



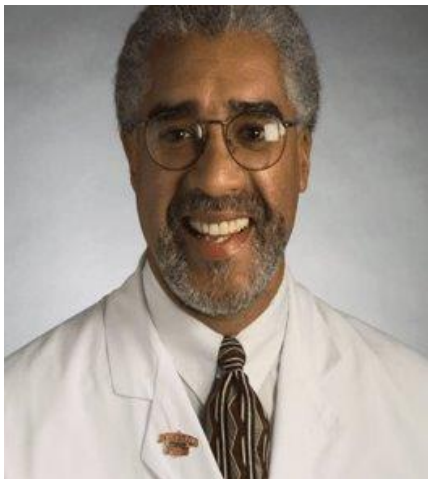
# Atrium Health

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## An Emergency Town Hall: Delta Variant Update

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# Presenter



**David G. Jacobs, MD, FACS**  
**Trauma & Acute Care Surgeon**  
**Vice-Chair/Department of Surgery**  
Atrium Health - Carolinas Medical Center

# United States COVID Vaccination Stats and Trends

8/31/2021

**Total Vaccine Doses**  
Delivered 440,026,945  
Administered 369,556,911


[Learn more about the distribution of vaccines.](#)

**173.8M**  
People fully vaccinated

**955k**  
People received an additional  
dose since August 13th, 2021

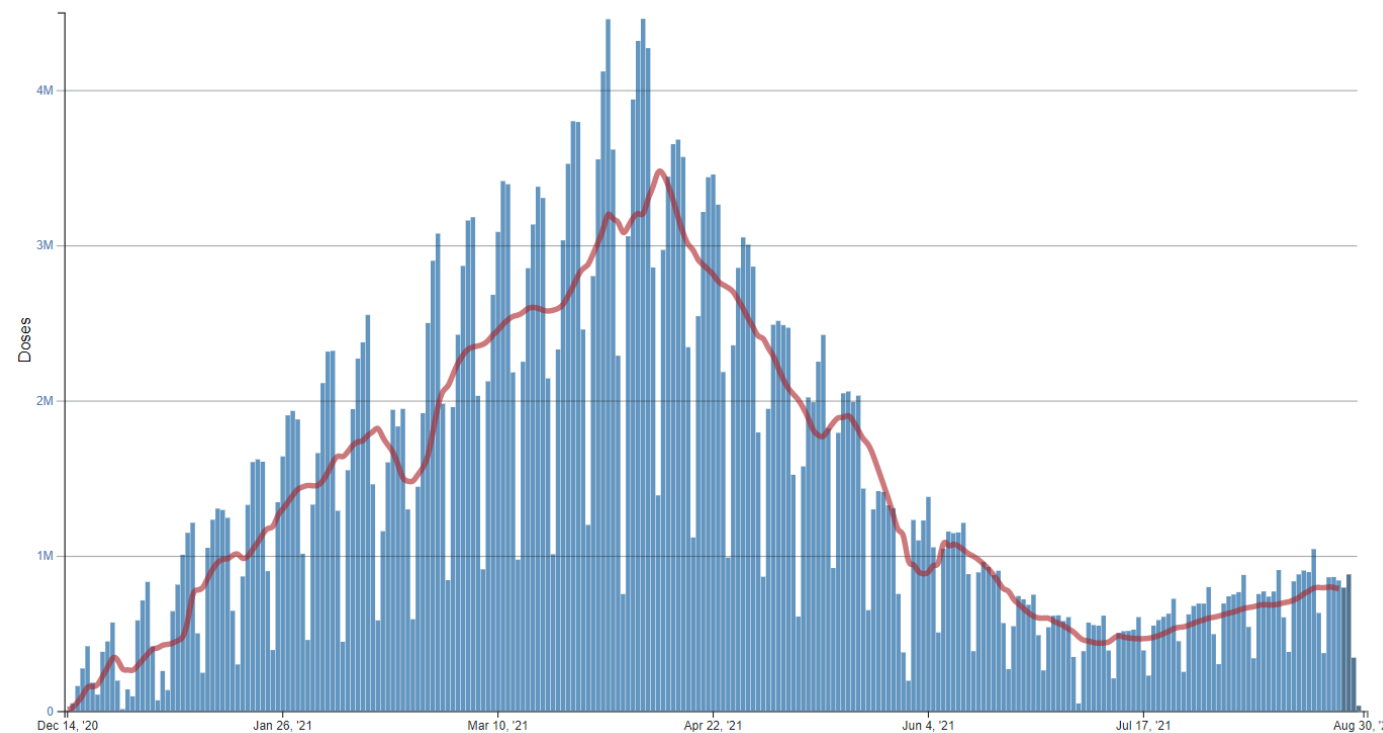
## People Vaccinated

|                                   | At Least One Dose | Fully Vaccinated |
|-----------------------------------|-------------------|------------------|
| Total                             | 204,742,648       | 173,832,202      |
| % of Total Population             | 61.7%             | 52.4%            |
| Population ≥ 12 Years of Age      | 204,514,420       | 173,700,607      |
| % of Population ≥ 12 Years of Age | 72.1%             | 61.3%            |
| Population ≥ 18 Years of Age      | 191,367,513       | 163,650,079      |
| % of Population ≥ 18 Years of Age | 74.1%             | 63.4%            |
| Population ≥ 65 Years of Age      | 50,286,364        | 44,664,225       |
| % of Population ≥ 65 Years of Age | 91.9%             | 81.7%            |

 About these data

CDC | Data as of: August 30, 2021 6:00am ET. Posted: Monday, August 30, 2021 1:59 PM ET

Daily Count of Total Doses Administered and Reported to CDC by Date Administered, United States



# North Carolina Vaccine Uptake as of 8/31/2021

First of 2 Doses  
Administered

5,280,517

Second of 2 Doses  
Administered

4,811,176

Single Shot Doses  
Administered

388,035

Total Doses  
Administered

10,479,728

Percent of Population Vaccinated with  
at Least One Dose

Total Population



12+ Years of Age



18+ Years of Age



65+ Years of Age



Percent of Population  
Fully Vaccinated

Total Population



12+ Years of Age



18+ Years of Age



65+ Years of Age



## Our Counties Percent

- Stanly – 35%
- Anson – 36%
- Gaston – 39%
- Lincoln – 41%
- Cabarrus – 44%
- Union – 44%
- Mecklenburg – 52%

<https://covid19.ncdhhs.gov/dashboard/vaccinations>

# Top 6 Reasons for Not Getting Vaccinated

1 Belief that the vaccines are not tested enough

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2 Worried about potential side effects

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3 Afraid of getting COVID-19 from the vaccine

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4 Religious or political reasons

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5 Concerned about infertility, pregnancy, and breastfeeding

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6 Worried there are harmful ingredients in the vaccine

# ① **CONCERN: The Vaccine Was Not Tested Enough**

## ① **FACT:**

The COVID-19 vaccine was made based on many years of work. While steps were done quickly, no steps were skipped.

