

WHAT'S NEXT FOR COVID-19 & DELAWARE?



**MARCI DREES,
M.D., MS, FACP, FSHEA
ChristianaCare**



**JOE SPINELLI
AccessDX**



**DR. MICHAEL YBARRA
PhRMA & Emergency
Medical Physician**



WEDNESDAY, SEPTEMBER 1

7:30 AM – 9:00 AM

BRANDYWINE

ZOO

Go a little wild!

NETWORKING BREAKFAST

Join us for the 28th Annual
DELAWARE STATE
CHAMBER OF COMMERCE
Chamber Chase Golf Tournament

Wednesday, September 8, 2021



Kings Creek Country Club
Rehoboth Beach, Delaware



DELAWARE

NETWORKING STATION

SEPTEMBER 21, 2021

5:00 PM – 8:00 PM

Chase Center on the Riverfront



Thank you to our sponsor:





Hot Topics in COVID-19

Marci Drees, MD, MS, DTMH, FACP, FSHEA
Chief Infection Prevention Officer & Hospital Epidemiologist

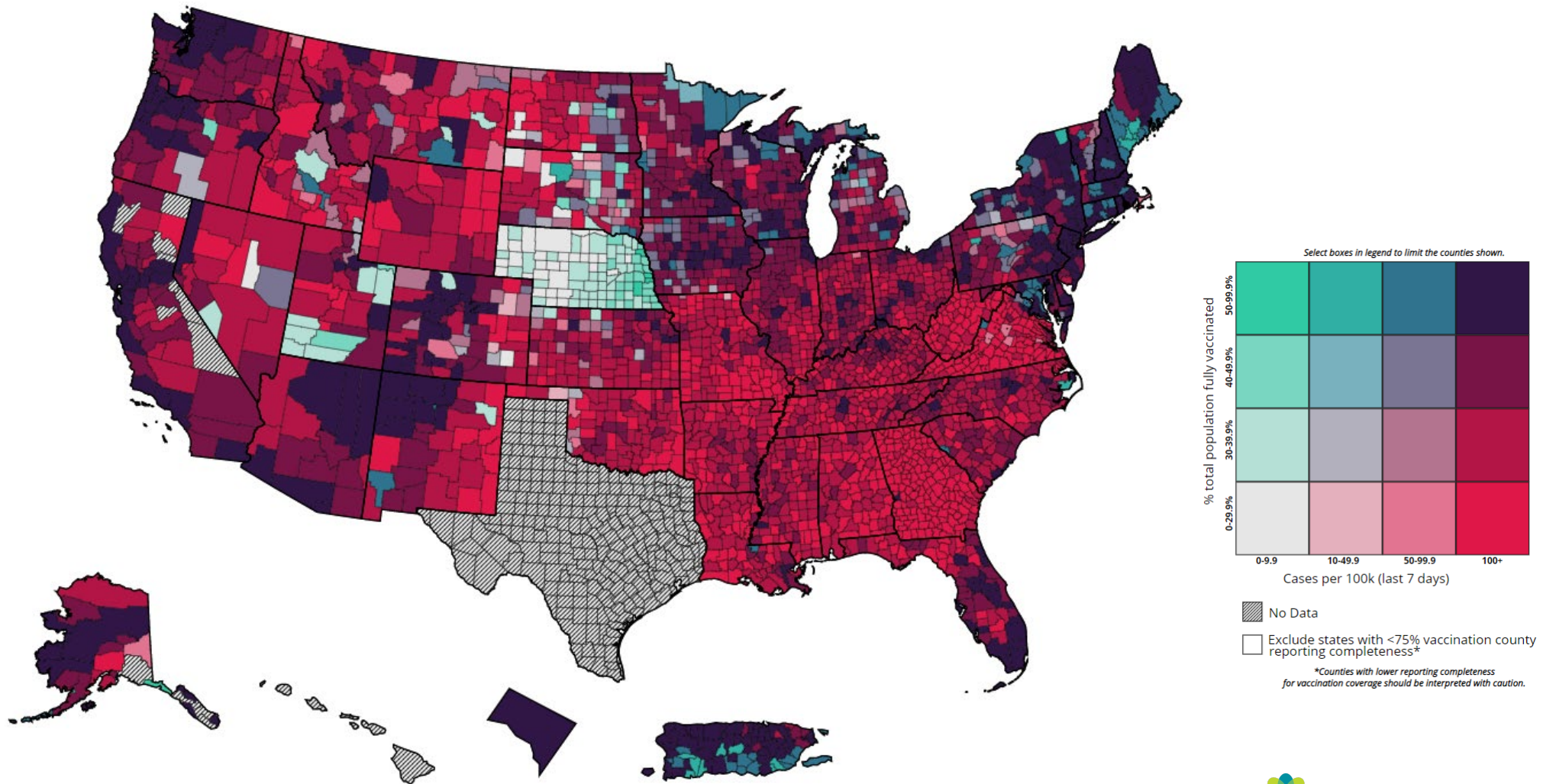
Delaware Chamber of Commerce
August 24, 2021



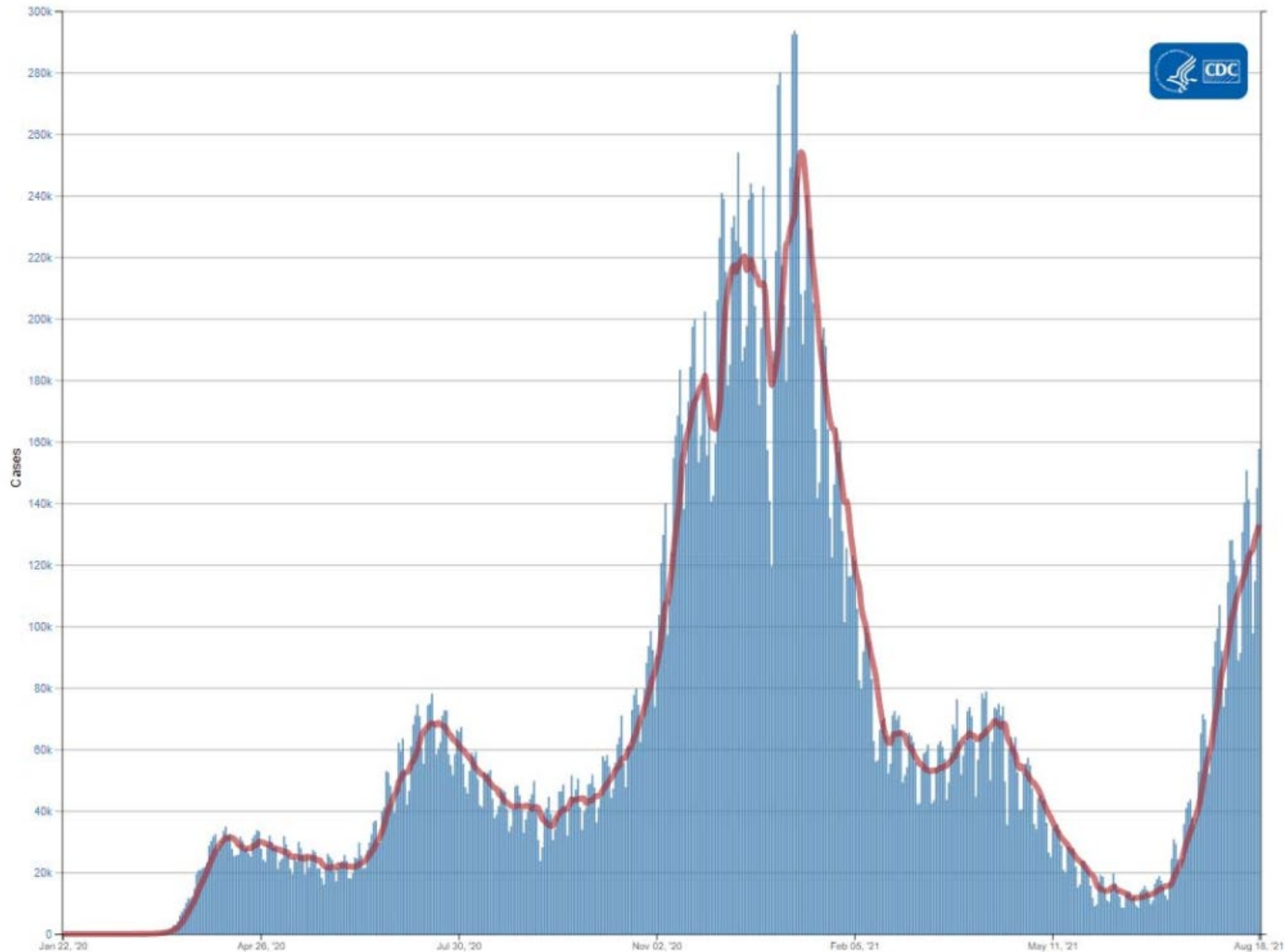
Agenda

- Recent trends
- COVID-19 variants
- Breakthrough cases
- Third doses/boosters

COVID-19 US Data



U.S. Trend: New Cases



U.S. Trend: Hospitalizations & Deaths

New Admissions of Patients with Confirmed COVID-19, United States Aug 01, 2020 - Aug 20, 2021

