COVID-19 Series for Free & Charitable Clinics

March 16, 2023

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AT THE FOREFRONT UChicago Medicine

Vaccinate with Confidence

A National Strategy to Reinforce Confidence in COVID-19 Vaccines

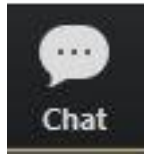
CDC's Strategy: **Empower Healthcare Personnel**: Promote confidence among healthcare personnel in their decisions to get vaccinated and recommend the vaccination to their patients.

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 **6 State Associations**: to consult directly with clinic personnel in highly vulnerable areas with low vaccination rates.

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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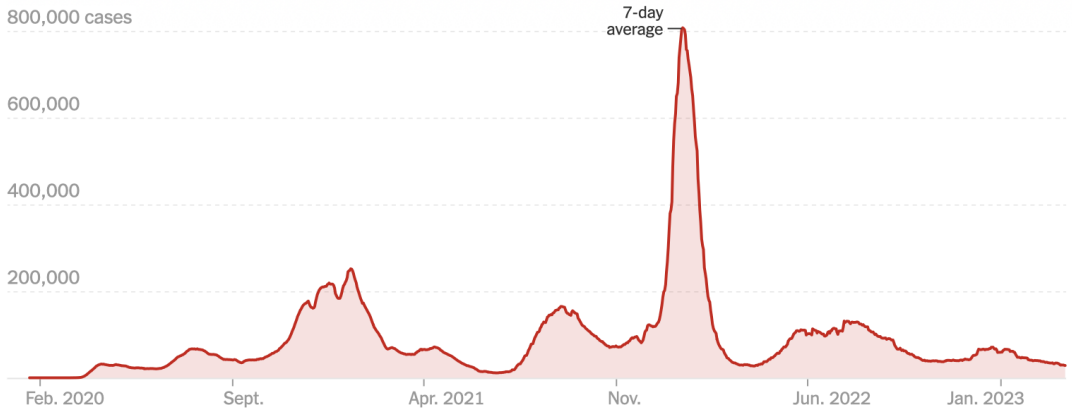
Disclosures

- We have no relevant financial interests to disclose.

