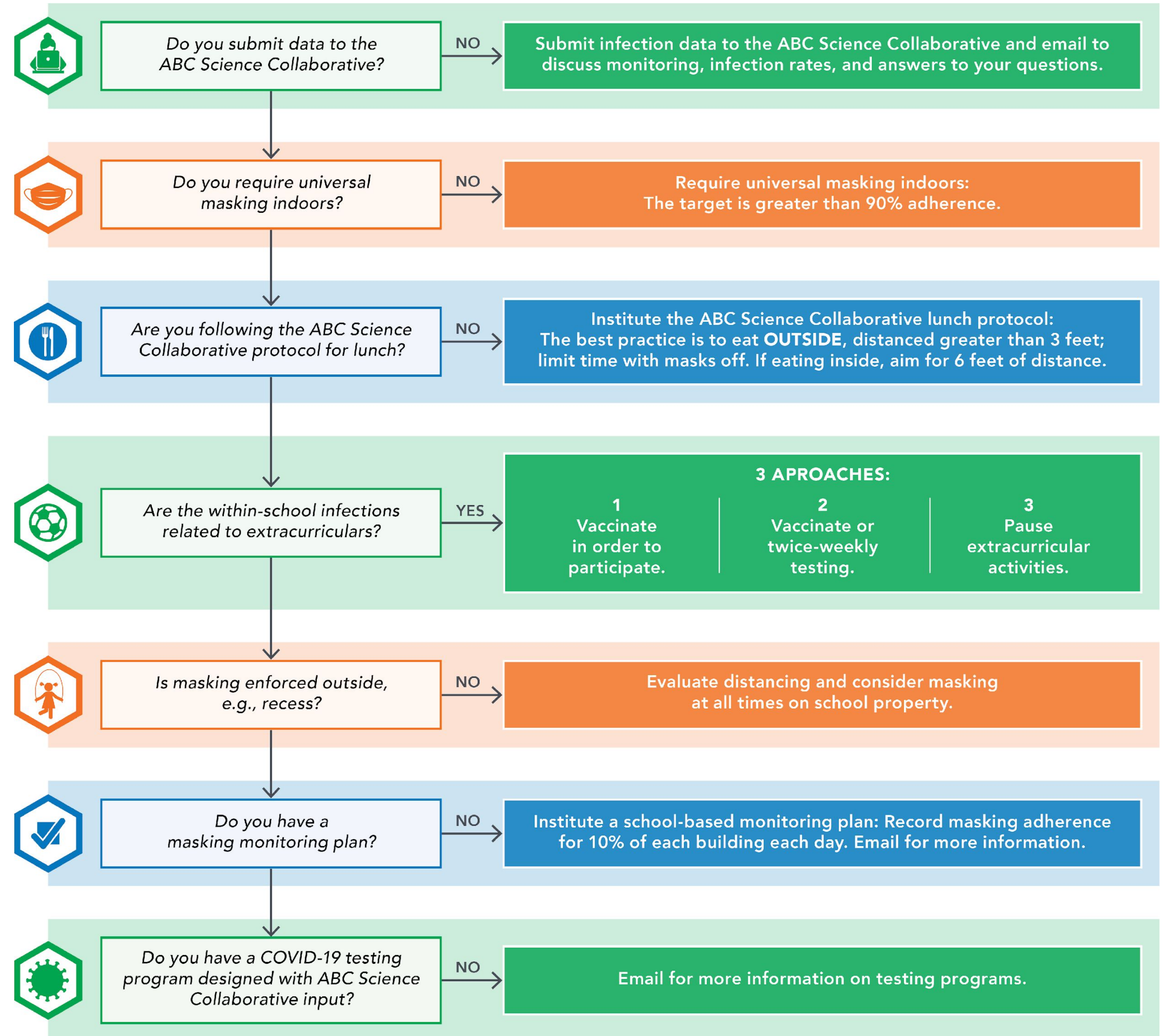
Thinking through a district

- Understand the district
 - Policies and mitigation
 - Community spread and vaccination
 - Central leadership, schools and their leaders, staff, and community
- Define the relevant outcome: within school transmission
 - Assess total number relative to size of the district
 - Discuss where cases are happening
- ‘Standardize’ comparison
- Estimated secondary attack rate
 - Infections/close contacts
 - Target <5% for ancestral variant
 - Unknown for Delta variant
- Ratio of
 - (infections acquired outside-of school) to (infections acquired at school)
 - Target ≥ 10 for ancestral variant
 - Unknown for Delta variant
- Compare the district to other districts
 - In the state
 - Within the state to others in the region
 - Similar size
 - Community rates
 - Vaccination uptake
 - Masking policies
 - Outside the state
- Assess goals of within-school transmission
 - Determine level of concern
 - WCPSS <3% SAR; Ratio >10
 - Level of concern is variable by community
- Discuss options at lower level of concern
 - With the ancestral variant, 3 areas to discuss
 - Extracurricular, Adherence, Lunch,
 - Over the past few months, have started to incorporate additional areas
 - Vaccination, Recess, Testing

Keeping it REAL: Reducing COVID-19 in Schools

Use this map to determine the next steps in your school's mitigation process, with an emphasis on **R**ecess, **E**xtracurriculars, **A**dherence and **L**unch (**REAL**). The ABC Science Collaborative is available to help you navigate these strategies and answer your questions.

Email ABCScienceCollaborative@duke.edu for information or reach out to your local ABC Science Collaborative national partner.



Can be implemented quickly and data available



Monitoring Plan

- Based on compliance with hand washing in health care
- Hand washing in public restrooms
- Principles around goals, feedback
- Proof of concept
 - Increase adherence
 - Reduce infections
- Schools-specific
 - Based on within-school transmission
 - Voluntary QI
- “Top down” approach vs “ground up”



Lunch

- Very simple, asked for with ancestral variant
- Based on data from health care, North Carolina, other settings
- Outside
- Distance (greater distance indoors)
 - Use available space indoors
- Importance of limiting time
- Limit time with masks off
 - Talking, eating, breathing

Can be implemented quickly but limited data



Outdoor Masking and CDC Guidance

- In general, people do not need to wear masks when outdoors (e.g., participating in outdoor play, recess, and physical education activities).
- CDC recommends people who are not fully vaccinated wear a mask in crowded outdoor settings or during activities that involve sustained close contact with other people.
- Universal masking is recommended during indoor physical education or recess.
- Do not have a strong data
- Concern for spread at recess primarily due to
 - Reality of recess
 - Delta variant vs ancestral variant
- Uncertain how data will evolve
- Consider this step based on cases
- Risk is higher without masking, but amount of risk unknown—this is in contrast to masking indoors, increased risk in sports, and vaccinations where data are strong

Sports: CDC screening testing recommendations for K-12 schools by level of community transmission

	Low Transmission	Moderate Transmission	Substantial Transmission	High Transmission
High-risk sports and activities	Screening testing at least once per week for participants who are not fully vaccinated.		Screening tests twice/week for participants who are not fully vaccinated.	Cancel or hold high-risk sports and extracurricular activities, unless all participants are fully vaccinated.
Low- and intermediate-risk	Do not need to screen	Screening testing at least once per week for participants who are not fully vaccinated.		

Levels of community transmission defined as total new cases per 100,000 persons in the past 7 days (low, 0-9; moderate 10-49; substantial, 50-99, high, ≥100) and percentage of positive tests in the past 7 days (low, <5%; moderate, 5-7.9%; substantial, 8-9.9%; high, ≥10%.)

Examples of low-risk sports are diving and golf; intermediate-risk sport examples are baseball and cross country; high-risk sport examples are football and wrestling.

High-risk extracurricular activities are those in which increased exhalation occurs, such as activities that involve singing, shouting, band, or exercise, especially when conducted indoors.

Sports: SARS-CoV-2 transmission associated with high school wrestling tournaments



- In December 2020, public health officials in Florida learned that a person who attended two high school wrestling tournaments on Dec. 4-5 had a positive COVID-19 test result
- The tournaments included 10 participating high schools from three counties, with a total of 130 wrestlers, coaches, and referees
- A total of 54 (41.5%) of the 130 attendees received testing, and 38 cases of SARS-CoV-2 were identified; the minimum attack rate was 30.2% (38 of 126), and 70.4% (38 of 54) of tests had a positive result
- Among contacts of the 38 COVID-19 patients, 446 were determined to meet the CDC definition of a close contact, including 62 who were household contacts and 384 who were in-school contacts
- An estimated 1,700 in-person school days were lost due to isolation and quarantine of patients and close contacts.

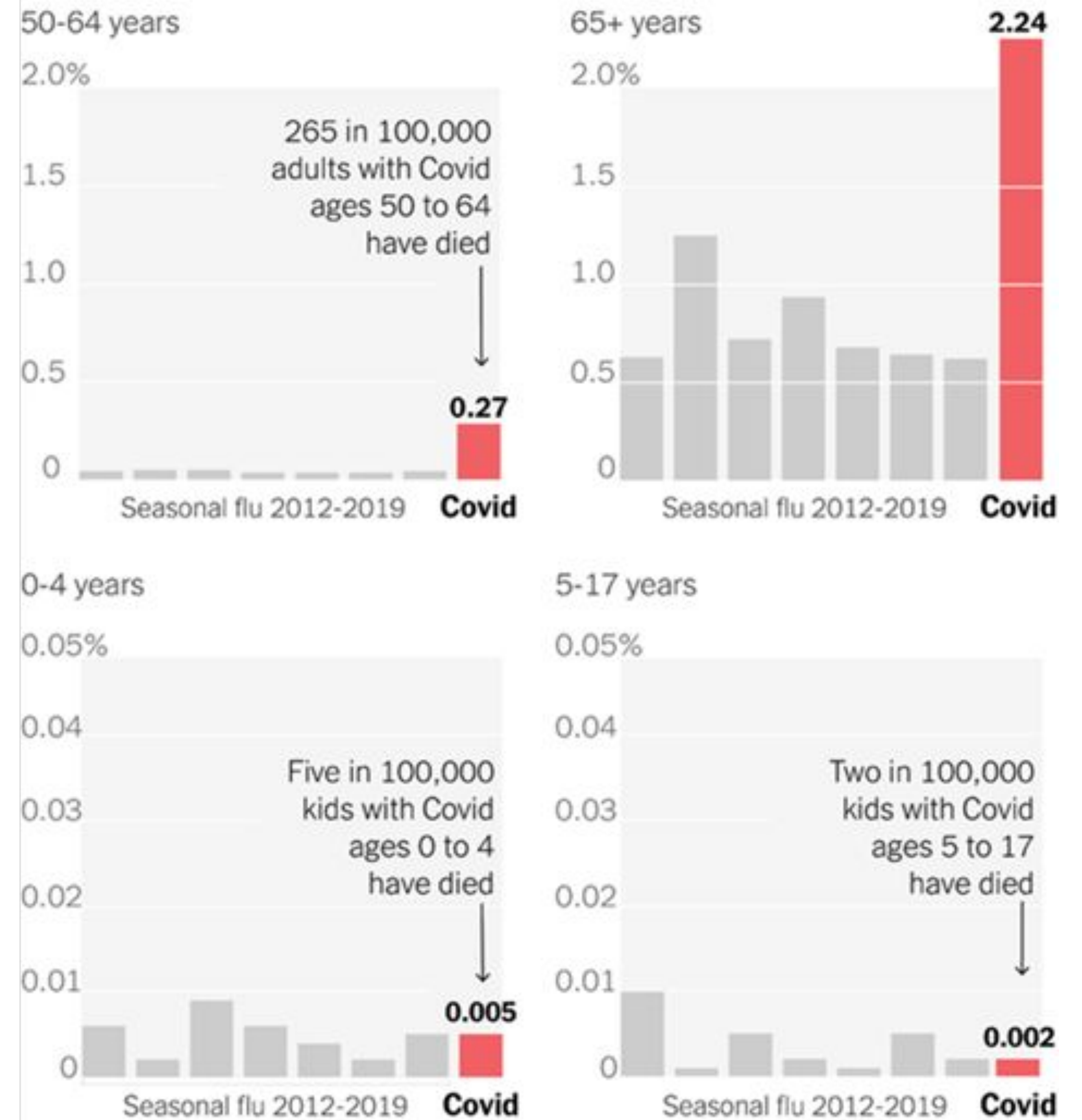


- Disproportionate impact in North Carolina transmission
 - Indoor sports (75% of within-school transmission)
 - Outdoor sports (50% of within-school transmission at high schools)
- Other ss+RNA virus (approximately 1/3rd); other Corona viruses, other Corona epidemic/pandemic (MERS; SARS-CoV-2 vs SARS)
- Contrast Delta variant
- Experience of other states
- Districts starting to require vaccinate to participate in order to comply with CDC guidance and play sports through the academic year:
 - Fairfax VA, Loudon VA
 - Albany NY, Yonkers NY
 - New York City

SARS-COV-2 and mortality (COVID) and thinking about vaccines

- For adults >50, mortality is 5-10x higher than influenza
- Mortality is <1% for 50- to 64-year-olds
- Mortality in COVID is less than influenza 5- to 17-year-olds
- Vaccinated, reduce mortality by 90% eleven days after dose 1 and 95% two weeks after dose 2
- Morbidity is higher in COVID than influenza, so completely unmasked is probably not the way to go
- But, if vaccinated, the morbidity and mortality are comparable to flu in older adults and less than flu in children
- When thinking about considering policy, keep in mind
 - COVID in 4- to 11-year-olds
 - Simplicity of risk considerations 12- to 18-year-olds

Estimated share of patients who died



Total caseloads are based on estimates of the share of influenza and Covid cases that are not captured by C.D.C. data.