2,623,897

Total Admissions
Aug 01, 2020 - Aug 20, 2021

11,615

Current 7-Day Average
Aug 14, 2021 - Aug 20, 2021

10,943

Prior 7-Day Average
Aug 07, 2021 - Aug 13, 2021

16,492

Peak 7-Day Average
Jan 03, 2021 - Jan 09, 2021

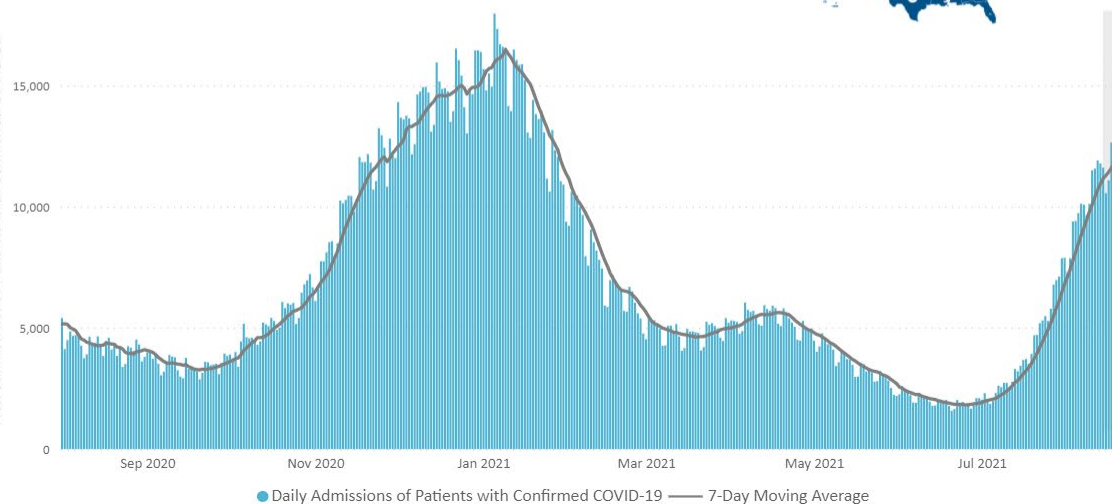
+6.1%

Percent change from prior 7-day
avg. of Aug 07, 2021 - Aug 13, 2021

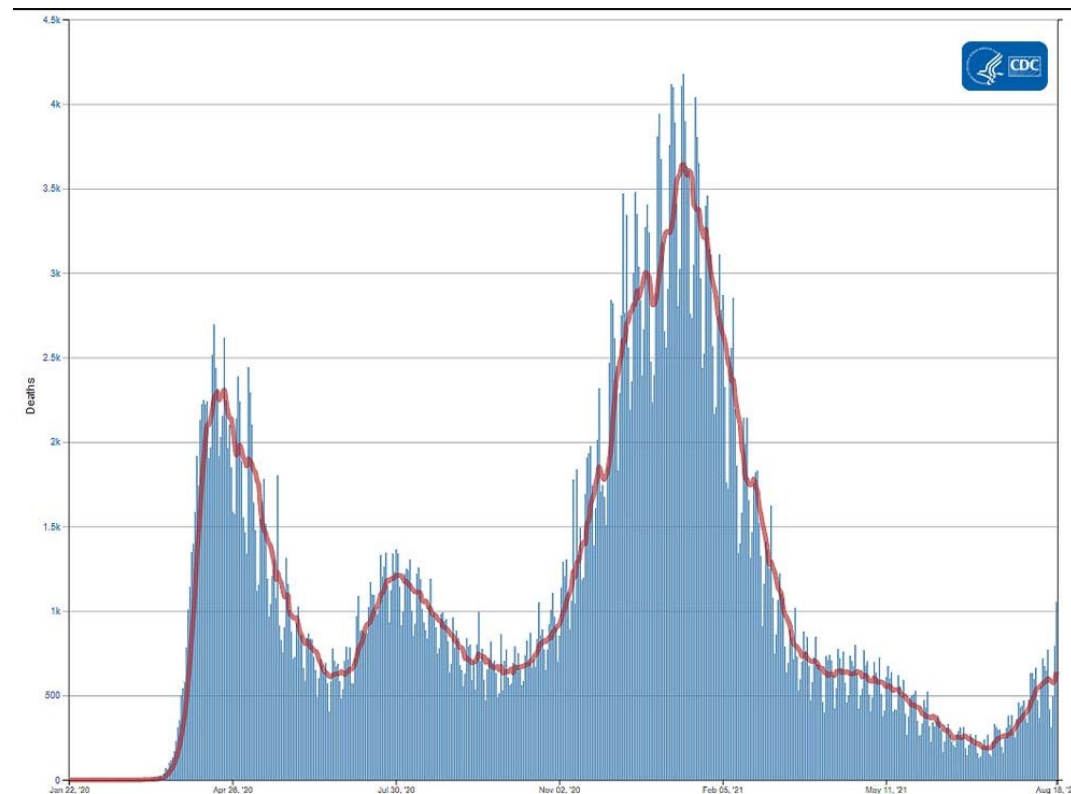
-29.6%

Percent change from peak 7-day
avg. of Jan 03, 2021 - Jan 09, 2021

New Admissions of Patients with Confirmed COVID-19

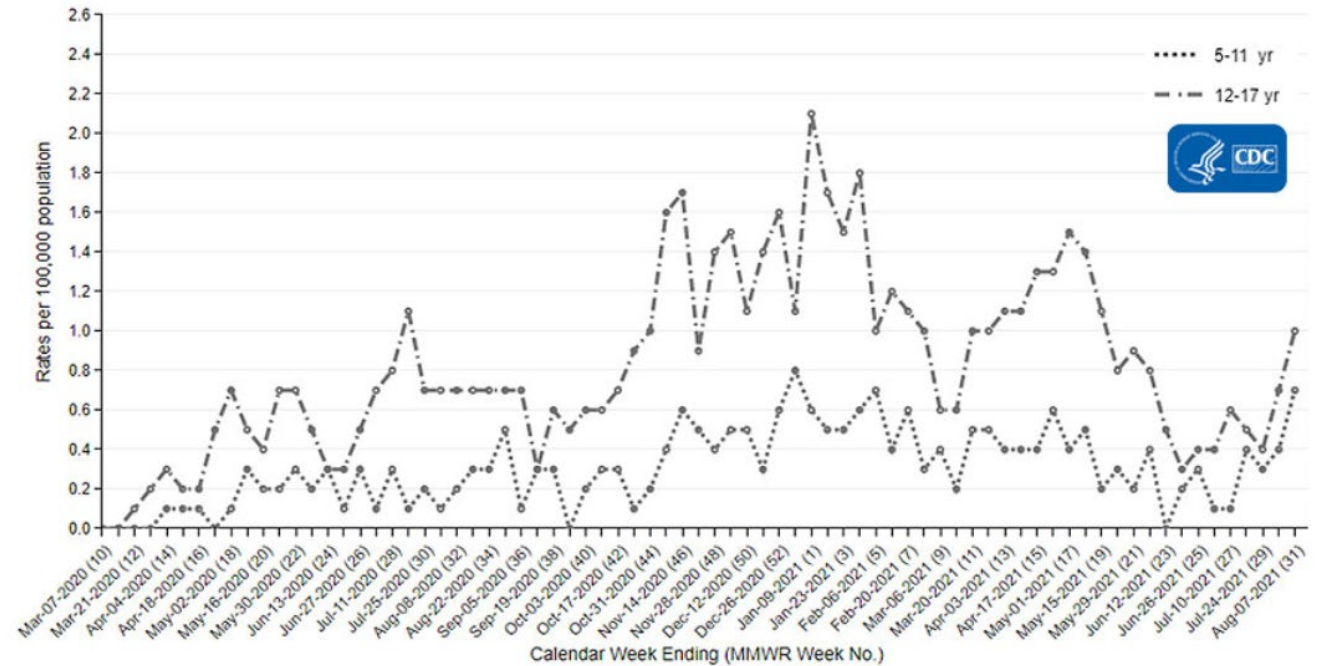


New Hospitalizations



U.S.: Pediatric Hospitalizations

United States | 0 - 17 Years

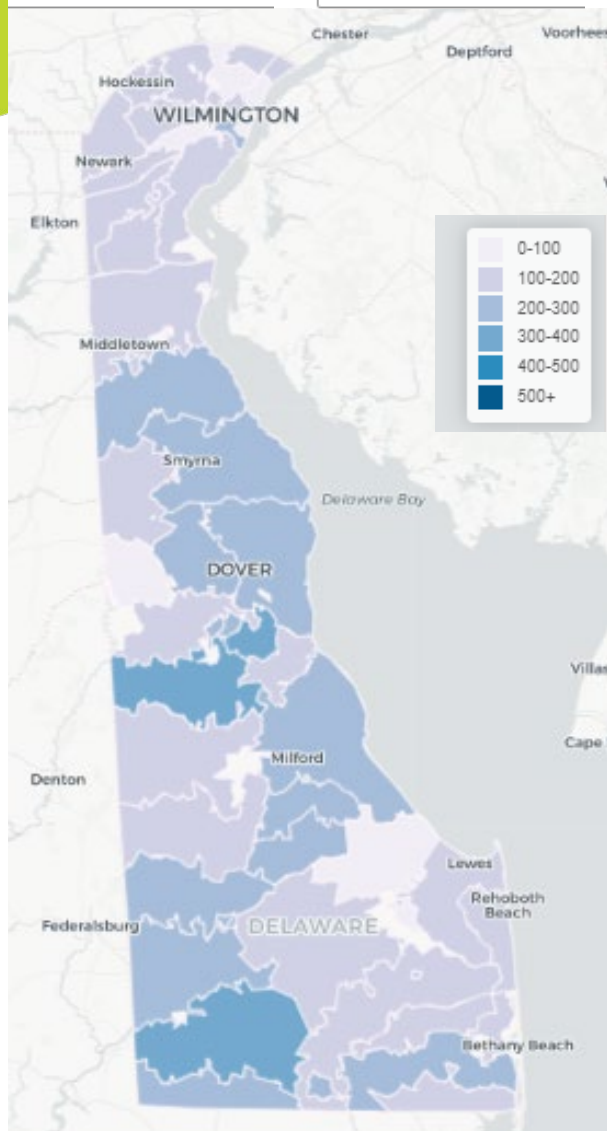


Pediatric deaths 131 (age 0-4), 292 (age 5-18)
MIS-C cases: 4,404 Deaths 37
Median age 9y

