COVID-19 Series for Free & Charitable Clinics

November 17, 2022

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AT THE FOREFRONT UChicago Medicine

Vaccinate with Confidence

A National Strategy to Reinforce Confidence in COVID-19 Vaccines

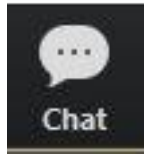
CDC's Strategy: **Empower Healthcare Personnel**: Promote confidence among healthcare personnel in their decisions to get vaccinated and recommend the vaccination to their patients.

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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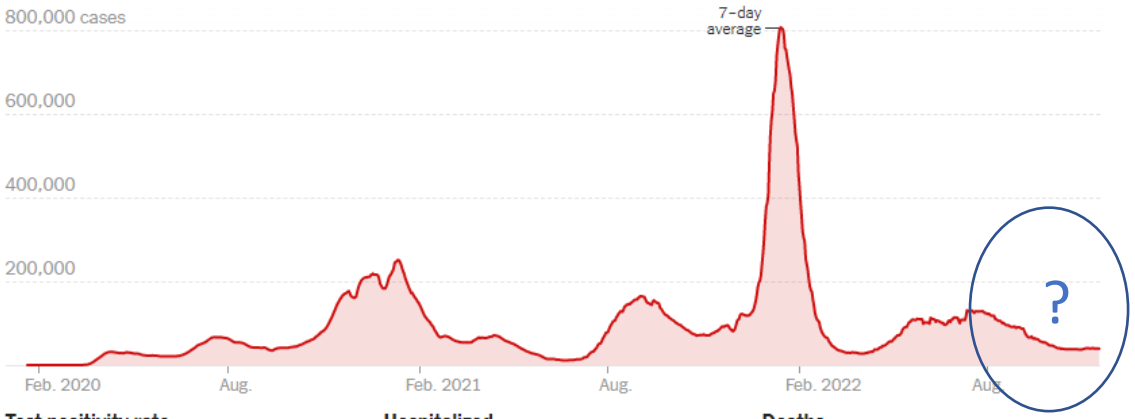
Disclosures

- We have no relevant financial interests to disclose.

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

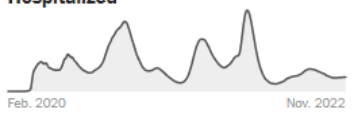
New reported cases

All time | Last 90 days

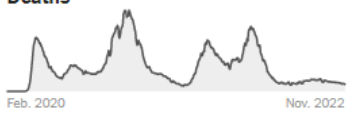


Test positivity rate

Hospitalized

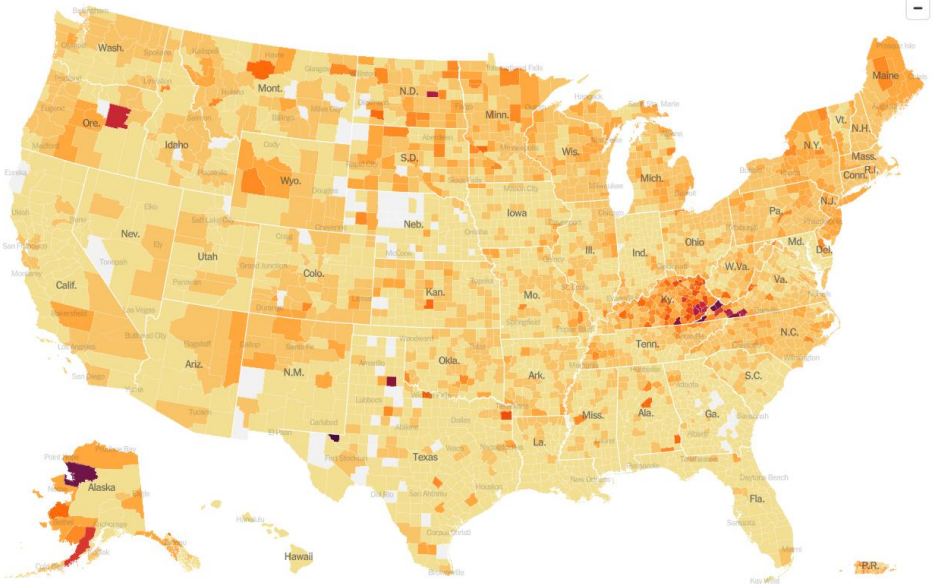


Deaths

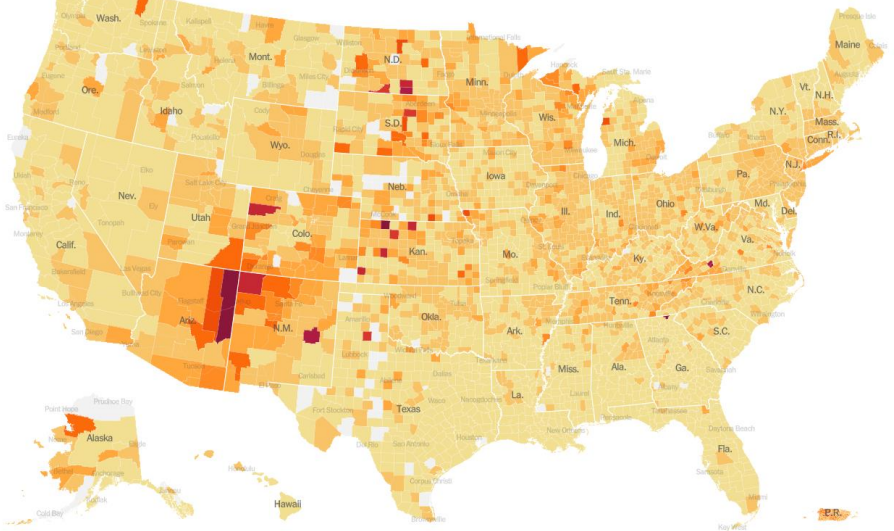


	DAILY AVG. ON NOV. 16	PER 100,000	14-DAY CHANGE
Cases	39,193	12	Flat
Test positivity	8.5%	—	—
Hospitalized	27,704	8	+2%
In I.C.U.s	3,212	<1	+3%
Deaths	299	<1	-13%

