



NORTHEAST

BUSINESS GROUP ON HEALTH

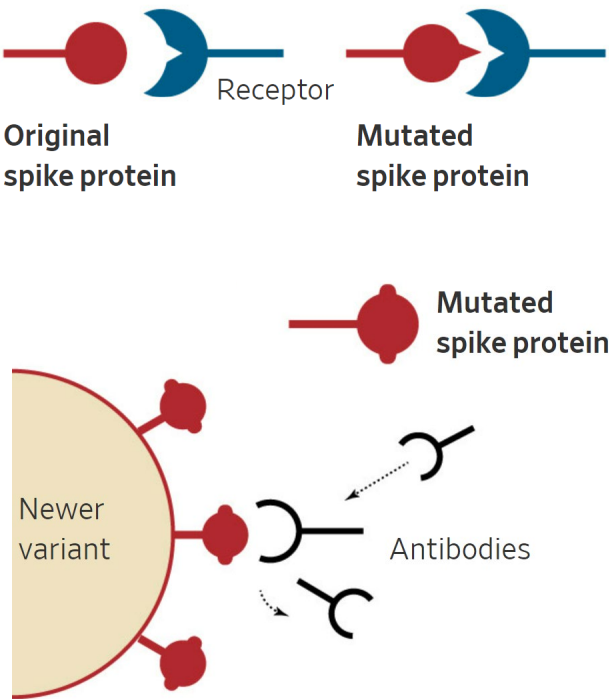
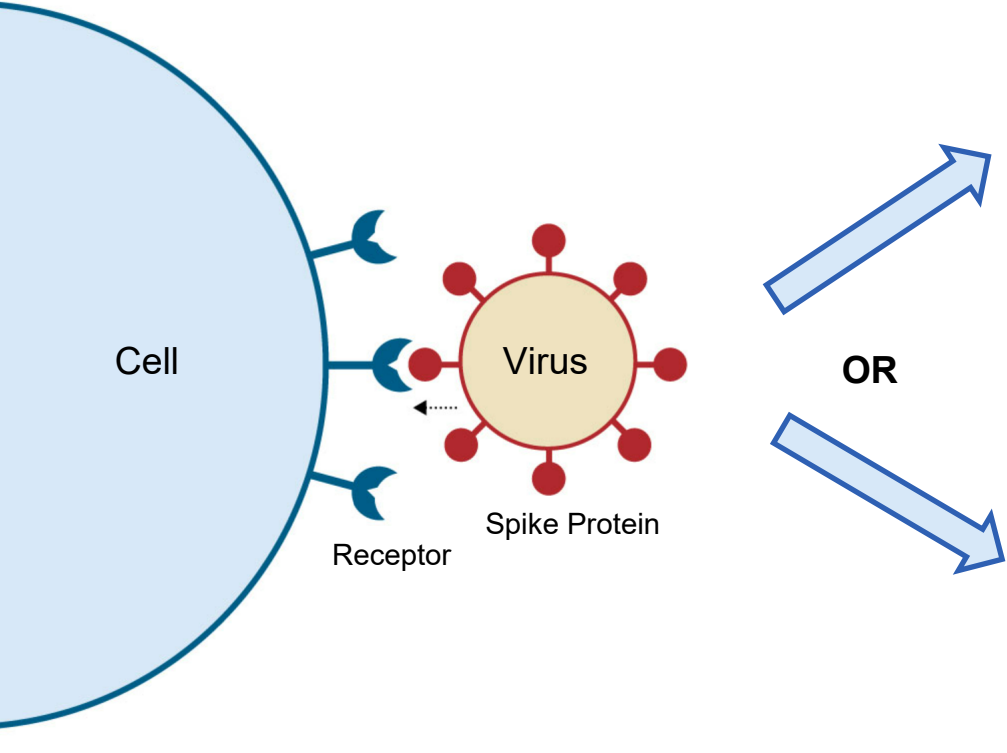
COVID-19 Update