COVID-19 Trends: Delaware

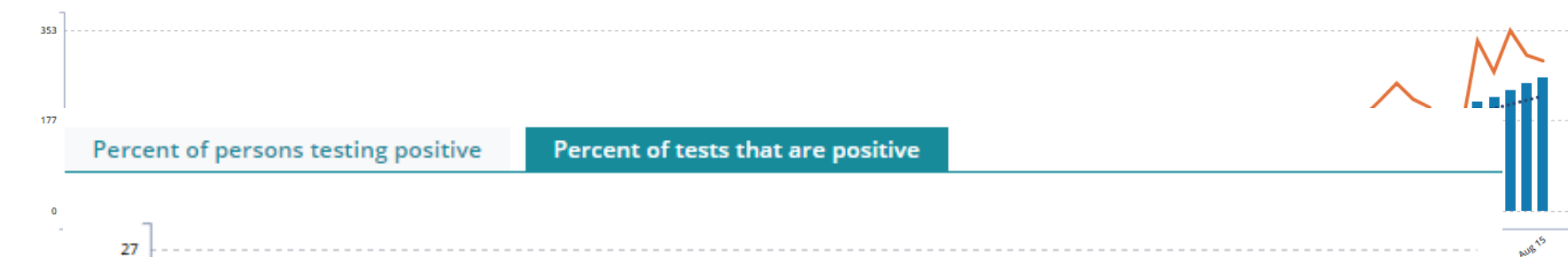
New Positive Cases

08/07/2021 - 08/13/2021



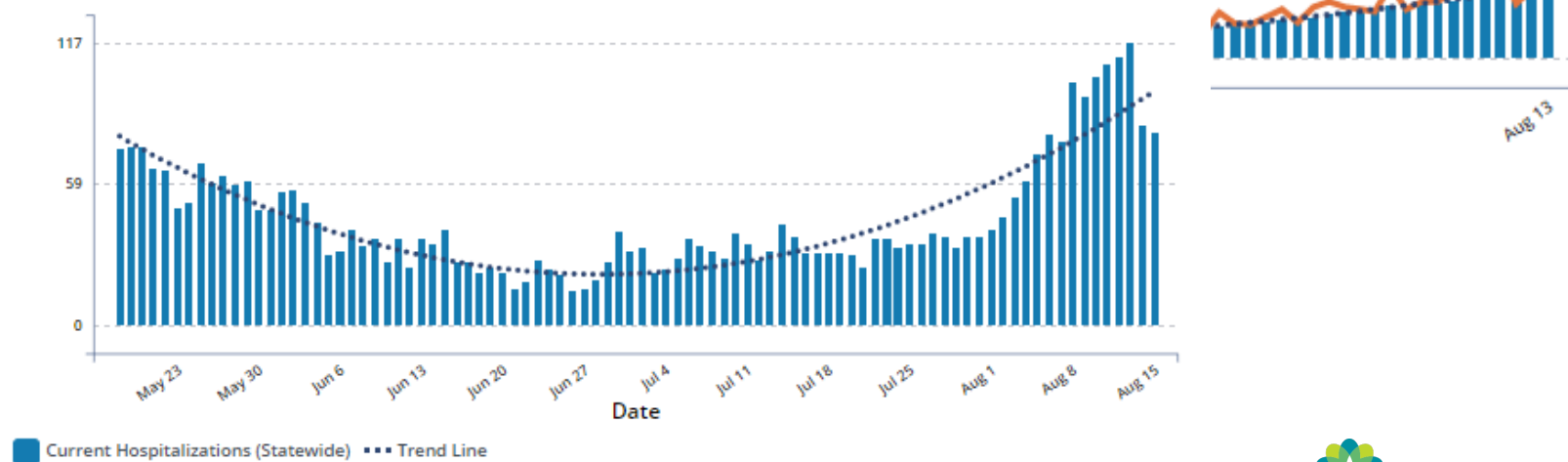
New Positive Cases

Data are current as of 6pm the previous day. Last update: 08/16/2021



Current Hospitalizations

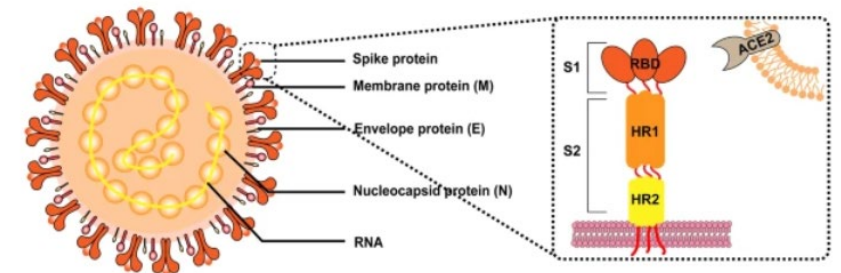
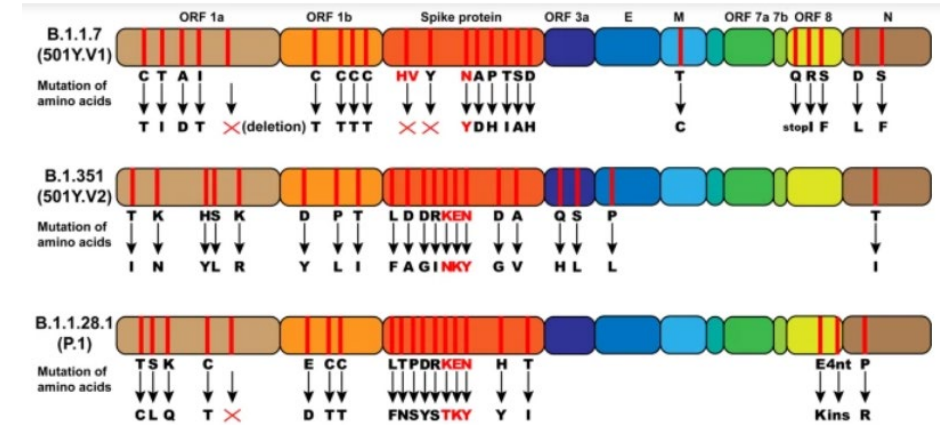
Data are current as of 6pm the previous day. Last update: 08/16/2021



<https://myhealthycommunity.dhss.delaware.gov>,
Data updated 8.17.21

SARS-CoV-2 Variants

- All viruses change over time via mutation
 - May make the virus weaker or have no effect
 - If mutation(s) confer some advantage → selective pressure (out-compete non-mutated or “wild type” virus)
- Variants *may*:
 - Spread more easily person-to-person
 - Cause milder or more severe disease
 - Affect ability to be detected by available diagnostic tests
 - Respond differently to available treatments
 - Alter vaccine effectiveness

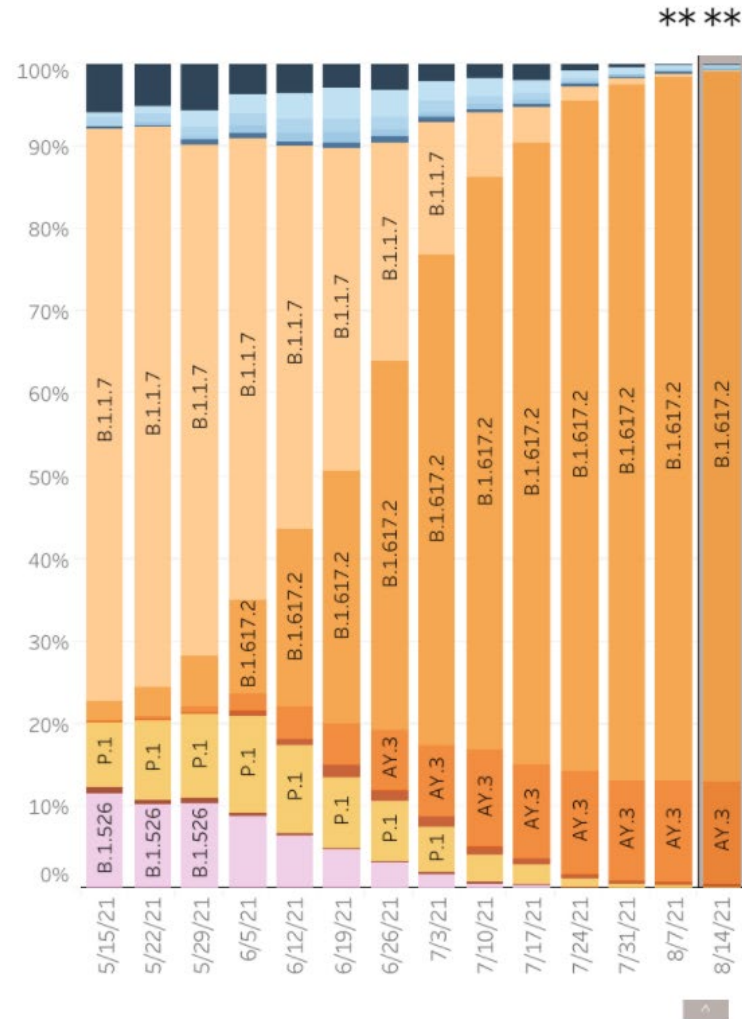


Zhou W & Wang W. *Nature*, 6.9.21

SARS-CoV-2 Variants

United States: 5/9/2021 – 8/14/2021

United States: 8/8/2021 – 8/14/2021 NOW



USA

WHO label	Lineage #	Type	%Total	95%..
Alpha	B.1.1.7	VOC	0.3%	0.0-1.0
Beta	B.1.351	VOC	0.0%	0.0-0.2
Gamma	P.1	VOC	0.2%	0.0-0.7
Delta	B.1.617.2	VOC	86.1%	82.6-88.5
	AY.3	VOC	12.3%	9.1-15.5
	AY.2	VOC	0.3%	0.0-1.0
	AY.1	VOC	0.1%	0.0-0.2
	AY.4	VOC	0.0%	0.0-0.2
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		0.4%	0.0-1.0
	B.1.621.1		0.1%	0.0-0.5
	B.1.628		0.1%	0.0-0.5
	A.2.5		0.0%	0.0-0.2
	B.1.626		0.0%	0.0-0.2
Other	B.1.617.1	VOI	0.0%	0.0-0.2
	B.1.617.3	VOI	0.0%	0.0-0.2
	Other*		0.0%	0.0-0.2