10/12/22

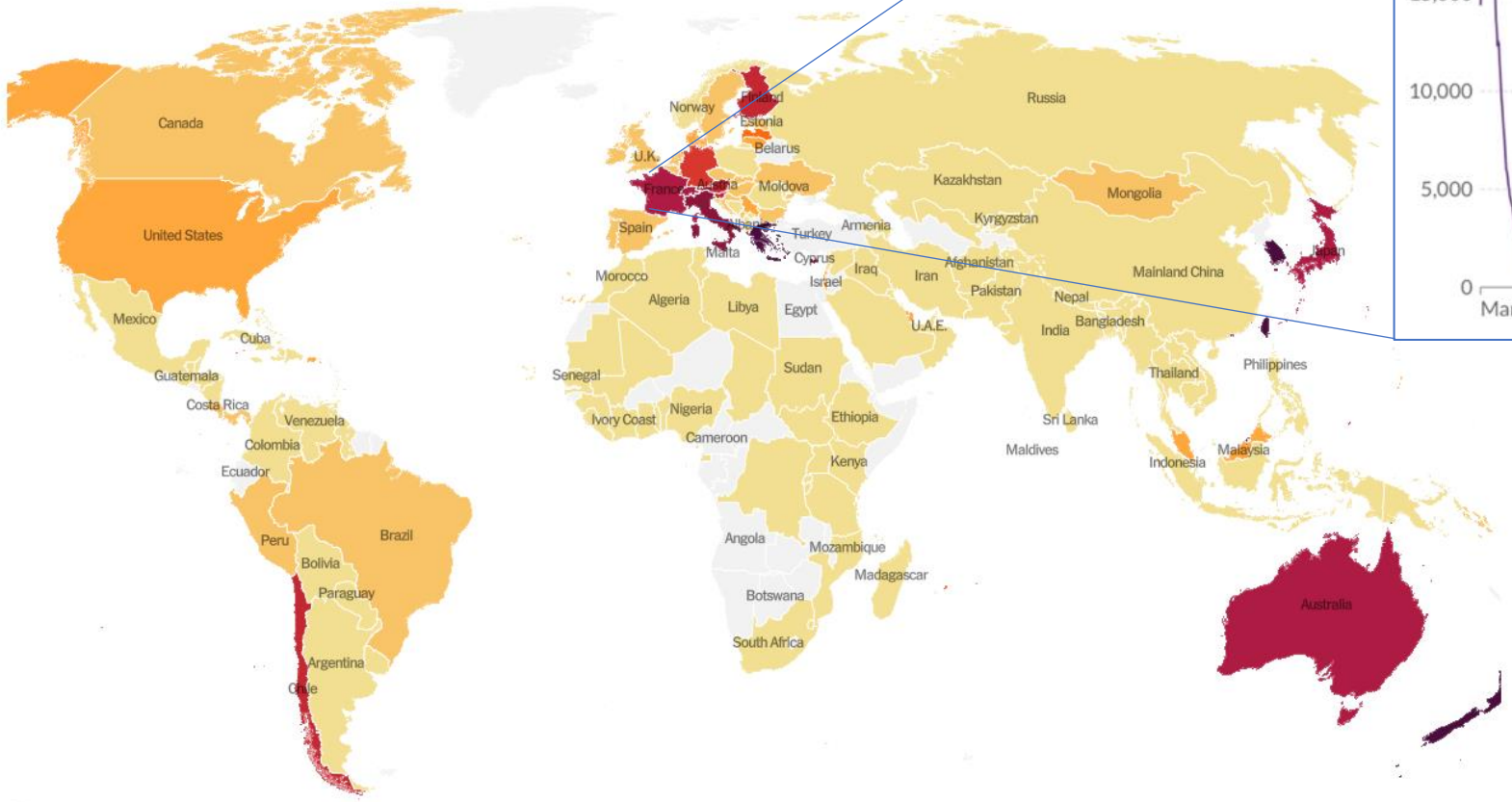


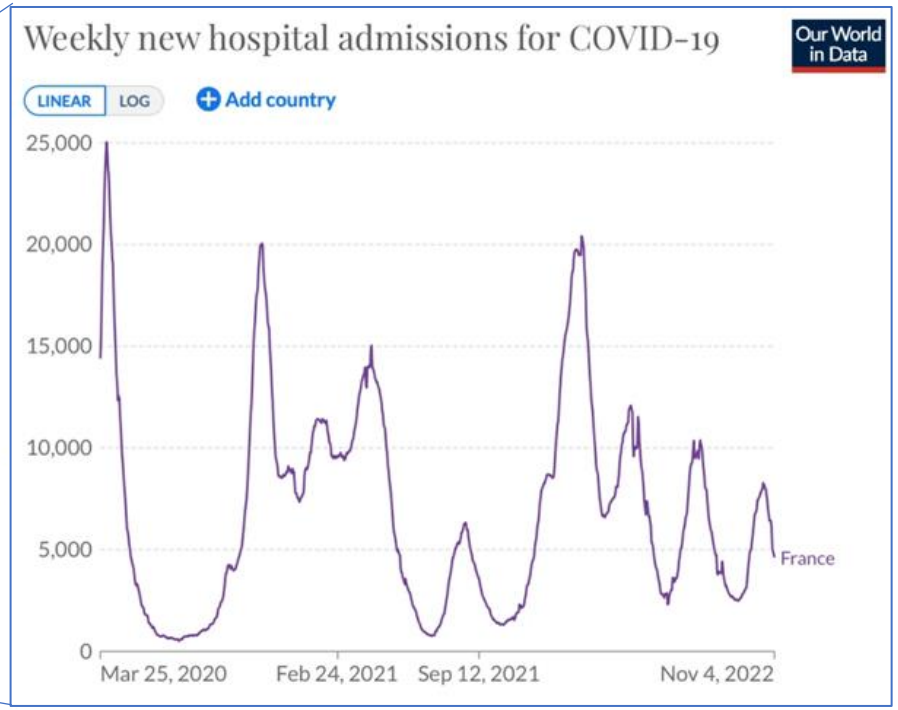
11/16/22