- Randomized trials
- Hospitalization and death
- Hospitalization and death with the Delta variant
- Vaccination essentially makes sports a near-zero (<math><1/1,000,000</math> serious morbidity or mortality)

K-12 staff vaccine requirements



- Between 35-40% of K-12 staff are under some type of COVID-19 mandate nationally
- Initial requirements were large districts
- Several states followed
- Most policies are at the district level
- Multiple districts every business day are increasing the number of staff required to be vaccinated
- Mix of policies:
 - Vaccinate as a condition of employment
 - Vaccinate or frequent testing
- Limited to primary series
- States
 - 10 states (approximately 30% of K-12 staff)
- Examples in North Carolina
 - Orange County Schools, Chapel Hill-Carrboro Schools
- Examples of other large districts that adopted mandates (some now part of states with state-wide mandates)
 - Portland OR, New York City NY, Los Angeles CA, Chicago IL, Philadelphia PA, Clark County NV, Denver CO, Hawaii, Montgomery MD, Prince George's MD, Baltimore MD, Loudon VA, Arlington VA, Richmond VA
- Examples of mid-sized districts
 - Aurora CO, St. Paul MN, Howard County MD

Vaccine reduces infectivity



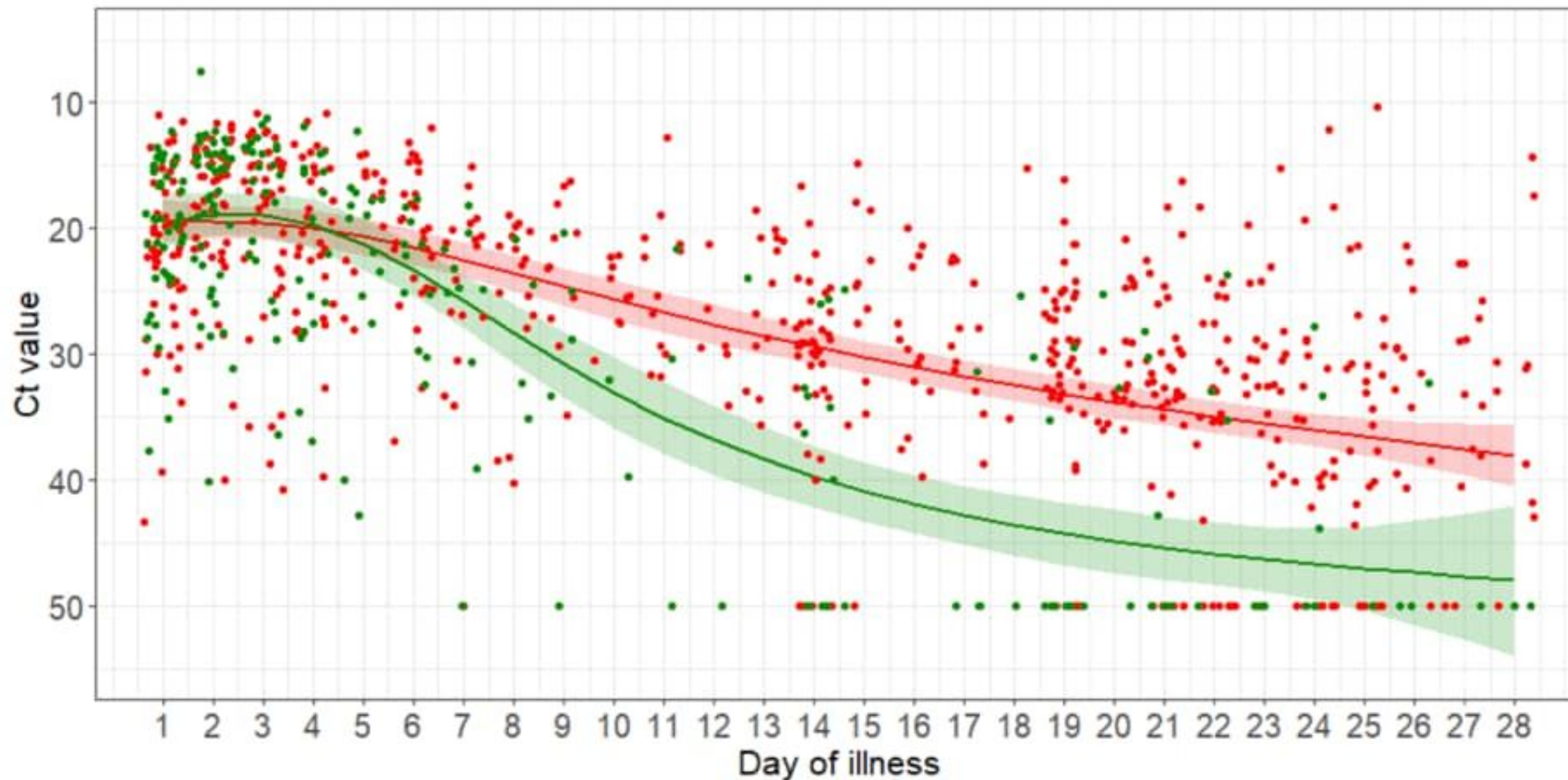
- Vaccines and severe disease
 - >90% reduction in hospitalization, major morbidity, death
- Vaccination initially very much reduced infection, but much of this was lost with the Delta variant. But (importantly) **not all was lost**
 - UK REACT-1
 - 98,233 tested for COVID19; all positives were Delta variant
 - 49% effective for any positive (asymptomatic and symptomatic)
 - 59% for symptomatic disease . In other words, vaccinated people had a 59% reduced risk of getting symptomatic COVID19 compared to unvaccinated.
 - Israel (40-60% for infection).

Vaccinated are lower risk to others

Scatterplot of Ct values and marginal effect of day of illness of COVID-19 B1.617.2 infected patients with 95% confidence intervals from generalized additive mixed model with interaction term between vaccination status and day of illness



— Unvaccinated — Vaccine-breakthrough



Thinking about risks

- Drinking and driving doubles your odds of car accident¹
- Not wearing a seat belt doubles risk of death²
- Speeding (10mph) doubles risk of death¹
- Texting and driving increases odds of accidents 6-fold
Do you require people who drive to not text?

We know that occasionally schools have compliance challenges (more so related to adults than children).

In the unmasked environment, vaccinating the adults will have substantial impact on risk reduction of children acquiring COVID given the Delta variant (lower probability of staff becoming infected + fewer days for infected staff to then infect children and other adults in the building).

1. National Highway Traffic Safety Administration: <https://www.washingtonpost.com/news/wonk/wp/2015/02/09/how-just-a-couple-drinks-make-your-odds-of-a-car-crash-skyrocket/?variant=45bcfc8a951d56c3>
2. Naval Safety Center, VirtualDrive, NHTSA <https://www.thezebra.com/resources/research/seat-belt-statistics/>



Safety events in the life cycle of the **development of the vaccine**

Early:

- Pre-licensure (study 20,000-50,000 people)
- Common (RSV)

Middle:

- Post marketing <10,000,000 people
- Uncommon (Rotavirus)

Late:

- Post marketing >10,000,000 people
- Very uncommon, but have occurred (oral Polio)

Safety events relative to **administration of the vaccine**

Early:

- 24-48 hours
- Common 30-50%

Middle:

- 1st week
- Relatively common (5-10%)

Late:

- 1 week to 3 months post administration
- Relatively uncommon but occurs

Longer than 6 months post vaccination for event to start

- Never reported

mRNA vaccine and safety



- Over 190,000,000 Americans have received at least one dose of an mRNA vaccine (Moderna or Pfizer)
- No deaths in the USA linked to vaccine as of September 1st 2021
- Stronger safety track record than any medical product sold in the USA
- Deaths from the following are rare, but >0/190,00,000
 - Safer than food (e.g., anaphylaxis from nut allergies)
 - Safer than water (hyponatremia from excess water consumption in young infants and occasionally older people)
 - Safer than oxygen (preterm infants, hyperbaric oxygen, excess ventilation)

Vaccine history



Vaccines for which we needed mandates in order to achieve widespread (population) uptake >80% in children:

- Smallpox¹
- Polio²
- Diphtheria
- Tetanus
- Pertussis
- Measles
- Mumps
- Rubella
- Hepatitis B
- HPV
- Pneumococcus
- Hib
- Chicken Pox

Vaccines for which we achieved widespread uptake >80% without mandates: NONE

¹**Smallpox** had a mortality of >30% and we could not get 80% coverage without mandates despite >100 years of effort. With mandates (upheld in the landmark 1905 ruling) we eventually achieved ~80% in many communities with widespread vaccination drives. In order to eliminate smallpox, we had to use a combination of mandates, and a “ring-strategy” that was completed through a persistent decades-long global effort.

²**Polio** is an interesting case in revisionist history. When I speak to my parents about Polio, they talk about “everyone” lining up for shots once it was shown to work. But that is not exactly what happened. The trial was successful (true), and church bells rang out (also true), and people lined up (true-“ish”).

What my parents (and to be fair, most people) don’t remember the reason for the lines is that there were only 9 million doses on hand. In the 1950s, Eisenhower did not view the role of government to be actively involved in the research, distribution, or the uptake. With only 9 million doses, demand well exceeded supply (think back to December 2020 – January 2021 with COVID). However, it was not long before the supply well exceeded the demand. Part of this related to a manufacturing catastrophe of one lot produced by one of the 5 USA manufacturers. But even with the advent of the oral polio vaccine, vaccination rates were 56% by 1965. Ultimately mandates (school requirements in the US, different strategies elsewhere) for Polio were needed to drive high rates of vaccination.

Vaccine uptake concepts



- Given that the R_0 is ~ 8 (range estimated 5-10), we need $>80\%$ uptake. We also need $>80\%$ uptake as evidenced by the drama that is ongoing with Delta.
- By May 2023 every American will either
 - Have been infected with COVID
 - Have been vaccinated with COVID
 - Both
- So the questions are:
 - How many Americans eligible for vaccine (those older than 12) die with COVID
 - Do we want to protect people not eligible for vaccine (those younger than 12) until we can get them vaccinated
- In addition to deaths from Delta, the failure to bring forth mandates in the US and globally will substantially increase the probability of a variant that escapes vaccine, restarting the cycle of the past 18 months.

What about ventilation and testing?



Ventilation:

The concept is excellent. Unfortunately, this has not been shown to reduce infections in the school setting. See Marin County data presented at start of slides. The windows were open, the filters were high quality, there was extra filtration in the room, and yet....

- Investment in facilitating eating outside and conducting the monitoring as needed. The district purchased picnic tables last spring and is purchasing more, and provide tents as schools make requests
- The upgraded Merv-13 filters in all WCPSS is probably some benefit because of the unmasked environment of special needs (adapted curriculum or regional) and lunch indoors.
- Think of upgrading ventilation like masking at recess. Except for ventilation you're spending millions of taxpayer dollars



Testing:

Testing is not a prevention strategy. Testing is a control strategy. Thus, if you accept that you want to put athletes at risk (which you are doing), but you want to limit the spread across the district (50+ schools playing each other a couple times per week across 1/2 dozen sports spreading COVID across a district), then testing helps to slow that down. Testing also helps to limit the spread by unvaccinated adults.