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

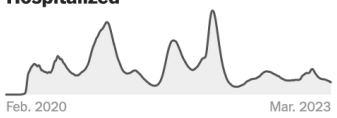
New reported cases

All time | Last 90 days

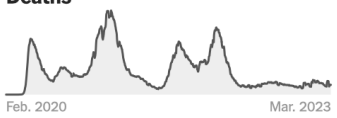


Test positivity rate

Hospitalized

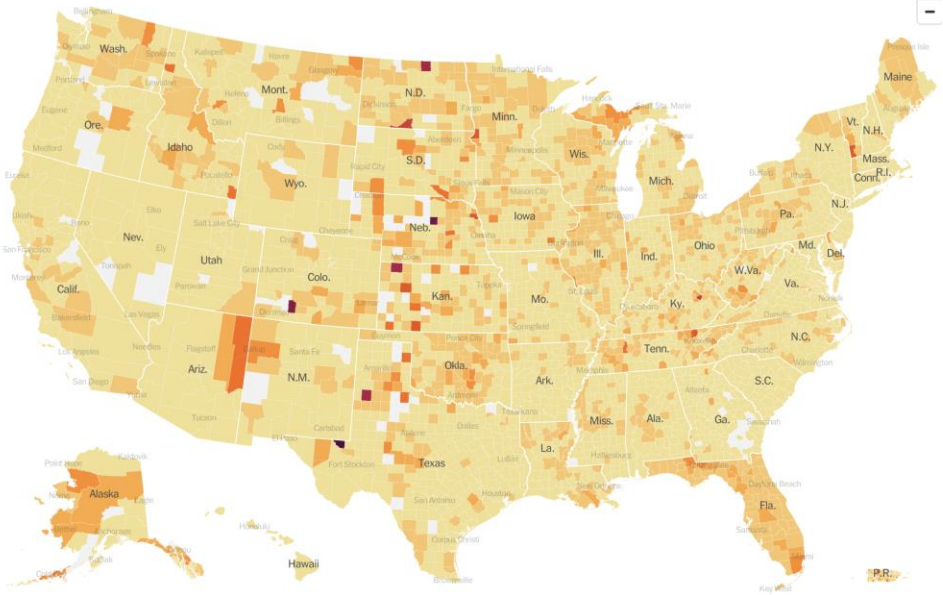


Deaths

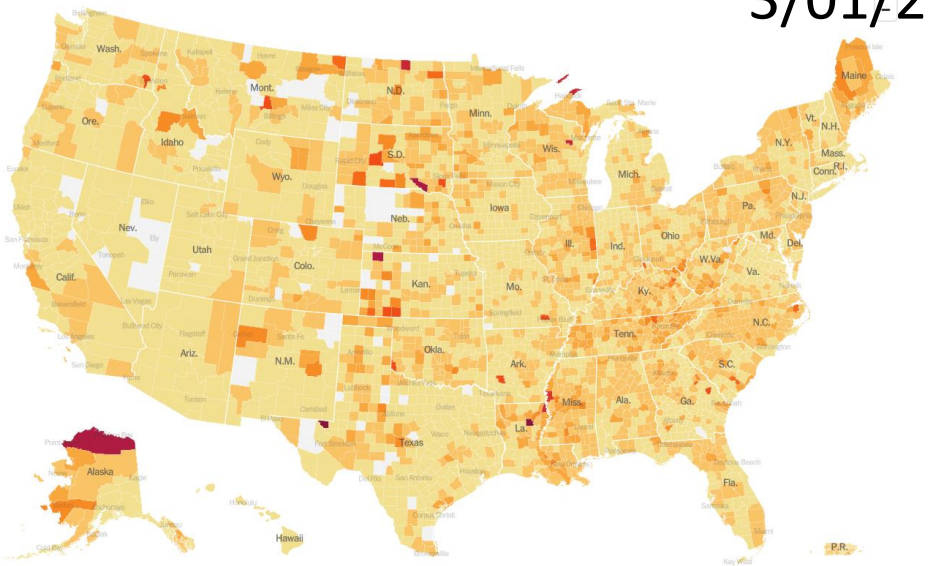


	DAILY AVG. ON MAR. 14	PER 100,000	14-DAY CHANGE
Cases	28,313	9	−18%
Test positivity	7.5%	—	−17%
Hospitalized	23,398	7	−14%
In I.C.U.s	3,117	<1	−12%
Deaths	387	<1	−13%

3/15/23



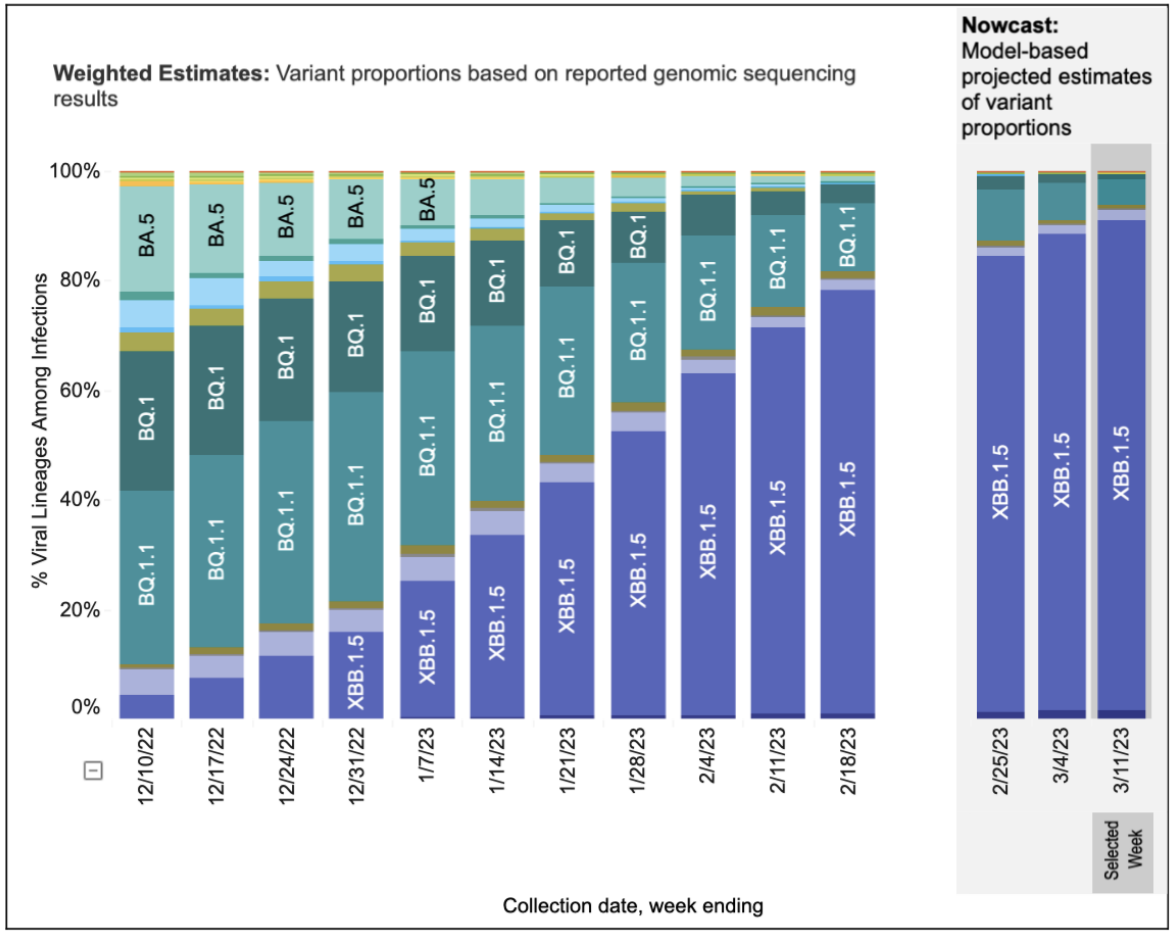
3/01/23



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

Weighted and Nowcast Estimates in United States for Weeks of 12/4/2022 – 3/11/2023

Hover over (or tap in mobile) any lineage of interest to see the amount of uncertainty in that lineage's estimate.