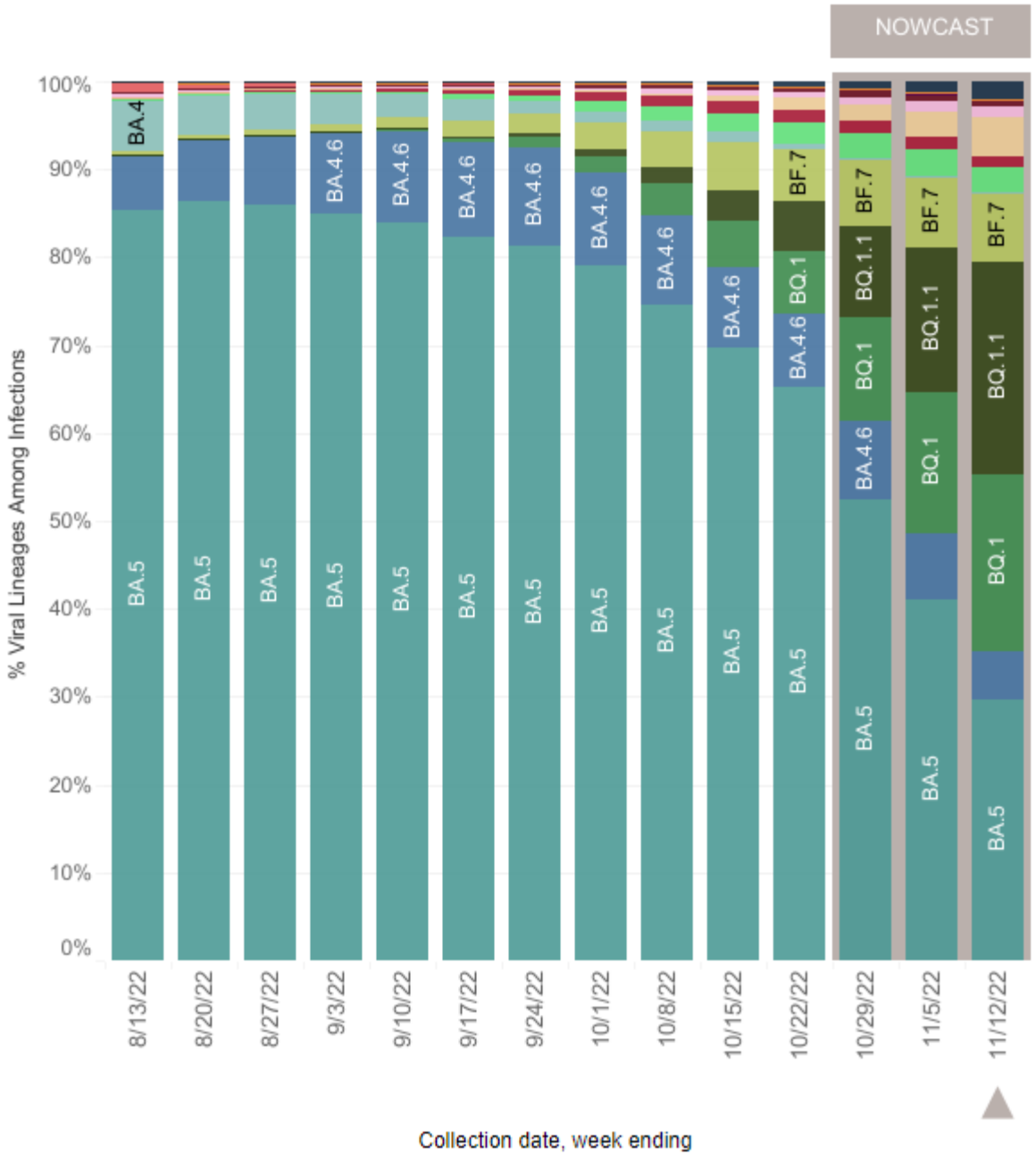
https://www.nytimes.com/interactive/2021/us/coronavirus-us-cases.html

