COVID-19 Series for Free & Charitable Clinics

December 9, 2021

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AT THE FOREFRONT UChicago Medicine

Vaccinate with Confidence

A National Strategy to Reinforce Confidence in COVID-19 Vaccines

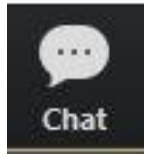
CDC's Strategy: **Empower Healthcare Personnel**: Promote confidence among healthcare personnel in their decisions to get vaccinated and recommend the vaccination to their patients.

Project Goal: Build and reinforce COVID-19 vaccine confidence among healthcare personnel in the safety net sector and, in turn, the patients they serve.

Partnerships: **The National Association of Free and Charitable Clinics** and **15 State Associations** and Federally Qualified Health Centers (FQHCs) in Puerto Rico and the U.S. Virgin Islands.

How: Provide tailored COVID-19 vaccine information to the free and charitable clinic sector through various channels and **give the FCC sector a direct line of communication to CDC**.

Reminders:

- Please use your first name and clinic name when you join the session
- Use the “chat” feature to ask questions 

- Please remember to mute your microphone 

- If you can’t connect audio via computer or you lose computer audio at anytime, you can call in to session at **(408) 638-0968, Meeting ID 932-6566-2201##**
- This activity has been approved for AMA PRA Category 1 Credit™ & Nursing CEUs

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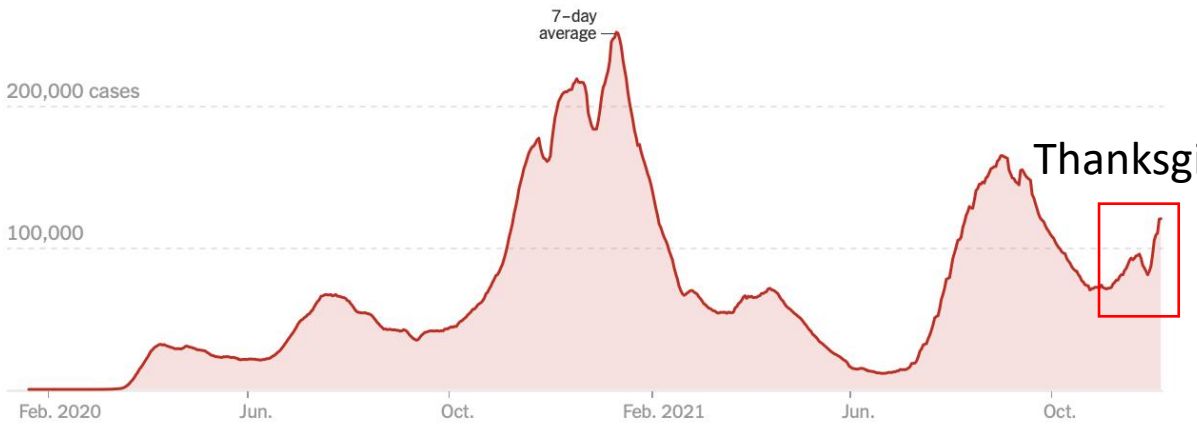
Disclosures

- We have no relevant financial interests to disclose.

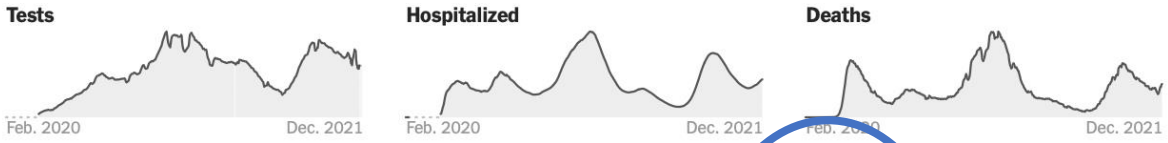
Coronavirus in the U.S.: Latest Map and Case Count

New reported cases

All time | Last 90 days

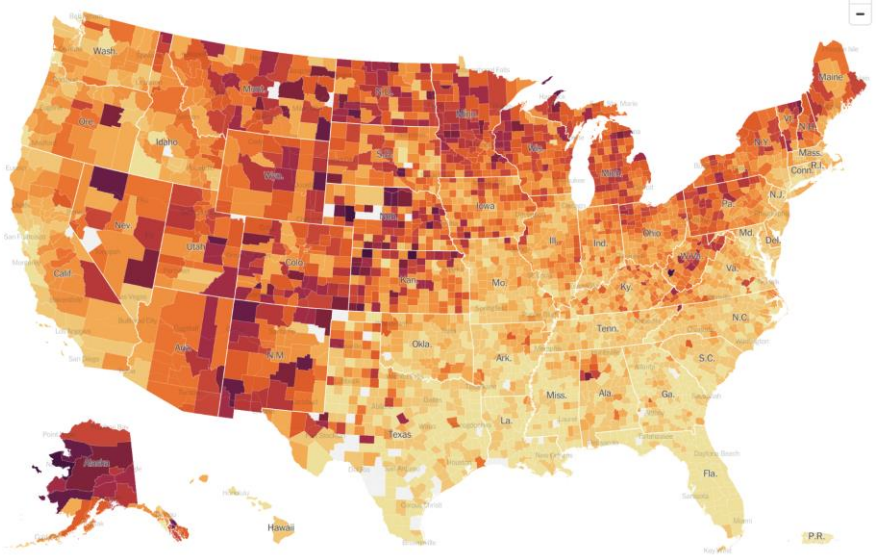


Thanksgiving!

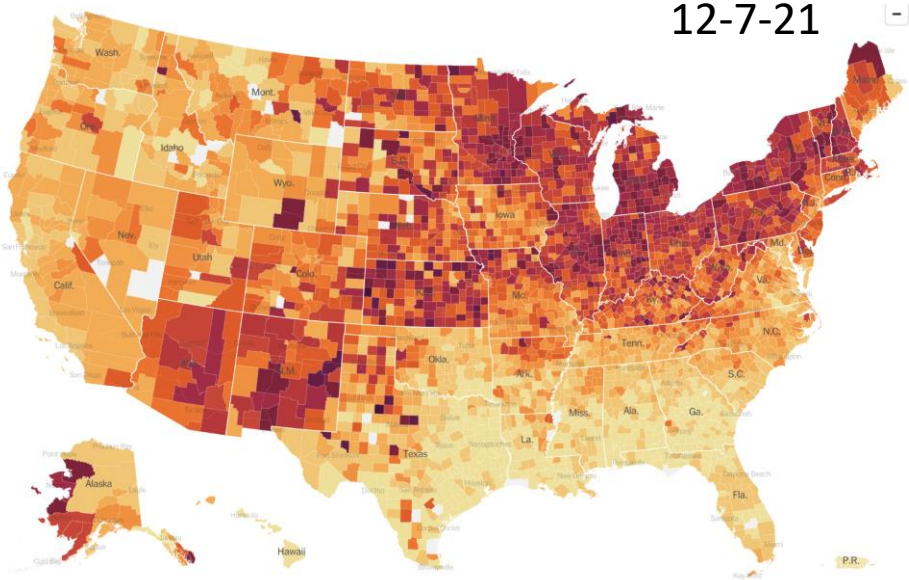


	DAILY AVG. ON DEC. 7	14-DAY CHANGE	TOTAL REPORTED
Cases	120,071	+27%	49,356,263
Tests	1,152,160	-1%	—
Hospitalized	60,747	+19%	—
Deaths	1,298	+13%	790,082