Risk of transmission

- Masked and ancestral variant: ~1%
- Masked and Delta variant: 1-3%
- Much higher with extracurricular activity

Four groups of exposed

1. Vaccinated
2. Mask on mask children in the classroom
3. Mask on mask children outside the classroom
4. Other type of exposure (risk assessment by local health department)

WCPSS could eliminate almost all quarantine in 4 steps:

1. **Vaccinate all staff**—now you don't have to quarantine adults
2. **Universal masking** indoors
3. **Eat distanced**
(outside when possible)
4. **Vaccinate** as a condition of participation in **extracurricular activity**

Now, your quarantine is limited to special needs and the occasional break in masking adherence

Summary

Overall Picture:

Very good job in WCPSS to prevent within school transmission with Delta variant based on two months of data

- Meeting expectations
- More clusters and more within school transmission than district would like to see

Five Recommendations:



1. **Vaccinate school staff.**
Very strong scientific merit



2. **Vaccinate athletes.**
Very strong scientific merit



3. **Monitoring plan.**
Strong scientific merit



4. **Lunch protocol.**
Strong scientific merit



5. **Masking at recess.**
Some scientific merit,
but unproven intervention



Wake County Health and Human Services Update

Wake County Board of Education Work Session

Dr. Nicole Mushonga

Public Health Update

COVID-19

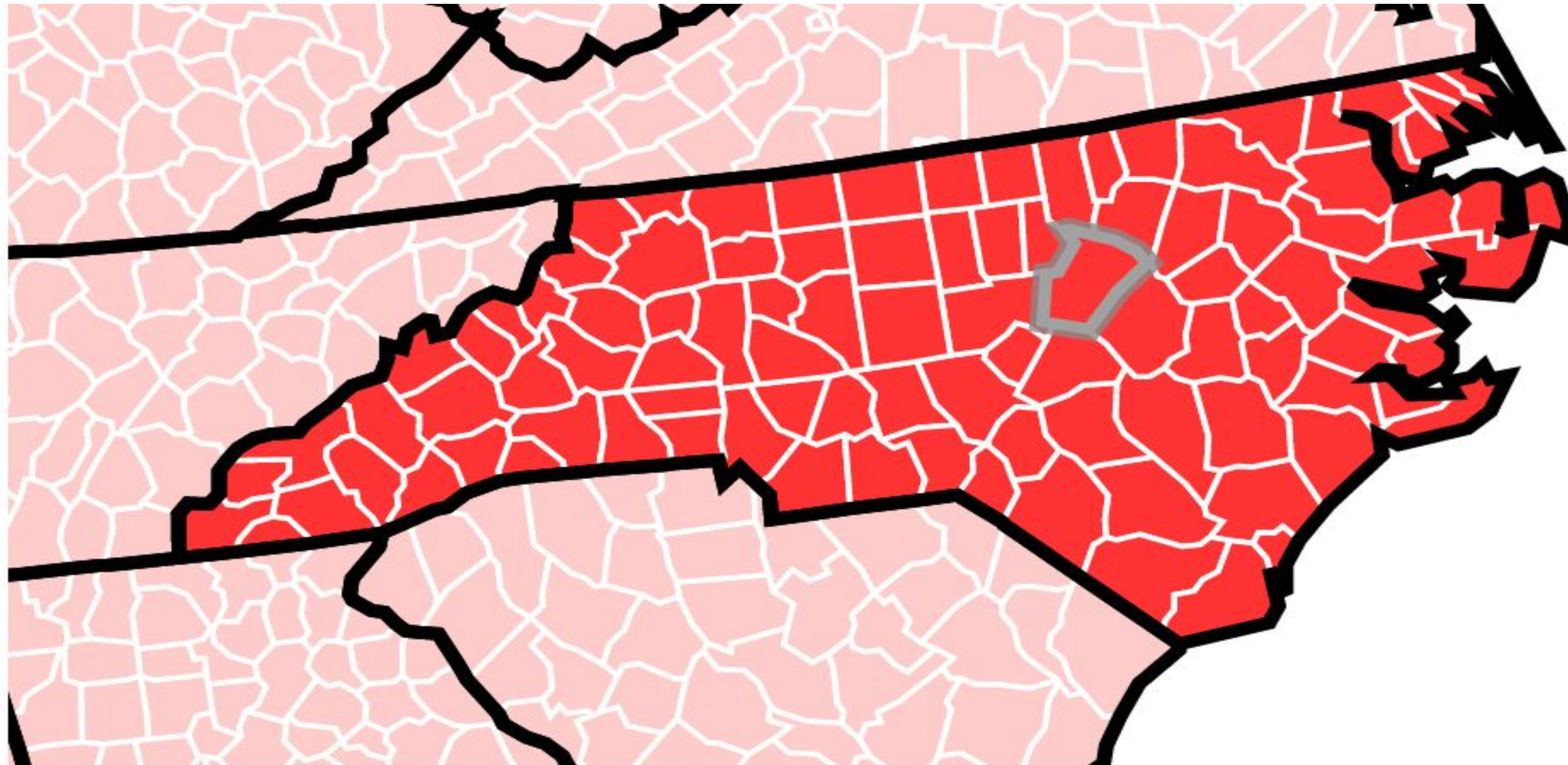
Nicole Mushonga, MD, MS

September 7, 2021



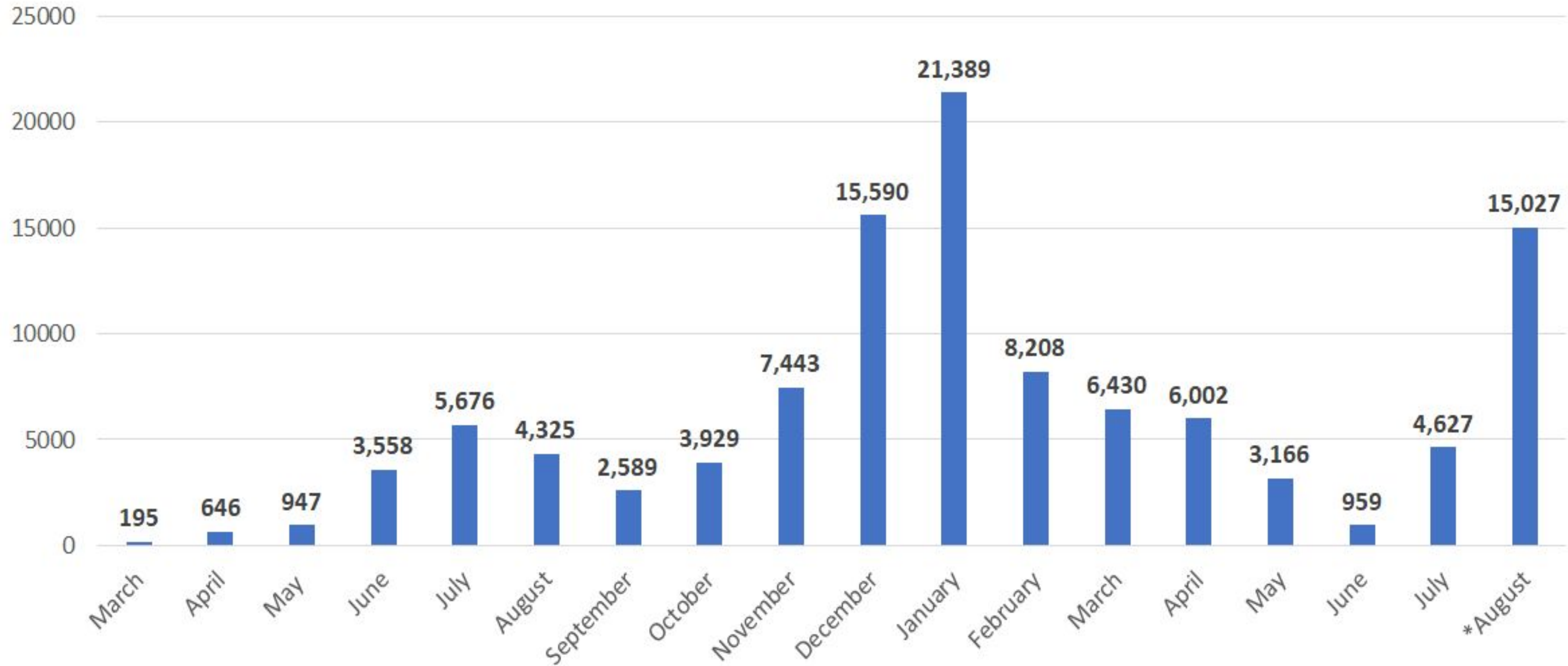
@wakegov    

wakegov.com



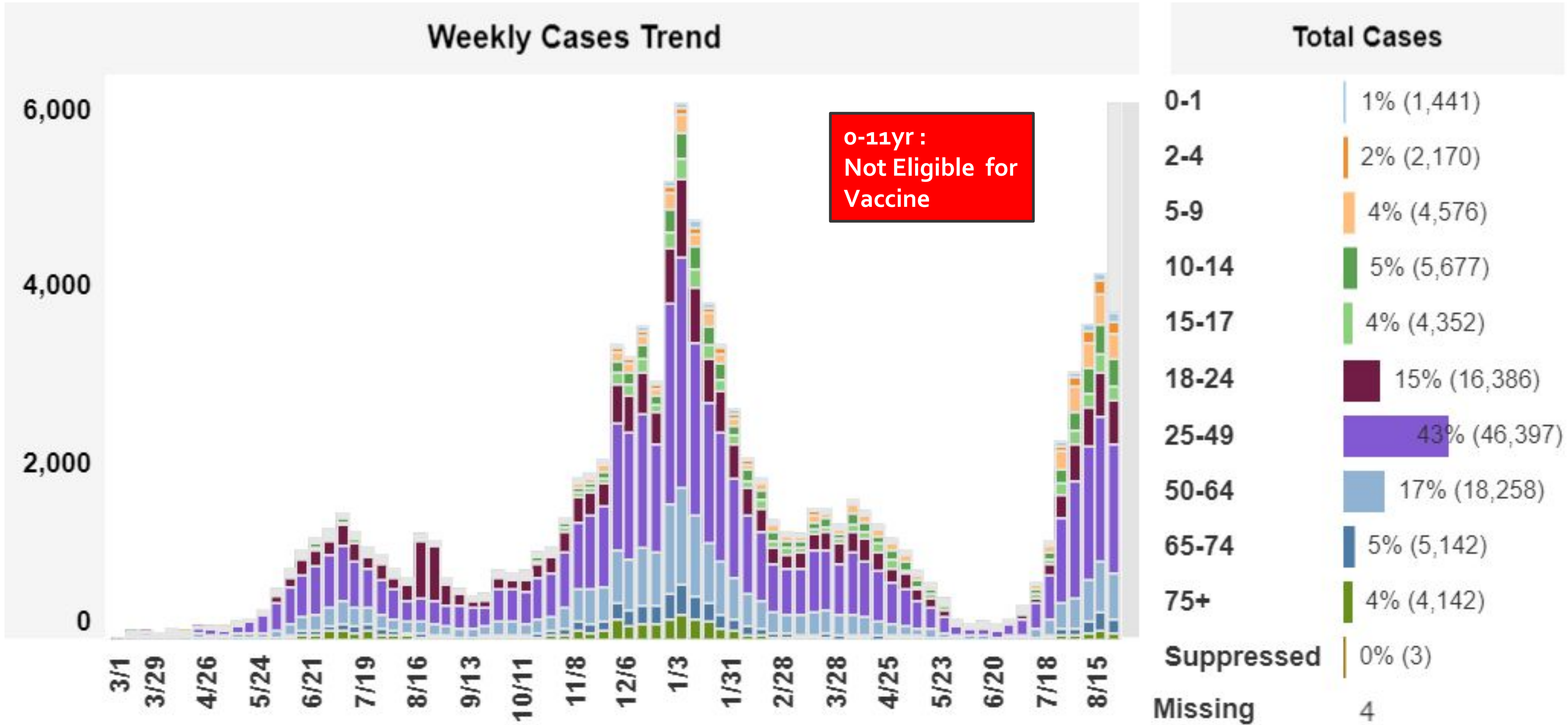
● High ● Substantial ● Moderate ● Low ● No Data