World Hot Spots





United States: 8/7/2022 – 11/12/2022



United States: 11/6/2022 – 11/12/2022 NOWCAST

USA

WHO label	Lineage #	US Class	%Total	95%PI
Omicron	BA.5	VOC	29.7%	27.2-32.3%
	BQ.1.1	VOC	24.1%	21.3-27.3%
	BQ.1	VOC	20.1%	17.2-23.4%
	BF.7	VOC	7.8%	6.8-9.0%
	BA.4.6	VOC	5.5%	5.0-6.2%
	BN.1	VOC	4.3%	3.0-6.2%
	BA.5.2.6	VOC	2.9%	2.5-3.4%
	BA.2	VOC	1.3%	0.8-1.9%
	BA.2.75	VOC	1.2%	1.0-1.5%
	BA.2.75.2	VOC	0.9%	0.6-1.2%
	BA.4	VOC	0.1%	0.1-0.1%
	BA.1.1	VOC	0.0%	0.0-0.0%
	B.1.1.529	VOC	0.0%	0.0-0.0%
	BA.2.12.1	VOC	0.0%	0.0-0.0%
Delta	B.1.617.2	VBM	0.0%	0.0-0.0%
Other	Other*		2.0%	1.1-3.3%

* Enumerated lineages are US VOC and lineages circulating above 1% nationally in at least one week period. "Other" represents the aggregation of lineages which are circulating <1% nationally during all weeks displayed.

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

\# BA.1, BA.3 and their sublineages (except BA.1.1 and its sublineages) are aggregated with B.1.1.529. Except BA.2.12.1, BA.2.75, BA.2.75.2, BN.1 and their sublineages, BA.2 sublineages are aggregated with BA.2. Except BA.4.6, sublineages of BA.4 are aggregated to BA.4. Except BF.7, BA.5.2.6, BQ.1 and BQ.1.1, sublineages of BA.5 are aggregated to BA.5. For all the lineages listed in the above table, their sublineages are aggregated to the listed parental lineages respectively. Previously, BN.1 was aggregated with BA.2.75. Lineages BA.2.75.2, BN.1, BA.4.6, BF.7, BA.5.2.6 and BQ.1.1 contain the spike substitution R346T.

Current Omicron Variants

- Current BQ 1.1, BQ1 and BA5 make up 75% in US
- One to watch: **XBB**
- Recent outbreak in Singapore where >92% are vaccinated; 80% have booster
  - Though, there wasn't a big spike in hospitalizations
- The most immune evasive variant tested in preliminary neutralization studies
- Resistant to current monoclonal antibody treatments
- Predicted to have one of the largest relative growth rates
- There are no signs that XBB causes more severe COVID illness.

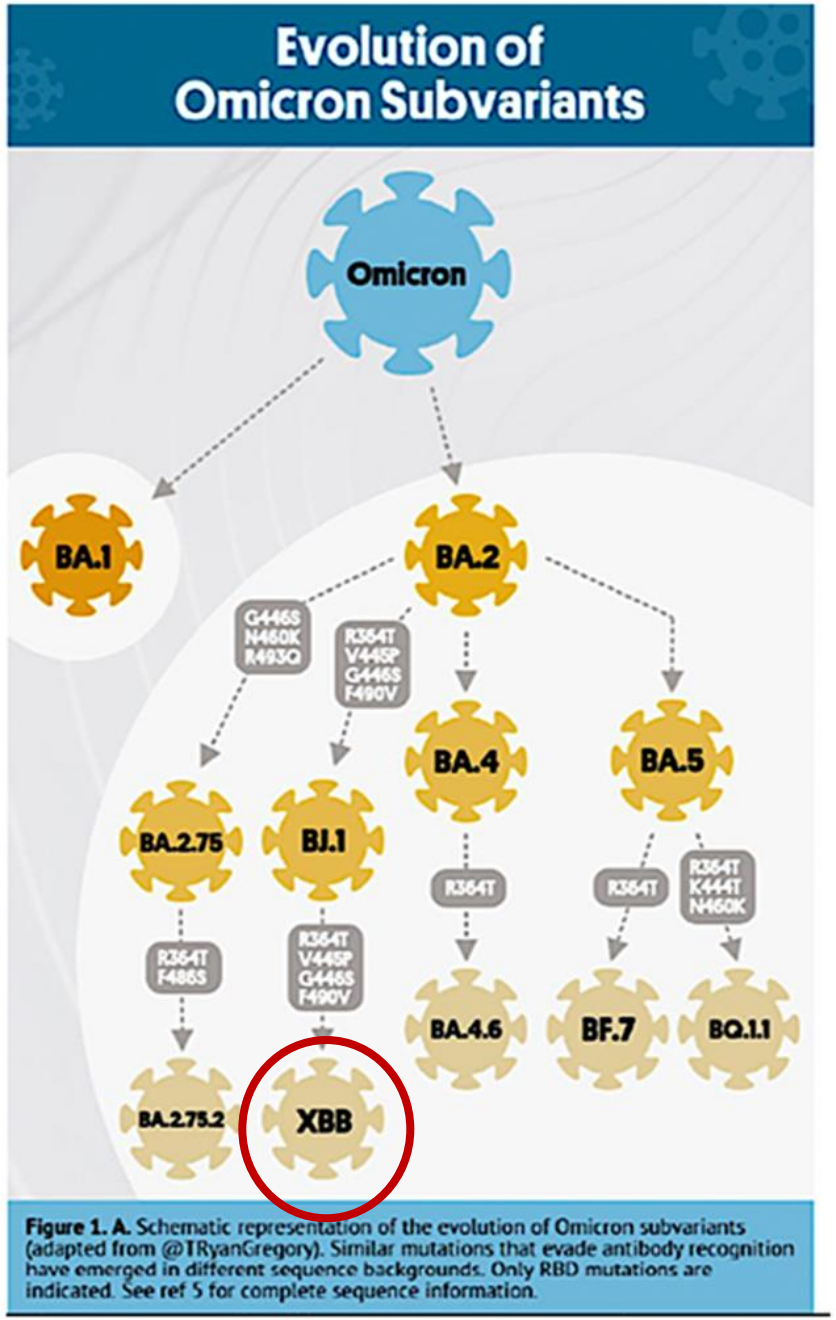


Figure 1. A. Schematic representation of the evolution of Omicron subvariants (adapted from @TRyanGregory). Similar mutations that evade antibody recognition have emerged in different sequence backgrounds. Only RBD mutations are indicated. See ref 5 for complete sequence information.