Nowcast Estimates in United States for 3/5/2023 – 3/11/2023

USA

WHO label	Lineage #	US Class	%Total	95%PI
Omicron	XBB.1.5	VOC	89.5%	85.8-92.3%
	BQ.1.1	VOC	4.7%	3.3-6.8%
	XBB	VOC	2.1%	1.1-3.9%
	XBB.1.5.1	VOC	1.6%	1.0-2.4%
	BQ.1	VOC	1.0%	0.7-1.5%
	CH.1.1	VOC	0.7%	0.4-1.0%
	BN.1	VOC	0.1%	0.1-0.2%
	BA.2	VOC	0.1%	0.0-1.1%
	BA.5	VOC	0.1%	0.0-0.1%
	BF.7	VOC	0.0%	0.0-0.1%
	BA.5.2.6	VOC	0.0%	0.0-0.0%
	BA.2.75	VOC	0.0%	0.0-0.0%
	BF.11	VOC	0.0%	0.0-0.0%
	BA.2.75.2	VOC	0.0%	0.0-0.0%
	B.1.1.529	VOC	0.0%	0.0-0.0%
	BA.4.6	VOC	0.0%	0.0-0.0%
	BA.2.12.1	VOC	0.0%	0.0-0.0%
	BA.4	VOC	0.0%	0.0-0.0%
	BA.1.1	VOC	0.0%	0.0-0.0%
Delta	B.1.617.2	VBM	0.0%	0.0-0.0%
Other	Other*		0.1%	0.0-0.1%

United States

At a Glance

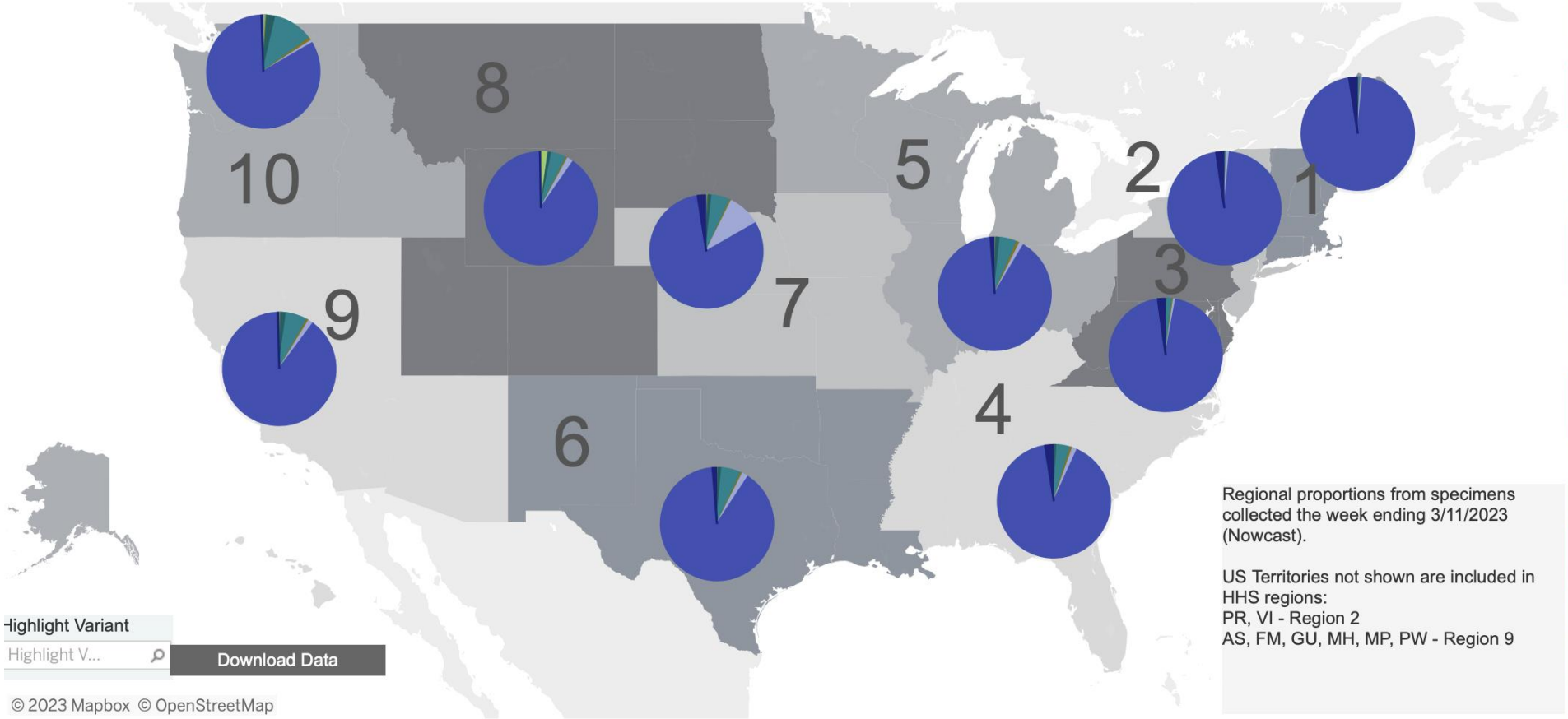
Cases Total
Case Trends
103,672,529

Deaths Total
Death Trends
1,119,762

Current **Hosp.**
Admission Trends
16,354

16.3% of People with
Updated Booster Dose

Nowcast Estimates in for 3/5/2023 – 3/11/2023 by HHS Region



Regional proportions from specimens collected the week ending 3/11/2023 (Nowcast).