Dr Mark Cunningham-Hill

Medical Director NEBGH

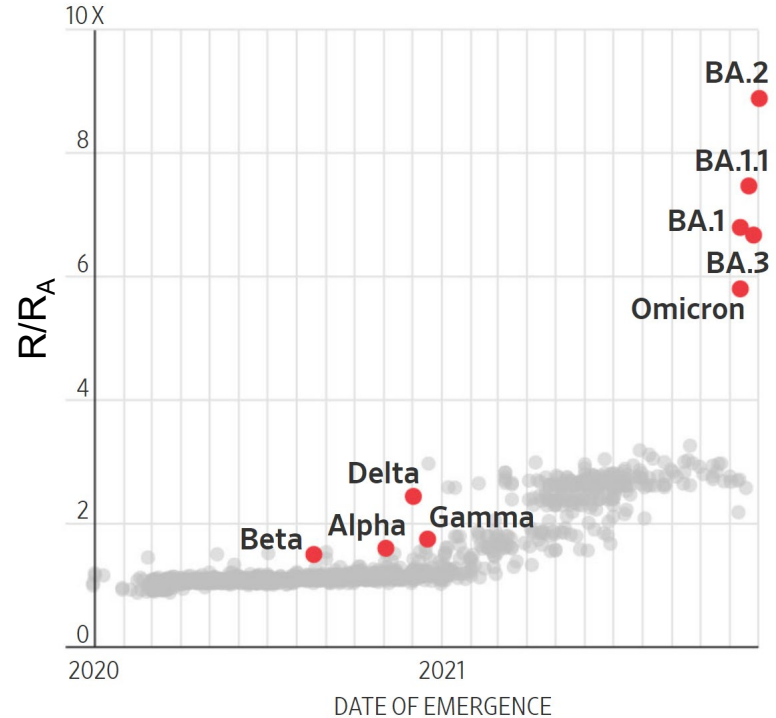
Monday August 22nd, 2022

Mutational Fitness of Variants



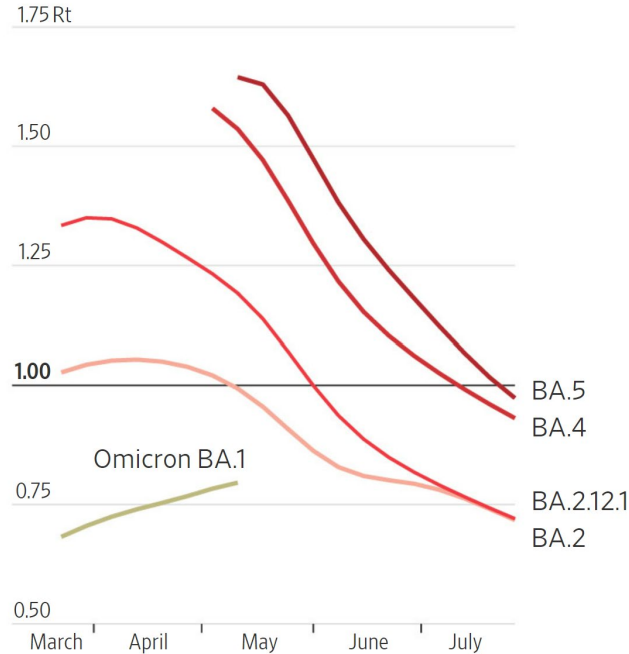
Mutational Fitness of Variants

- During 2020 and 2021 variant mutational fitness was by becoming more infectious – better able to attach to and enter human cells
- Omicron however was more successful by being able to avoid immunity



Transmission Rate Rt

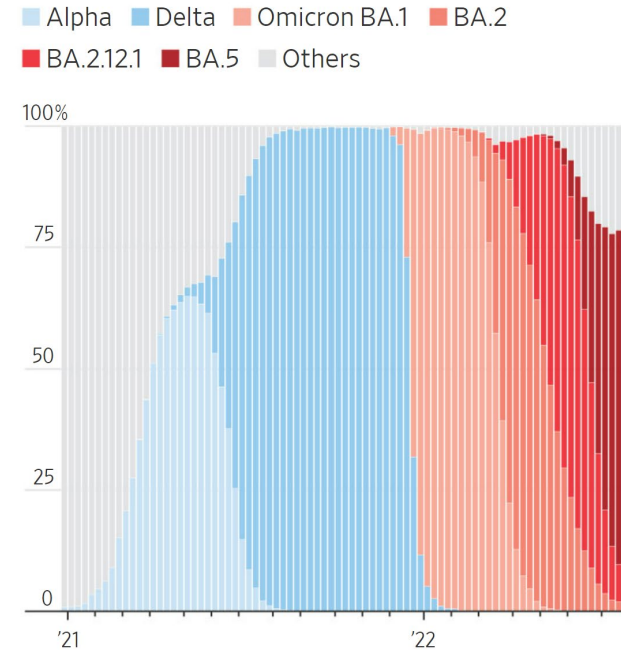
Weekly average Rts for the U.S.