* 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.3.1 is aggregated with its parent lineage AY.3. AY.4-AY.12 aggregated with B.1.617.2

Delaware Variant Reporting

Variants of Concern

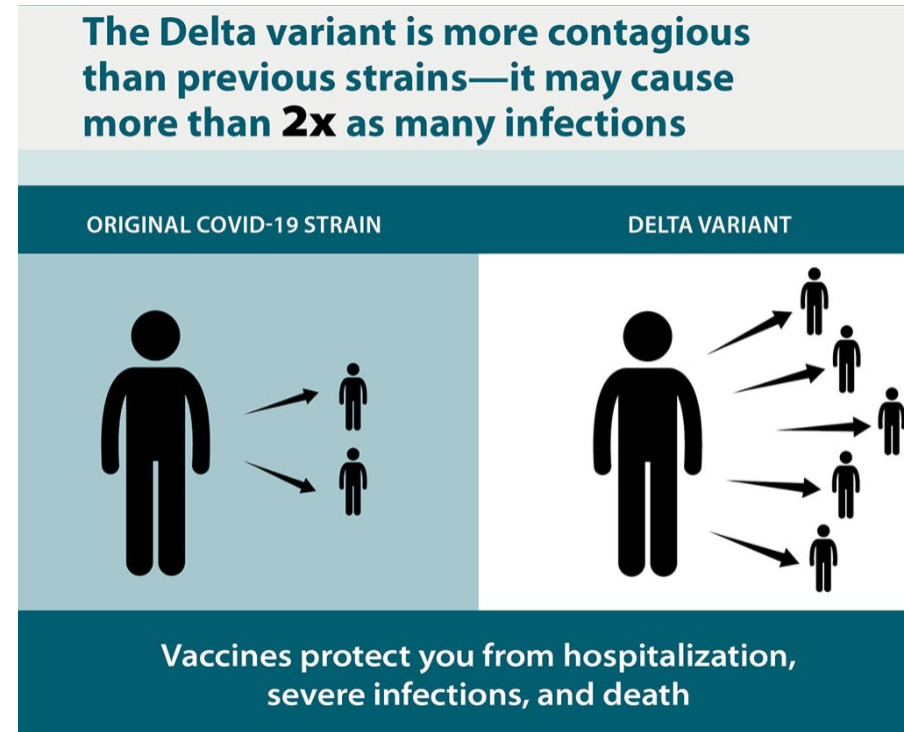
Variant	Origin	# of cases
Alpha/B.1.1.7	United Kingdom	1,004
Beta/B.1.351	South Africa	1
Gamma/P.1	Brazil	63
Delta/B.1.617.2	India	144

Variants of Interest

Variant	Origin	# of cases
Eta/B.1.525	UK/Nigeria (formerly New York, US)	2
Iota/B.1.526/B.1526.1	New York, US	330
Epsilon/B.1.427	California, US	10
Epsilon/B.1.429	California, US	11

Delta Variant

- About twice as contagious as prior variants
- Several studies suggest more severe disease in unvaccinated persons
- Monoclonal antibody treatments may be slightly less effective
- Appears to affecting pediatric populations more than prior strains
- Fully vaccinated persons who experience breakthrough infections with delta appear to be contagious for shorter period of time
- Vaccines remain highly protective against severe disease





Breakthrough Cases

- Expected that fully vaccinated persons may still get COVID-19
 - No vaccine is 100% effective
 - Delta effect
 - Waning immunity over time
- National data:
 - Jan 1-Apr 30: 10,262 breakthrough cases reported
 - 10% hospitalized, 2% died - 29% not related to COVID-19
 - May 1: CDC transitioned to tracking only hospitalized breakthrough cases
 - As of Aug 9: 8054 hospitalized/fatal breakthrough cases reported
 - 74% were 65 years or older
 - 1587 deaths (1/5 not related to COVID)

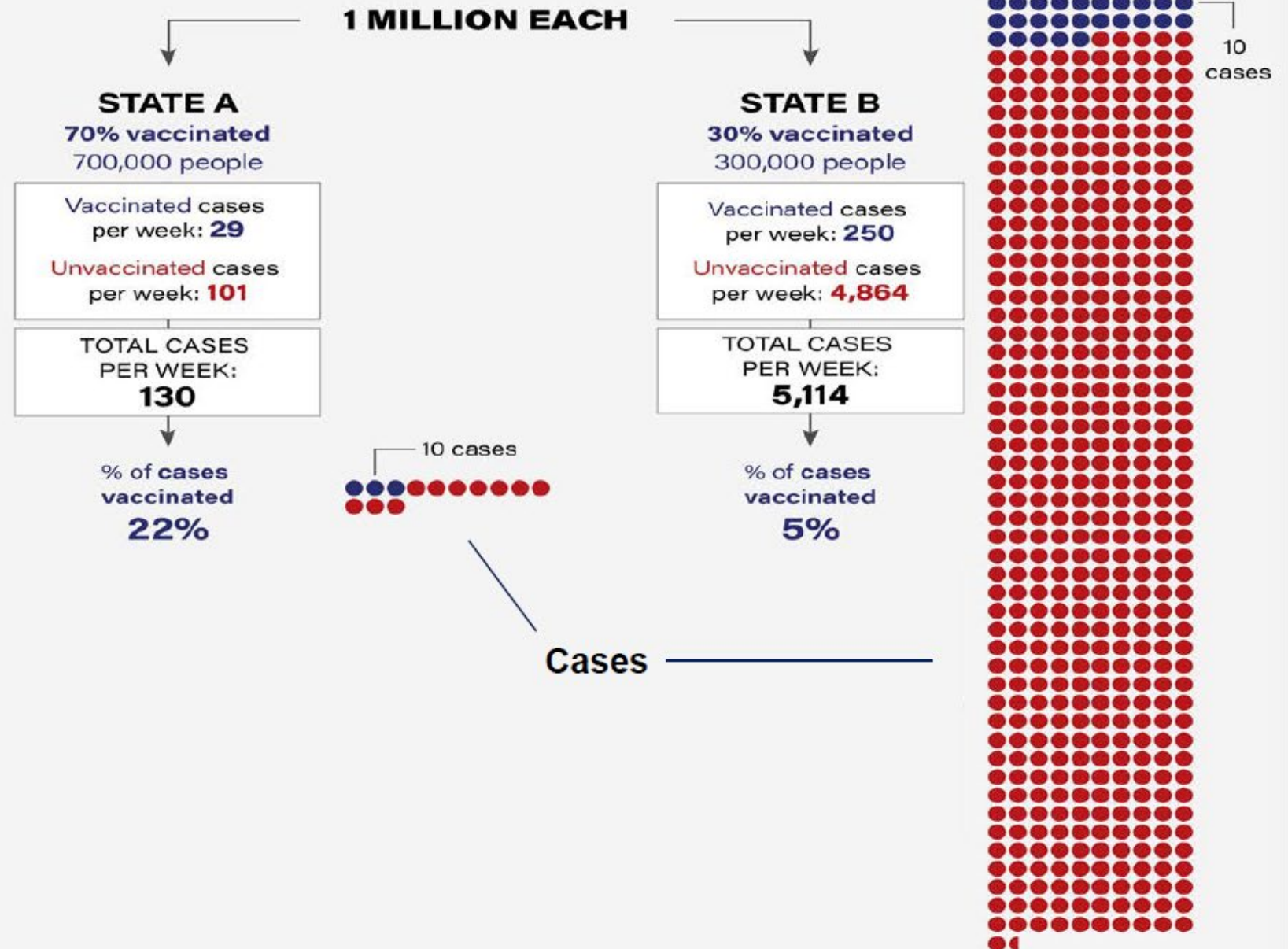


Breakthrough Cases in Delaware

- As of Aug 20:
 - 485,033 Delawareans fully vaccinated
 - 75% of 18+ have received at least 1 dose
 - 57% of total population \geq 1 dose
- 1236 breakthrough cases reported (0.25% of all vaccinated persons)
 - 36 hospitalized
 - 14 deaths (not confirmed due to COVID)
- For week of 8/9-8/15:
 - Total cases: 1828
 - Unvaccinated/Partially vaccinated 1451 (79%)
 - Hospitalizations: 106
 - Unvaccinated/Partially vaccinated 91 (86%)
 - Deaths: 5
 - Unvaccinated/Partially vaccinated 4 (80%)

DELTA CASES

Two example states
with 1 million population
and different levels of
vaccination coverage
(70% vs 30%)