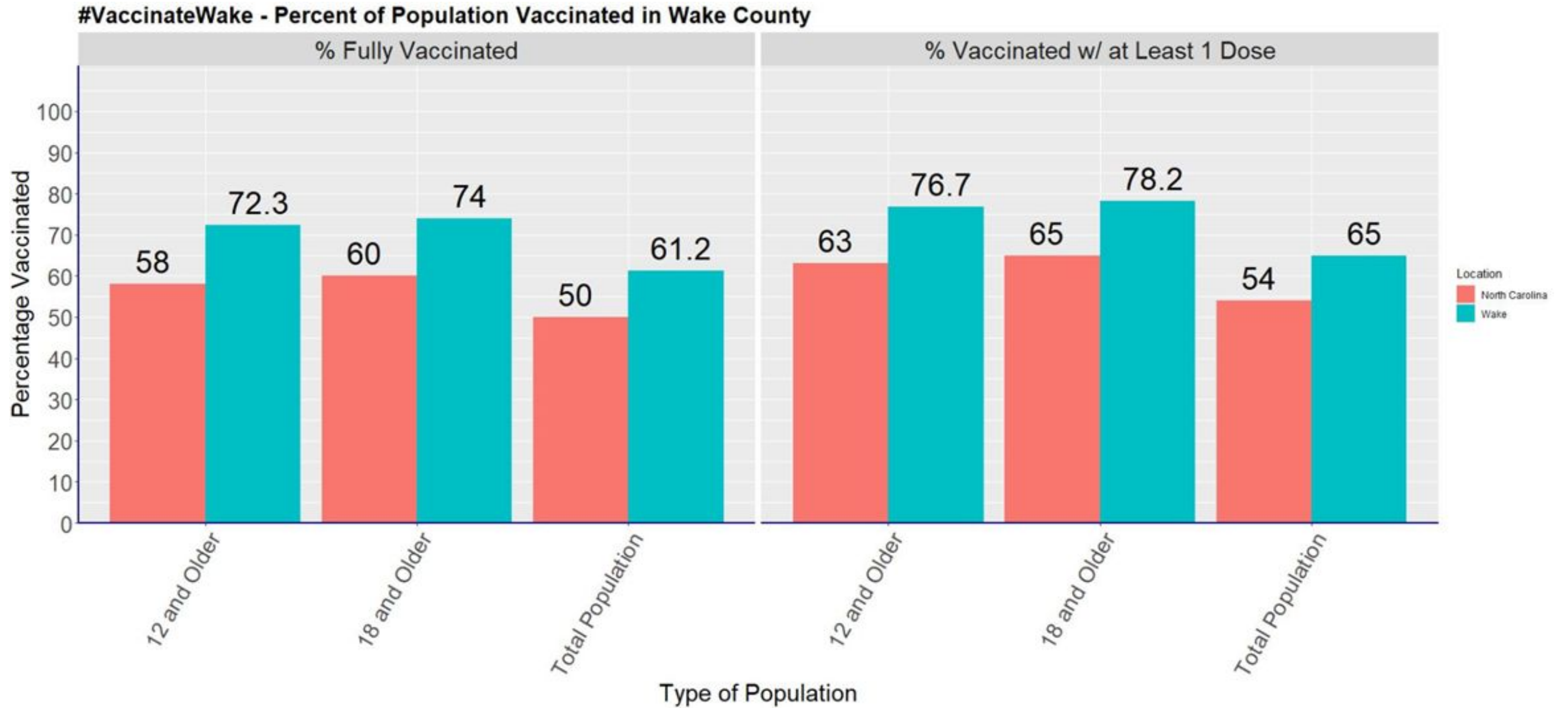
Wake County COVID-19 Cases by Month



*August 1st -29th

Wake County Cases by Age



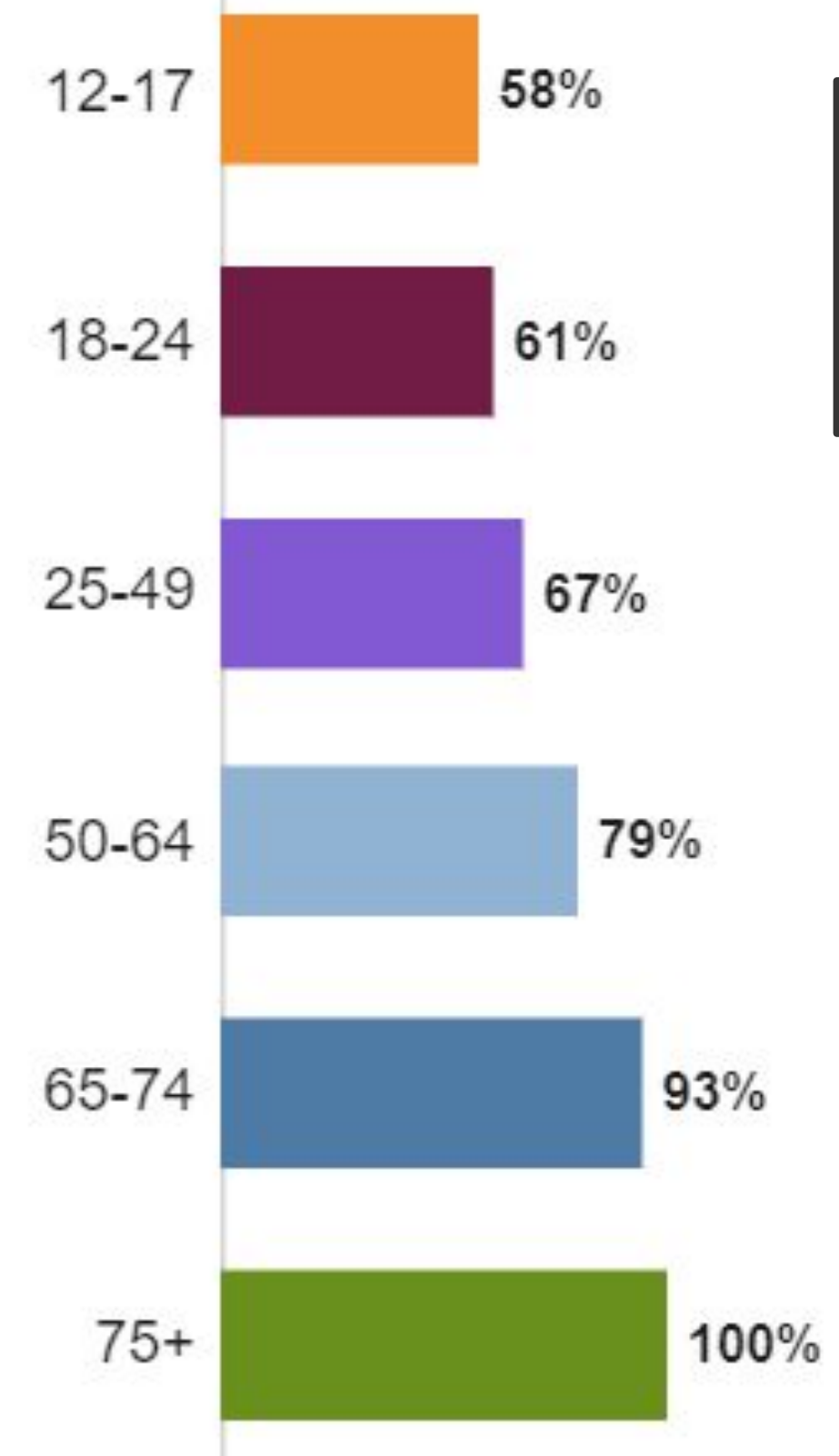
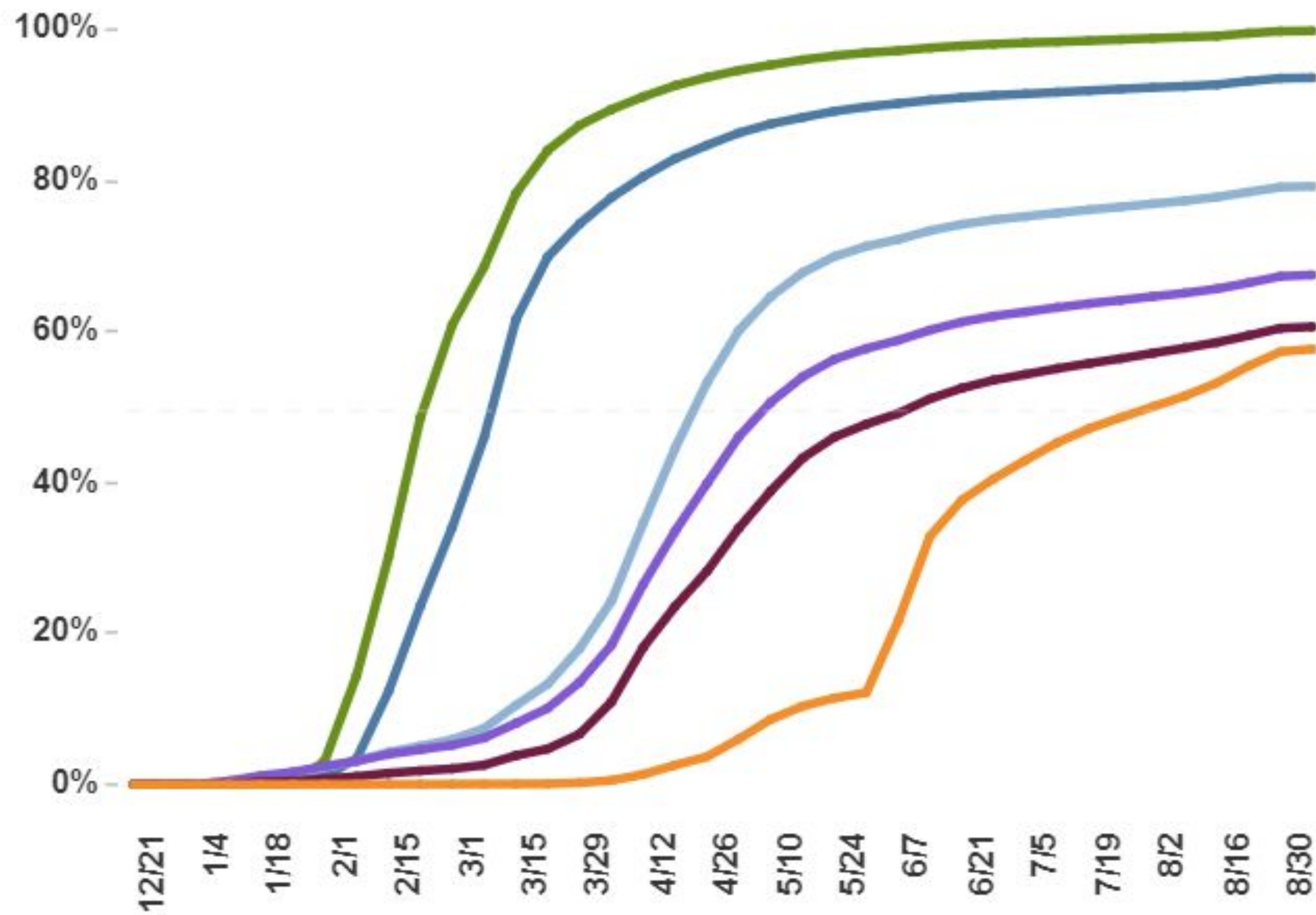


Percent of Population Fully Vaccinated by Age - Wake County



Weekly Trend

Cumulative Total



**0-11 yr :
Not Eligible for
Vaccine**

Dialogue and Questions

WHAT   
STARTS
 HERE
CHANGES
 EVERYTHING.



WCPSS COVID-19 Dashboard

Wake County Board of Education Work Session

Tim Simmons, Chief of Communications

Positive cases

Listed by date

Can be sorted by column heading

Marked pending until confirmed

Clusters

Listed by date

Includes school/facility

Includes cases at the time a cluster was declared

Quarantines

Lists total per week

Reports the number related to athletics

Includes percent of students/staff quarantined

Related Information

Vaccination sites

Face coverings

When to stay home and when to return

General info



Upcoming Events

Check out the exciting events that are happening in our district.

TUESDAY
SEPTEMBER **07**

3:00 PM - 5:30 PM
Board Work Session

5:30 PM
Board of Education
Meeting

WEDNESDAY
SEPTEMBER **15**

3:00 PM - 5:00 PM
Facilities Committee
Meeting

TUESDAY
SEPTEMBER **21**

1:30 PM - 3:30 PM
Budget / Finance
Committee Meeting

3:30 PM - 5:30 PM
Board of Education
Work Session

5:30 PM
Board of Education
Meeting

WEDNESDAY
SEPTEMBER **22**

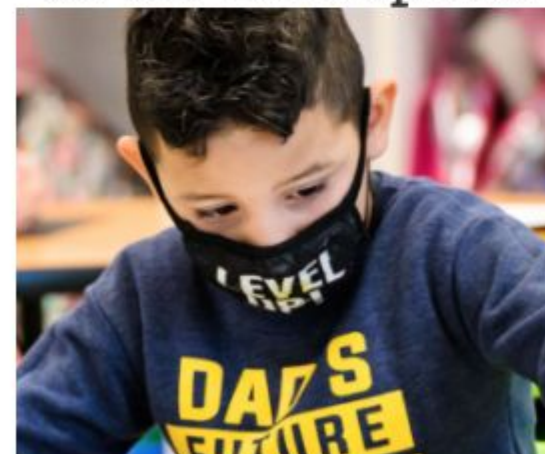
3:00 PM - 5:00 PM
Safety and Security
Committee Meeting

MONDAY
SEPTEMBER **27**

3:00 PM - 5:00 PM
Student Achievement
Committee Meeting

[VIEW CALENDAR](#)

COVID-19 Response



[Learn what precautions we're taking to keep our students, staff, and community healthy in a safe and welcoming environment. This includes COVID-19 dashboards.](#)

Health and Wellness



[Resources for students and families to help improve their health and wellness.](#)

Guides to Technology



[Need tech support? View our guides to technology for parents and students.](#)

wcpss.net/covid19

COVID-19 Metrics ☆ 📄 ☁

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	A	B	C	D	E	F	G
1	Date	Location	Confirmed	Last on Campus/ Facility	Student/ Staff/ Visitor	Suspected Household or Community Link	Suspected Campus Link
265	9/3/2021	Wakefield ES	Pending	9-2	Student		Yes
266	9/3/2021	Harris Creek ES	Pending	8-25	Student		Yes
267	9/3/2021	Conn ES	Pending	8-27	Student		
268	9/3/2021	Lake Myra ES	Pending	9-1	Staff		
269	9/3/2021	Alston Ridge MS	Pending	8-31	Student	Yes	
270	9/3/2021	Harris Creek ES	Pending	9-2	Student		Yes
271	9/3/2021	Carroll MS	Pending	9-1	Student		
272	9/3/2021	Walnut Creek ES	Pending	9-1	Student		Yes
273	9/3/2021	Walnut Creek ES	Pending	9-1	Student		
274	9/3/2021	Lacy ES	Pending	9-2	Student		Yes
275	9/3/2021	Bryan Rd ES	Pending	8-27	Student	Yes	
276	9/3/2021	Wilburn ES	Pending	8-27	Student		
277	9/3/2021	North Ridge ES	Pending	9-1	Student		
278	9/3/2021	Heritage HS	Pending	9-2	Student		
279	9/3/2021	Holly Ridge MS	Pending	9-2	Staff		
280	9/3/2021	West Lake MS	Pending	9-2	Student		
281	9/3/2021	Holly Springs HS	Pending	9-1	Student		
282	9/3/2021	Martin MS	Pending	8-31	Student		

2021-22 Cluster Dashboard

2021-22 Clusters		
<p>The state defines a cluster as five or more cases that are clearly linked to one another over a 14-day period. The cluster can be confined to a single bus, classroom or sports team or it can cut across grade levels and groups. The key is finding clear links among positive cases.</p> <p>When a cluster is declared, Wake County Public Health requires a 14-day quarantine. The quarantine applies to anyone in the group who tests positive or is exposed even if no direct link is documented. The longer quarantine is used to keep staff and students away from others during the full incubation period of the virus.</p>		
Date cluster was declared	School / Facility	Number of cases on date cluster was declared
July 22, 2021	Turner Creek Elementary	7
July 26, 2021	North Forest Pines Elementary	6
July 29, 2021	Lufkin Road Middle	6
August 2, 2021	Salem Elementary	15
August 2, 2021	Herbert Akins Elementary	11
August 9, 2021	Neuse River Middle	8
August 17, 2021	Sanderson High	10
August 18, 2021	Knightdale High	5
August 20, 2021	Holly Grove Elementary	6
August 30, 2021	Athens Drive High - football team	9
September 3, 2021	Lake Myra Elementary	5
September 3, 2021	Vadora Springs Elementary	5

2021-22 Cluster Dashboard

Clusters **Quarantines**

2021-22 Quarantine Totals

The state defines a cluster as five or more cases that are clearly linked to one another over a 14-day period. The cluster can be confined to a single bus, classroom or sports team or it can cut across grade levels and groups. The key is finding clear links among positive cases.