## 2 CONCERNS: The Vaccine Has Side Effects

2 **FACTS:** You might have some side effects that last only a short period of time of 1 to 2 days. This means your body is building protection.

Common side effects:

On the arm where you got the shot:



- Pain
- Redness
- Swelling

Throughout the rest of your body:



- Tiredness
- Headache
- Muscle Pain
- Chills
- Fever
- Nausea

3

## **CONCERN: Afraid of Getting COVID-19 From the Vaccine**

3

### **FACTS:**

- None of the COVID vaccines contain the live virus that causes COVID-19 so it cannot make you sick with COVID-19.
- The vaccine will help to protect you from getting CoVid-19 by teaching your body how to make an antibody to fight CoVid-19.
- That's how you win, and the virus loses.



## 4 **CONCERNS:** Religious or Political Beliefs

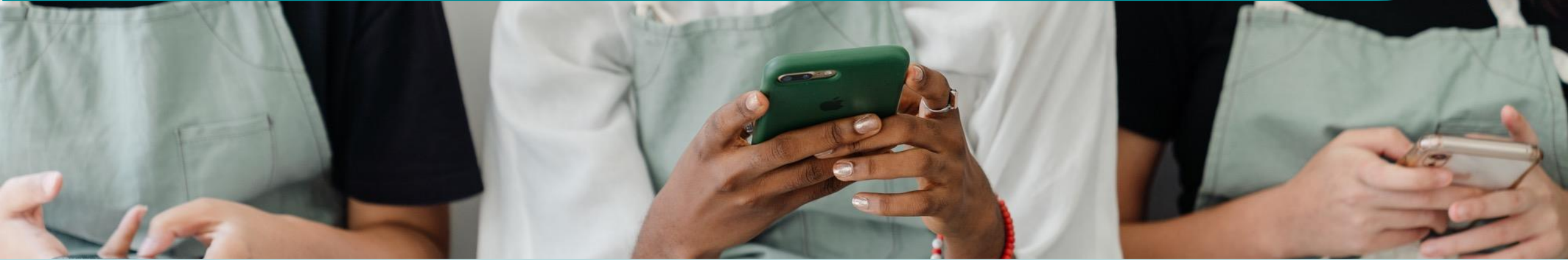
### 4 **FACTS:**

Making an informed decision about getting the vaccine can help to know if the vaccine is right for each person's beliefs

We do know the science is clear. The vaccine helps:

- Protect against getting COVID-19
- Prevent severe disease and death
- Us to return to normal more quickly

## 5 CONCERN: COVID-19 Vaccine & Fertility



## 5 FACTS:

**Social media messaging has been spreading that vaccine causes infertility**

- **These claims are untrue**
- These claims have been reviewed by experts on fertility and there is NO data to support that these vaccines impact fertility
- People undergoing fertility treatment and/or attempting to get pregnant are encouraged to consider getting the vaccination

# 5 CONCERN: Pregnancy, Breastfeeding & COVID-19 Vaccines

## 5 FACTS:

- COVID infection during pregnancy has been associated with increased severity of illness, death and preterm labor
- **Expert opinions:**
  - The **American College of Obstetricians and Gynecologists (ACOG)** and the **Society for Maternal-Fetal Medicine (SMFM)**, the two leading organizations representing specialists in obstetric care, **recommend that all pregnant individuals be vaccinated against COVID-19.**
  - The organizations' recommendations in support of vaccination during pregnancy reflect evidence demonstrating the safe use of the COVID-19 vaccines during pregnancy from tens of thousands of reporting individuals over the last several months.
- Potential protection of the baby through the mother's antibodies
- None of the currently approved vaccines are thought to be a risk to the breastfeeding infant
- Unlikely vaccine would enter the bloodstream and reach breast tissue – even less likely to transfer into milk and even less likely to have any biologic impact on breastfeeding baby
- Antibodies may passively transfer into milk and provide protection to infant that cannot get vaccinated

6

## **CONCERN: There are harmful ingredients in the COVID-19 Vaccine**

6

### **FACTS:**

- ✓ There is **NO LIVE VIRUS** in the vaccines.
- ✓ The ingredient list for the vaccines does not include any toxic ingredients.
- ✓ The leading vaccines have been tested for several months in thousands of people without issues.
- ✓ The COVID-19 virus has killed over 500,000 Americans and more than 1.6 million people worldwide.

# The Three E's

- Empathize with the members of our network on the difficulty of this decision
- Educate about the COVID-19 Vaccine
- Encourage vaccination



# Tips on Vaccine Conversations

- 2 approaches:
  - Presumptive (72-74% effective\*)
    - Ex: “Today we’re going to vaccinate xyz unit/department/etc.”
  - Participatory (4-22% effective\*)
    - Ex: “Who wants to get their COVID vaccine today?”
- Offer strong, universal, timely, urgent recommendation
  - Ex: “I strongly recommend the COVID-19 Vaccine. I got vaccinated, my whole family is vaccinated and I have encouraged my friends to get vaccinated!”

\* acceptance of childhood vaccines

# Address Vaccine Concerns - Motivation

- Motivational Interviewing (MI):
  - Empathy, collaboration, evocation, support autonomy
- Elicit, provide, elicit (EPE)
  - Elicit what person knows or understands
  - Seek permission to provide new information or advice
  - Give information in neutral and nonjudgmental way
  - Elicit response to that information or advice

# C.A.S.E Approach to Encouraging Vaccination

- **C.A.S.E. Approach**

- **Corroborate**: Acknowledge the vaccine concern
- **About Me**: How have you developed your vaccine expertise?
- **Science**: What does the evidence show?
- **Explain/Advise**: What is your advice based on science?





# **COVID-19 VACCINE**

## **FAQs to Share**

# Vaccine FAQs

## How much does the vaccine cost?

There is **no charge** to you to get the vaccine:

- **If you have insurance**, the administration fee will be paid by your insurance with no cost to you.
- **If you do not have insurance**, the fee can be paid for by [the Provider Relief Fund](#) with no cost to you.

## How long will it take for the vaccine to protect me against COVID-19?

Researchers believe that people begin to become immune to COVID-19 within a week or 2 of their final dose.