Note: Excludes dates when variant frequencies are below 0.5%
Source: Trevor Bedford, Fred Hutchinson Cancer Center

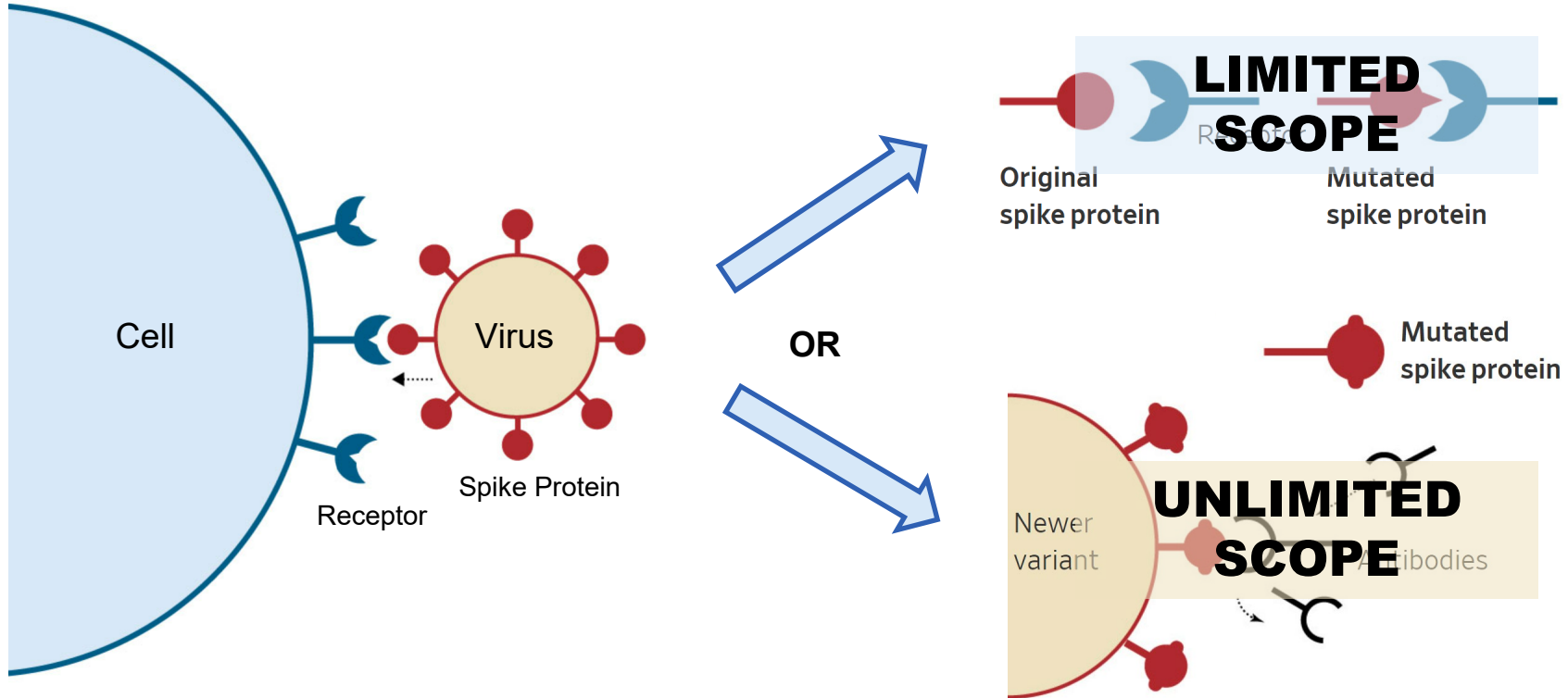
Prevalence of Coronavirus Variants

Weekly data for the U.S.