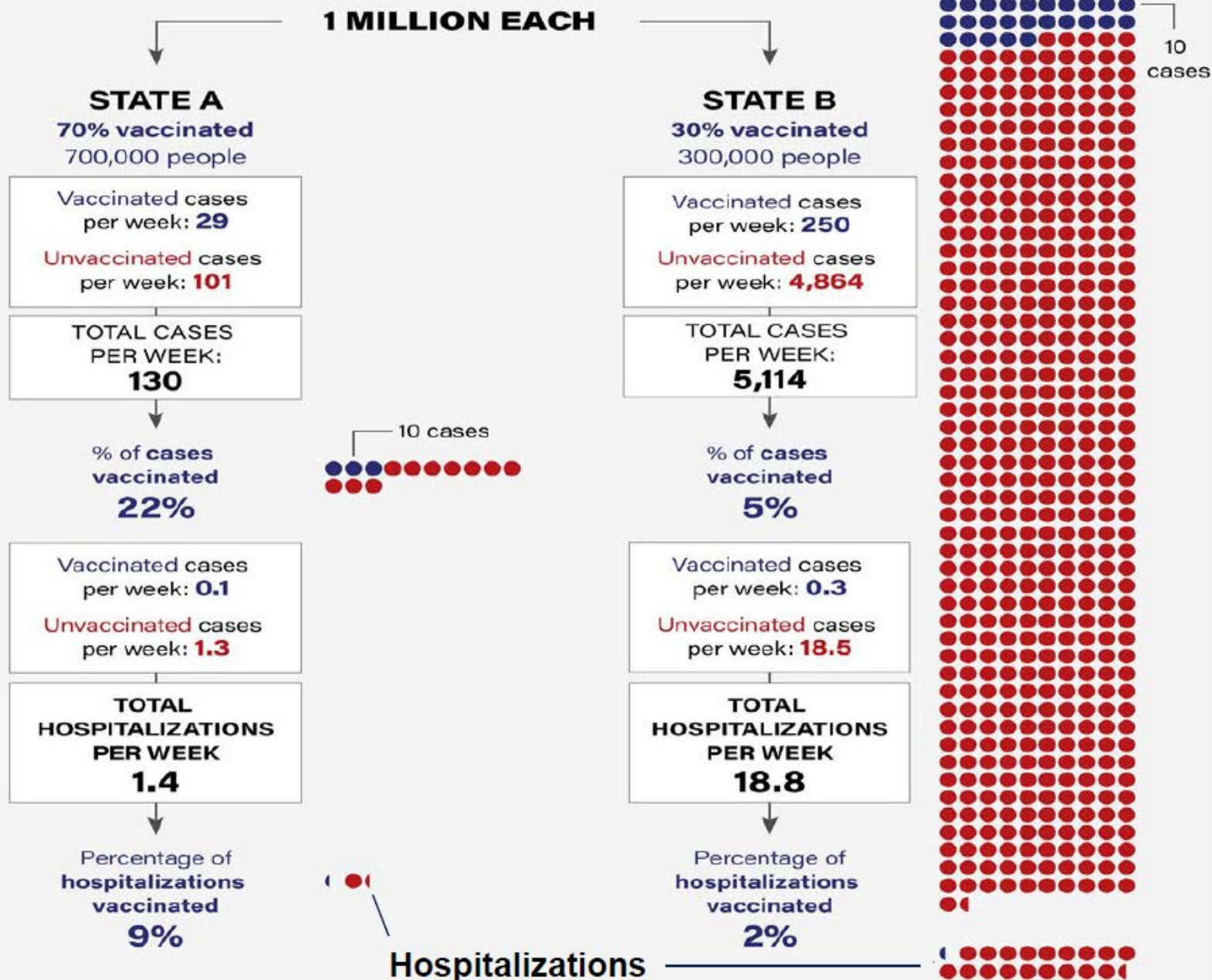


DELTA CASES AND HOSPITALIZATIONS

Two example states with 1 million population and different levels of vaccination coverage (70% vs 30%)

Higher vaccination coverage leads to fewer cases and hospitalizations, but greater % of vaccinated cases and hospitalizations

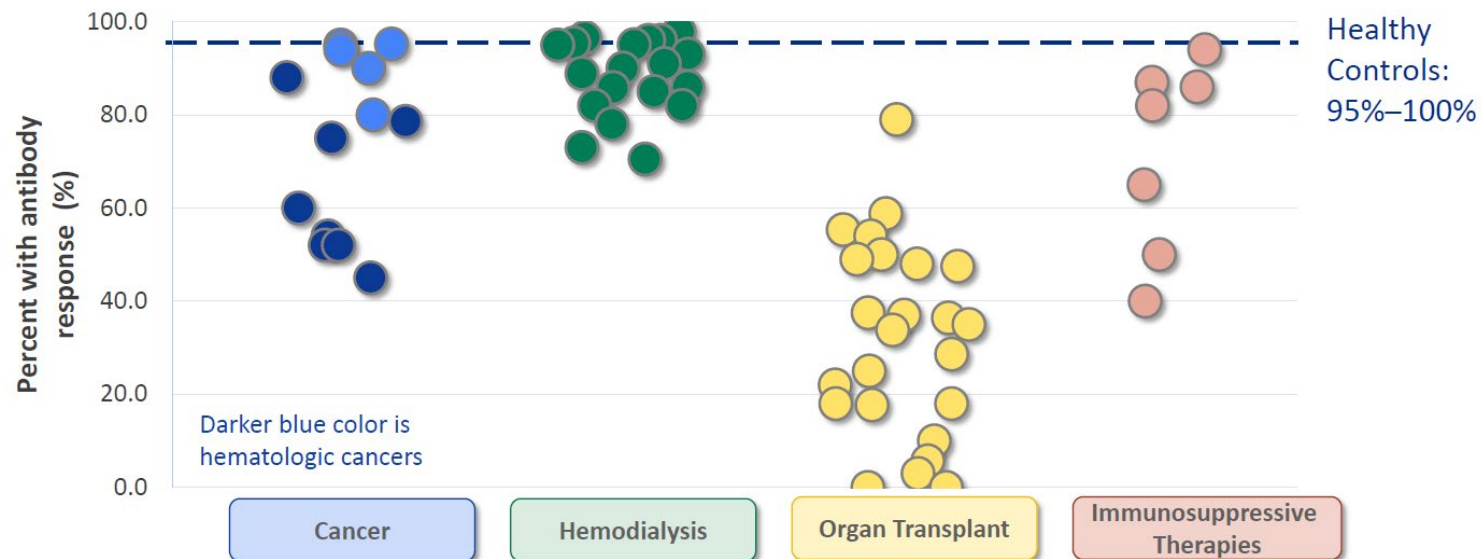
In both scenarios, cases and hospitalizations are greater among unvaccinated than vaccinated persons



What About 3rd Doses/Boosters?

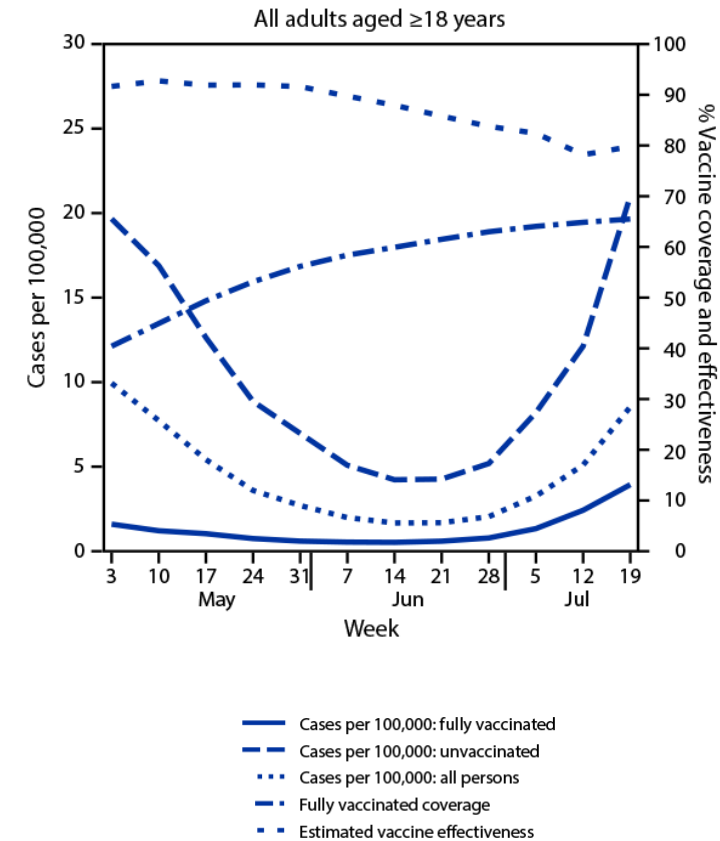
- Immunocompromised people: currently authorized & recommended to get 3rd dose as part of primary vaccine series
 - Assumed to respond poorly to initial two doses

Percent of subjects with antibody response after two mRNA vaccine doses by immunocompromising condition and study (n=63)



Booster Due to Waning Immunity?

- To be discussed at ACIP meeting - Aug 30-31
- What are we trying to prevent with a booster?
 - All COVID-19 cases?
 - Severe cases - hospitalizations, deaths?
 - Preserve healthcare workforce?
- Recent data:
 - NY: overall VE declined from 92% to 80%
 - Nursing home residents: VE declined from 74% in March-May to 53% in June-July
 - Protection against hospitalization preserved





What About Flu?

- Nearly non-existent flu season in 2020-21
 - Masking & social distancing
 - Tele-work
 - Many schools hybrid/virtual
 - Relatively little travel
- Resurgence of non-COVID viral respiratory illnesses out of season
 - RSV, parainfluenza
- 2021-22 season?
 - Recommend aggressive flu vaccination campaign
 - Non-pregnant adults should be vaccinated in Sept/Oct (not earlier)
 - No restrictions from getting flu/COVID vaccines within 14 days

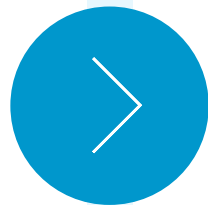
COVID-19 Update

August 2021

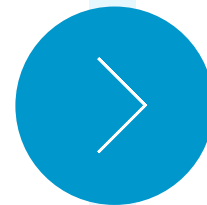
COVID-19 Update

Three common areas of question and concern...