Pfizer and BioNTech Announce Updated Clinical Data for Omicron BA.4/BA.5-Adapted Bivalent Booster Demonstrating Substantially Higher Immune Response in Adults Compared to the Original COVID-19 Vaccine

- ***Per Pfizer PR*:** Bivalent booster elicited approximately 4-fold higher neutralizing antibody titers against Omicron BA.4/BA.5 sub-lineages compared to the original COVID-19 vaccine in individuals older than 55 years of age
- One-month after a 30-µg booster dose of the bivalent vaccine, Omicron BA.4/BA.5-neutralizing antibody titers increased 13.2-fold from pre-booster levels in adults older than 55 years of age and 9.5-fold in adults 18 to 55 years of age, compared to a 2.9-fold increase in adults older than 55 years or age who received the original booster vaccine
- Safety and tolerability profile of bivalent booster remains favorable and similar to the original Covid-19 vaccine

Moderna Bivalent COVID-19 Booster Generates Higher Levels Of Neutralizing Antibodies Against Omicron Subvariants Than Previous Booster

- Study from Moderna suggests that its updated coronavirus booster generates significantly higher levels of neutralizing antibodies against the subvariant, BA.5, and another Omicron subvariant, BA.4, than the previous booster, the company said
- Levels shot up 15 times higher than their pre-booster levels, Moderna said in a news release
- In a sub-study of 40 participants, lab tests suggested that the new booster also produced robust levels of antibodies against that surging subvariant, BQ.1.1

Bivalent Booster shows efficacy

Bivalent BA.5 Booster Neutralizing Antibody Lab Assessments

Lab	Assay	Bivalent vs. BA.5 Compared to Original	Bivalent vs. BQ.1.1 Compared to Original
Suthar	Live virus	4-fold improved	~10-fold increased (vs 1 booster)
Shi	Live virus	3-fold improved	Low, but 3-fold GMT
Pfizer	Live virus	4-fold improved	Not assessed
Ho	Pseudovirus	Minimal difference	Not assessed
Barouch	Pseudovirus	1.3-fold increase	Not assessed
Barouch	Pseudovirus	No difference	Modest ~1.2-fold increase

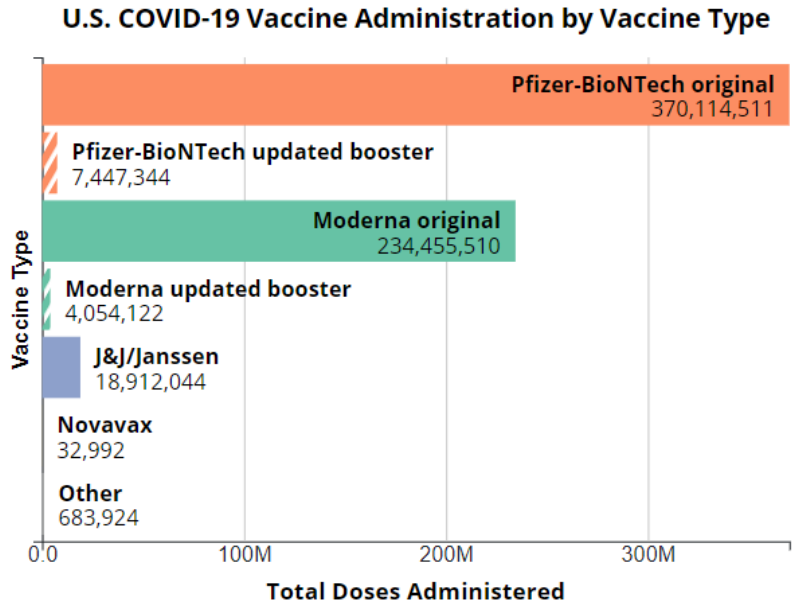
Though, these are not clinical endpoints – just antibody levels…
Still more reasons to get the booster.