Note: Based on genetic samples submitted to GISAID database
Source: covidcg.org

What will the Virus do Going Forward



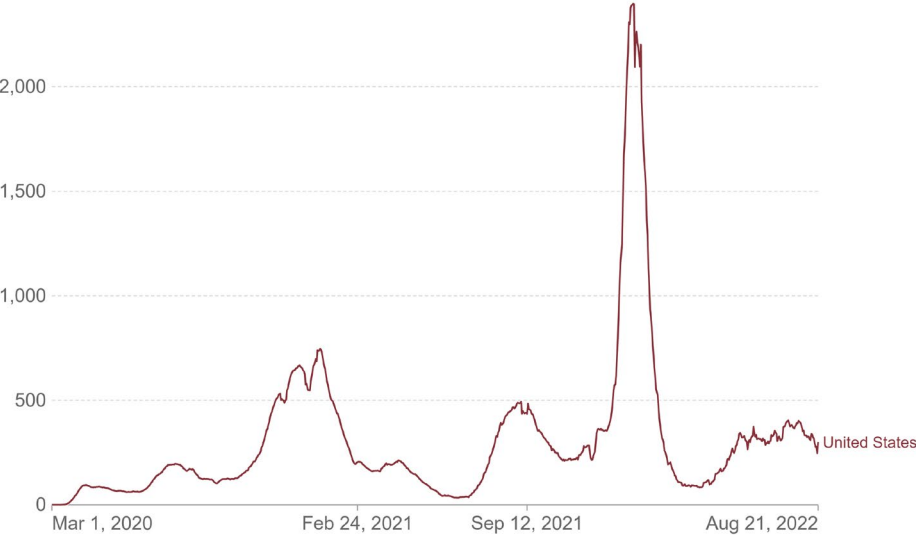
Impact of Immune Avoiding Variants

- Past infections may offer less and less protection
- Existing vaccines may offer less and less protection
- Keep giving boosters But heightened protection lasting less time
- Variant specific vaccines – offer best solution
 - Original + BA.1 coming soon
 - Original + BA.5 in the fall
 - Bivalent vaccines may offer broader protection than just against the 2 variants and may last longer
 - Challenge is keeping up with the virus!

So where are we now?

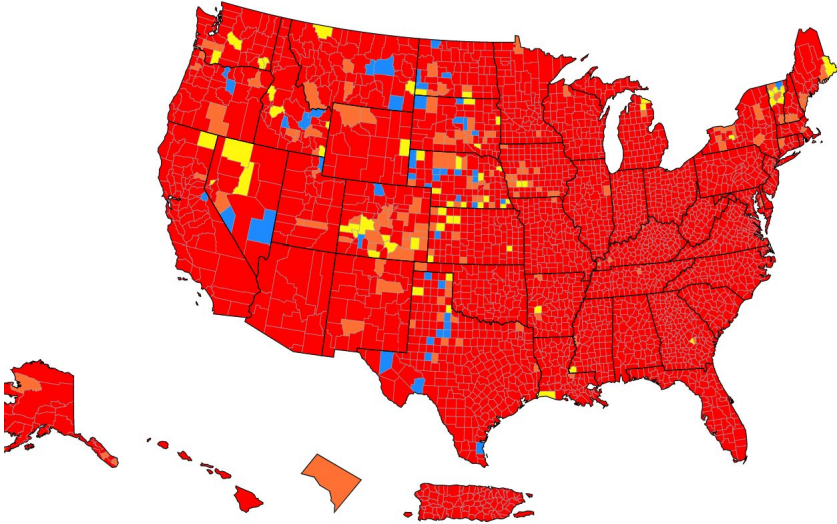
Daily new confirmed COVID-19 cases per million people

7-day rolling average. Due to limited testing, the number of confirmed cases is lower than the true number of infections.



Source: Johns Hopkins University CSSE COVID-19 Data

Our World
in Data



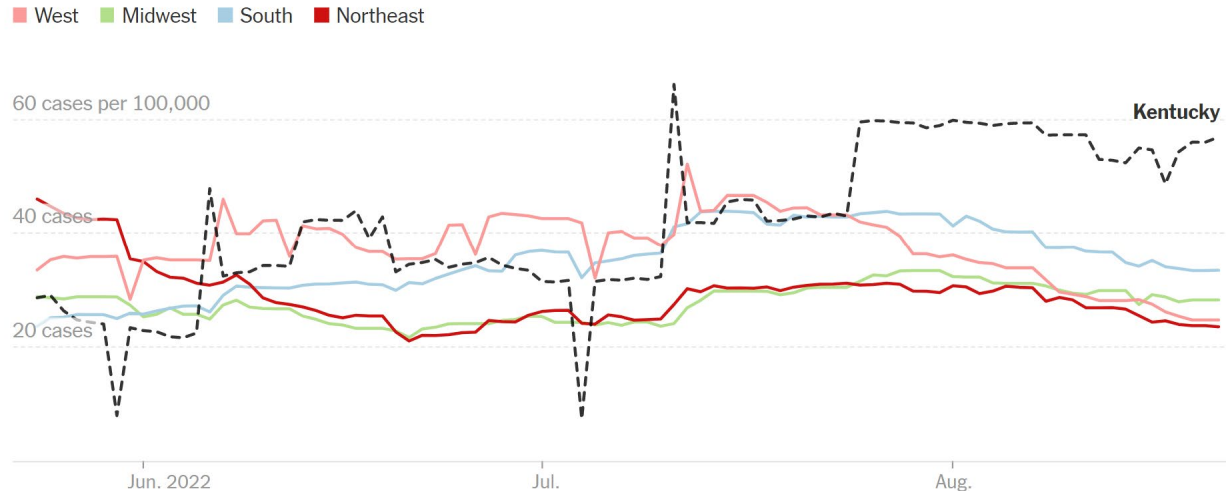
CC BY

Community Transmission in US by County

	Total	Percent	% Change
High	2968	92.12%	- 1.83%
Substantial	139	4.31%	0.37%
Moderate	66	2.05%	1.12%
Low	49	1.52%	0.34%