11-10-21

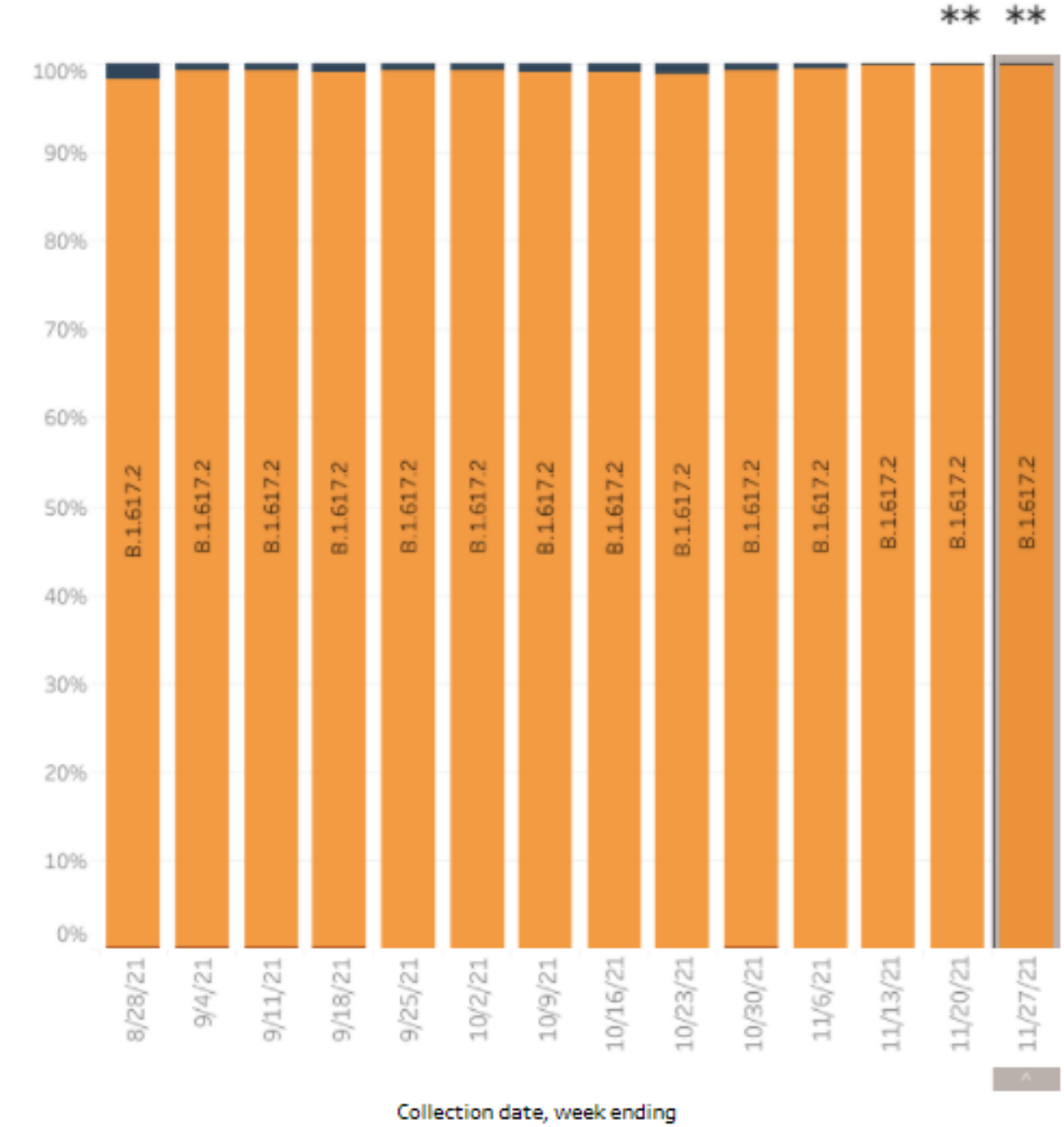


12-7-21



https://www.nytimes.com/interactive/2021/us/covid-cases.html?action=click&module=Top%20Stories&pgtype=Homepage

United States: 8/22/2021 – 11/27/2021



United States: 11/21/2021 – 11/27/2021 NOWCAST

USA

WHO label	Lineage #	US Class	%Total	95%PI
Delta	B.1.617.2	VOC	99.9%	99.9-99.9%
	AY.1	VOC	0.1%	0.0-0.1%
	AY.2	VOC	0.0%	0.0-0.0%
Other	Other*		0.0%	0.0-0.1%

* Enumerated lineages are US VOC and lineages circulating above 1..

New Admissions of Patients with Confirmed COVID-19, United States

Aug 01, 2020 - Nov 26, 2021

3,389,760
Total Admissions
Aug 01, 2020 - Nov 26, 2021

5,592
Current 7-Day Average
Nov 20, 2021 - Nov 26, 2021

5,789
Prior 7-Day Average
Nov 13, 2021 - Nov 19, 2021

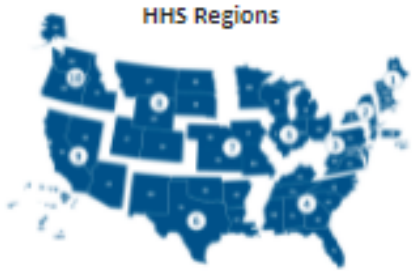
16,478
Peak 7-Day Average
Jan 03, 2021 - Jan 09, 2021

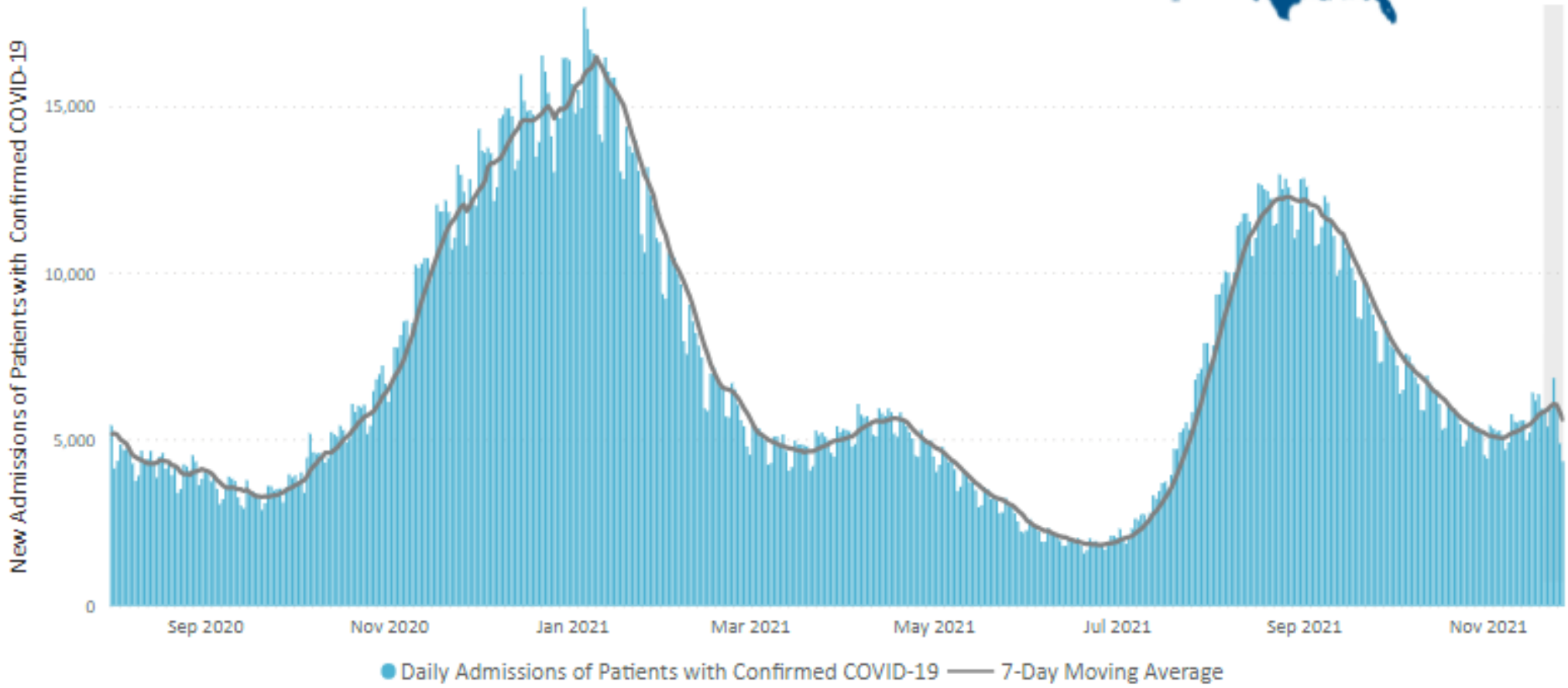
-3.4%
Percent change from prior 7-day avg. of Nov 13, 2021 - Nov 19, 2021