When a cluster is declared, Wake County Public Health requires a 14-day quarantine. The quarantine applies to anyone in the group who tests positive or is exposed even if no direct link is documented. The longer quarantine is used to keep staff and students away from others during the full incubation period of the virus.

For the week of July 5 through August 16, 2021: student quarantine percentages are based on 40,000 students in non traditional calendar schools. Staff quarantine percentages are based on 4,600 staff working in non-traditional calendar schools.

For the weeks starting on August 23, 2021: student quarantine percentages are based on 149,000 students. Staff quarantine percentages are based on 16,718 staff members.

Week of	Number of student quarantines	Percent of student quarantines	Number of student quarantines connected to athletics	Number of staff quarantines	Percent of staff quarantines
7/5/2021	2	0.01%	n/a	0	0.00%
7/12/2021	47	0.12%	n/a	5	0.11%
7/19/2021	369	0.92%	n/a	32	0.70%
7/26/2021	555	1.39%	n/a	34	0.74%
8/2/2021	1031	2.58%	n/a	8	0.17%
8/9/2021	821	2.05%	n/a	71	1.54%
8/16/2021	664	1.66%	138	50	1.09%
8/23/2021	739	0.50%	61	68	0.41%
8/30/2021	1273	0.85%	59	66	0.39%



Academic Advancement Updates

Wake County Board of Education Work Session

Drew Cook, Assistant Superintendent, Academics



Academics Updates

- Overview of Current Enrollment Data
- WCPSS Virtual Academy Update
- Potential Virtual Academy Alternatives
- Instruction During Quarantine



Academics Updates

Overview of Current Enrollment Data

- Projected 2021-2022 Student Membership 160,591
- # of Students Projected to Attend In Person 150,160 (93.5%)
- # of WCPSS Virtual Academy Students 10,431 (6.5%)
- # of Students Quarantined (Week of 8/30/21) 1,273 (<1%)

Academics Updates

Virtual Academy Enrollment

Total:

10,431

Grades K-5:

4,980

Grades 6-8:

2,535

Grades 9-12:

2,916

**As of 8/31/21*

Virtual Academy Staffing

Vacancy Rate:

4.5%

Vacancies:

30

Total Positions:

673

WCPSS Virtual Academy Update

- Ensure students have stable, consistent learning experiences with highly qualified teachers.
- Schools have been adjusting and finalizing student schedules.
- Staffing challenges impact on implementation of planned instructional model (particularly for HS)
- Partnership and communication with students, families, schools and NCVPS has been integral for a successful start to the school year.



Academics Updates

Virtual Academy Expansion is Problematic:

- Hire or Contract Additional WCPSS Staff to Expand Capacity - *Not Feasible*
- Contracted Online Vendor (RFP currently posted) - *Likely Not Feasible*
- Ongoing Considerations:
 - Over Enroll Virtual Academy Courses
 - Master Schedule Changes (move in person sections to virtual)
 - Concurrent Teaching



Academics Updates

Instruction During Quarantine

Current Practices

- Aligned to Policy 4400 and 4400 R&P
- Access to instructional resources in Canvas/Google
- Daily communication
- Weekly live office hours for instructional support and engagement

Under Development

- Supplemental district-level schedule of after hours live support and tutoring sessions (contract with current WCPSS teachers)
- Contracted vendor for online tutoring services (RFP Posted)



Operational Updates

Wake County Board of Education Work Session

Mark Strickland, Chief of Facilities & Operations



Operations - Transportation

Staffing

- Numbers remain relatively the same as reported 8-17-21
- 17% bus driver vacancy
- 35% mechanic vacancy
- EC vendors short 30 drivers

Start of Year

- Families and schools are settling into their transportation routines
- Buses are fully loaded with bus runs to maximize use of our 633 buses
- Staff is monitoring late arrivals and customer concerns. Route plans will be adjusted to resolve late arrivals as we move forward
- Bus drivers have shared concerns about high temperatures on buses during afternoon runs



Operations - CNS

School-based Staffing

- 24% vacancy rate as of 8/31
 - 832 positions
 - 200 vacancies (41 managerial)
- 95% of CNS Central Office staff deployed to school kitchens to sustain cafeteria operations

Supply Chain Constraints Impacting Menu Variety

- Food and supplies production/transportation delays
- Consolidation of product lines
- Last minute cancellations
- Unexpected substitutions

Dialogue and Questions

WHAT   
STARTS
 HERE
CHANGES
 EVERYTHING.



COVID-19-Related Information

Wake County Board of Education Work Session

Paul Koh, Assistant Superintendent, Student Support Services



Health Guidance Guiding Priorities

Need to balance between our top 2 priorities:

Keep schools
open for all daily
in-person
instruction

Keep students and
staff healthy by
minimizing
exposures and
quarantines

PRIORITY

Health Guidance Considerations for the Delta Variant

1.



Vaccinations

Recommended range of 70%-90% vaccinated for students and staff

2.



Positive Cases

Significant declining rate covering 28 days (2 incubation cycles)

3.



Cases per 100,000

7-day average 10 cases or less per 100,00 in the community

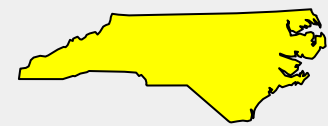
The following considerations are used for all decisions when discussing necessary health guidelines during in-person instruction.

There is no single metric that can be calculated from these three areas that will automatically trigger a change in guidance.

All three will be used and given the weight needed based on the circumstances.

Considerations for In-person Instruction During COVID-19

1.



Vaccinations

Recommended range of 70%-90% vaccinated for students and staff

2.



Positive Cases

Significant declining rate covering 28 days (2 incubation cycles)

3.



Cases per 100,000

7-day average 10 cases or less per 100,00 in the community

Age Group	% of Wake County population with at least one dose (as of 8/30)	% of Wake County population fully vaccinated (as of 8/30)
12-17	63%	58%
18-24	66%	61%
25-49	72%	67%
50-64	82%	79%
65-74	95%	93%
75+	100%	100%

Source: NCDHHS Vaccinations Data Dashboard

Considerations for In-person Instruction During COVID-19

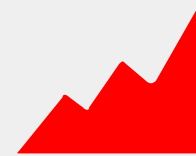
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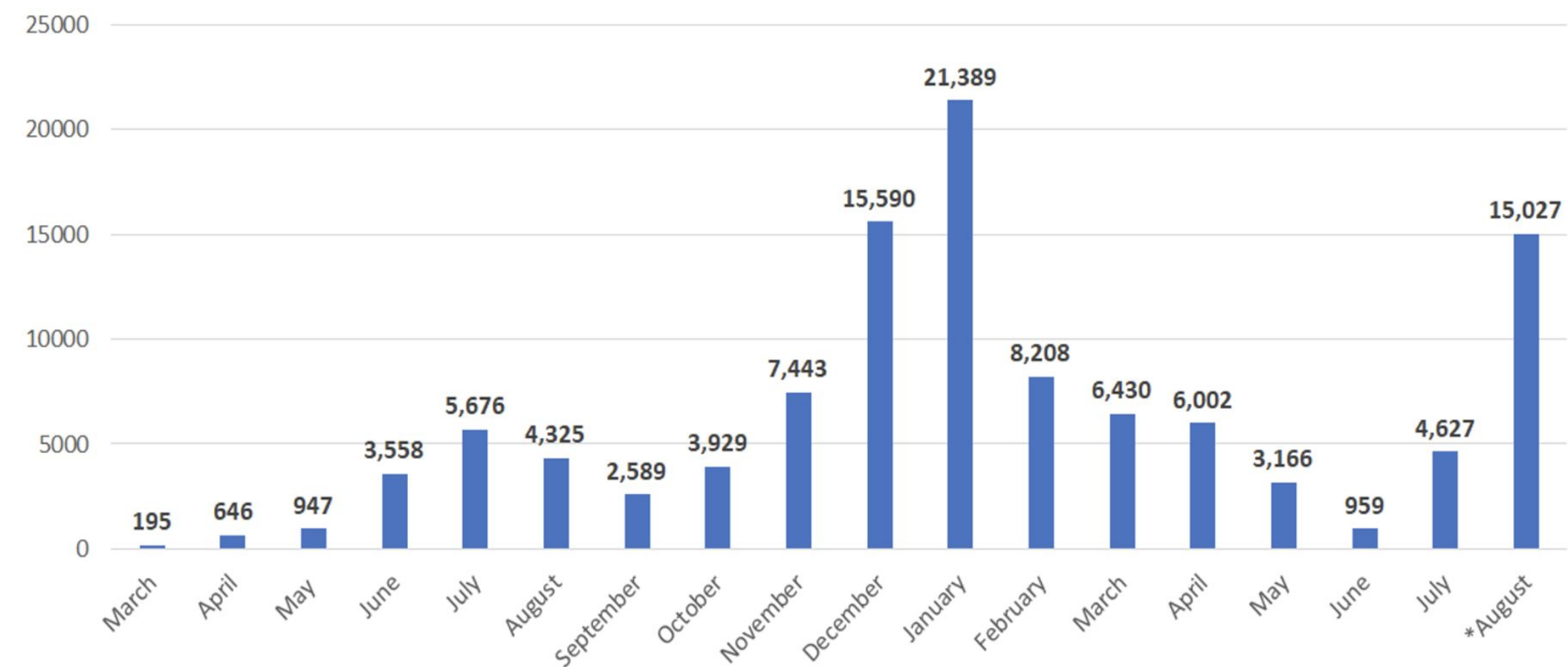


Cases per 100,000

7-day average 10 cases or less per 100,00 in the community

- June 2021 - 959 COVID-19 Cases
- July 2021 - 4,627 COVID-19 Cases
- August 2021 - 15,027 COVID-19 Cases

Wake County COVID-19 Cases by Month



*August 1st -29th

WAKE COUNTY

Source: <https://nccovid.ncpublichealth.com/>

3

Considerations for In-person Instruction During COVID-19

1.



Vaccinations

Recommended range of 70%-90% vaccinated for students and staff

2.



Positive Cases

Significant declining rate covering 28 days (2 incubation cycles)

3.

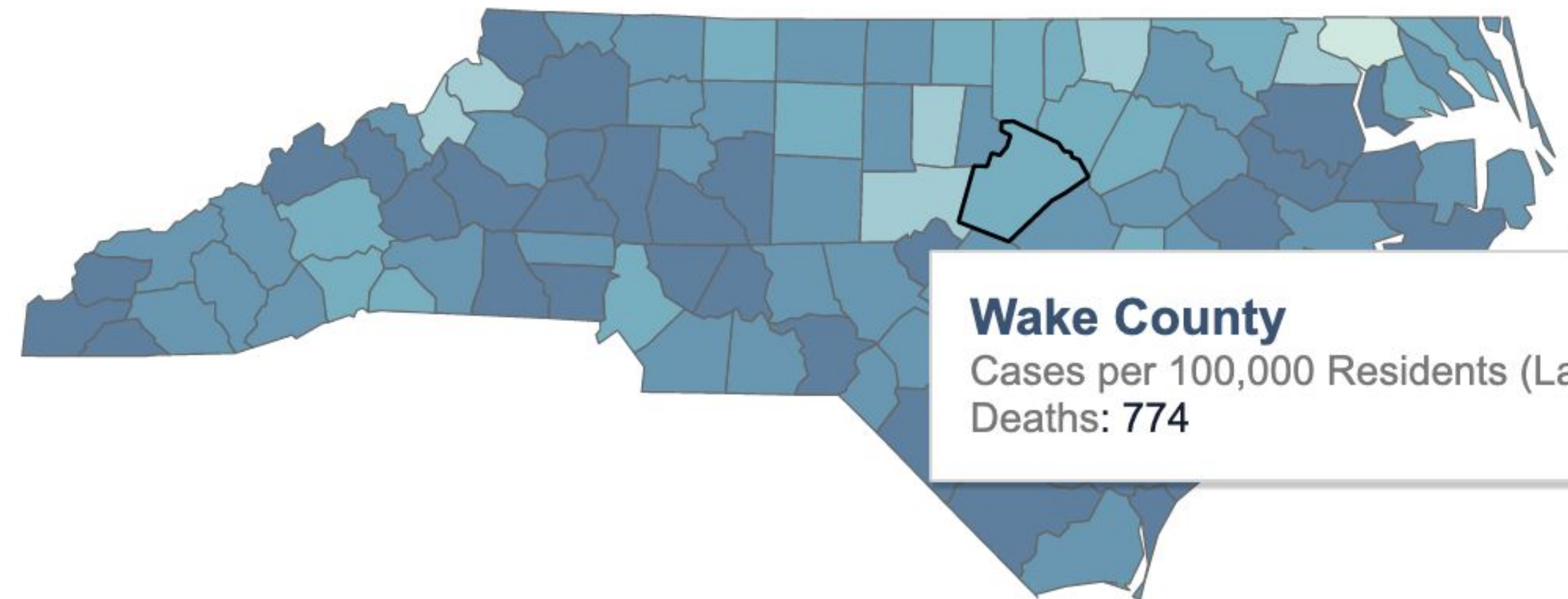


Cases per 100,000

7-day average 10 cases or less per 100,00 in the community

County Map by Cases per 100,000 Residents (Molecular (PCR) and Antigen)

(Click to highlight map, unclick to revert map)



Wake County

Cases per 100,000 Residents (Last 7 Days): **345**
Deaths: 774

Cases per 100,000 per 7 days as of 9/2/21 - 345

Cases per 100,000 per 7 days on 8/1/21 - 178

[Source: NCDHHS COVID Summary Dashboard](#)



Secondary Considerations for the Delta Variant

These secondary considerations are also important to consider when discussing necessary health guidelines during in-person instruction.