Improving Picture

- Cases decreasing
- Hospitalizations decreasing in many (but not all states)
- Deaths are down slightly to 500 per day





What is helping and what is not!

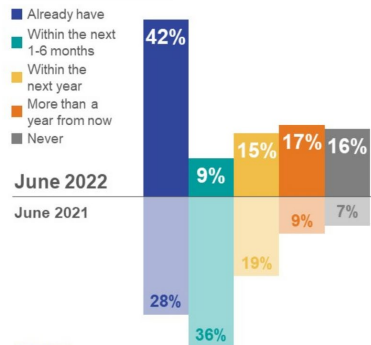
Negative Drivers

- Masking on the way out!
- Less testing
- 1 in 3 Americans think the pandemic is over

Americans living in different pandemic worlds

Two in five have returned to pre-COVID life but one in three feel left behind

When do you expect to be able to return to your normal, pre-COVID life?



Percentage of Americans who agree...

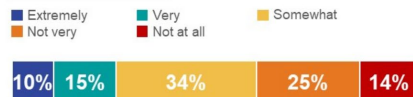
The COVID-19 pandemic is over



I feel like most people around me have moved on from the pandemic, but I haven't

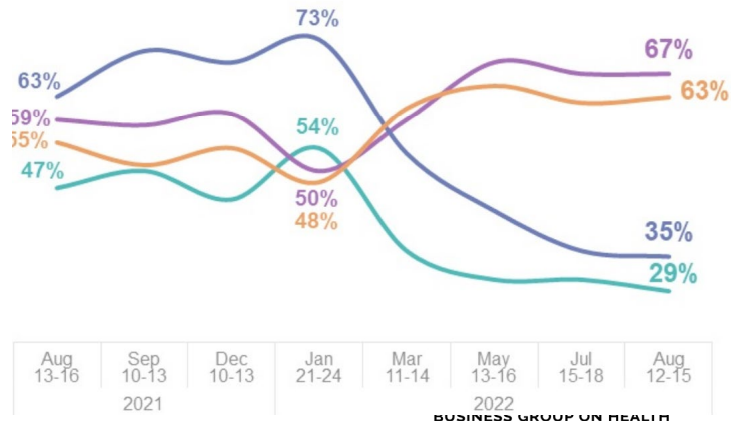


How concerned are you, if at all, about the coronavirus or COVID-19 outbreak?



Percentage of Americans who have _____ in the past week

■ Worn a mask outside the home at least sometimes
 ■ Social distanced
 ■ Visited friends or relatives
 ■ Gone out to eat