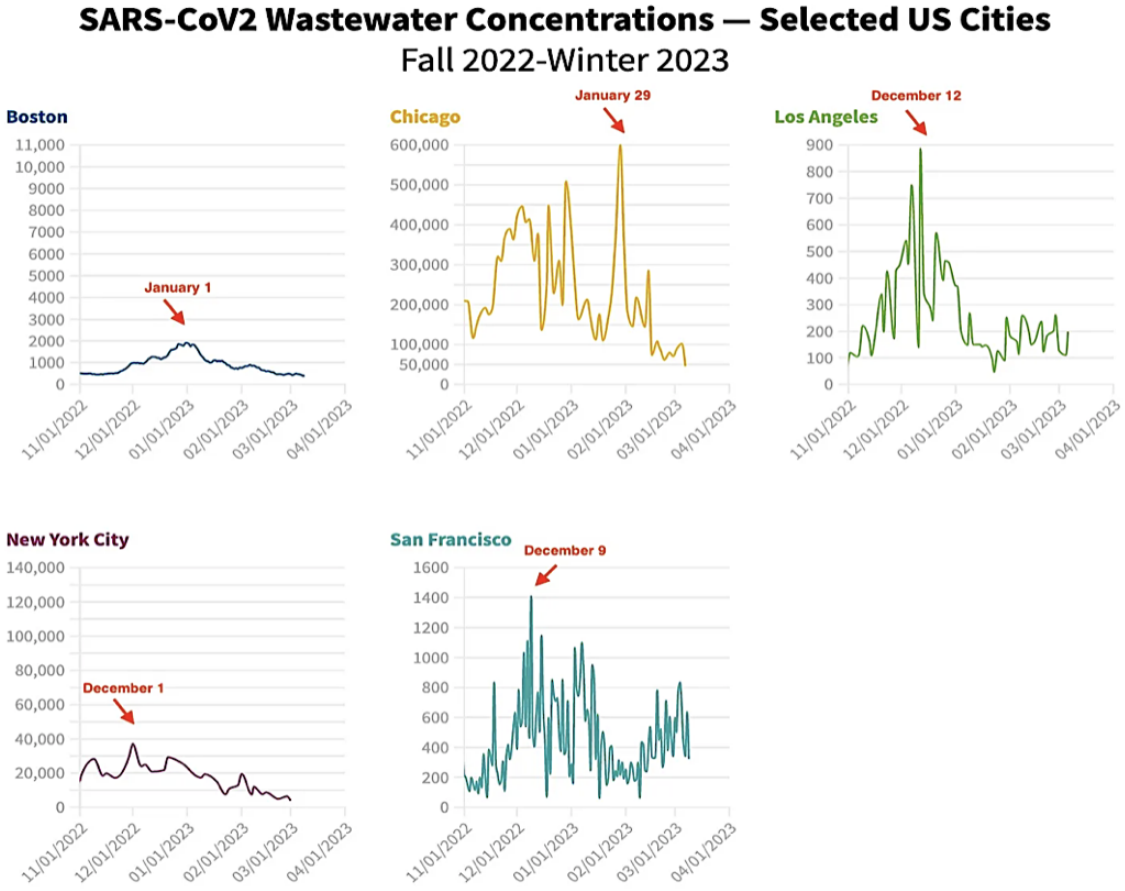
US Territories not shown are included in HHS regions:
PR, VI - Region 2
AS, FM, GU, MH, MP, PW - Region 9

Lineages called using pangolin v4.2, pangolin-data v1.18.1.1 and usher v0.6.2.

Updated March 10, 2023

Is COVID Becoming Seasonal?

- The question—now that most people's immune systems have seen the spike protein of SARS-CoV-2—is whether we can we expect a more predictable seasonal pattern?
- Seems we have emerged from the third winter in the US?
- Wastewater data certainly suggest that winter waves have crested and receded in 3 successive years



https://insidemedicine.substack.com/p/data-snapshot-has-winter-past-covid

Did I say, “Masks Don’t Work?”

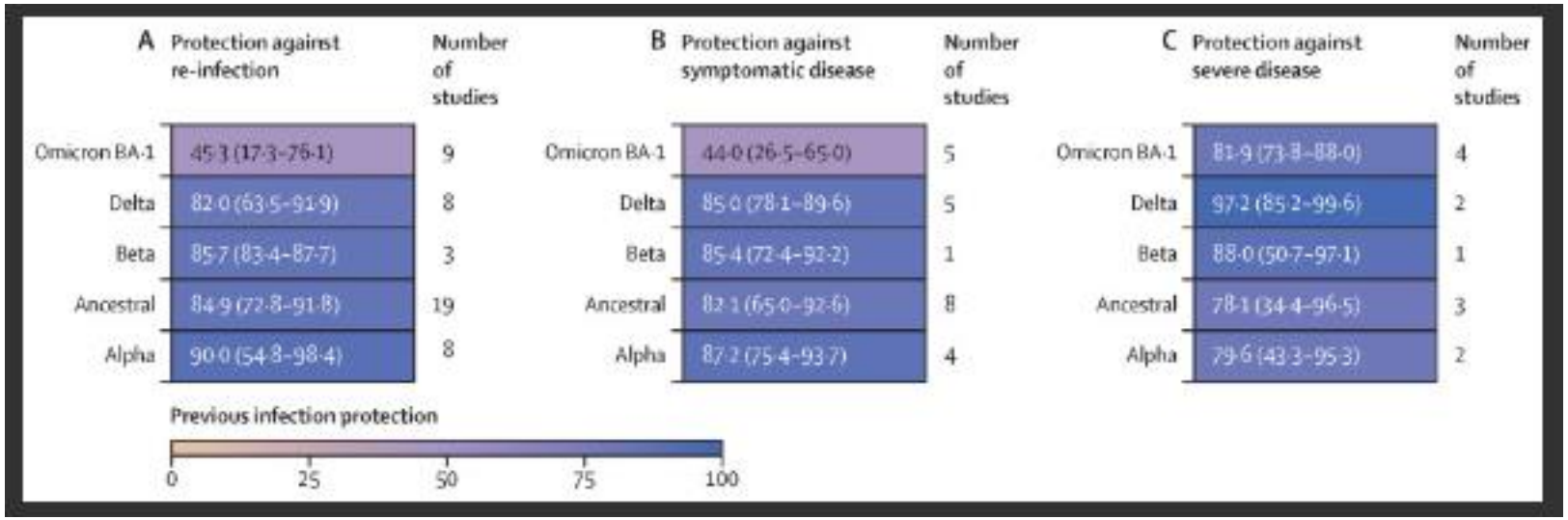
- Karla Soares-Weiser, Editor-in-Chief of the Cochrane Library, has responded on behalf of Cochrane
- The study has been widely misinterpreted.