Vaccines

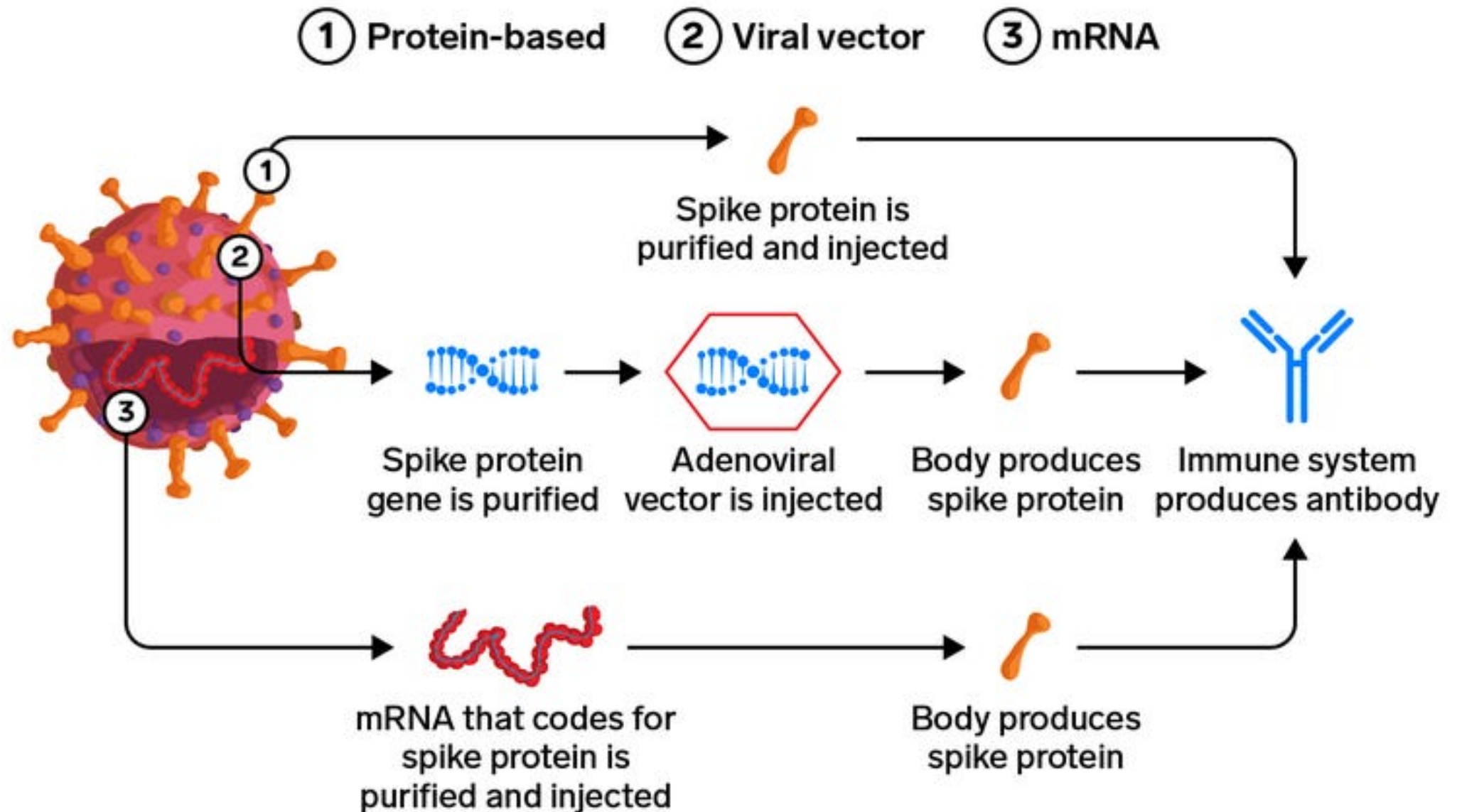


Variants



Boosters

Three types of coronavirus vaccines in development



COVID-19 Vaccines in the U.S.

Authorized



“Pfizer’s COVID-19 vaccine is first to win U.S. approval” (12/11)



“First shipments of Moderna vaccine roll out, a new weapon in U.S. Covid-19 response” (12/20)



“J&J says single shot Covid vaccine will prevent deaths” (3/1)

FDA Approved



Health

Pfizer-BioNTech coronavirus vaccine wins full FDA approval, potentially persuading the hesitant to get a shot

The licensing is a landmark event that could have major effects, experts said.

Humbling reality:

BUSINESS
INSIDER

Almost all of the current COVID-19 deaths are among those unvaccinated

Sarah Al-Arshani

Sat, June 26, 2021, 10:02 PM · 2 min read

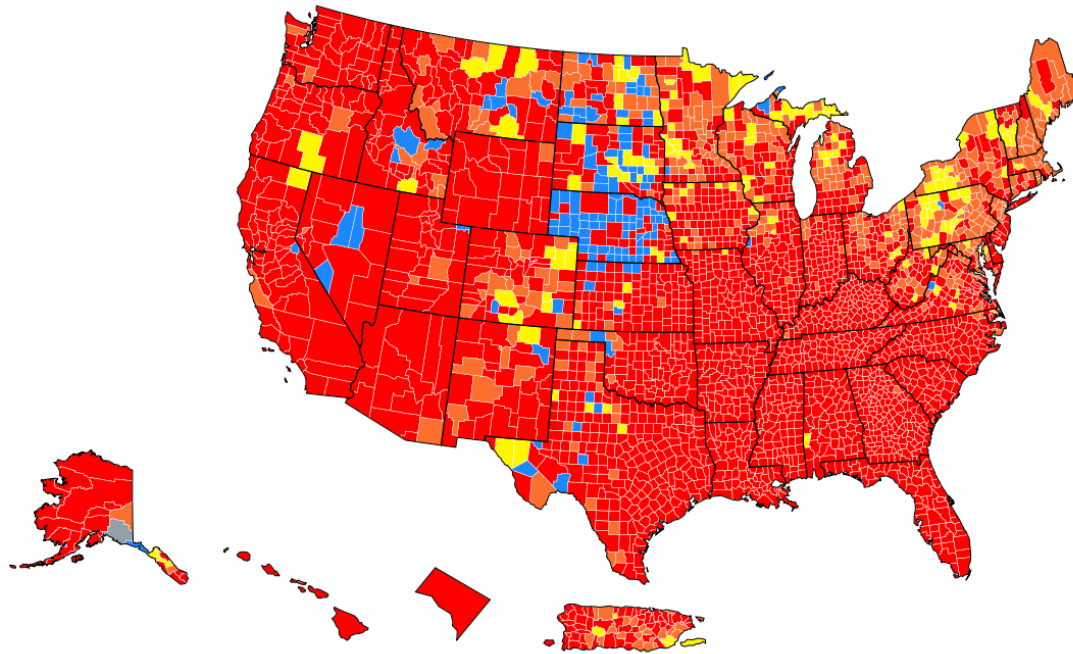


Healthcare workers get the Pfizer-BioNTech COVID-19 vaccination at the Legacy Emanuel Medical Center on December 16, 2020 in Portland, Oregon. Paula Bronstein/Getty Images

- More than 99% of those hospitalized for COVID-19 are unvaccinated, the

Variants

- Movement to Greek Lettering system
- Delta variant now dominant in the U.S.
- Seeing significant upticks across the country; worse in lower vaccinated parts



Boosters



“US to Advise Booster Shots for Most Americans 8 Months After Vaccination”



“Nursing home residents and HCWs will most likely be the first to get boosters, as soon as Sept.”

Thank you!

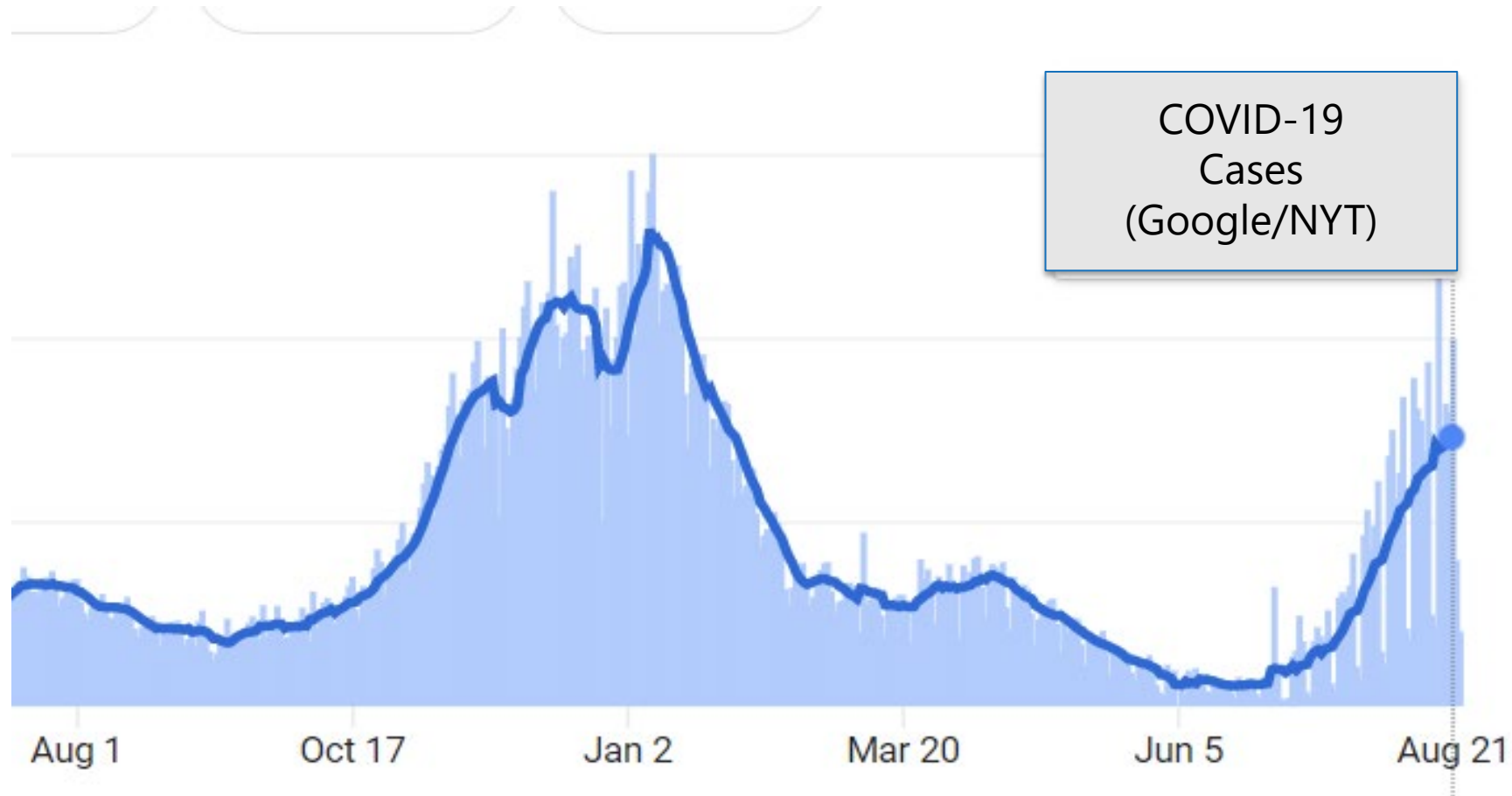
Questions?