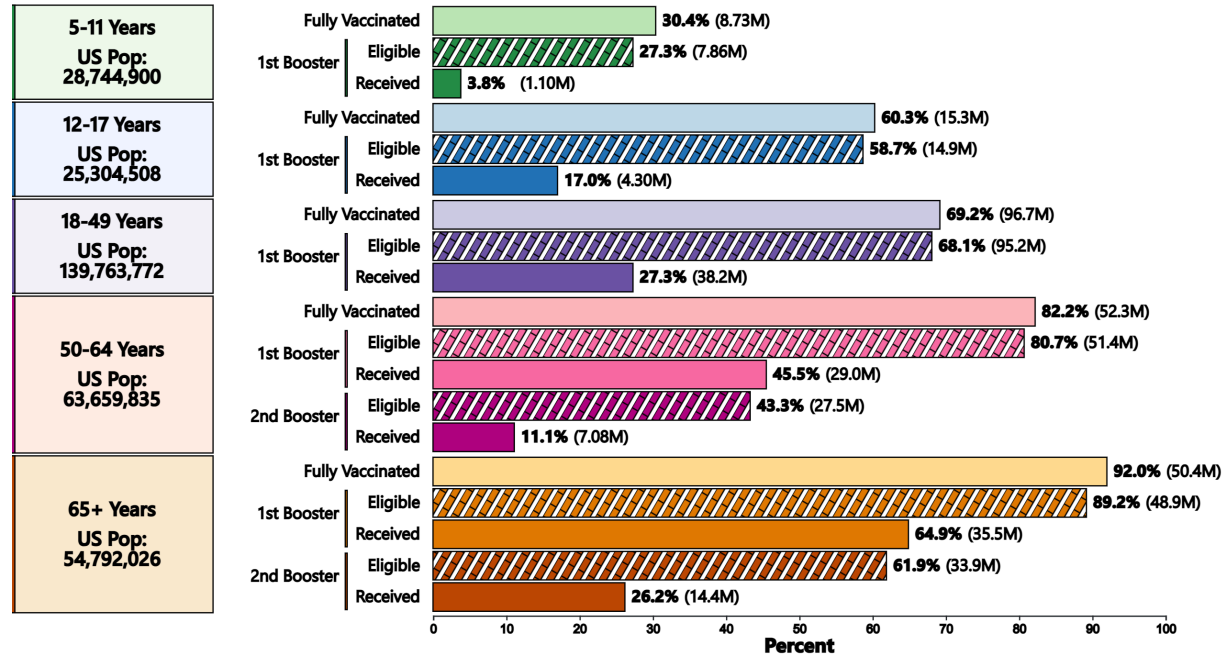


What is helping and what is not!

Negative Drivers

- Vaccination and booster rates
- Past infection less protective
- Potential for new variants:
 - 832K *reported* cases per day (globally)
 - Global vaccination rates 62% - many using less effective vaccines
- Increasing global travel

Primary Series Completion, Booster Dose Eligibility, and Booster Dose Receipt by Age, United States



What is helping and what is not!

Positive Drivers

- High level of immunity from vaccinations and past infections (but!)
- Omicron may be causing less severe illness
- Excellent vaccines
- Therapeutics – test to treat
- Enhanced ventilation systems

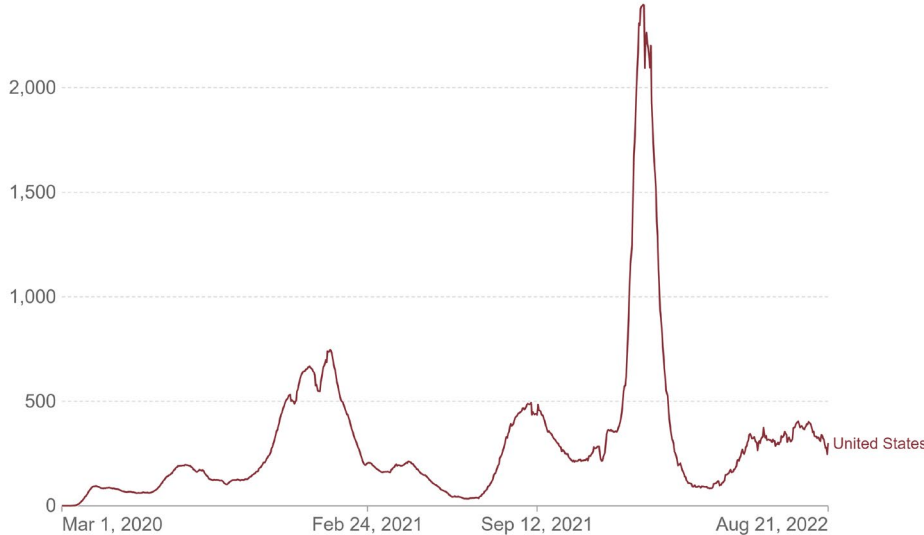


Prediction

Daily new confirmed COVID-19 cases per million people

7-day rolling average. Due to limited testing, the number of confirmed cases is lower than the true number of infections.

Our World
in Data



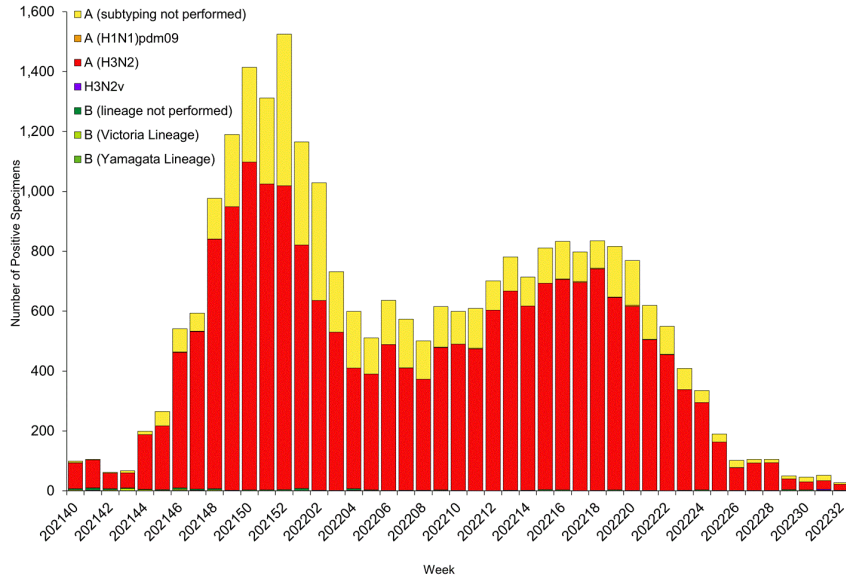
Source: Johns Hopkins University CSSE COVID-19 Data