> *Many commentators have claimed that a recently-updated Cochrane Review shows that 'masks don't work', which is an inaccurate and misleading interpretation.*
>
> *It would be accurate to say that the review examined whether interventions to promote mask wearing help to slow the spread of respiratory viruses, and that the results were inconclusive. Given the limitations in the primary evidence, the review is not able to address the question of whether mask-wearing itself reduces people's risk of contracting or spreading respiratory viruses.*
>
> *The review authors are clear on the limitations in the abstract: 'The high risk of bias in the trials, variation in outcome measurement, and relatively low adherence with the interventions during the studies hampers drawing firm conclusions.' Adherence in this context refers to the number of people who actually wore the provided masks when encouraged to do so as part of the intervention. For example, in the most heavily-weighted trial of interventions to promote community mask wearing, 42.3% of people in the intervention arm wore masks compared to 13.3% of those in the control arm.*
>
> *The original Plain Language Summary for this review stated that 'We are uncertain whether wearing masks or N95/P2 respirators helps to slow the spread of respiratory viruses based on the studies we assessed.' This wording was open to misinterpretation, for which we apologize. While scientific evidence is never immune to misinterpretation, we take responsibility for not making the wording clearer from the outset. We are engaging with the review authors with the aim of updating the Plain Language Summary and abstract to make clear that the review looked at whether interventions to promote mask wearing help to slow the spread of respiratory viruses.*

https://www.cochrane.org/news/statement-physical-interventions-interrupt-or-reduce-spread-respiratory-viruses-review

Natural Immunity

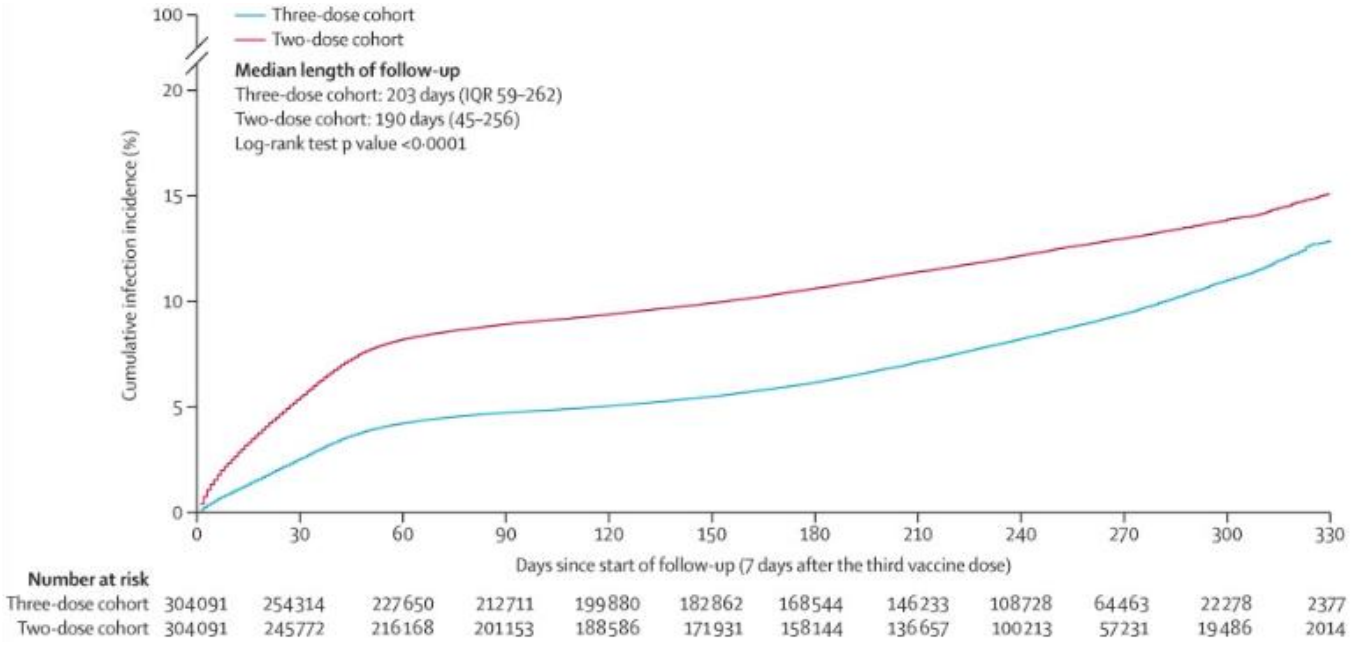
- Largest review and meta-analysis assessing the extent of protection following COVID-19 infection by variant and how durable that protection is against different variants, including 65 studies from 19 countries.
- For people who have been infected with COVID-19 at least once before, natural immunity against severe disease (hospitalization and death) was strong and long-lasting for all variants (88% or greater at 10 months post infection).
- Past infection with pre-Omicron variants provided substantially reduced natural immunity protection against reinfection with Omicron BA.1 (36% at 10 months after infection).
- **The researchers say we should recognize the natural immunity in people who have recently been infected with COVID-19, but warn that their findings <u>should NOT discourage vaccination because it is the safest way to acquire immunity</u>.**