Unlike the primary considerations, they do not have a set target.

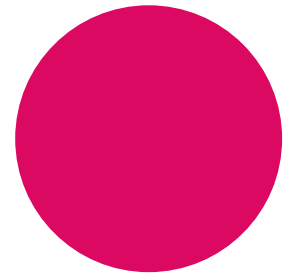
However, they should not be ignored as we determine appropriate measures to meet our two priorities of providing safe in-person instruction with as few quarantines as possible.

- **Clusters** | Clusters are the results of on-campus transmissions. The fewer the better
- **Community Hospitalizations** | High rates in the community increase risk to staff and students
- **Community Deaths** | While vaccines have reduced COVID-19 deaths, they must be monitored



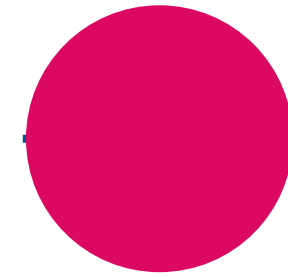
Face Covering Guidance

August 3, 2021



Board approved universal PreK-12 face covering requirement indoors and on buses

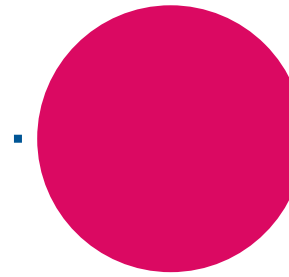
September 2, 2021



WCPSS operational decision requires face coverings outdoors for athletics, band, and other co-curricular activities

***Except when students are engaged in physical exertion in contests and practices**

Monthly



Senate Bill 654

Monthly vote on whether face covering policy should be modified



Lunch Guidance in Schools

Maintaining Best Practices

- Grouping students during transitions to and from classroom to eating areas
- Seating charts for students in eating areas
- Students wear face coverings properly over nose, mouth, and under chin when getting food and only removing them while eating
- Students eat within a window of 15 minutes or less - to the extent possible
- Practice proper hand hygiene before entering eating areas

Updates

- Emphasized reducing density of students in eating areas during meal times
- Emphasized eating outdoors as much as possible during lunch

Example Best Practices

- Splitting up lunches into more sessions
- Eating outside
- Eating in classrooms
- Rotating weeks where grade levels alternate between spaces: cafeteria, outside, classrooms, or common areas
- Seating charts mirroring class seating assignments



COVID-19 Testing Information

State COVID-19 Testing Program

- Open to all public and private schools for 2021-2022 school year
- Schools must opt-in
- Parent consent is required
- Can be tailored to school district specifications and must be consistent throughout the school district
- School districts have options to opt-in with state contracted vendor or participate in an independent testing program

Purpose of Testing

- Strategies recommended by the CDC and NCDHHS for:
 - Diagnostic testing for individuals who exhibit symptoms of COVID-19 at school or have recent known close contact to an individual with COVID-19
 - Screening testing for PreK-12 students and staff on a regular, routine basis

Funding

- NCDHHS would provide funding for school district to hire health services staff for medical and technical assistance
- School district responsibility to hire for these positions
- Funding lasts through July 31, 2022



COVID-19 Testing Information

North Carolina schools and districts engaged in testing program:

- [244 schools and school districts participating in testing program](#)

Known school district strategies:

- Guilford County Schools - unvaccinated students participating in athletics and other high-risk extracurricular activities
- Orange County Schools - unvaccinated staff, and unvaccinated students participating in Fall 2021 extracurricular activities
- Winston-Salem Forsyth County Schools - weekly testing for all students participating in middle and high school athletics, band, chorus, dance team, ROTC

Considerations for a COVID-19 Testing Program:

- Application is required to participate in the state testing program
- If interested, districts must apply by September 13, 2021
- Details provided at a future date

Covid-19 Vaccination Information - Wake County

Age Group	% of population with at least one dose (as of 8/30)	% of population fully vaccinated (as of 8/30)
12-17	63%	58%
18-24	66%	61%
25-49	72%	67%
50-64	82%	79%
65-74	95%	93%
75+	100%	100%

Considerations for requiring vaccinations for students and staff:

- Recommended practice by public health officials
- Protects individuals from severe COVID-19 symptoms and hospitalizations
- Increasing vaccination rates aligns with our priorities of keeping in-person school open and keeping students and staff healthy

***Vaccination requirement requires Board approval**

Dialogue and Questions

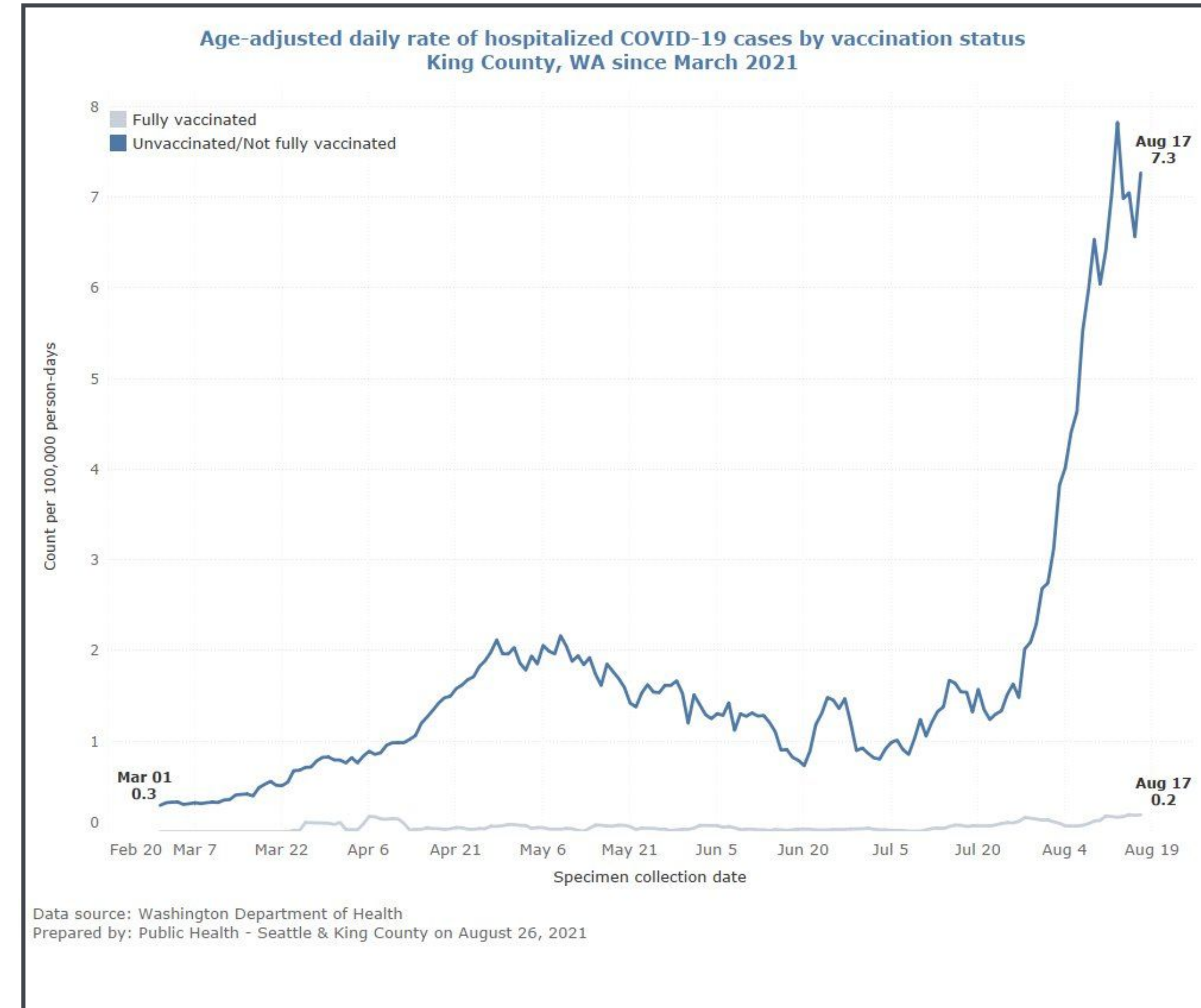
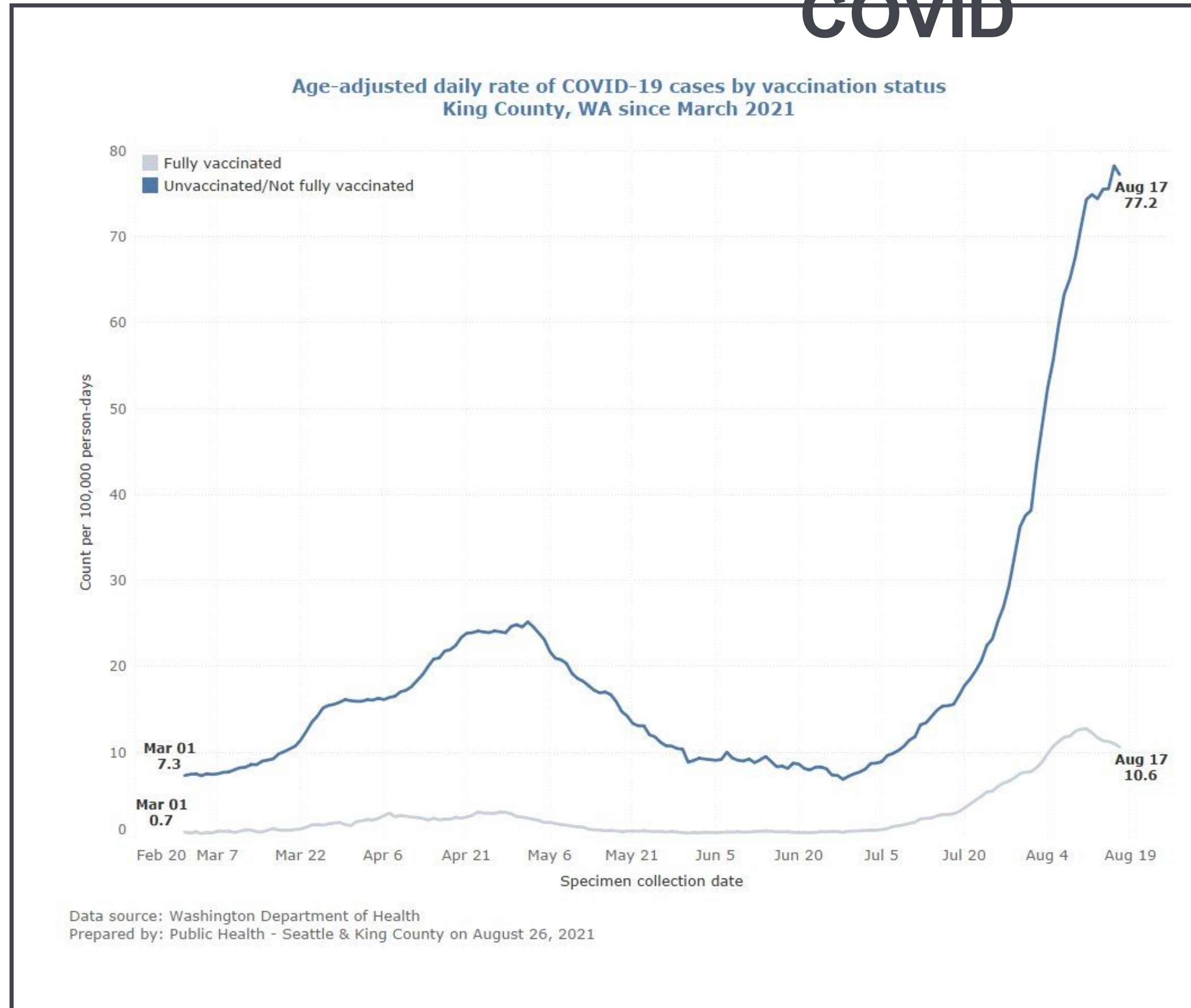
WHAT   
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Appendix Slides