-66.1%
Percent change from peak 7-day avg. of Jan 03, 2021 - Jan 09, 2021

By Jurisdiction and Age Group | By Jurisdiction

Select a Jurisdiction: United States





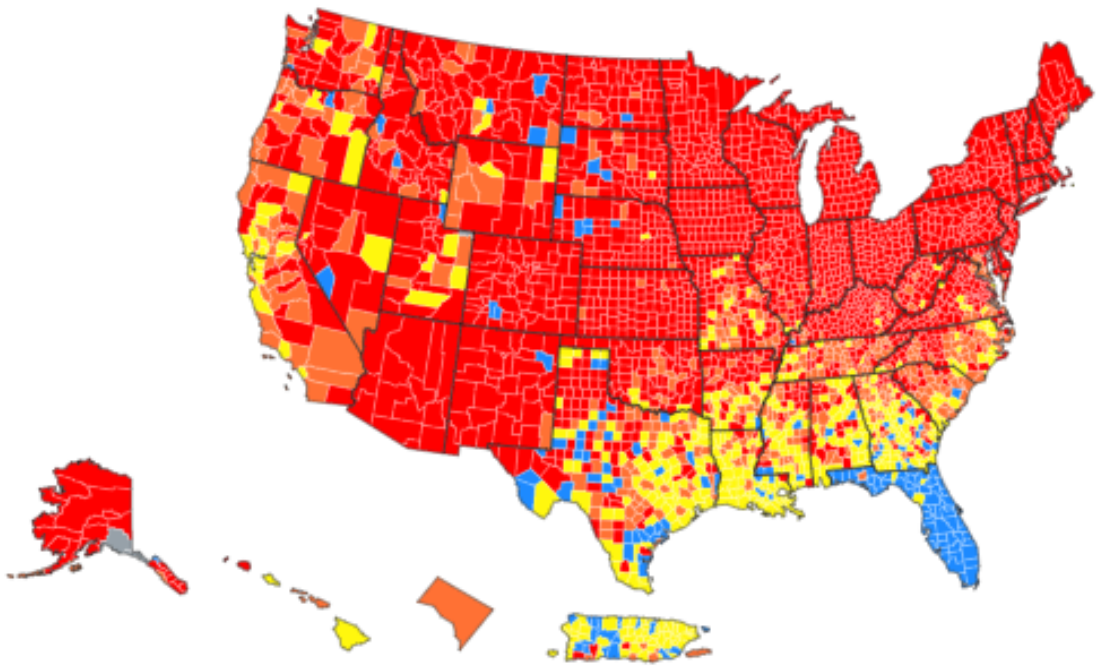
Based on reporting from all hospitals (N=5,259). Due to potential reporting delays, data reported in the most recent 7 days (as represented by the shaded bar) should be interpreted with caution.

Small shifts in historic data may occur due to changes in the CMS Provider of Services file, which is used to identify the cohort of included hospitals. Data since December 1, 2020 have had error correction methodology applied. Data prior to this date may have anomalies that are still being resolved. Data prior to August 1, 2020 are unavailable.

Last Updated: Nov 28, 2021

Unified Hospital Dataset, White House COVID-19 Team, Data Strategy and Execution Workgroup

Level of Community Transmission of All Counties in US



Community Transmission in US by County

	Total	Percent	% Change
High	2107	65.39%	-7.98%
Substantial	478	14.84%	1.55%
Moderate	457	14.18%	3.88%
Low	174	5.4%	2.55%

How is community transmission calculated?

High Substantial Moderate Low No Data

Total Vaccine Doses

Delivered	572,190,175
Administered	454,447,737

Learn more about the distribution of vaccines.

196.2M
People fully vaccinated

37.5M
People received a booster dose**

At Least One Dose | Fully Vaccinated | Booster Doses***

Vaccinated People	Count	Percent of US Population
Total	231,367,686	69.7%
Population ≥ 5 Years of Age	231,331,029	74.1%
Population ≥ 12 Years of Age	227,687,049	80.3%
Population ≥ 18 Years of Age	212,308,277	82.2%
Population ≥ 65 Years of Age	54,796,073	99.9%

***For surveillance purposes, COVID Data Tracker counts people as being "fully vaccinated" if they received two doses on different days (regardless of time interval) of the two-dose mRNA series or received one dose of a single-dose vaccine.**

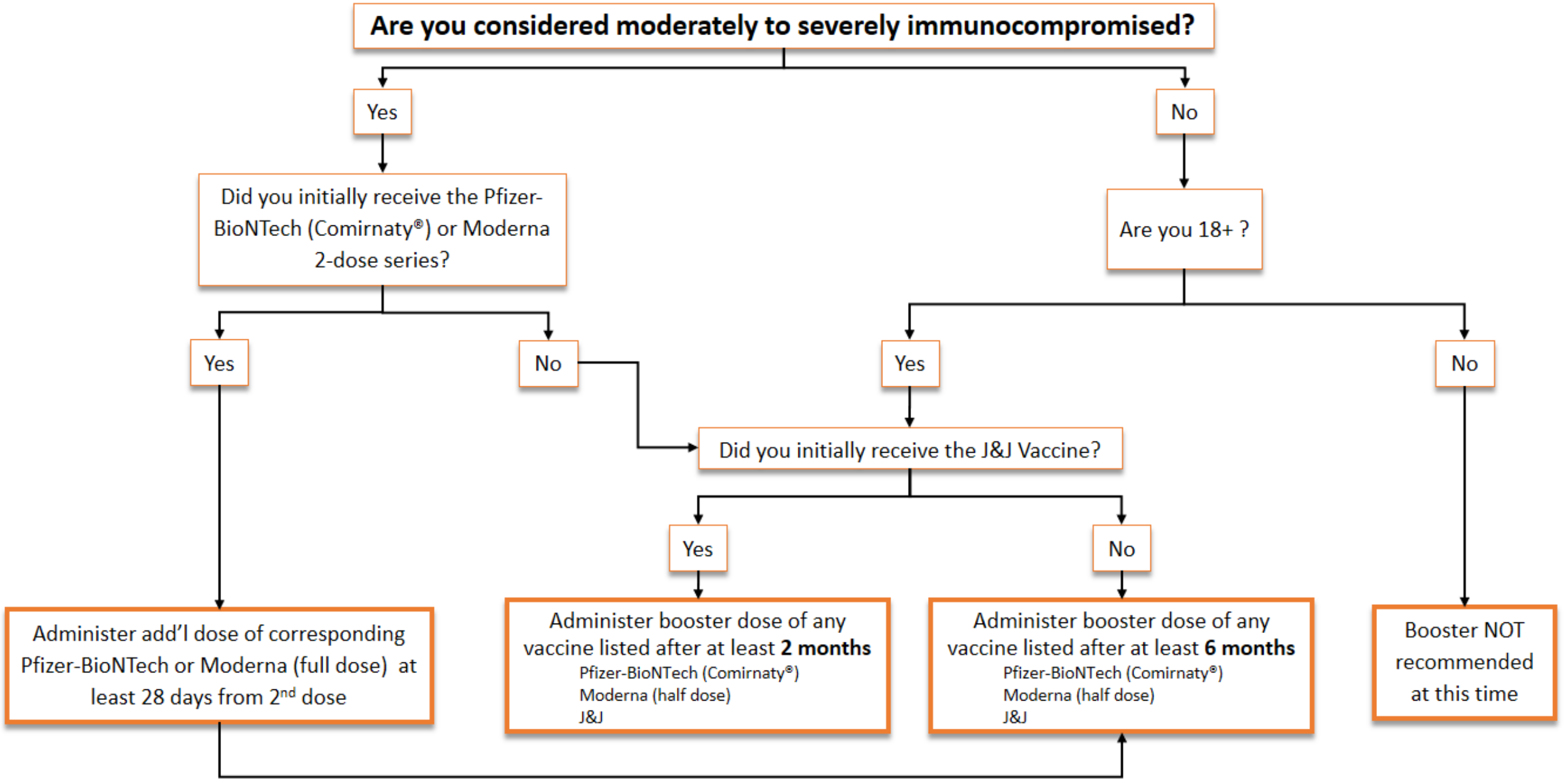
****The count of people who received a booster dose includes anyone who is fully vaccinated and has received another dose of COVID-19 vaccine since August 13, 2021. This includes people who received booster doses and people who received additional doses.**