# Vaccine FAQs

**If I've already had COVID-19, will I still need to get the vaccine?**

**Yes.** Some people who have had COVID-19 still don't have antibodies to fight the virus. Even having COVID-19 antibodies may not mean total immunity from the virus. By getting this vaccine, you can develop the protection you need against COVID-19.

**After I get the vaccine, can I stop wearing my mask or social distancing?**

**No.**

The latest guidance from the U.S. Centers for Disease Control and Prevention says that vaccinated individuals should wear a mask indoors in public if you are in an area of substantial or high transmission. This is meant to maximize protection from the Delta variant and prevent possibly spreading it to others. Currently, Mecklenburg County and the surrounding metro area are all considered areas of substantial or high transmission.

A mask is also required on public transportation, including on buses, subways, and planes and at airports and fully vaccinated individuals should also continue to follow any local or business rules.



# Vaccine FAQs

## Will my privacy and personal information will always be protected?

- **Yes.** Nothing in the vaccine can be tracked—the protein your body makes cannot be tracked and it disappears after it finishes making you stronger
- Personal information about your vaccination and health are always protected
- We do not send any personal information to the CDC or ICE
- To follow state law, North Carolina submits:
  - Year of birth (not date of birth)
  - First three digits of the zip code
  - Date of vaccine