CC BY

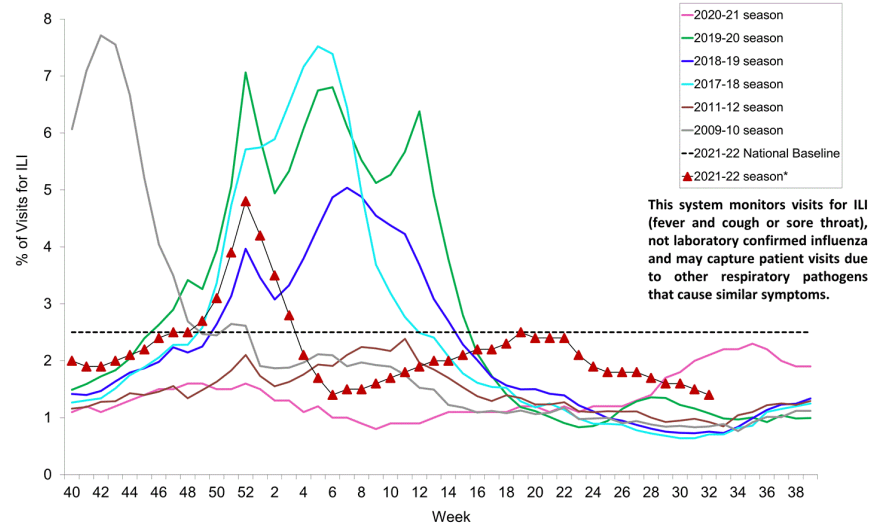
- Few weeks of decreasing case rates but probably not getting to really low levels
- Moderately high risk of new variant in the fall which will drive a winter surge
 - Variant and effectiveness of bi-valent vaccines (and % who take them) will determine size of the surge

Influenza

Influenza Positive Tests Reported to CDC by U.S. Public Health Laboratories, National Summary, October 3, 2021 – August 13, 2022



Percentage of Outpatient Visits for Respiratory Illness Reported By The U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet), Weekly National Summary, 2021-2022* and Selected Previous Seasons