*****Some COVID-19 vaccine recipients are recommended to receive booster doses.**

About these data

CDC | Data as of: November 28, 2021 6:00am ET. Posted: Sunday, November 28, 2021 4:45 PM ET

COVID-19 Vaccine Third Dose/Booster Dose Workflow



Pfizer Booster and Mortality

December 8, 2021
DOI: 10.1056/NEJMoa2115624

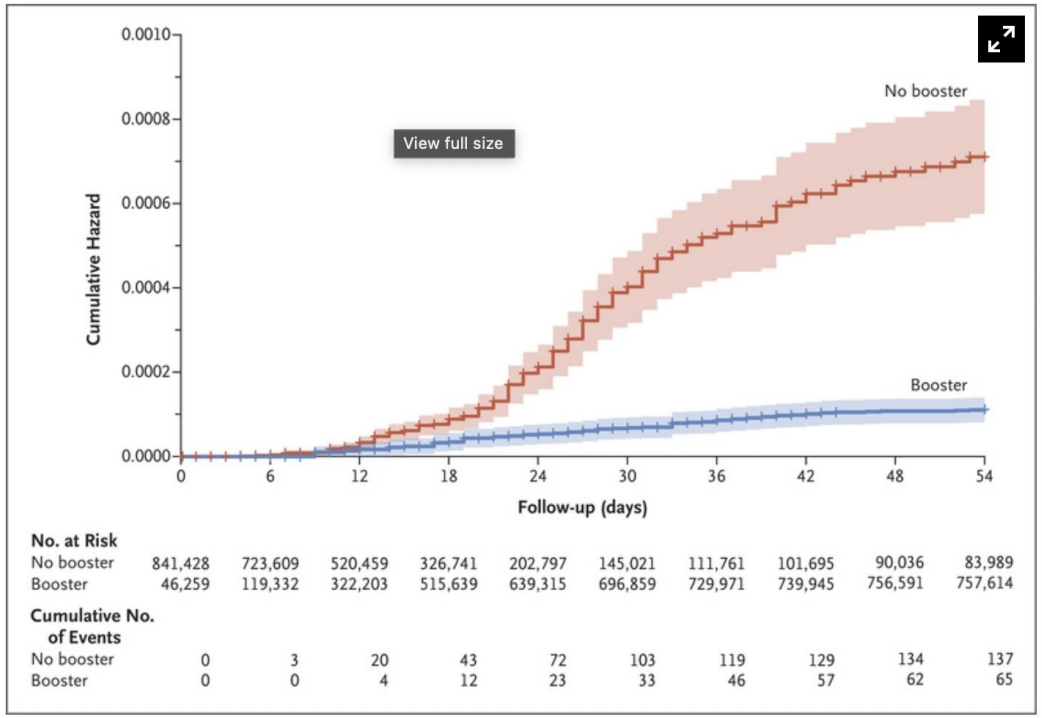


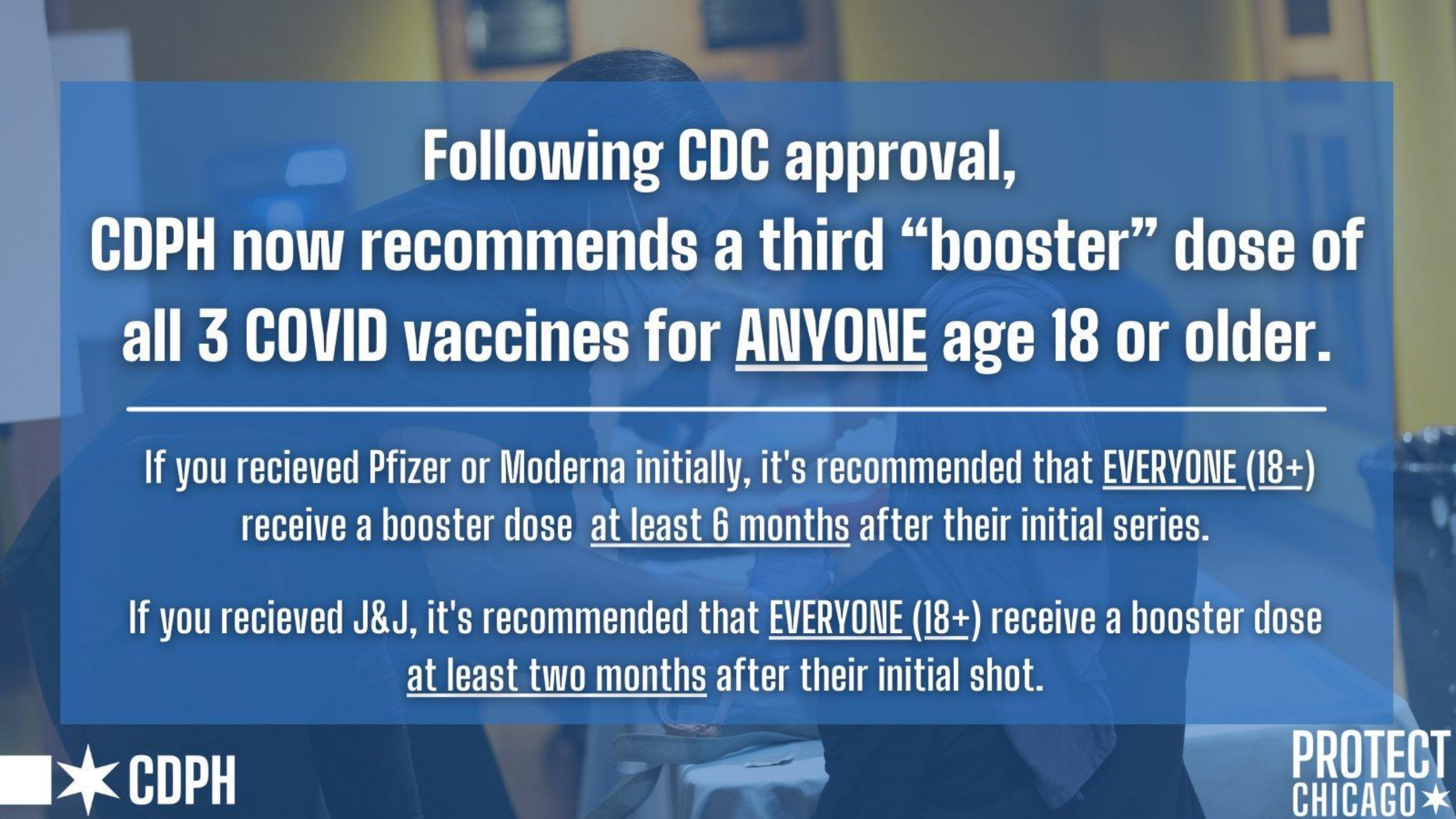
Table 2. Association of Confounding Variables with Death Due to Covid-19.