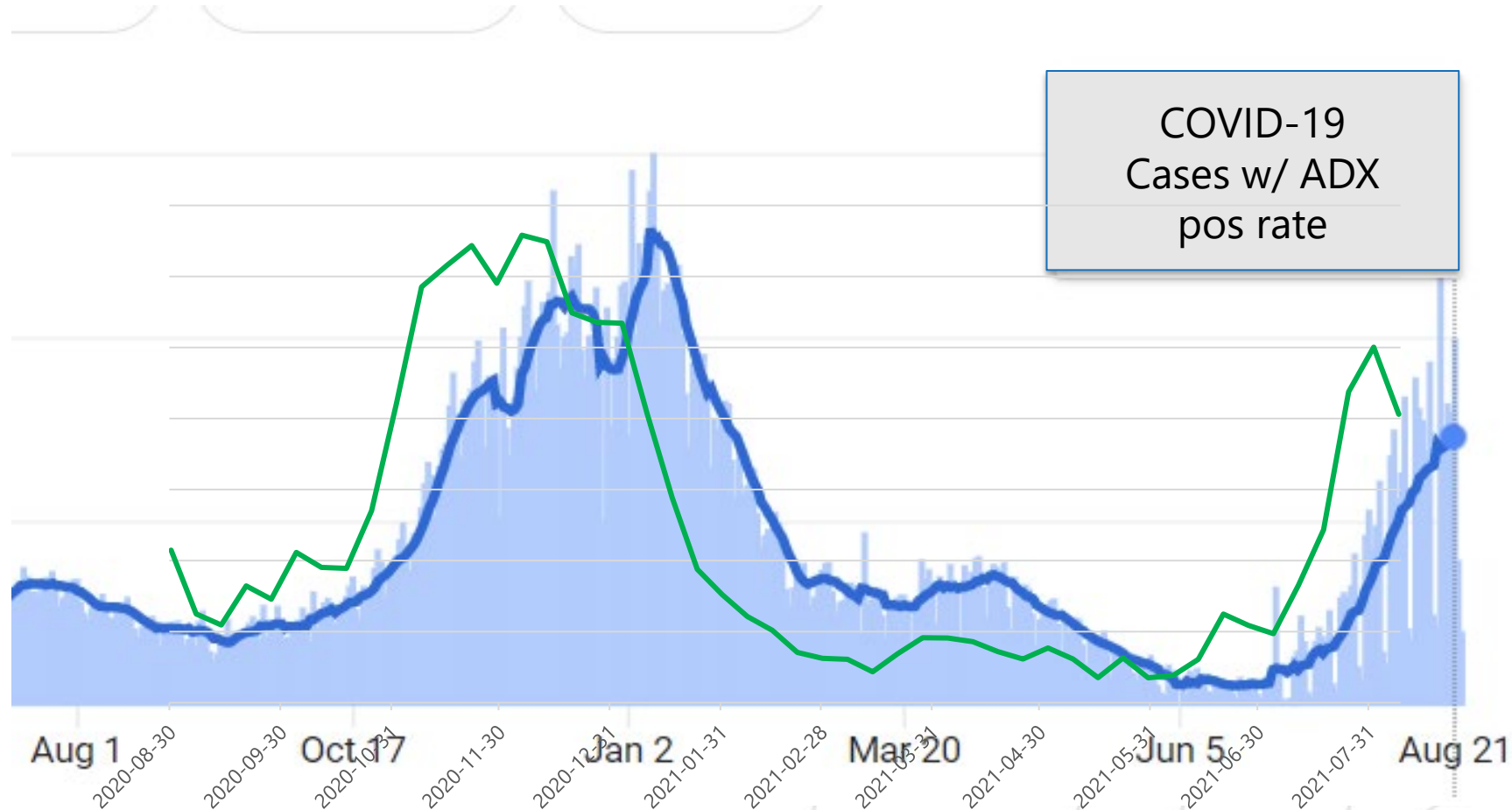


***COVID-19 Diagnostic Testing Update
DSCC – August 24, 2021 | Presenter – Joe Spinelli***

What's going on?



What's going on?



COVID-19 testing landscape and best practices

- Diagnostic testing availability has *broadly* caught up with demand, assuming no further surges
- PCR testing remains gold standard – fast/same day turnaround pressured by variant demand, compliance mandates, and RtW/consumer programs
- Rapid testing solutions (telemedicine/on-site) combined with reflex (verification) to PCR increasingly in use by employer groups for surveillance testing
- **Employers:** establish and reaffirm relationships for key stakeholder programs (both rapid and reflex)
 - Employees
 - Visitors/Customers
 - Traveling Staff (especially international)

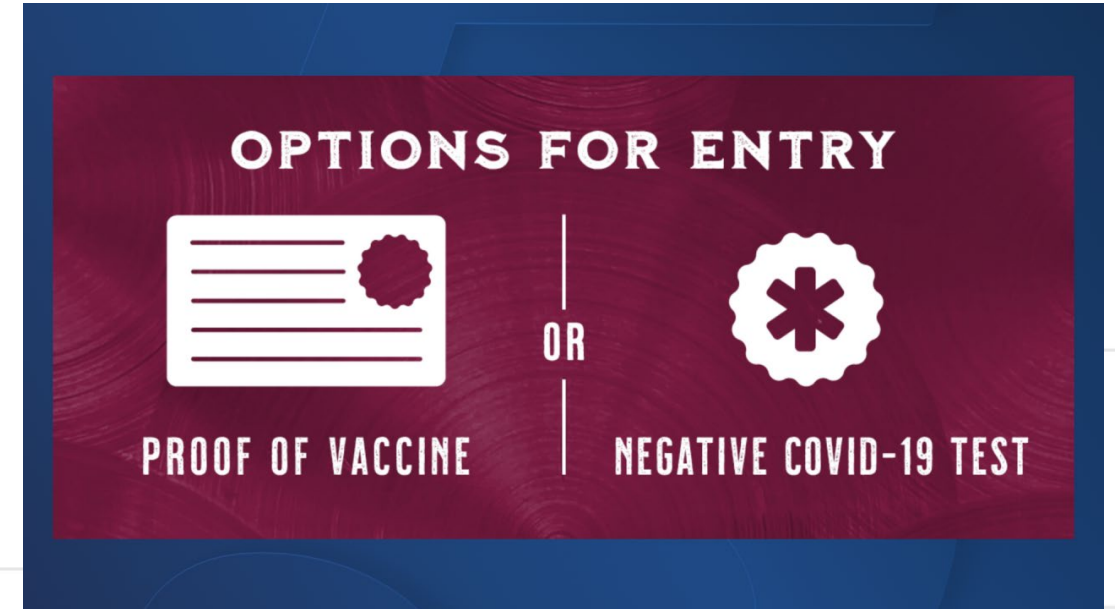


Employer Testing Mandates

- As employers are still determining their use of vaccine mandates, surveillance testing remains a component of any mandate program.
- New mandates requiring “vaccine or test” not expected to be driver of diagnostic market stress, but could impact wait and turnaround times
- *Trust but verify* on employee-provided results

*“every federal government employee and onsite contractor will be asked to attest to their vaccination status. Anyone who does not attest to being fully vaccinated will be required to wear a mask on the job no matter their geographic location, physically distance from all other employees and visitors, comply with a **weekly or twice weekly screening testing requirement**, and be subject to restrictions on official travel”*

– whitehouse.gov, Jul 29 2021 statement



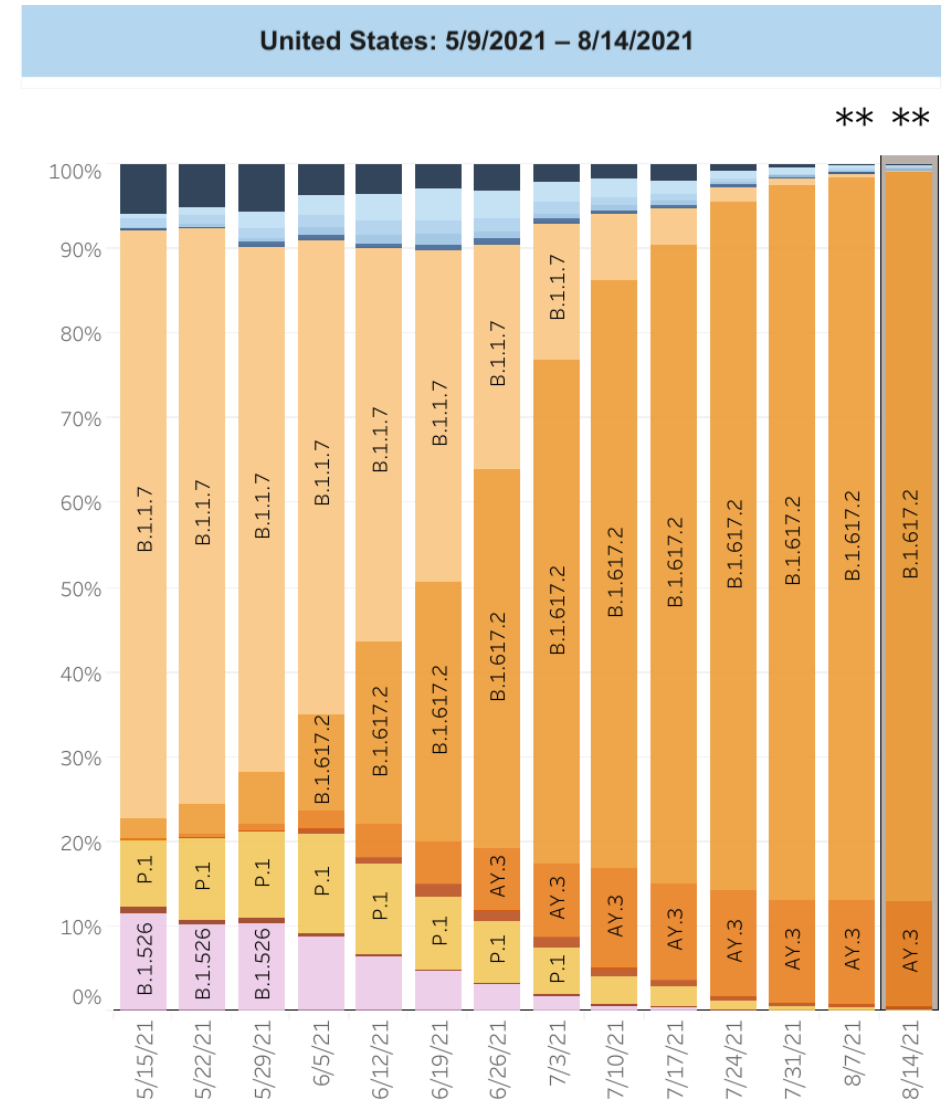
Variant Considerations

Sequencing

- Analyze positive samples for variant composition
- Restricted capabilities to communicate variants to individuals
- Variants currently do not change standard response/management protocol