https://erictopol.substack.com/p/daily-pandemic-briefing-4-november

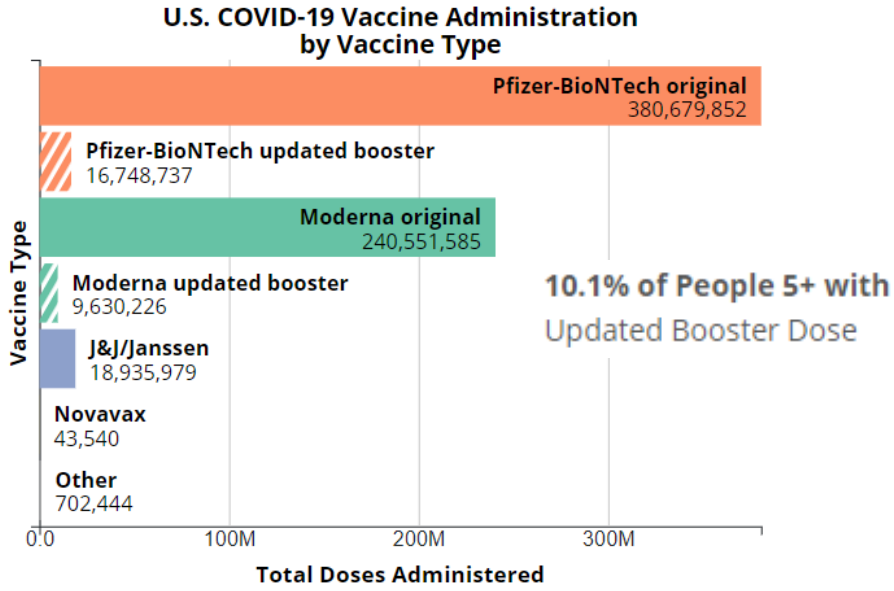
Slow Uptake of New Boosters

- According to the latest data shared by the CDC, only 25 million eligible people have received an updated booster. That is ~10% of the 240 million people who qualify – though it has doubled in the last 6 weeks
- A survey by the Kaiser Family Foundation points at important communication gaps when it as comes to the omicron booster. As of the end of September, about half the population had heard only a little, or nothing at all, about the booster shot. <u>40% of responders didn't know whether the booster was available to them</u>

September



November

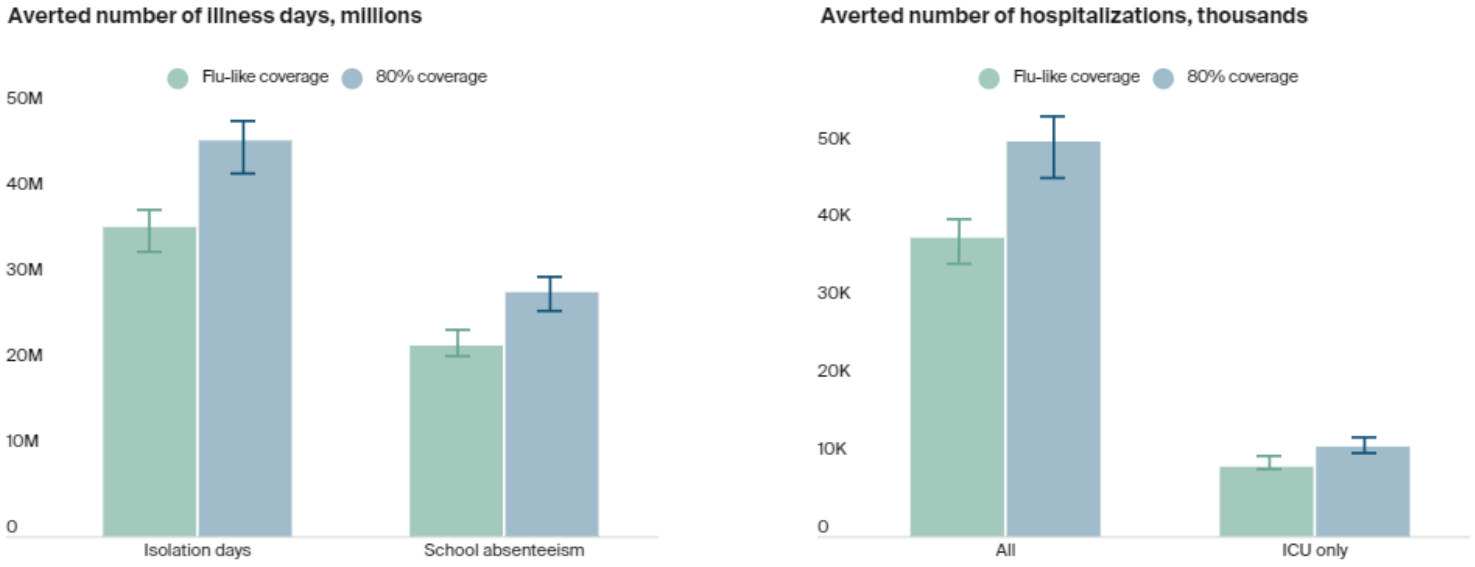


https://www.kff.org/coronavirus-covid-19/poll-finding/kff-covid-19-vaccine-monitor-september-2022/

https://covid.cdc.gov/covid-data-tracker/#vaccinations_vacc-people-additional-dose-totalpop

Recent Analysis Favors “Boosting” the Booster in Pediatrics

Estimated Pediatric Isolation Days, Days of School Absenteeism, and Pediatric Hospitalizations Averted Under Different Booster Vaccination Scenarios, October 1, 2022, Through March 31, 2023