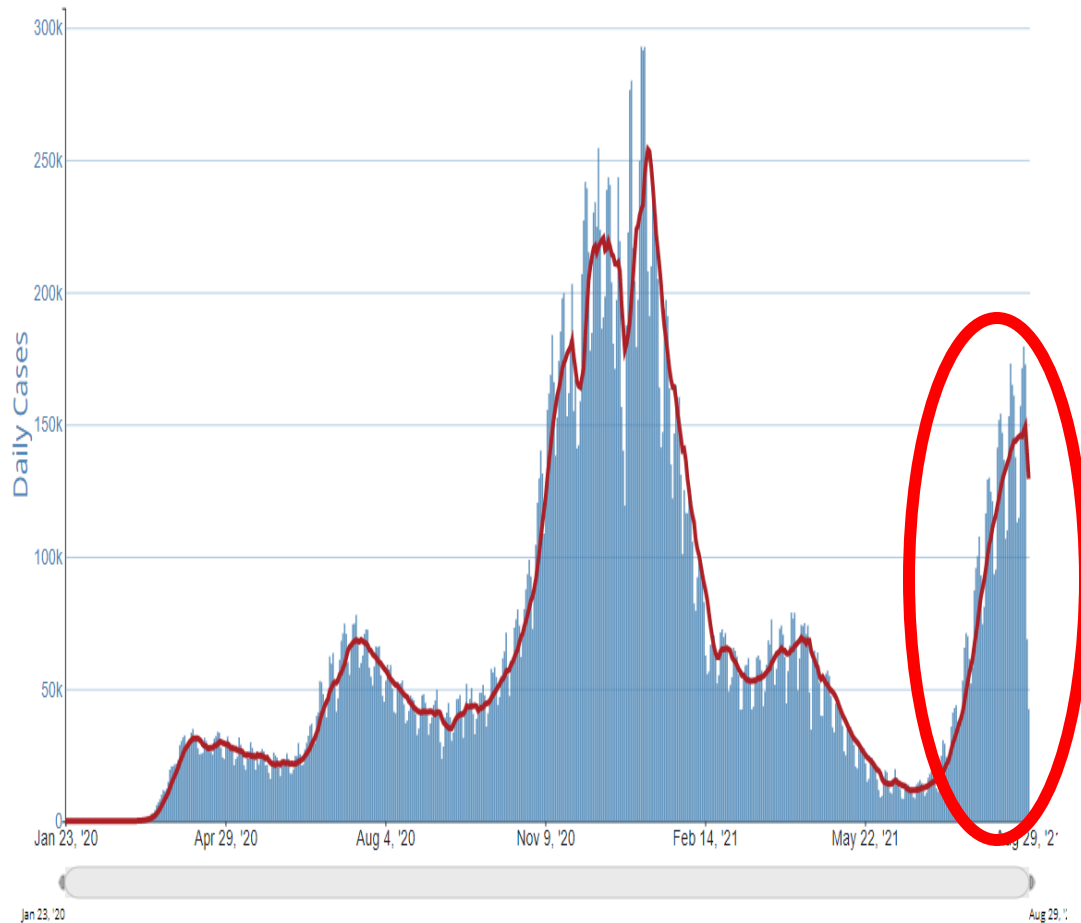


# Delta Variant – A Game Changer

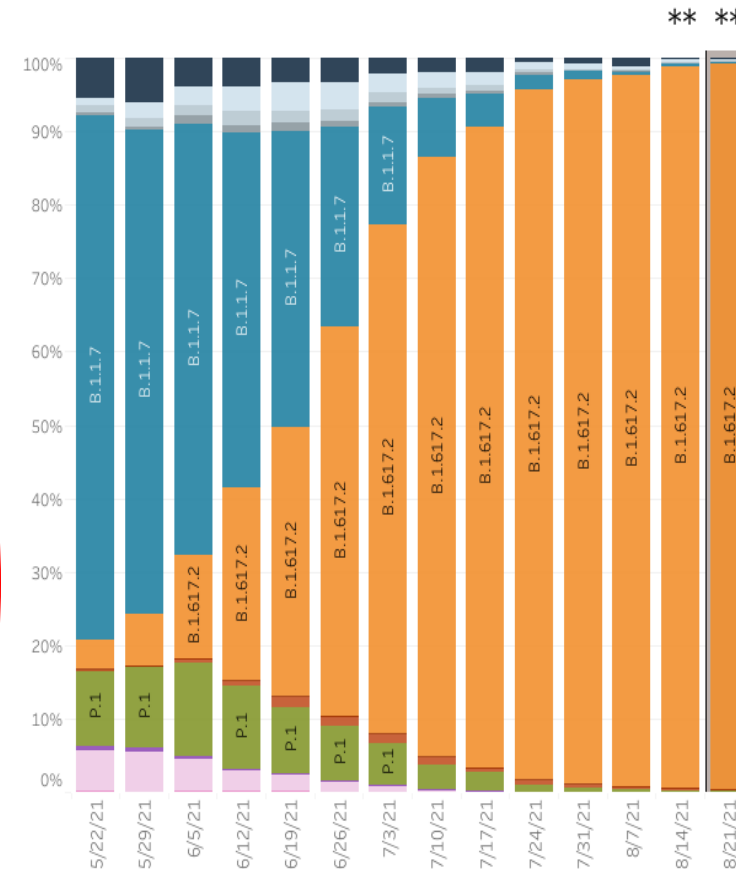


# Trends in Cases and Variants of Concern (VOC)

Daily Trends in Number of COVID-19 Cases in The United States Reported to CDC



United States: 5/16/2021 – 8/21/2021



United States: 8/15/2021 – 8/21/2021 NOWCAST

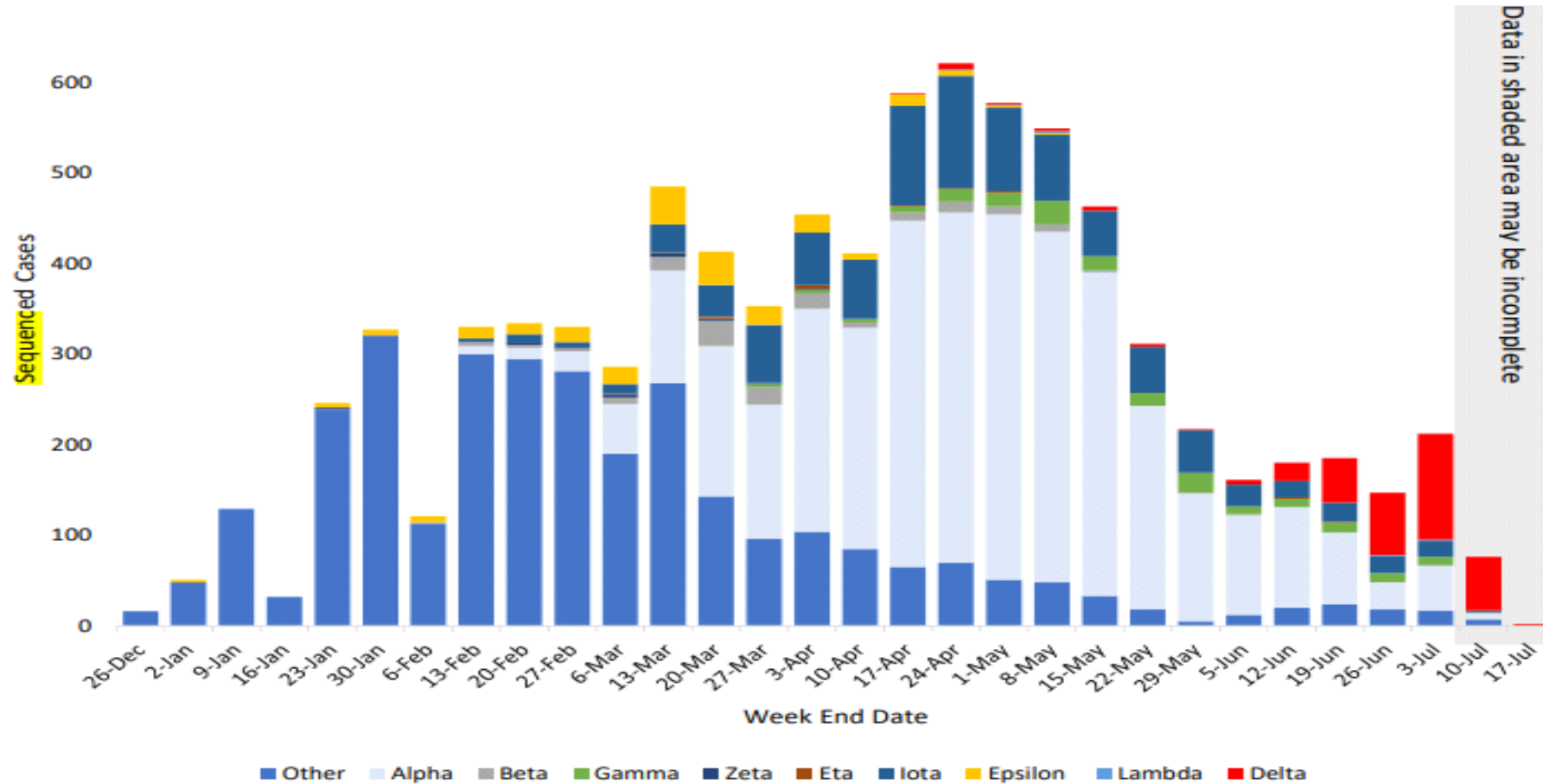
| USA       |           |      |        |            |  |
|-----------|-----------|------|--------|------------|--|
| WHO label | Lineage # | Type | %Total | 95%PI      |  |
| Alpha     | B.1.1.7   | VOC  | 0.2%   | 0.0-0.7%   |  |
| Beta      | B.1.351   | VOC  | 0.0%   | 0.0-0.2%   |  |
| Gamma     | P.1       | VOC  | 0.1%   | 0.0-0.5%   |  |
| Delta     | B.1.617.2 | VOC  | 98.8%  | 97.6-99.8% |  |
|           | AY.2      | VOC  | 0.2%   | 0.0-0.7%   |  |
|           | AY.1      | VOC  | 0.1%   | 0.0-0.5%   |  |
| Eta       | B.1.525   | VOI  | 0.0%   | 0.0-0.2%   |  |
| Iota      | B.1.526   | VOI  | 0.0%   | 0.0-0.2%   |  |
| N/A       | B.1.621   |      | 0.3%   | 0.0-0.7%   |  |
|           | B.1.621.1 |      | 0.1%   | 0.0-0.5%   |  |
|           | B.1.628   |      | 0.1%   | 0.0-0.5%   |  |
| Other     | Other*    |      | 0.1%   | 0.0-0.5%   |  |

\* Enumerated lineages are VOI/VOC or are circulating >1% in at least one HHS region during at least one two week period; remaining lineages are aggregated as "Other".