THE ABC SCIENCE
COLLABORATIVE

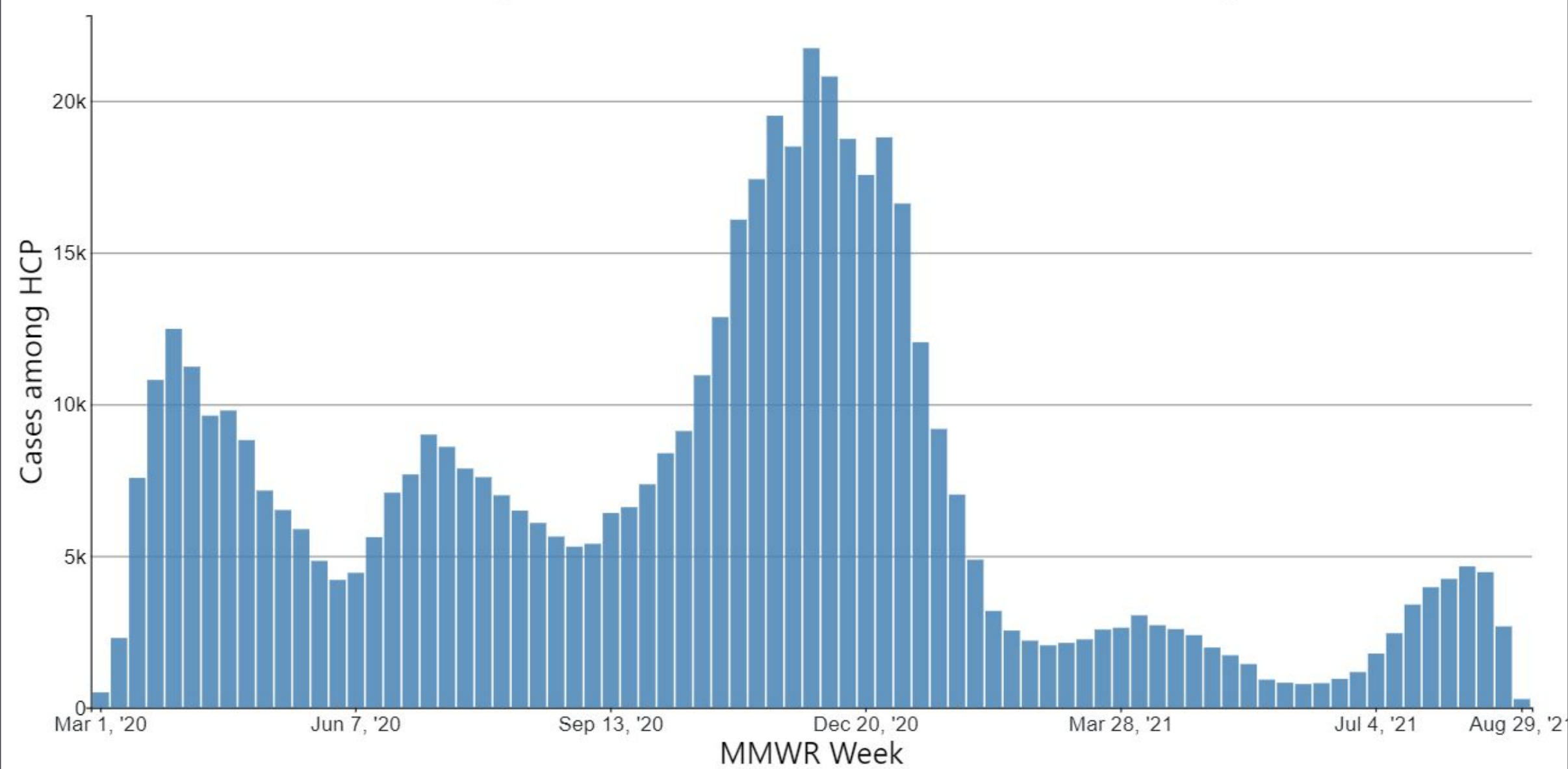
King County, Vaccines and COVID



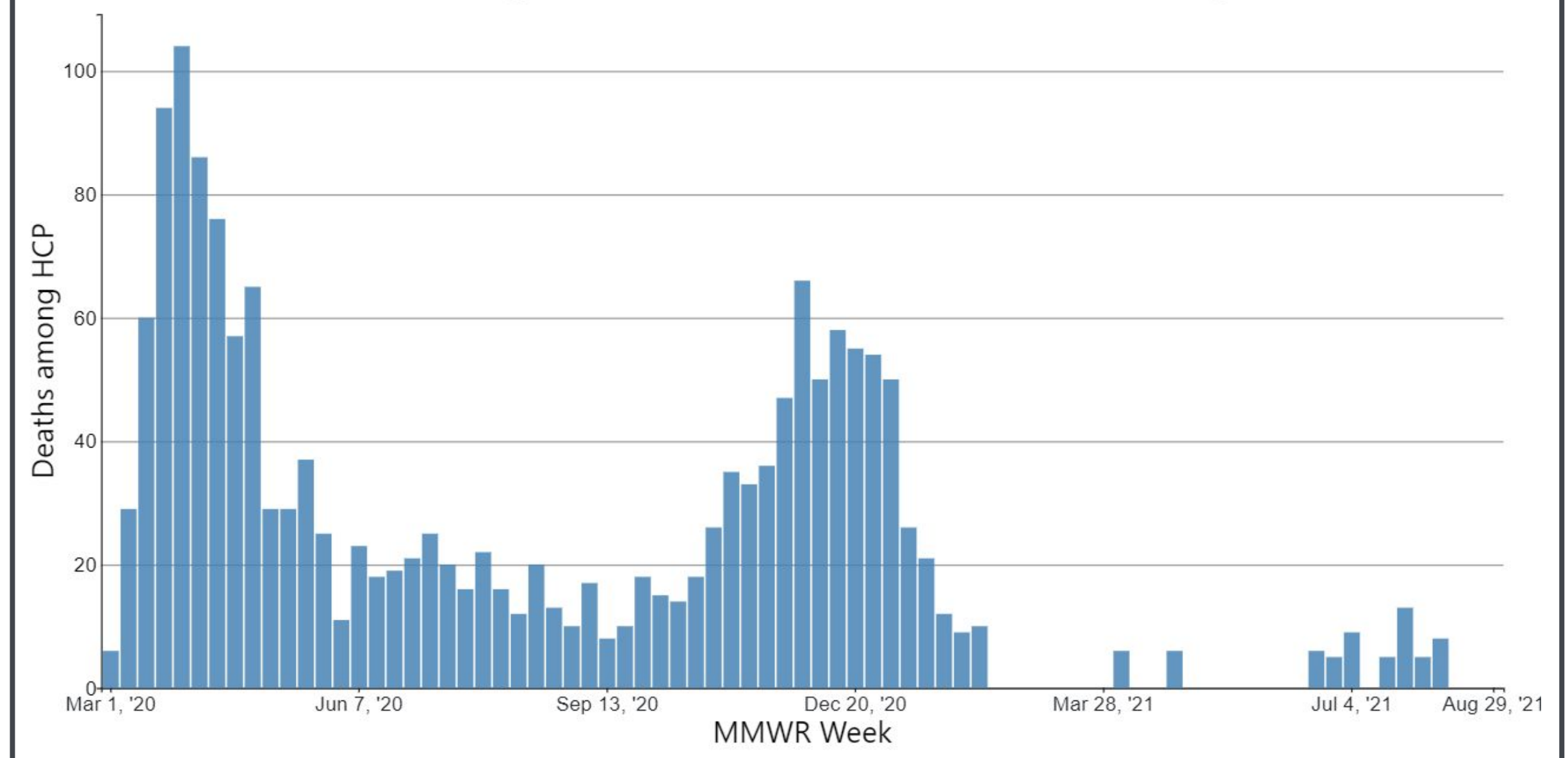
- Age-adjusted CoV-19 rates for past 30 days in King County, WA: Compared to fully-vaccinated people, those not fully vaccinated are:
- - 6 X more likely to test + for CoV-19
- - 37 X more likely to be hospitalized for CoV-19
- - 67 X more likely to die due to CoV-19 related illness

COVID Vaccine, Cases, Mortality in Healthcare Personnel

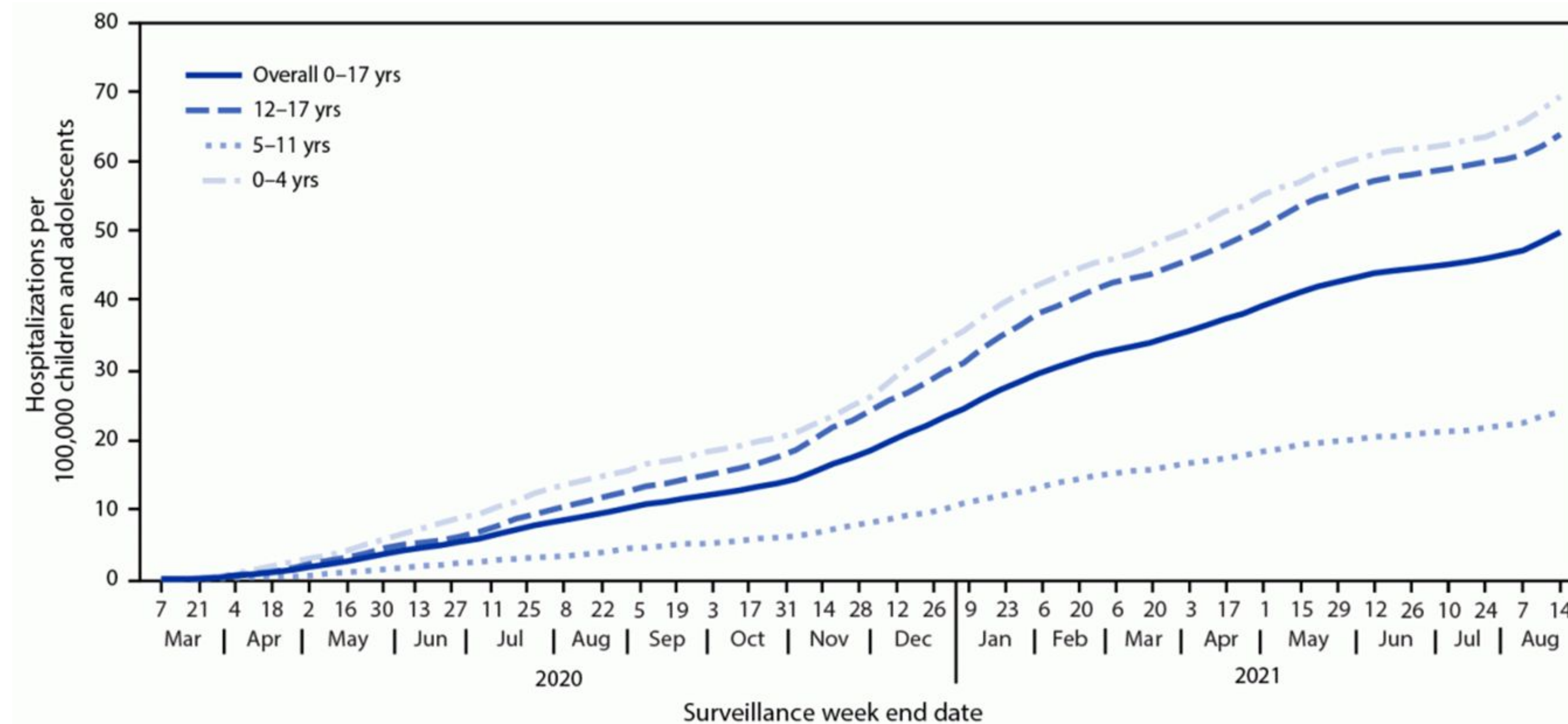
Cases among Healthcare Personnel (HCP) by Week