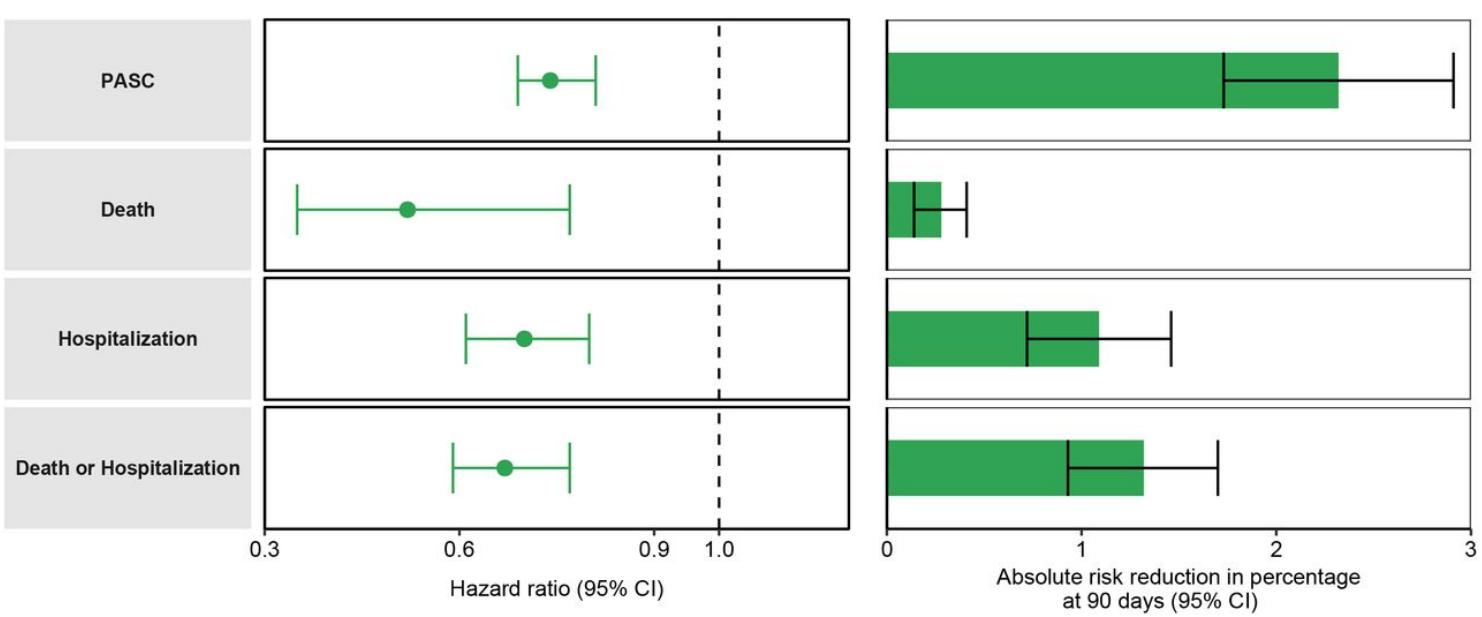


https://www.commonwealthfund.org/blog/2022/how-covid-booster-campaign-could-keep-kids-out-of-hospital-in-school

- Study estimated that a booster campaign that achieved age-specific coverage similar to the 2020–21 influenza vaccination levels (Scenario 1) would avert more than 36 million pediatric isolation days and more than 22 million days of school absenteeism.
- A more ambitious booster campaign reaching 80 percent of eligible individuals of all ages (Scenario 2) would avert more than 46 million pediatric isolation days and almost 29 million days of school absenteeism

Nirmatrelvir and the Risk of Post-Acute Sequelae of COVID-19

- Pre-print VA study of those who were treated with oral nirmatrelvir within 5 days after the positive test (n=9217) and those who received no COVID-19 antiviral or antibody treatment during the acute phase of SARS-CoV-2 infection (control group, n= 47,123)
- Results show that in people with SARS-CoV-2 infection who had at least 1 risk factor for progression to severe COVID-19 illness, treatment with nirmatrelvir within 5 days of a positive SARS-CoV-2 test was associated with reduced risk of PASC regardless of vaccination status and history of prior infection



Xie et al., doi: https://doi.org/10.1101/2022.11.03.22281783

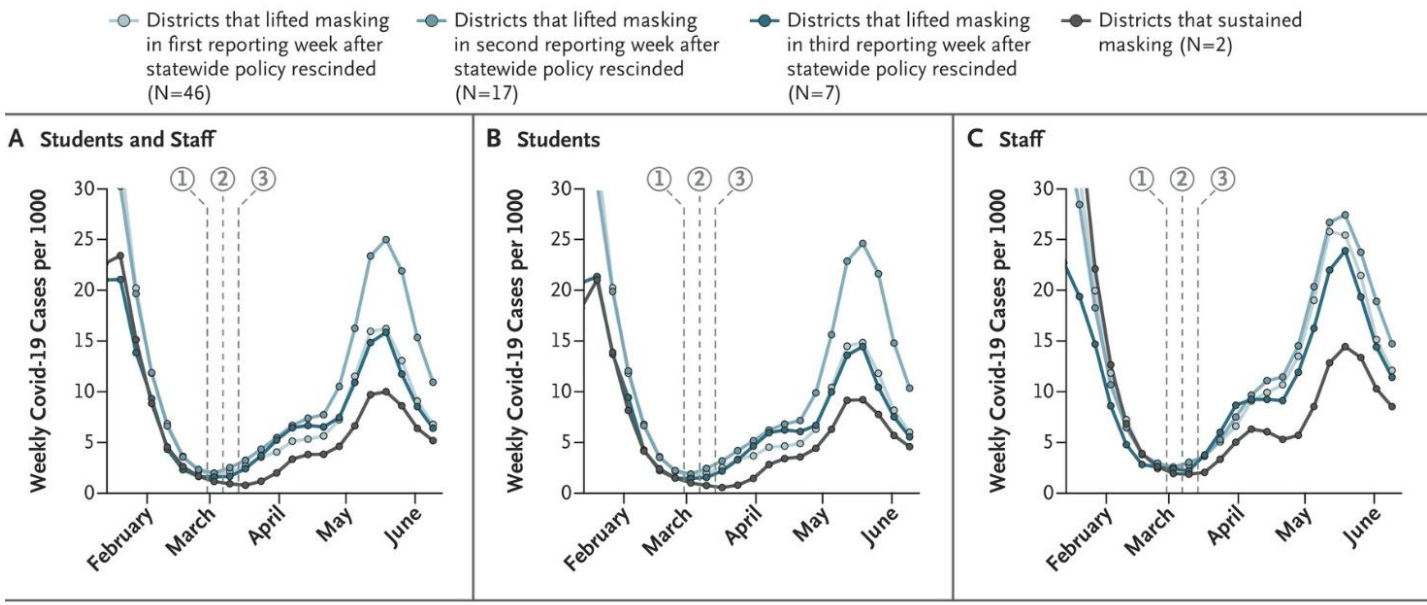
Complexity and Challenges of the Clinical Diagnosis and Management of Long COVID