Variable	Hazard Ratio for Death Due to Covid-19 (95% CI)	P Value
Booster received	0.10 (0.07–0.14)	<0.001
Age	1.10 (1.09–1.12)	<0.001
Male sex	2.49 (1.82–3.41)	<0.001
Socioeconomic status	0.98 (0.92–1.04)	0.45
Diabetes	1.29 (0.96–1.72)	0.09
Chronic obstructive pulmonary disease	1.31 (0.86–1.99)	0.22
Chronic kidney failure	2.27 (1.63–3.15)	<0.001
Ischemic heart disease	0.96 (0.69–1.32)	0.79
Chronic heart failure	1.41 (0.95–2.09)	0.09
Obesity	1.17 (0.87–1.58)	0.30
Lung cancer	3.20 (1.49–6.87)	0.003
History of cerebrovascular accident	1.54 (1.08–2.17)	0.02
History of transient ischemic attack	0.87 (0.50–1.51)	0.63
History of smoking	1.10 (0.82–1.49)	0.52

Study in Israel: 758,118 (90%) received the booster during the 54-day study period. Death due to Covid-19 occurred in 65 participants in the booster group (0.16 per 100,000 persons per day) and in 137 participants in the nonbooster group (2.98 per 100,000 persons per day). The adjusted hazard ratio for death due to Covid-19 in the booster group, as compared with the nonbooster group, was 0.10 (95% confidence interval, 0.07 to 0.14; P<0.001).

CONCLUSIONS

Participants who received a booster at least 5 months after a second dose of BNT162b2 had 90% lower mortality due to Covid-19 than participants who did not receive a booster.



Following CDC approval, CDPH now recommends a third "booster" dose of all 3 COVID vaccines for ANYONE age 18 or older.

If you recieved Pfizer or Moderna initially, it's recommended that EVERYONE (18+) receive a booster dose at least 6 months after their initial series.

If you recieved J&J, it's recommended that EVERYONE (18+) receive a booster dose at least two months after their initial shot.

CDPH

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Omicron Variant (B.1.1.529)

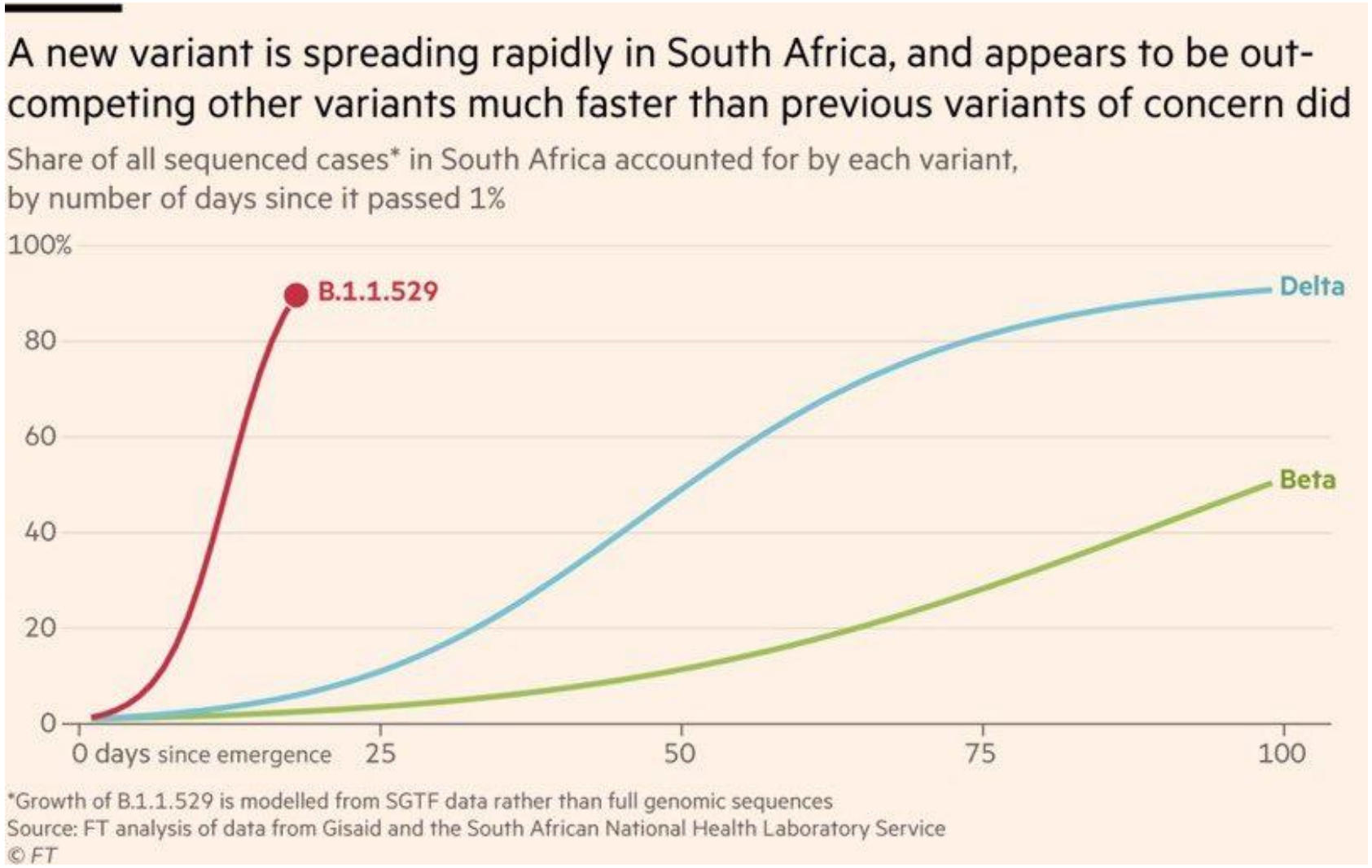
- S. Africa and Botswana first reported new variant to WHO Nov 24th
- >30 mutations to SARS-CoV2 spike protein
- Appears to be outcompeting Delta Variant in S. Africa
- Designated VOC by WHO on Nov 26th
- Since been identified in 20 other countries
- Most cases have no contact to Africa, indicating community-level transmission
- US has joined others in imposing travel bans to S. Africa, Bostwana, Zimbabwe, Namibia, Lesotho, Eswatini, Mozambique, and Malawi, effective Nov 29th

Omicron Variant (B.1.1.529)

Three questions to be answered:

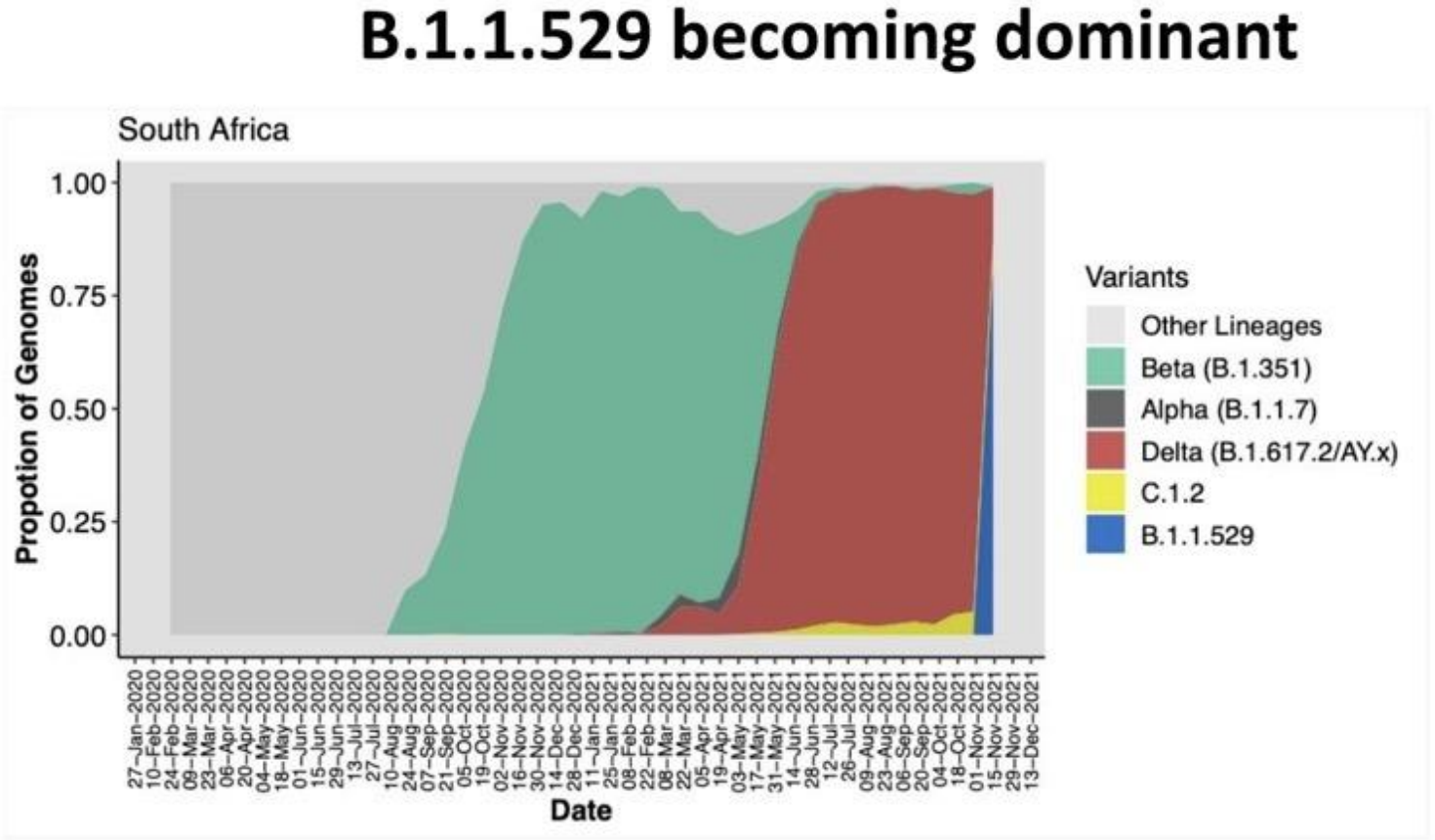
- Is Omicron variant is more transmissible than the current Delta variant? *Likely…*
- Does the Omicron variant cause more severe disease? *Unlikely…*
- Does the Omicron variant escape our immune response (via prior infection or vaccination)? *Somewhat…*

Omicron Variant (B.1.1.529) Transmissibility



Omicron Variant (B.1.1.529) Transmissibility

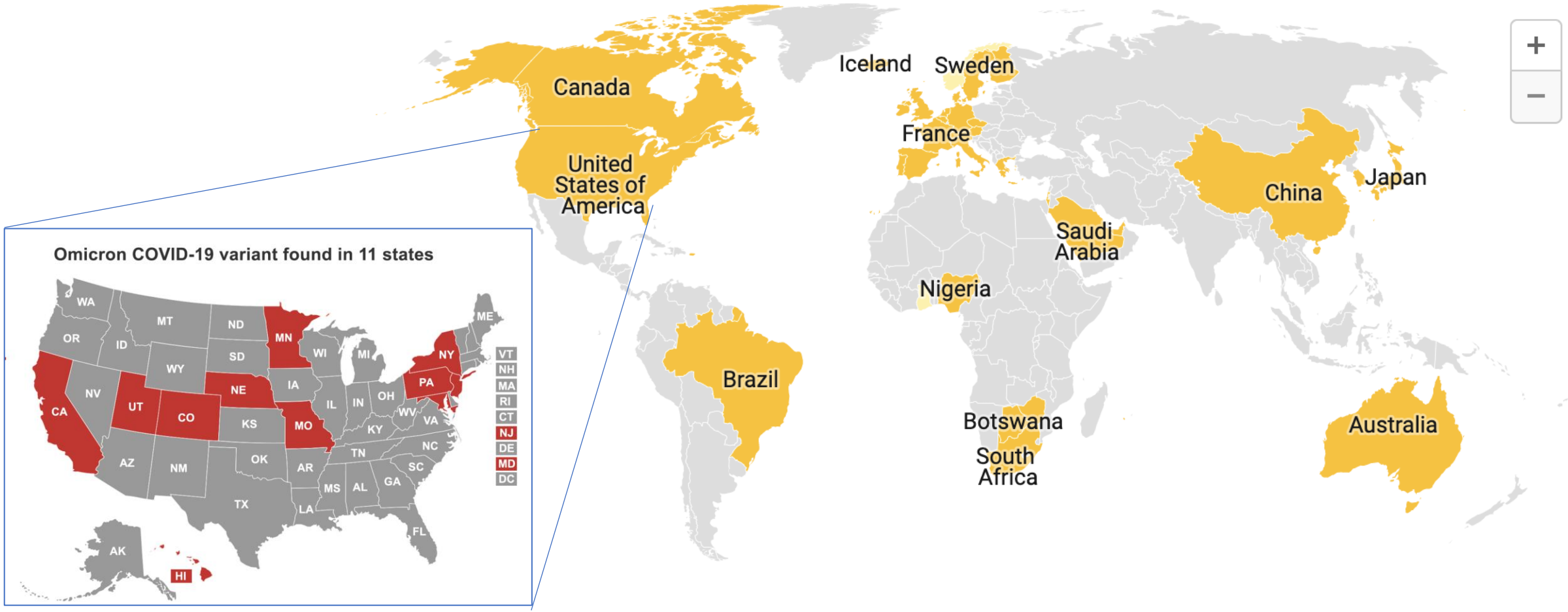
- Omicron has become the predominant variant in Gauteng Province (SA) in less than 3 weeks
- Early studies show that it has a $R_0$2
- 2,828 new confirmed cases recorded Friday Nov 26th
  - 65% not vaccinated
  - ~25% partially vaccinated