\*\* These data include Nowcast estimates, which are modeled projections that may differ from weighted estimates generated at later dates

# Sublineages of P.1 and B.1.351 are aggregated with the parent lineage and included in parent lineage's proportion. AY.3-AY.12 are aggregated with B.1.617.2

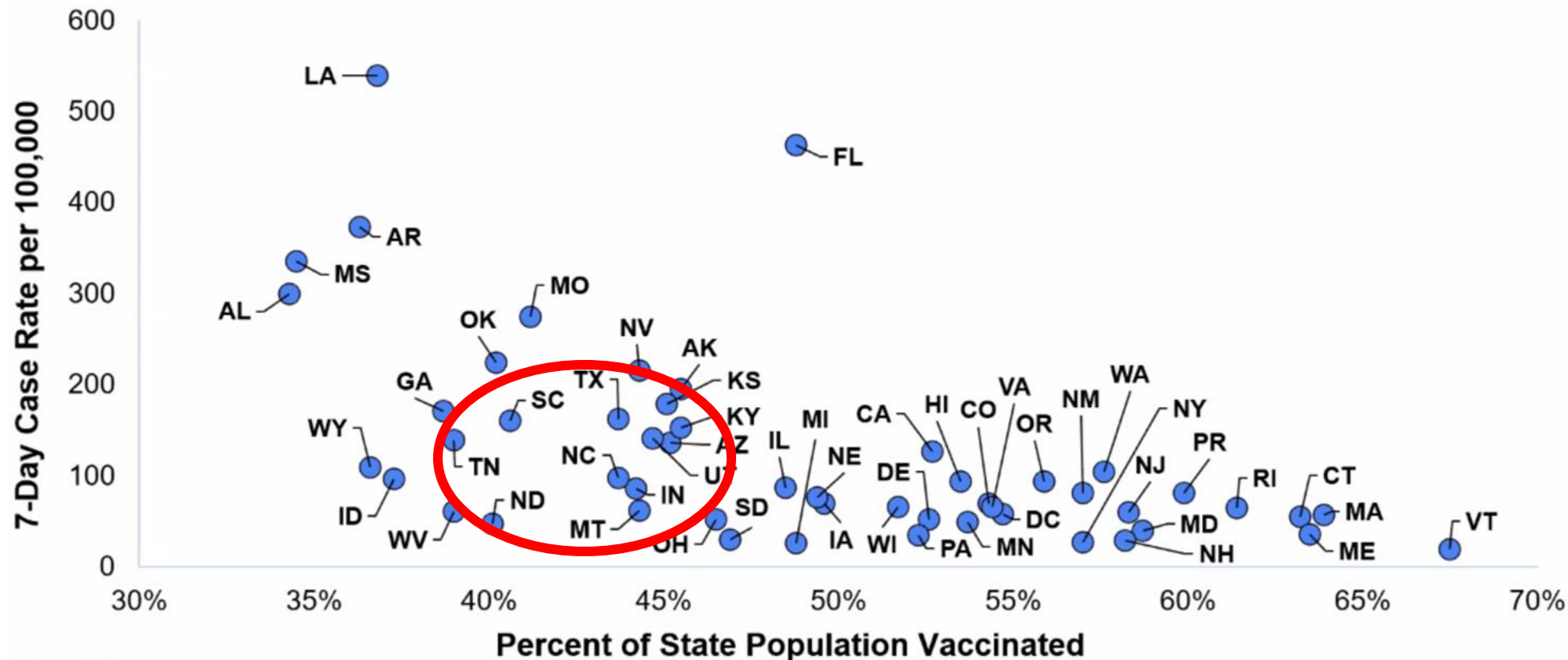
# NC VOC Sequencing



- Current COVID VOC sequencing largely done at state lab
- Results reported in aggregate not at patient level \*\*
- Not all positive isolates sequenced
- State Grant to expand VOC sequencing Atrium/Wake Partnership

# State COVID Cases by Percent Vaccinated – Delta Predominant Strain Circulating

COVID-19 Case Rate (7-day rate per 100,000) By  
Percent of State Population Fully Vaccinated, July 22-28, 2021



Data Sources: Aggregate-level case surveillance notifications and aggregate-level vaccination information from state, local and territorial public health jurisdictions for the 50 US states and Puerto Rico, accessed July 30, 2021.

Data are Provisional Until Officially Released by CDC – For Internal Use Only – For Official Use Only – Sensitive But Unclassified – Not for Further Distribution – Predecisional Draft for Internal CDC Briefing Only





OPINION | Guest Column

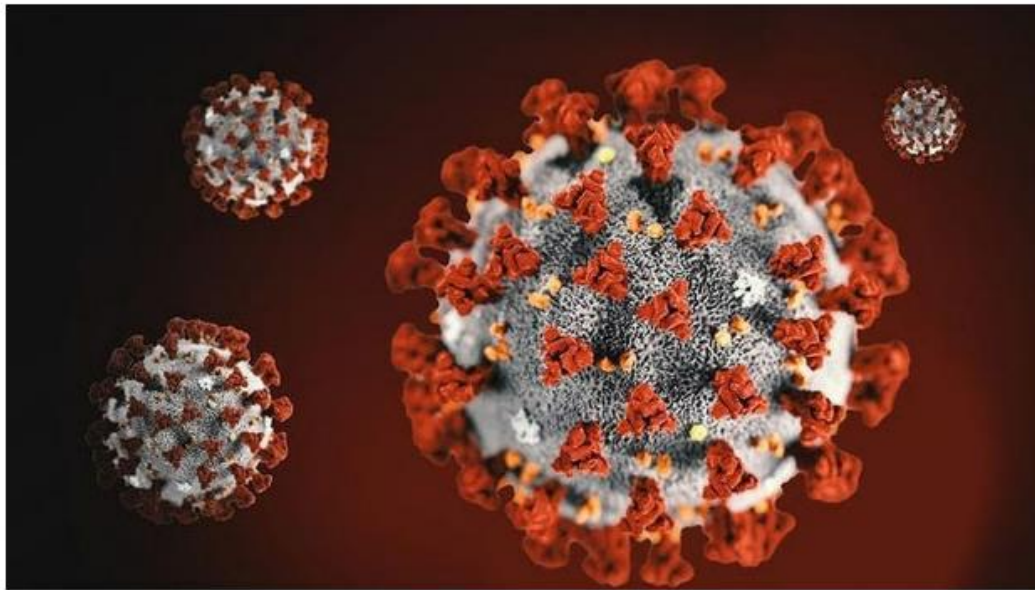
J. Stacey Klutts

## *What we now know about how to fight the delta variant of COVID | Column*

An expert explains why vaccines — and masks — are so important, and why delta is different and more dangerous.



▶ Listen 08:25



We all know what this is ...

Published Aug. 10

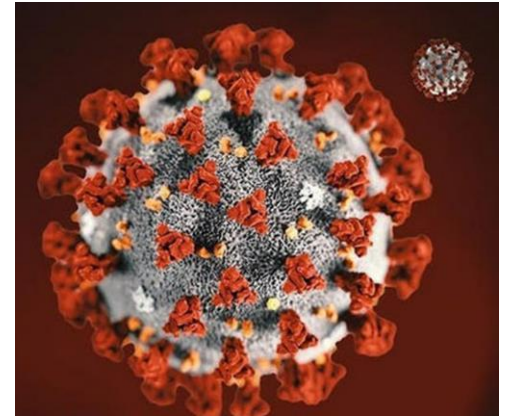
Updated Aug. 16

**Tampa Bay Times**

CORONAVIRUS

# Like Gorilla Glue

The delta variant has a particular collection of mutations in the spike protein (that knob-like projection you see in renderings of the virus) that make it extremely effective in attaching to human cells and gaining entry. If the original COVID strains were covered in syrup, this variant is covered in ultrafast-drying Gorilla Super Glue (industrial strength).