- VA study using qualitative analysis of documentation from EHRs of 200 patients
- 2 dominant themes were identified:
  - (1) Clinical uncertainty, in that it was often unclear whether particular symptoms could be attributed to long COVID, given the medical complexity and functional limitations of many patients and absence of specific markers for this condition, which could lead to ongoing monitoring, diagnostic testing, and specialist referral
  - (2) Care fragmentation, describing how post–COVID-19 care processes were often siloed from and poorly coordinated with other aspects of care and could be burdensome to patients

JAMA Netw Open. 2022;5(11):e2240332. doi:10.1001/jamanetworkopen.2022.40332

Lifting Universal Masking in Schools — Covid-19 Incidence among Students and Staff

- During the 15 weeks after the statewide masking policy was rescinded, the lifting of masking requirements was associated with an additional 44.9 cases per 1000 students and staff (95% confidence interval, 32.6 to 57.1), which corresponded to an estimated 11,901 cases and to 29.4% of the cases in all districts during that time.
- Districts that chose to sustain masking requirements longer tended to have school buildings that were older/worse condition and to have more students per classroom
- These districts had higher percentages of low-income students, students with disabilities, and students who were English-language learners, as well as higher percentages of Black and Latinx students and staff.
- Results support universal masking as an important strategy for reducing Covid-19 incidence in schools and loss of in-person school days.

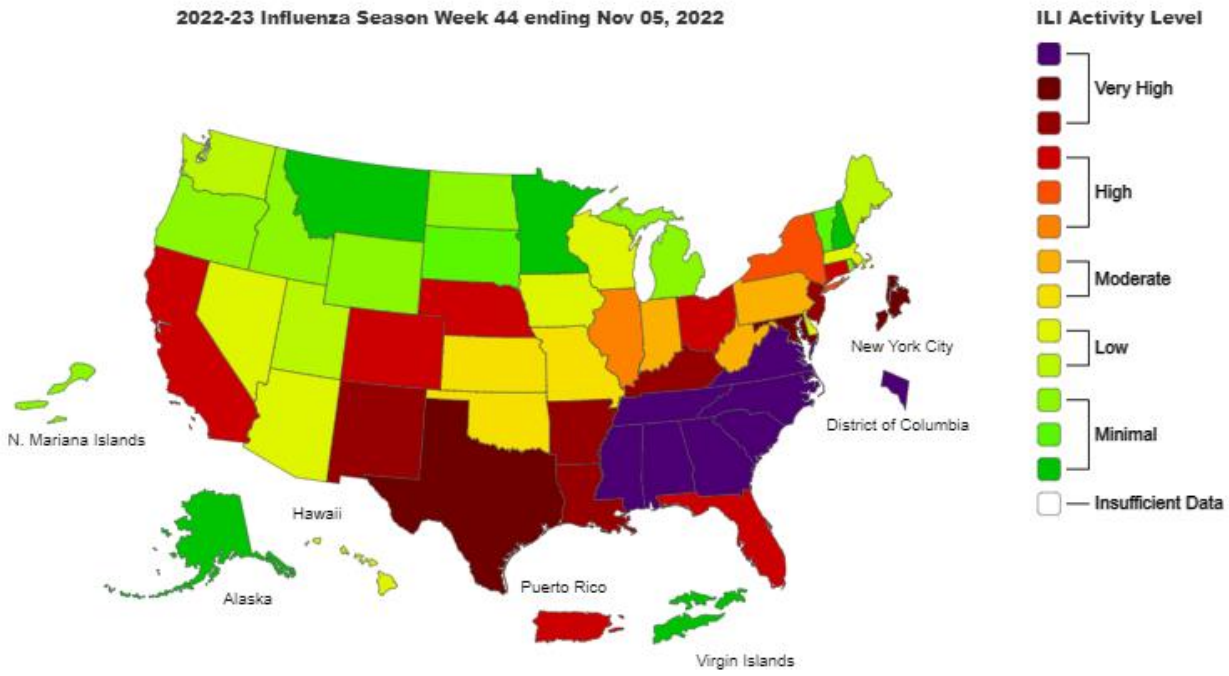


Authors believe that universal masking may be especially useful for mitigating effects of structural racism in schools, including potential deepening of educational inequities.

Nov 9, 2022 DOI: 10.1056/NEJMoa2211029

Other Respiratory Viruses Are Lurking…

- Winter is coming…
- Influenza and RSV continue to be a problem across much of the US
- Will people voluntarily start masking again?
- One public health official:
  - *Think of a mask like an umbrella – you use it when you need it.*



Questions?

Thank you!

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

Resources & recording of the session

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

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