DOI: https://doi.org/10.1016/S0140-6736(22)02465-5

Long-term COVID-19 booster effectiveness by infection history and clinical vulnerability and immune imprinting

- There were 20 528 incident infections in the three-dose cohort and 30 771 infections in the two-dose cohort. Study done in Qutar.
- Booster effectiveness relative to primary series was 26·2% (95% CI 23·6–28·6) against infection and 75·1% (40·2–89·6) against severe, critical, or fatal COVID-19, during 1-year follow-up after the booster.
- Among people clinically vulnerable to severe COVID-19, effectiveness was 34·2% (27·0–40·6) against infection and 76·6% (34·5–91·7) against severe, critical, or fatal COVID-19.
- Effectiveness against infection was highest at 61·4% (60·2–62·6) in the first month after the booster but waned thereafter and was modest at only 15·5% (8·3–22·2) by the sixth month.
- In the seventh month and thereafter, coincident with BA.4/BA.5 and BA.2·75* subvariant incidence, effectiveness was progressively negative albeit with wide CIs.
- Protection against omicron infection waned after the booster, and eventually suggested a possibility for negative immune imprinting. However, boosters substantially reduced infection and severe COVID-19, particularly among individuals who were clinically vulnerable, affirming the public health value of booster vaccination.



→ **Updated boosters may blunt the imprinting effect**

https://doi.org/10.1016/S1473-3099(23)00058-0

Omicron less likely than wild-type virus to result in long COVID?

- Evaluated the trajectory of long-COVID symptoms in 1,201 previously infected and uninfected HCWs from nine Swiss healthcare networks in March 2021 (Q1), September 2021 (Q2), and June 2022 (Q3).
- 157 HCWs infected with the wild-type virus were 67% more likely than uninfected participants to report persistent symptoms, falling to 37% in Q3. The most common symptoms were loss of smell or taste, tiredness/weakness, burnout/exhaustion, and hair loss
- Rates of long COVID among the 429 HCWs with Omicron infections were the same as those of controls for symptoms and 8% higher for FSS.
- **PCC symptoms after Wild-type infection declined over time, but were still present at 18 months, whereas primary Omicron infection did not increase symptoms. Neither Omicron reinfections nor SARS-CoV-2 vaccination had any influence.**

https://www.cidrap.umn.edu/covid-19/omicron-less-likely-wild-type-virus-result-long-covid-study-suggests

Figure 1

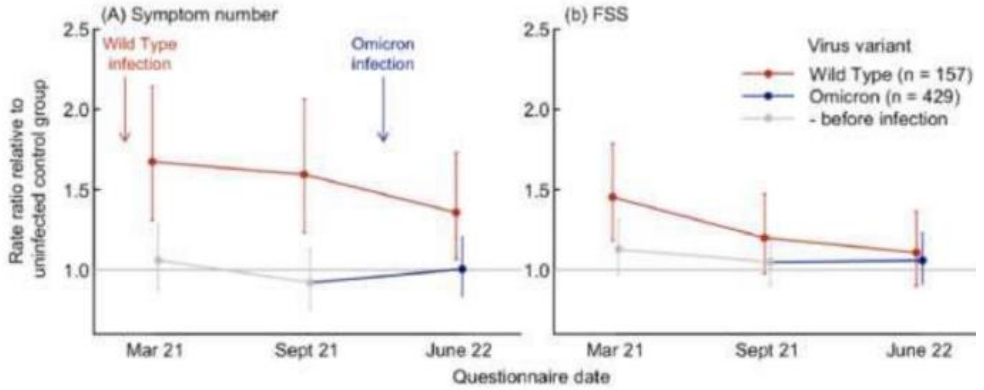


Figure 1. Evolution of number of PCC symptoms (A) and Fatigue Severity Scale (B) relative to uninfected controls (horizontal grey line) by SARS-CoV-2 Wild-type (red) and primary Omicron BA.1 infection (blue).