# 1,000 times higher

There are two recent publications which demonstrate that the viral loads in the back of the throats of infected patients are 1,000 times higher with the delta than with previous variants. I can tell you from data in my own labs, that is absolutely true. We are seeing viral signals we never saw last year using the exact same assays.

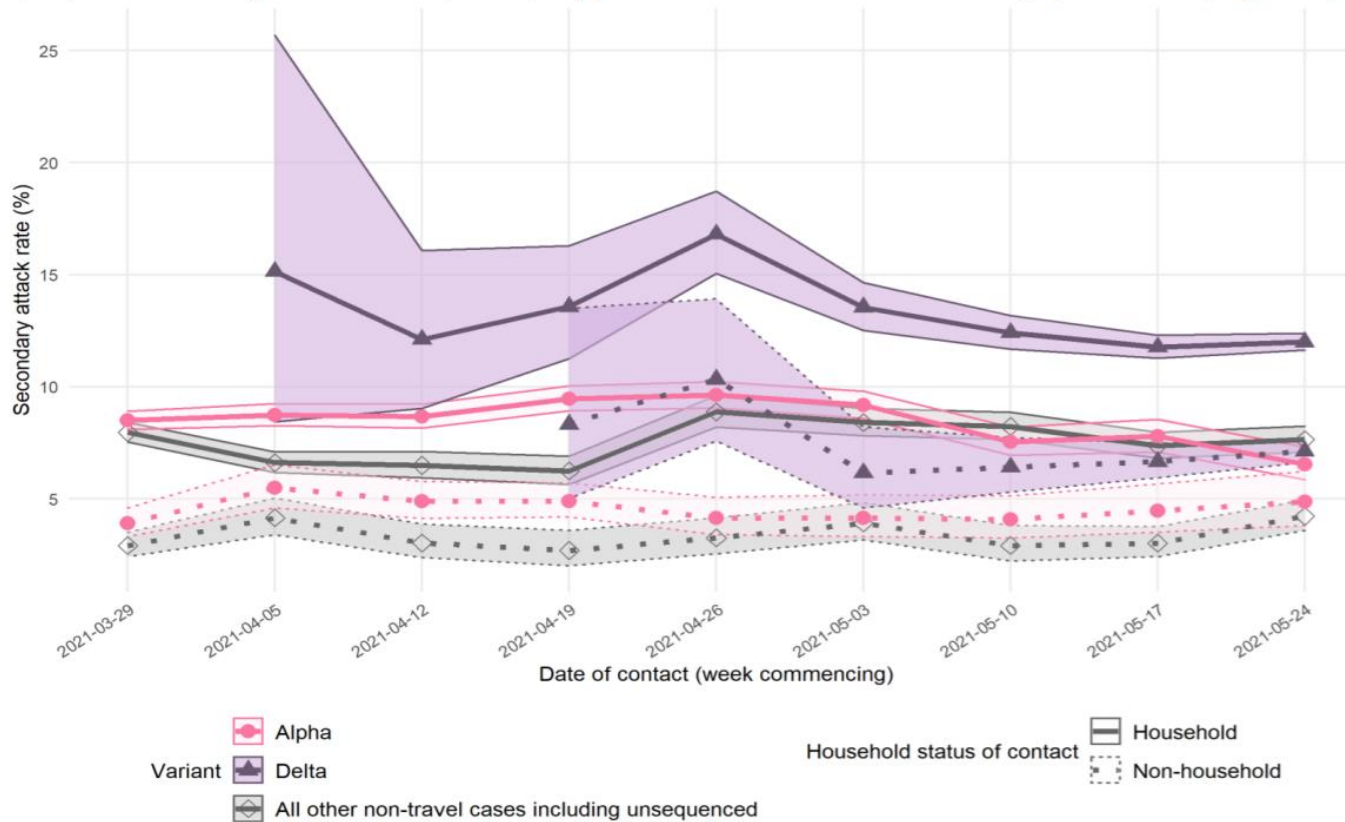
# Much more infectious

Higher Load + Ultra “Stickiness” = More Infectious

- R0 (Pronounced R naught) = the number of people to which an infected person would be expected to transmit the virus.
  - Early versions of the virus had a 2 to 2.5 R0 value (so one infected person would infect two or so people on average).
  - Delta has an R0 of about eight!
  - In the infectious disease world, that’s almost unheard of

# Delta Transmissibility compared to other VOC

**Figure 9. Secondary attack rates amongst household and non-household contacts of non-travel cases of Alpha, Delta and all others including unsequenced cases, with 95% confidence intervals.** (29 March 2021 to 30 May 2021, variant data as of 14 June 2021, contact tracing data as of 22 June 2021) (Find accessible data used in this graph in [underlying data](#).).



- At least 2x more transmissible
- Delta associated with significantly lower CT (suggesting higher viral loads) compared to other variants

Note legend from Table 5. Secondary attack rates are suppressed when count of contacts is less than 50 or count of cases is less than 20. Data provided is for period until 30 May 2021 in order to allow time for contacts to become cases and complete weeks to be shown. Probable (genotyping) results are included, low quality genomic results are not.

# Five Days

The viral loads in the *throats* of vaccinated persons who become infected with delta rises at identical rates as in unvaccinated persons, but only for the first few days. After five days or so, the viral loads in the vaccinated person start to quickly drop whereas those in the unvaccinated person persist.



# Young People

- Round 1 primarily affected older patients and those with significant pre-existing conditions
- Round 2 of the pandemic is primarily being observed in younger patients than in Round 1.
  - Our children's hospitals are even already filling up or full.
  - No vaccines yet approved for children under the age of 12
  - What do you think this means for school re-openings?
- Because of the delta viral dynamics, it is much more capable of causing severe disease in a larger swath of the population.