Tracking the Omicron Variant

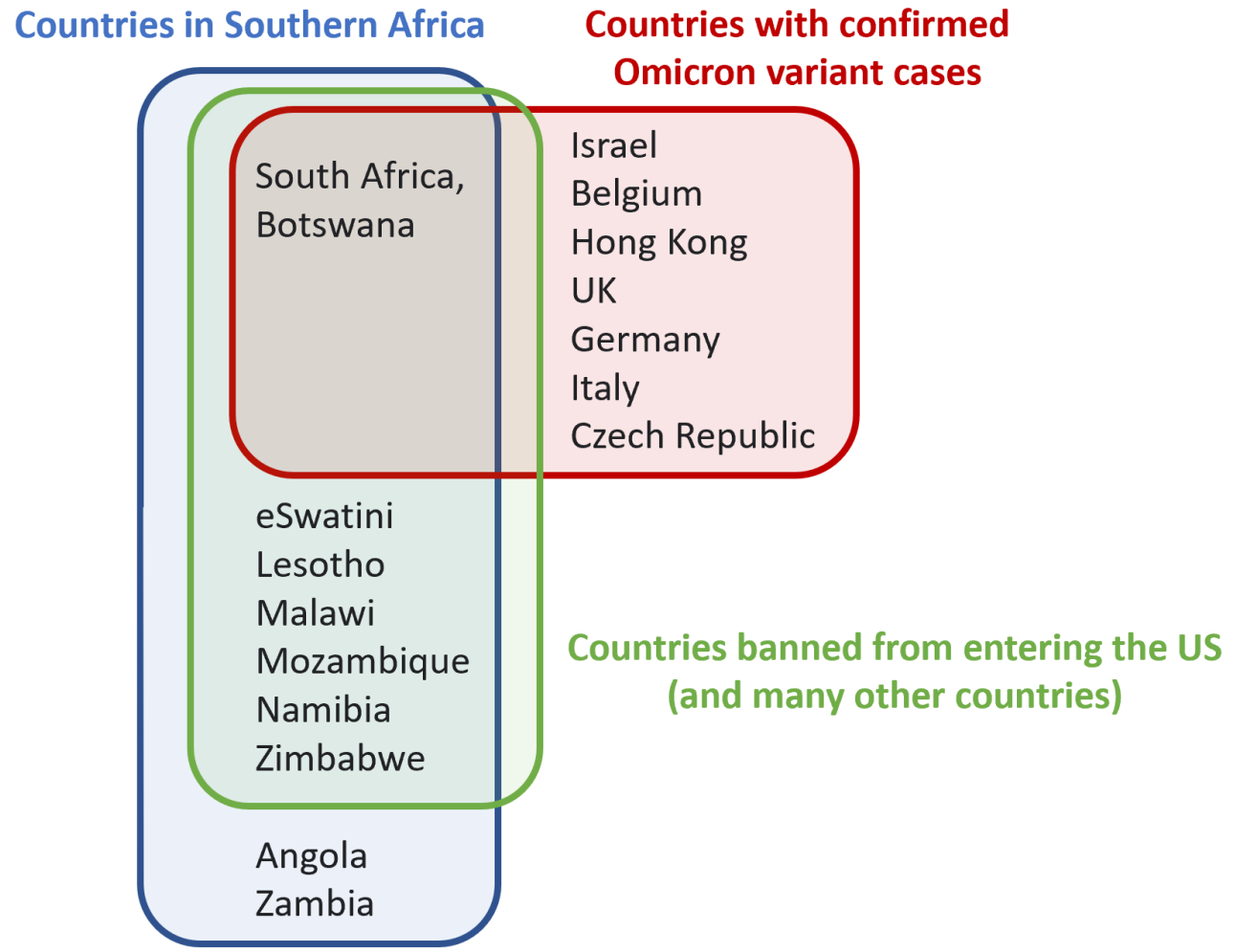
Cases of the omicron variant of the coronavirus have been detected in countries on opposite sides of the world, just days after it was first identified by researchers in South Africa. While many governments rushed to close their borders, scientists cautioned that it's not clear if the new variant is more alarming than other versions of the virus.

Verified Unverified

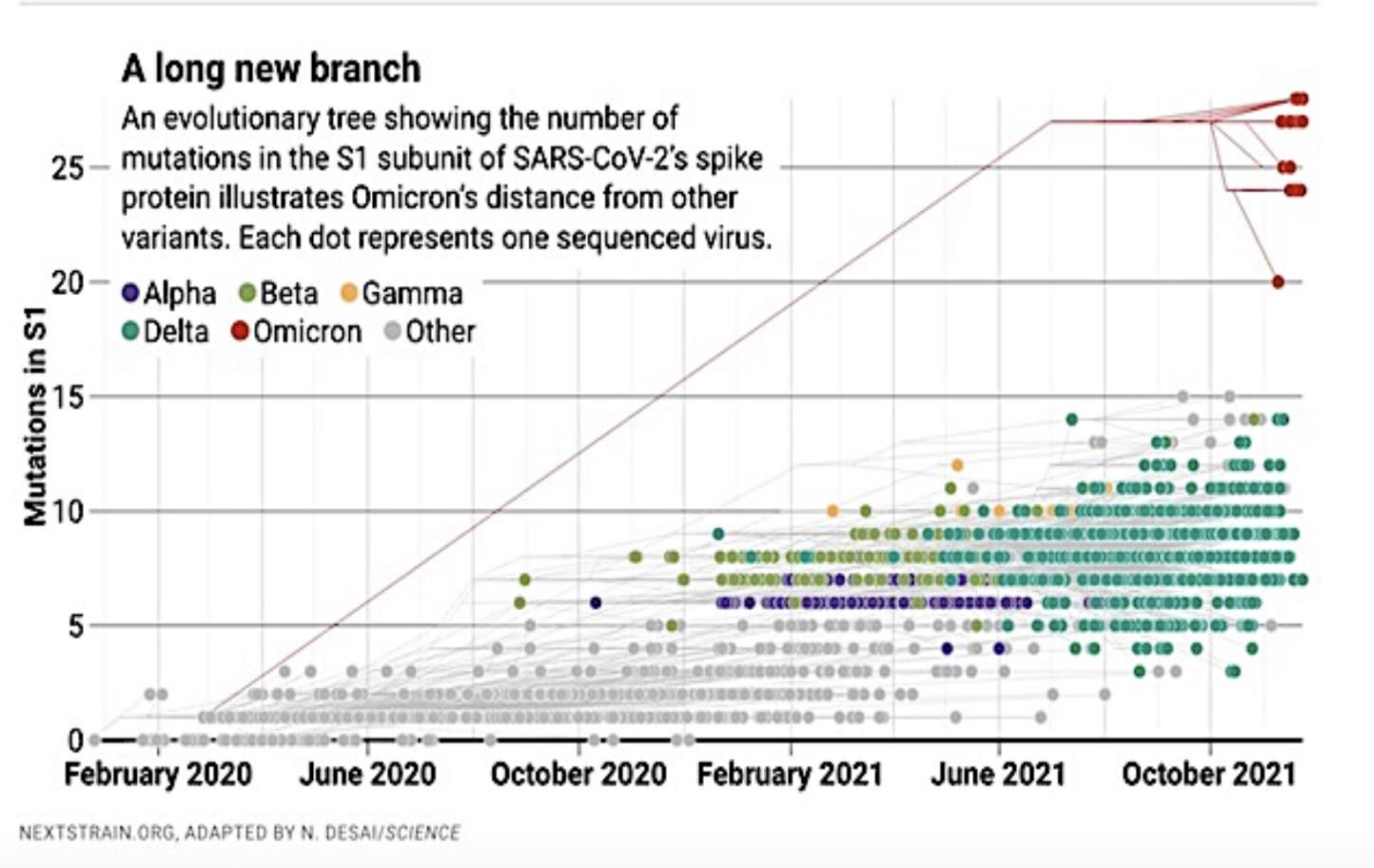


Utility of Travel Bans?