Figure 2

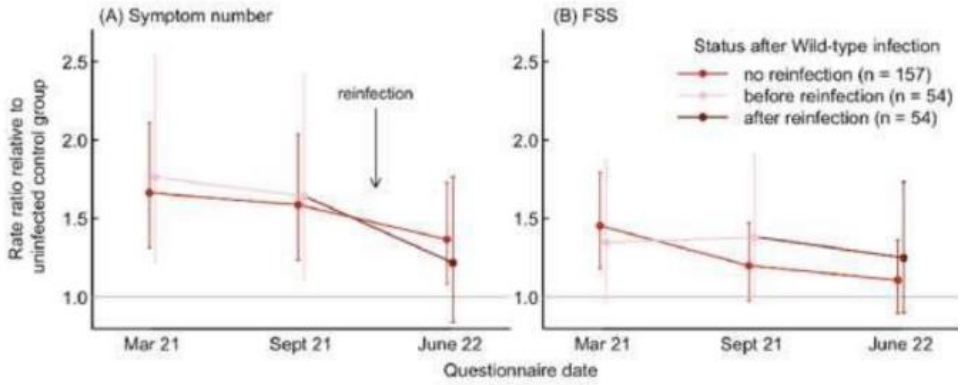
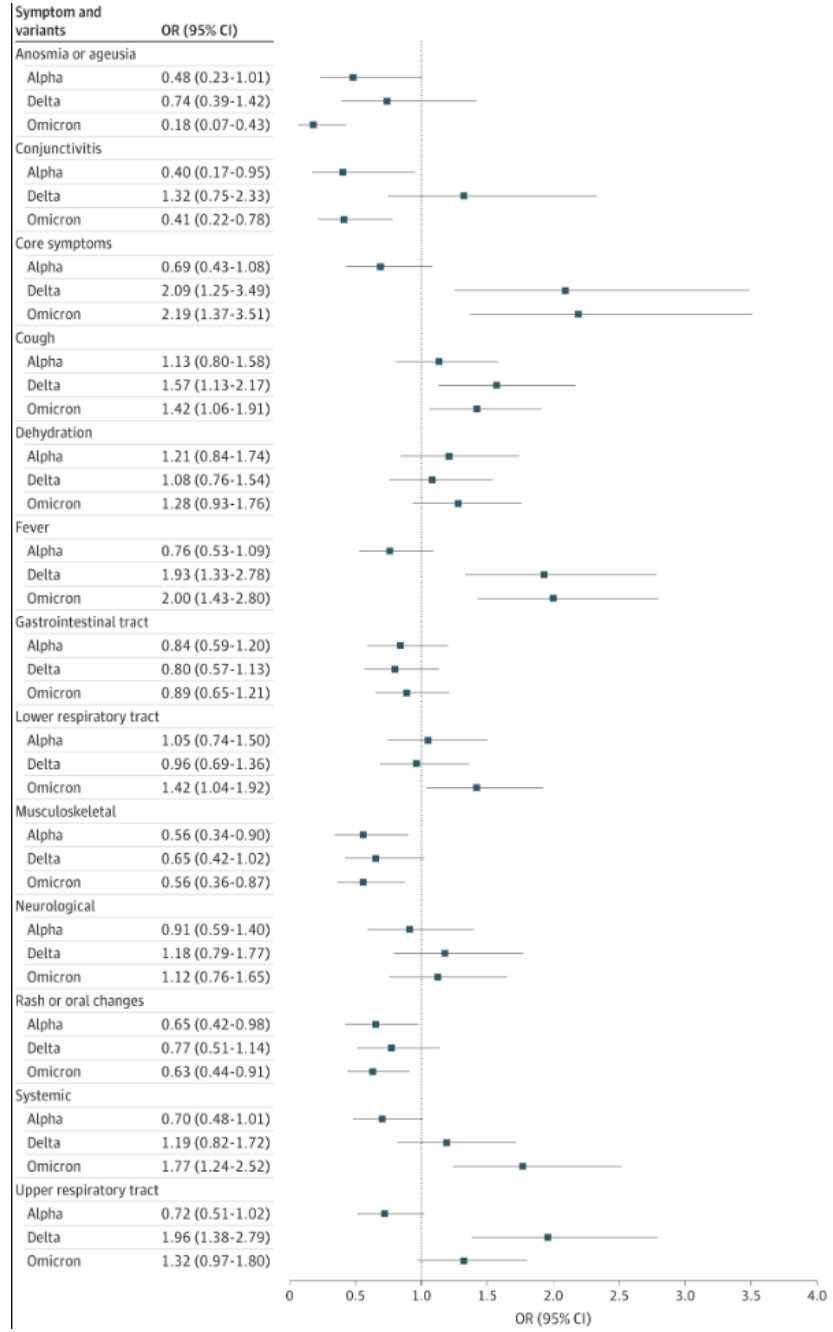


Figure 2. Evolution of number of PCC symptoms (A) and Fatigue Severity Scale (B) relative to uninfected controls (horizontal grey line) after SARS-CoV-2 Wild-type infection with or without reinfection with Omicron BA.1.

Comparison of Symptoms Associated With SARS-CoV-2 Variants Among Children in Canada

- The findings of this cohort study of SARS-CoV-2 variants suggest that the Omicron and Delta variants were more strongly associated with fever and cough than the original-type virus and the Alpha variant. Children with Omicron variant infection were more likely to report lower respiratory tract symptoms and systemic manifestations, undergo chest radiography, and receive interventions. No differences were found in undesirable outcomes (ie, hospitalization, intensive care unit admission) across variants.