Deaths among Healthcare Personnel (HCP) by Week

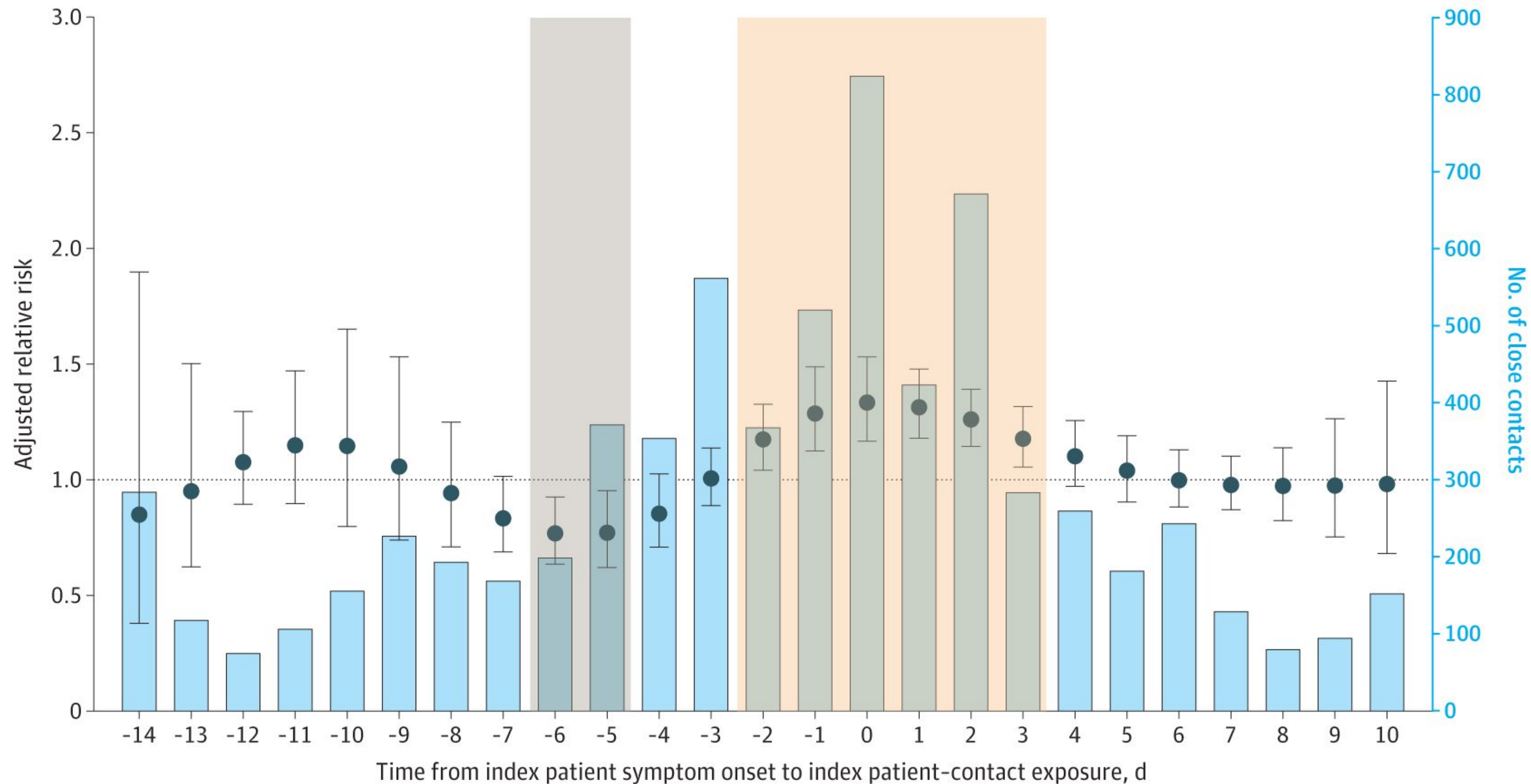


COVID-19 hospitalizations: children and adolescents



- MMWR report, weekly COVID-19–associated hospitalization rates among children and adolescents over the summer
- The cumulative number of COVID19 hospitalization ~50 per 100,000 children
- 26% admitted to ICU, 6% required ventilation, and 0.7% of the children died
- Pediatric hospitalization rates are 5 times higher in August compared to June
- Hospitalization rate among *unvaccinated* (12–17 years) was 10 times higher than vaccinated adolescents

From: COVID-19 Transmission Dynamics Among Close Contacts of Index Patients With COVID-19: A Population-Based Cohort Study in Zhejiang Province, China



Risk of Development of COVID-19 in Close Contacts of Index Patients by the Timing of Exposure: The x-axis represents the length of time between index patient–contact exposure and the index patient’s symptom onset time. For example, 0 signifies that the index patient’s symptom onset was the first day of index patient–contact exposure. Negative and positive days represent the days before and after exposure occurred relative to symptom onset. The left y-axis and dots represent the adjusted relative risk of COVID-19 transmission. The right y-axis and bars represent the number of close contacts exposed on each day.

Masking vs not masking

Schools with universal masking policies had low within-school transmission with ancestral variant. Estimated secondary attack rate ~1%

This has been shown in a series of publications:

1. From the fall of 2020 in North Carolina (view in Pediatrics)
2. From the winter of 2020-2021 in North Carolina (view in Pediatrics)
3. From the Spring of 2021 in North Carolina (view final report)
4. From Georgia elementary schools (Cobb County) in 2020 (view CDC MMWR) and compare this to Cobb County high rates in 2021 (view AJC article)
5. From a school district in Utah in 2020 (view CDC MMWR)
6. From a school district in Wisconsin (view CDC MMWR)
7. From Missouri (view CDC MMWR)
8. From Chesapeake, Virginia (view in PIDS)

Schools with universal masking had low within-school transmission with the Delta variant. Estimated secondary attack rate ~2.5%

Summer school North Carolina

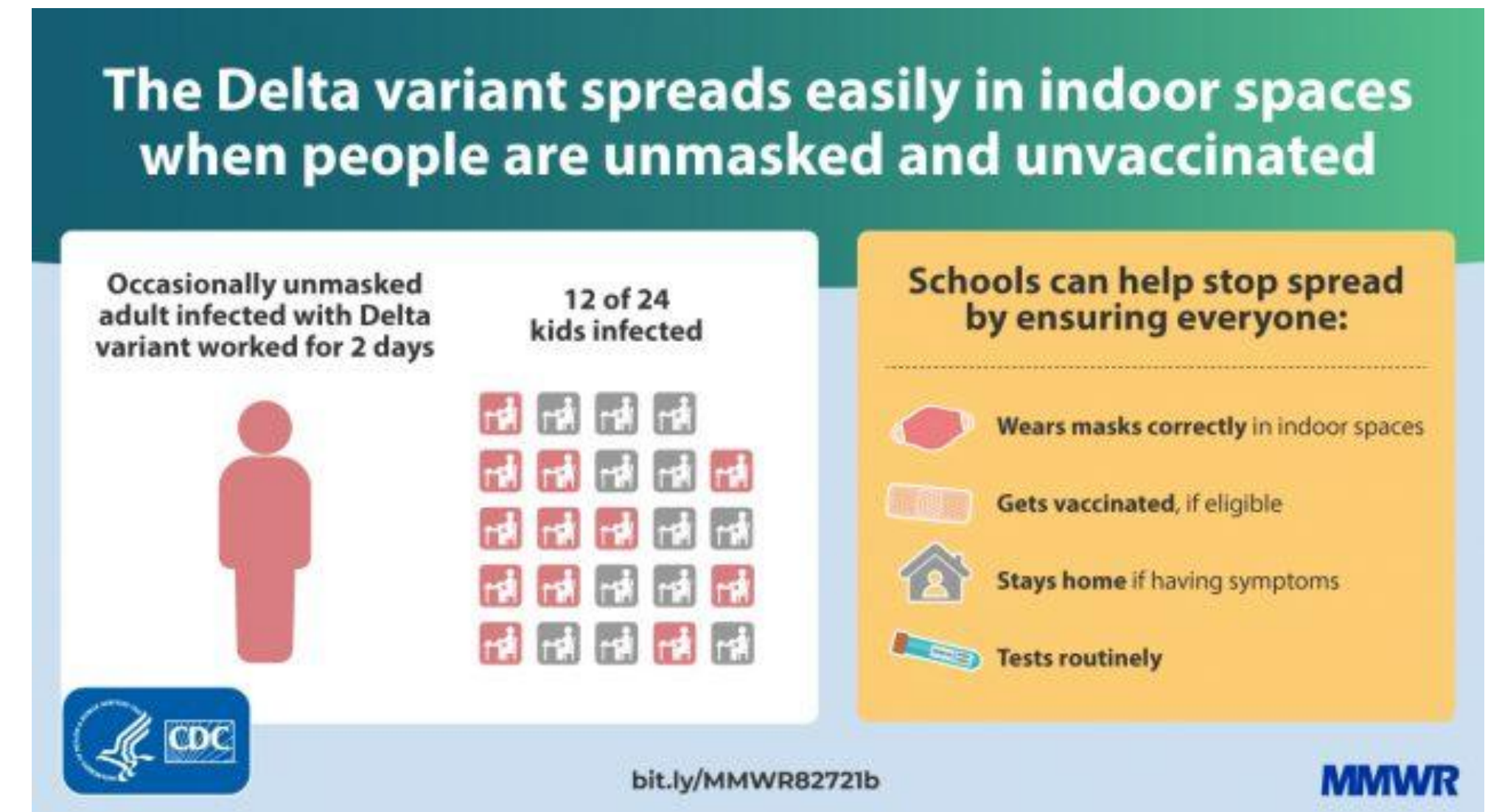
Initial data fall North Carolina

Failure to mask in schools causes rapid spread

1. Marin county MMWR report
2. Initial data North Carolina schools fall 2021
3. See also summary document provided to you, also available on ABC website
4. School districts that don't mask, typically do not report relevant infection data and refuse to have their infection data analyzed

From the CDC: Outbreak associated with SARS-CoV-2 Delta variant in an elementary school

- A teacher at a Marin County, California, elementary school reported becoming symptomatic on May 19, 2021, but continued to work for two days before receiving a test on May 21
- During this time, the teacher read aloud unmasked to the class despite school requirements to mask while indoors
- Beginning May 23, additional COVID-19 cases were reported among staff, students, parents, and siblings connected to the school, and on May 26 the health department initiated a case investigation and contact tracing
- 24 students were tested; 12 had positive test results, with an attack rate of 80% for students in the front two rows of the classroom, and 28% for the three back rows
- From May 24-June 1, 6 of 18 students in other grades tested positive and 8 additional cases were identified among parents and siblings
- One unmasked teacher, in one school, in one week was responsible for 26 within-school transmissions



Results from voluntary masking (continued)

22 school districts across 7 states

District Charter School	State	Closed School or Switch to Virtual	Changed to Require Masking	Number of Students Infected*	Number of Staff Infected*	Source
Vestavia Hills	AL		No	104		https://www.al.com/educationlab/2021/08/vestavia-parents-continue-to-battle-over-school-mask-policy.html
3 schools in Hancock Co.	MS	Yes		87	6	https://www.sunherald.com/news/local/education/article253528339.html
Rankin Co.	MS			78	40	https://www.rcsd.ms/coronavirus-information/smart-restart-2122
Chester Co.	SC		Yes	70		https://www.wbtv.com/2021/08/24/chester-county-schools-defies-sc-mask-mandate-ban-requires-masks-indoors/
2 Schools in Lamar Co.	MS	Yes		41	6	https://www.mississippifreepress.org/14272/as-outbreaks-force-schools-to-go-all-virtual-districts-reinstate-mask-mandates/
Burke County	GA	Yes		40		https://www.ajc.com/education/metro-atlanta-schools-record-nearly-4000-covid-cases-in-new-reports/RAATM33ERBDIZBU67LERDVUGQU/
Palm Beach	FL		Yes	37	14	https://www.palmbeachschools.org/students_parents/health_services/coronavirus_disease_2019_covid_19/covid-19_dashboard
2 schools George Co.	MS	Yes		27	12	https://www.sunherald.com/news/local/education/article253528339.html
Springfield	MO		Yes	17	2	https://www.sps.org/covidstats
Broward Co.	FL		Yes	13	138	https://www.browardschools.com/site/default.aspx?PageType=3&DomainID=20645&ModuleInstanceId=150127&ViewID=6446EE88-D30C-497E-9316-3F8874B3E108&RenderLoc=0&FlexDataID=234685&PageID=62583
Talladega Co.	AL		Yes	319	27	https://www.wbrc.com/2021/08/27/talladega-county-schools-require-masks/

Universal masking within-school transmission
North Carolina



Period	Grade Level	Number of School Districts	Number of Staff	Number of Students	Number of Students and Staff	Within school transmission Students and Staff
Fall 2020	K-12	11	18,184	117,417	135,601	32
Winter 2020-2021	K-12	13	23,134	138,071	161,205	209
Spring 2021	K-12	100	160,549	864,515	1,025,064	363

Within-school transmission definition:

Persons (student or staff) with confirmed or presumptive infection after close contact with exposure to a case. If the contact occurred in a school setting or school-sponsored event, these secondary cases are typically described as secondary transmissions with the school setting

Universal masking within-school transmission
Georgia



Period	Grade Level	Number of School Districts	Number of Staff	Number of Students	Within school transmission Students and Staff	Total Positive Cases
12/2020-1/2021	Elementary	1	700	2,600	45	-
8/2/2021-8/20/2021	K-12	15	-	802,525	-	11,812

Within-school transmission definition:

- The timing of symptom onset and testing must have been consistent with acquisition of SARS-CoV-2 infection from the index patient or a person with a school-associated case in the school setting based on the known incubation period
- The person must have had close contact at school with the school index patient or another person with a school-associated case
- The person must not have had known community or household contact with anyone with confirmed COVID-19 in the 2 weeks before receiving a positive test result, including with the index patient or another person with a school-associated case outside of school

Universal masking within-school transmission
Wisconsin



Period	Grade Level	Number of School Districts	Number of Staff	Number of Students	Number of Students and Staff	Within school transmission Students and Staff
8/31/2020-11/29/2020	K-12	1	654	4,876	5,530	7

Within-school transmission definition:
Identified through contact tracing

Universal masking within-school transmission
Virginia



Period	Grade Level	Number of School Districts	Number of Staff	Number of Students	Number of Students and Staff	Within school transmission Students and Staff
9/14/2020-1/29/2021	K-12	1	20,681	4,282	24,963	33

Within-school transmission definition:

- Determined through contact tracing
- 2 or more connected in-school cases including the source

Universal Masking Within School Transmission Utah



Period	Grade Level	Number of Schools	Number of Students and Staff	Identified Close Contact	Tested Close Contact	Within school transmission (Students and Staff)
12/3/2020-1/31/2021	Elementary	20	11,385	1,083	735	5

Within-school transmission definition:

Positive SARS-CoV-2 test result from tested close contacts

- Close contacts defined as a student or staff member who was in contact with the index patient for a cumulative total of 15 minutes or more during a 24-hour period in a classroom, cafeteria, school bus, or recess space during an index patient’s infectious period

Universal masking within-school transmission Missouri



Period	Grade Level	Number of School Districts	Number of Students (in Person Only)	Identified Close Contact	Tested Close Contact	Within school transmission Students and Staff
12/7/2020-12/18/2020	K-12	2	21,342	156	102	2

Within-school transmission definition:

Positive SARS-CoV2 test and was a close contact of someone with laboratory-confirmed COVID-19 in the school environment