Detection

- Each assay may employ different detection methodologies/signatures
- Concerns with current variants in early 2021 have been mitigated (S-gene dropout w/ B 1.1.7)
- Specific PCR / PCR reflex for variants becoming available, but require caution
- **Continue to monitor variant trends and check with providers on detection capability as new threats emerge**



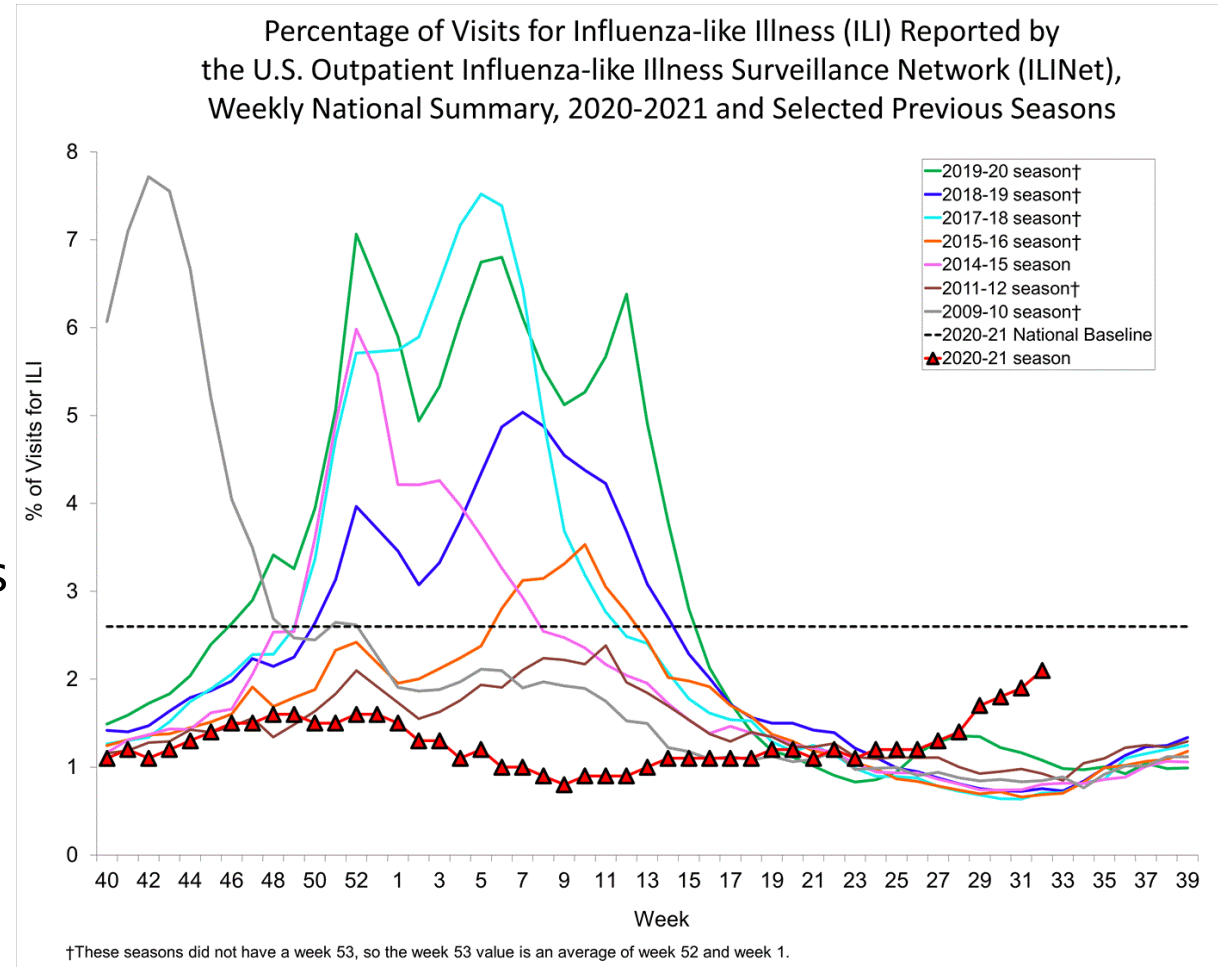
Triple Play/Quad Play Diagnostics

Flu A / Flu B

- Not a major issue in 2020, 2021 season expected to be “robust”
- CDC driving C-19/Flu combo PCR test as standard issue, check with your provider on timing/availability

RSV

- Peaking earlier than normal and 2019
- Significant concern for at-risk populations (elderly, children)



Triple Play/Quad Play Diagnostics

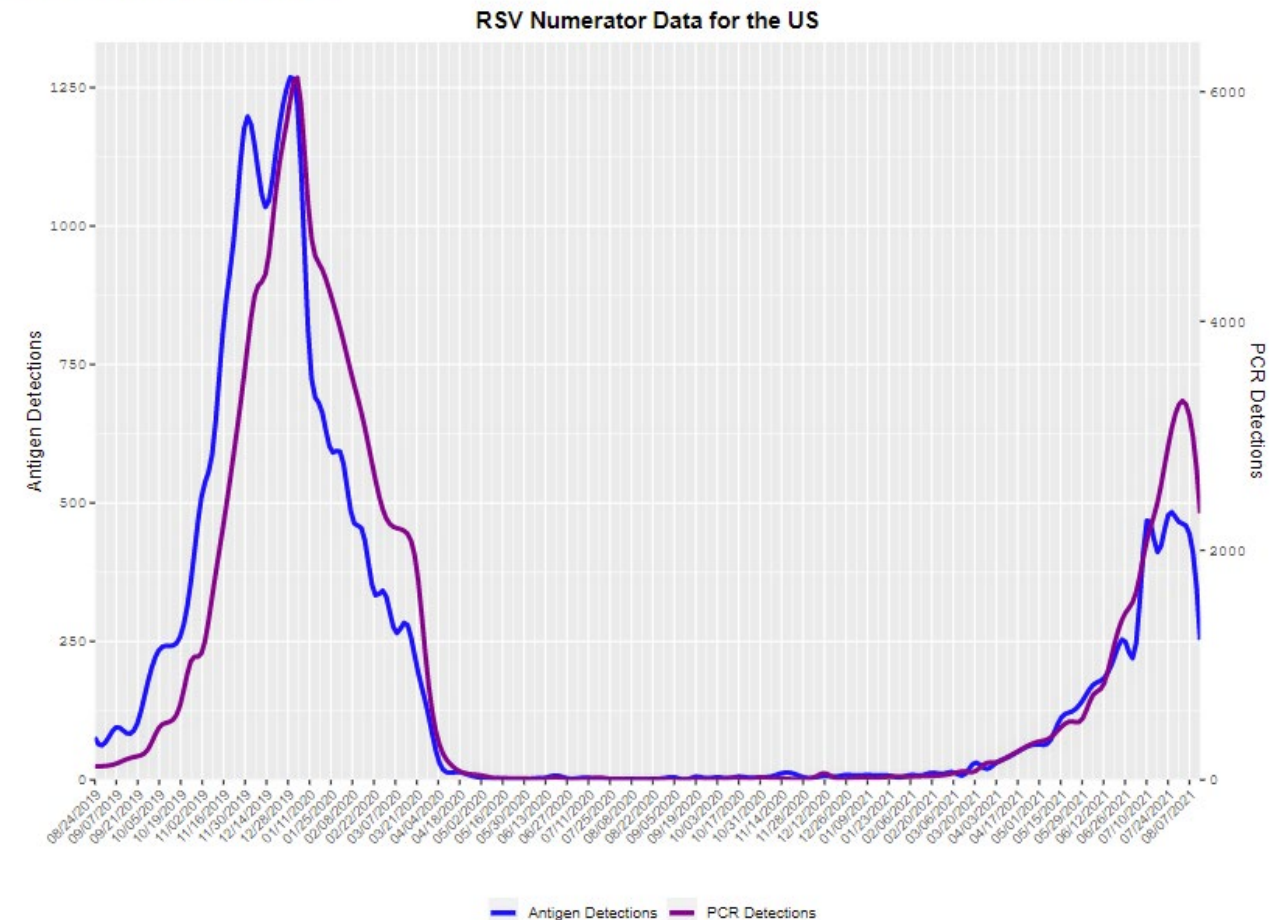
Flu A / Flu B

- Not a major issue in 2020, 2021 season expected to be “robust”
- CDC driving C-19/Flu combo PCR test as standard issue, check with your provider on timing/availability

RSV

- Peaking earlier than normal and 2019
- Significant concern for at-risk populations (elderly, children)

Detections



Conclusions

- **Diagnostic testing will remain a key component to the overall COVID-19 response**
- **Don't wait for positive tests to be confirmed by positive cases!**
- **Continue to revisit protocols and stay in sync with your corporate diagnostic providers**
- **Stay vigilant through COVID/Flu/RSV season**
- **Follow latest in federal/CDC, state, and local guidance**



Thank you!
Presenter – Joe Spinelli
joe.spinelli@accessdxlab.com