- While Omicron not identified yet in the US, likely only a matter of time
- Travel Bans at this point with limited utility
- Newer data shows presence of Omicron in Europe prior to Africa



Omicron has been with us for awhile



Scientists see essentially three possible explanations: The virus could have circulated and evolved in a population with little surveillance and sequencing. ***It could have gestated in a chronically infected COVID-19 patient.*** *Or it might have evolved in a nonhuman species, from which it recently spilled back into people.*

Omicron Variant (B.1.1.529) and Severity of Disease

- Many of the Omicron cases in S Africa have been in younger people (<40)
- Many of the other cases have been identified in travelers (meaning feel well enough to travel)
- Rising hospitalization count in S Africa matches the proportion in past waves
- Majority of hospital admissions continue to be among people who were not vaccinated
- Bottom line – we just do not know yet, needs to tracked closely

Omicron Variant (B.1.1.529) and Immune Evasion

- >30 mutations of spike protein, some mirroring Beta (which exhibited immune escape)
- Still unclear if Ab produce can neutralize Omicron variant
- Still need more information on T-cell response/immune effect on variant

Recent Research from Lab in S. Africa

- Laboratory experiments found that Omicron seems to dull the power of the Pfizer-BioNTech vaccine, but also hinted that people who have received a booster shot might be better protected.
- The study, published online on Tuesday, found that antibodies produced by vaccinated people were much less successful at keeping the Omicron variant from infecting cells than other forms of the coronavirus.
- Dr. Sigal's lab produced a few results:

  1. Omicron still uses ACE2

  2. There is a very large drop in neutralization of Omicron by BNT162b2 immunity relative to ancestral virus

  3. Omicron escape from BNT162b2 neutralization is incomplete. Previous infection + vaccination still neutralizes

Omicron Variant and Diagnostic Tests

- Most PCR and antigen tests are still diagnostic for Omicron variant
- *"While the Omicron variant contains mutations to the spike protein, Abbott's rapid and molecular tests — antigen and PCR — do not rely on the spike gene to detect the virus."*
- One type of test could be impacted:
  - Tide Laboratories DTPM COVID-19 RT-PCR Test
  - Limited use: Check https://www.fda.gov/medical-devices/coronavirus-covid-19-and-medical-devices/sars-cov-2-viral-mutations-impact-covid-19-tests

Outpatient toolkit vs. COVID-19

Currently available

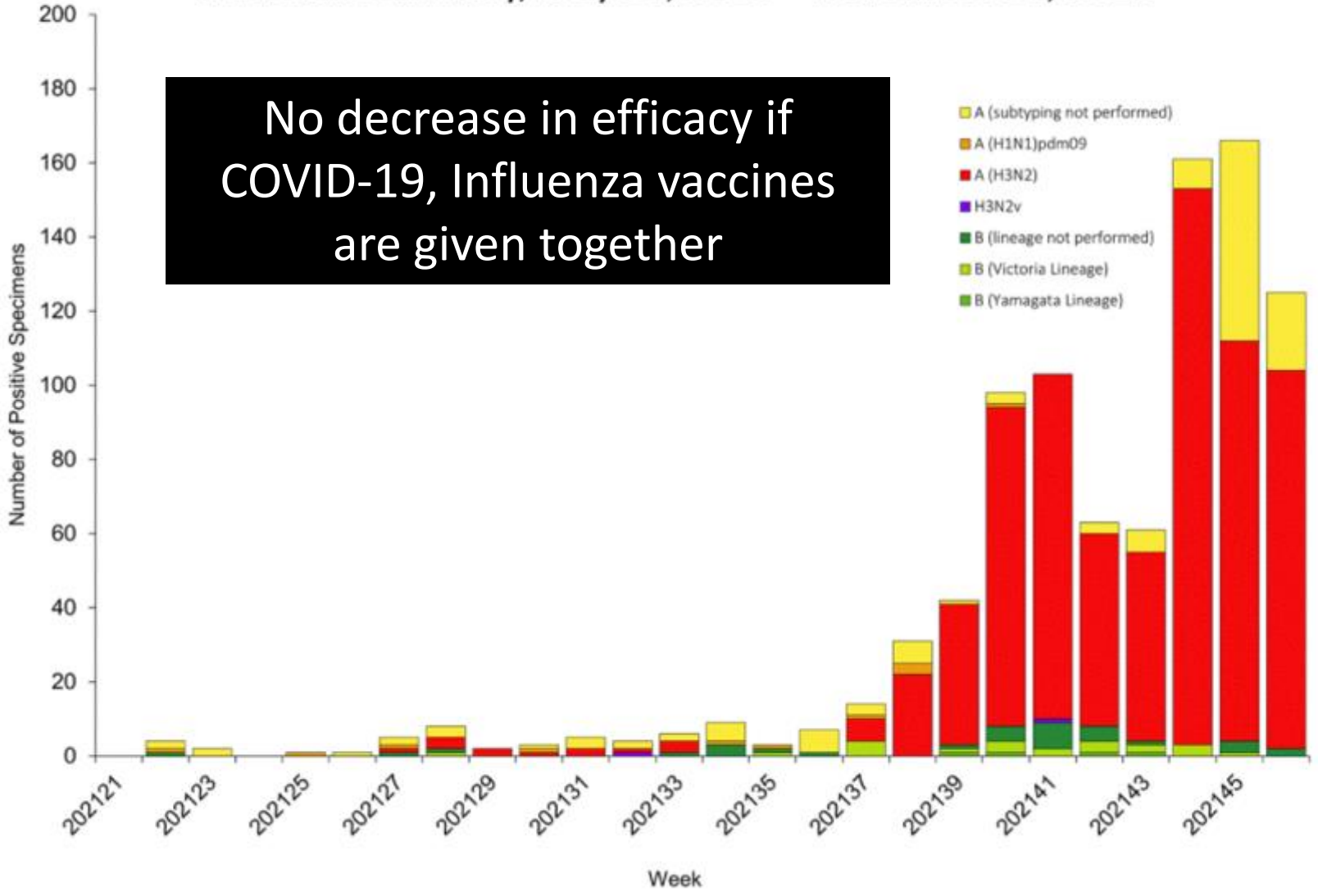
- **VACCINES + boosters**
- Behavioral mitigation strategies
  - Social distancing
  - Mask wearing
  - Hand hygiene
- Rapid testing/surveillance testing
- Monoclonal antibodies

Coming soon?

- Oral antivirals
  - Molnupiravir
  - Paxlovid
  - Fluvoxamine?

Influenza Positive Tests Reported to CDC by U.S. Public Health Laboratories, National Summary, May 23, 2021 – November 20, 2021

No decrease in efficacy if COVID-19, Influenza vaccines are given together



Influenza activity is low nationally, but the numbers of influenza viruses detected by labs has increased in recent weeks
Majority are A (H3N2)
>90% children and young adults ages 5-24

https://www.cdc.gov/flu/weekly/

Questions?

Thank you!

Next Session: Thursday, January 13th,12-1:15pm CST

Resources & recording of the session

https://www.echo-chicago.org/resources/covid19/

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QUESTIONS & CONTACT

Project Team Email: vaccinate@americares.org

Tija Danzig, Project Director: tdanzig@americares.org

Kristin Kelley, Administrative Support: kkelley@americares.org

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