# Delta – Increased Severity of Illness?

- Canada – 2.2x higher odds of hospitalization, 3.9x higher ICU admission, 2.4x death
- Singapore – 4.9 x higher odds of requiring O2/ICU admission or death, 1.9 x higher risk of pneumonia
- Scotland – 1.9 x higher odds hospitalization



# Do Vaccines Work?

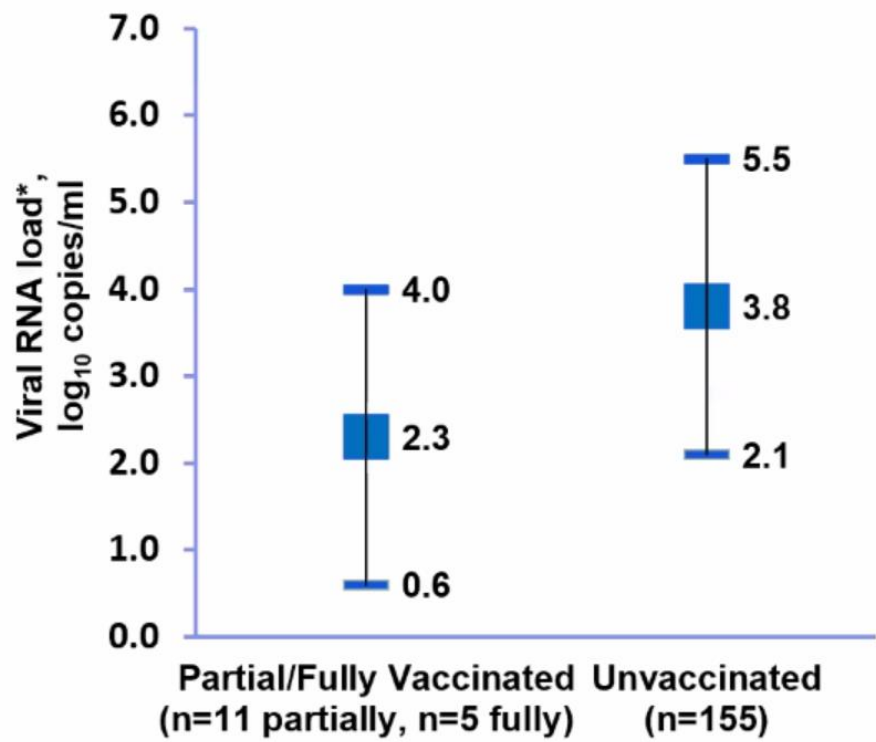
- Yes!
- When you get a vaccine as a “shot,” the “antigen” in the vaccine leads to formation of an antibody response. This primarily leads to a specific antibody response in the blood (IgG), but not on the surface of the throat (IgA).
- In a vaccinated person, the virus can still attach like it’s about to break into the house, but it doesn’t realize that there is an armed homeowner on the other side of the door. When that virus is detected, the IgG beats it up and clears it before the person gets very ill (or ill at all).

# Unvaccinated vs Vaccinated HCW Comparison Pre Delta VOC

**Table 3.** Viral RNA Load, Duration of Viral RNA Detection, Frequency of Febrile Symptoms, and Duration of Illness in Vaccinated and Unvaccinated Participants with SARS-CoV-2 Infection.\*

| Variable   | Unvaccinated   | Partially or Fully Vaccinated | Difference (95% CI) |
|--|----------------|-------------------------------|---------------------|
| Viral RNA load   |                |                               |                     |
| No. assessed   | 155            | 16                            | —                   |
| Mean — log <sub>10</sub> copies/ml†                    | 3.8±1.7        | 2.3±1.7                       | 40.2 (16.3–57.3)‡   |
| Duration of viral RNA detection                        |                |                               |                     |
| No. assessed   | 155            | 16                            | —                   |
| Mean — days  | 8.9±10.2       | 2.7±3.0                       | 6.2 (4.0–8.4)       |
| Detection of viral RNA for >1 week — no./total no. (%) | 113/156 (72.4) | 4/16 (25.0)                   | 0.34 (0.15–0.81)§   |
| Febrile symptoms — no./total no. (%)¶                  | 94/149 (63.1)  | 4/16 (25.0)                   | 0.42 (0.18–0.98)    |
| Total days of symptoms                                 |                |                               |                     |
| No. assessed   | 148            | 16                            | —                   |
| Mean — days  | 16.7±15.7      | 10.3±10.3                     | 6.4 (0.4–12.3)      |
| Days spent sick in bed                                 |                |                               |                     |
| No. assessed   | 147            | 15                            | —                   |
| Mean — days  | 3.8±5.9        | 1.5±2.1                       | 2.3 (0.8–3.7)       |

Data December 2020 thru April 2021  
Does Not reflect Delta VOC



# Preventing Disease and Death

- The COVID-19 vaccines are designed to prevent severe disease, hospitalization and death
- The vaccine shows an **8-fold** reduction in the development of any **symptomatic** disease secondary to delta.
- For hospitalization, it is a **25-fold** reduction.
- For death, it is also **25 times!**
- One of the best overall pharmaceuticals on the market in any class of drugs.
- 3-times reduction in infection.

# I'm vaccinated.....so can I still get COVID?

- We are indeed seeing detectable virus, at high levels, in **asymptomatic**, and **mildly symptomatic** vaccinated persons when we test them
- Although vaccination does lead to a **3-times** reduction in infection, the vaccines are designed to prevent severe disease, hospitalization and death, **not infection**.

# I'm vaccinated.....so why do I still need to wear a mask?

- **Primarily to protect others**

- Remember....the virus can live in the back of the throat for 5 days in a vaccinated person, so a vaccinated person can transmit this very infectious virus to others during that time.
- Wearing a mask interrupts the transmission cycle of the virus, as you don't know when you might be infectious. The vaccine alone cannot interrupt this cycle when there is a lot of virus in the community.
- The only way to prevent variants from popping up is to eliminate the virus altogether—i.e., prevent it from spreading!

# What Does “Full FDA Approval” Mean?

- FDA grants full approval to Pfizer/BioNTech COVID-19 vaccine for ages 16 and older
  - First coronavirus vaccine approved by the FDA
  - Emergency Use Authorization for adolescents ages 12 to 15 is still available
- 30% of unvaccinated people in polls said they were waiting for full approval to get vaccinated
- Decision likely to set off a cascade of vaccine mandates by hospitals, colleges and universities, corporations and other organizations

# Summary on Delta

- At least 2-3x more transmissible than prior strains
- Likely causes more severe disease
- Some suggestion increased risk of reinfection
- Vaccine Efficacy
  - Lower for symptomatic infection
  - Relatively retained for hospitalization/death
    - Vaccinated most at risk for severe illness include elderly and immunocompromised
  - Rates of mild COVID in vaccinated individuals will continue to increase as we see more spread in low vaccine uptake areas
- Vaccines continue to be best way to protect communities
- Masks needed until we get better vaccine coverage



# Try Not to Get Frustrated

- Planting Seeds
- Often an iterative process
- Share information and resources
- Continue conversations where you can





Q&A

The background is a solid teal color. On the right side, there is a large, faint, circular graphic. This graphic consists of several concentric circles and a series of overlapping, rounded rectangular shapes that radiate from the center, creating a stylized, organic pattern.