JAMA Netw Open. 2023;6(3):e232328. doi:10.1001/jamanetworkopen.2023.2328

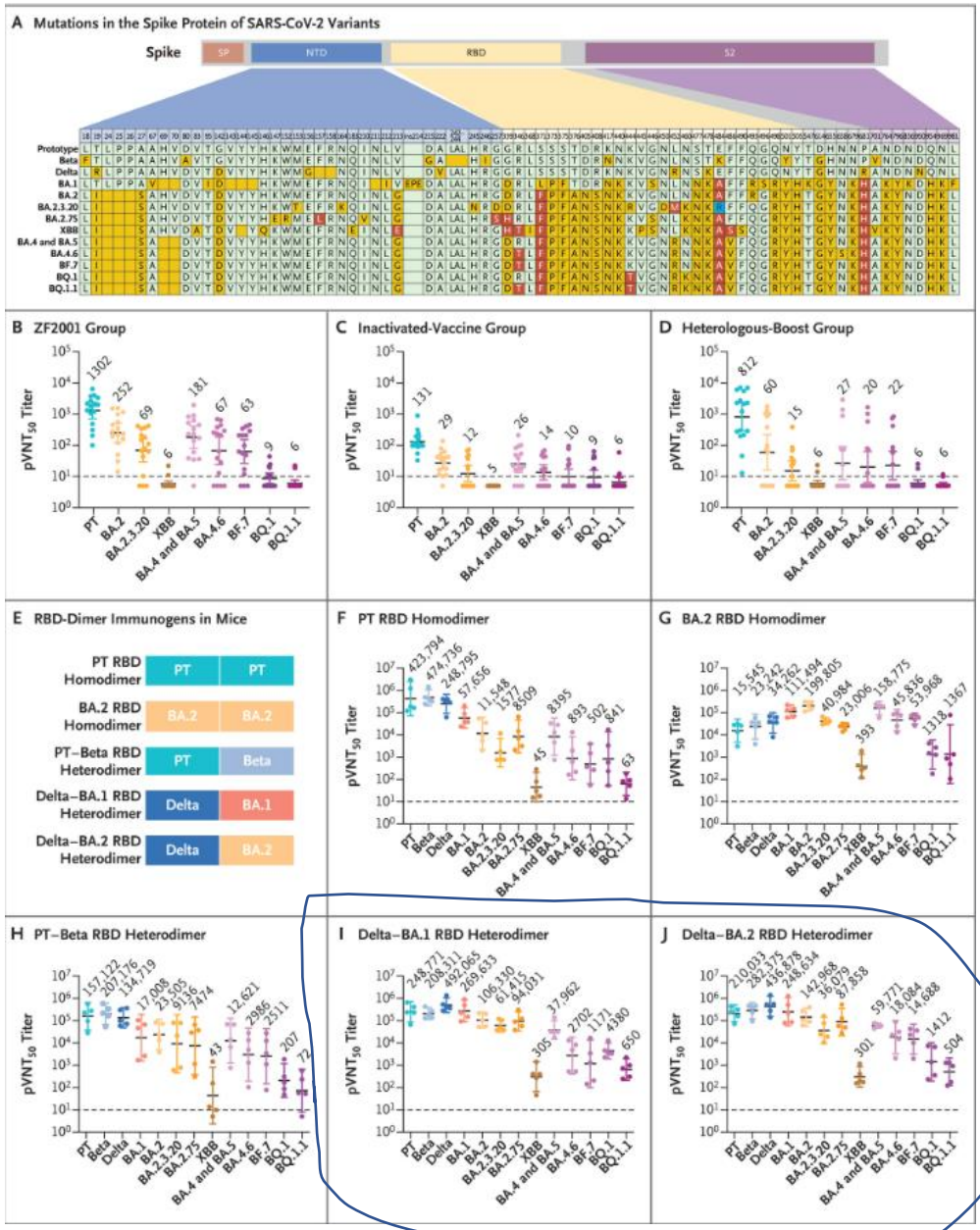
No clear association between Paxlovid and COVID-19 rebound, FDA says

- FDA: Covid rebound rates ranged from 10% to 16%, with no difference between people who took Paxlovid and those who got a placebo.
- FDA said it “did not identify a clear association between Paxlovid treatment and Covid-19 rebound.”
- *Annals* study: Symptom rebound was identified in 26% of untreated participants at a median of 11 days after initial symptom onset. Viral rebound was detected in 31% and high-level viral rebound in 13% of participants. Most symptom and viral rebound events were transient, because 89% of symptom rebound and 95% of viral rebound events occurred at only a single time point before improving. The combination of symptom and high-level viral rebound was observed in 3% of participants. *Symptom or viral relapse in the absence of antiviral treatment is common, but the combination of symptom and viral rebound is rare.*

https://www.fda.gov/media/166197/download
https://doi.org/10.7326/M22-2381

Neutralization of BQ.1, BQ.1.1, and XBB with RBD-Dimer Vaccines

- Newer targets are needed to advance vaccines
- The results showed that XBB and BQ.1.1 strongly escape the antibody responses induced by the prototype RBD homodimer
- In comparison, delta–BA.1 and delta–BA.2 RBD heterodimers induced balanced neutralization profiles against the early circulating strains (such as the prototype, beta, and delta) and omicron subvariants



DOI: 10.1056/NEJMc2216233

Questions?

Thank you!

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

Resources & recording of the session

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

This project was funded in whole by a cooperative agreement with the Centers for Disease Control and Prevention grant number 5 NU50CK000588-03-00. The Centers for Disease Control and Prevention is an agency within the Department of Health and Human Services (HHS). The contents of this resource center do not necessarily represent the policy of CDC or HHS and should not be considered an endorsement by the Federal Government.

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