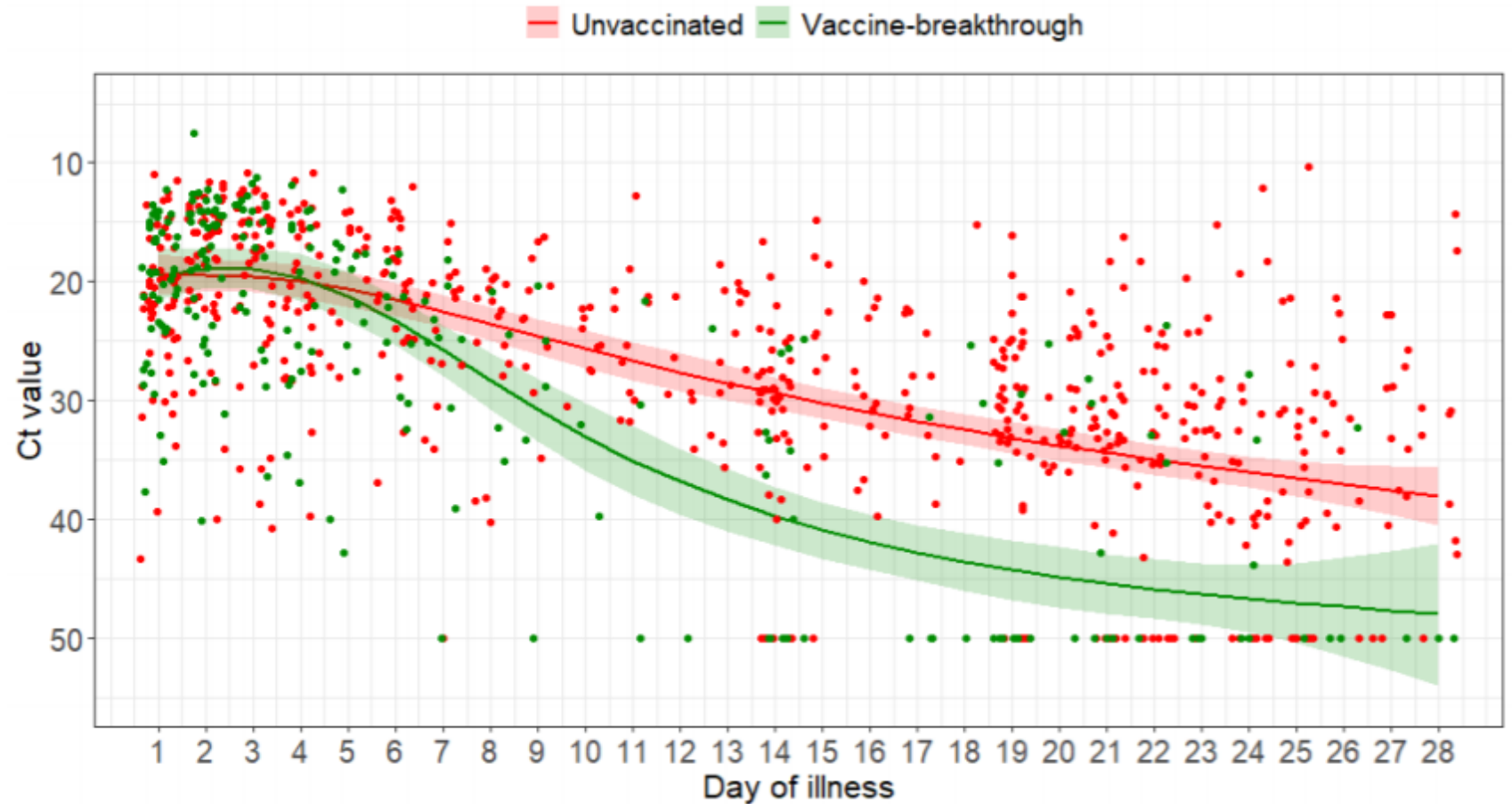
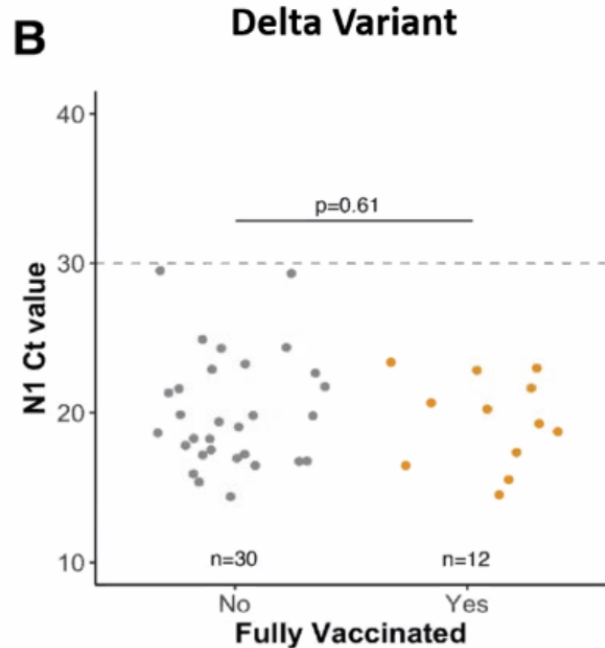
# Fully Vacc COVID Hospitalizations by Age

| Age Group   | Total COVID-19 Admissions | Total Vaccinated COVID Admissions | Percent COVID Admissions Fully Vacc |
|-------------|---------------------------|-----------------------------------|-------------------------------------|
| 0-4 years   | 5                         | 0                                 | 0                                   |
| 5-17 years  | 7                         | 0                                 | 0                                   |
| 18-24 years | 11                        | 0                                 | 0                                   |
| 25-49 years | 181                       | 4                                 | 2.2%                                |
| 50-64 years | 144                       | 6                                 | 4.17                                |
| 65+ years   | 137                       | 20                                | 14.6%                               |

## Fully Vaccinated Hospitalizations

- Average Age **72** (Average age for all COVID admissions July = 57)
- All with comorbidities
  - Prior SOT
  - DM
  - Obesity

# Vaccinated individuals CT values no diff than unvaccinated



Chia et al. <https://www.medrxiv.org/content/10.1101/2021.07.28.21261295v1>

Riemerasma et al. <https://www.medrxiv.org/content/10.1101/2021.07.31.21261387v1>