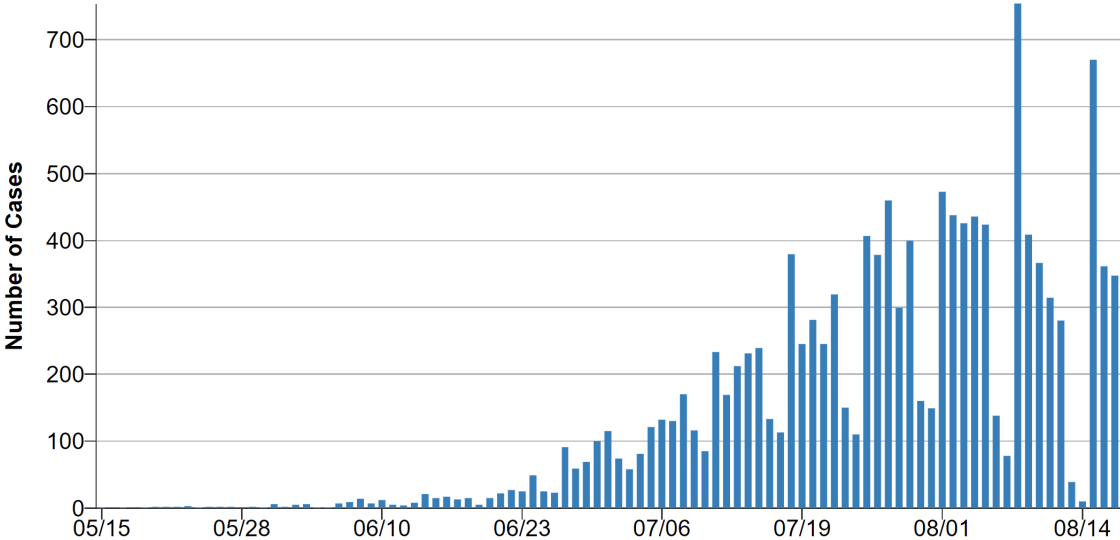


Influenza

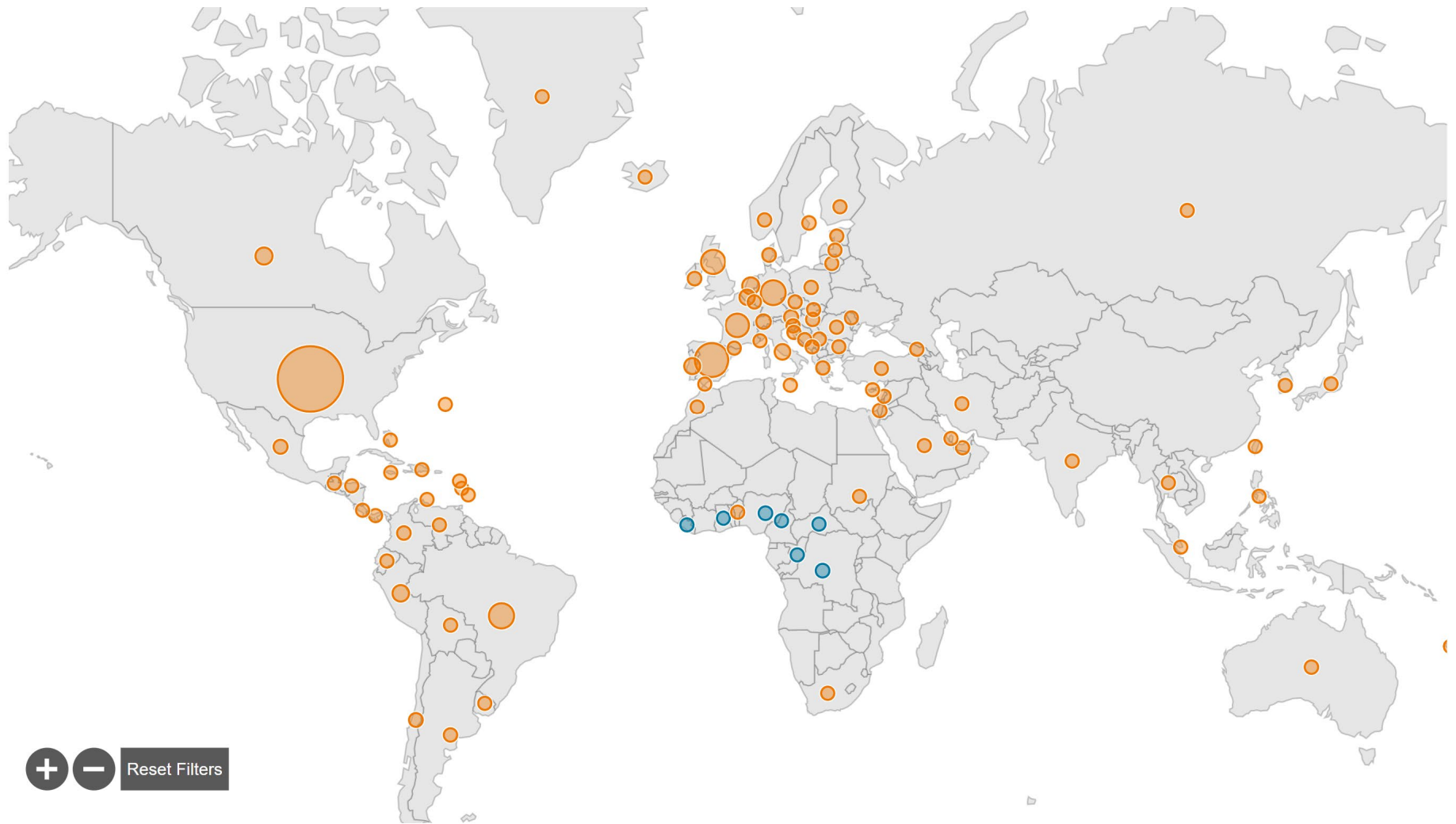
- Southern Hemisphere is having a bad flu season
- Influenza vaccination rates have declined over the last 2 years especially in some higher risk groups
 - Children, flu vaccination rates have dropped from 62.2% to 55.3%
 - Pregnant individuals, rates have dropped from 65.5% to 51.8%
- Start planning now as could be a bad flu season!
 - Vaccination programs including remote and hybrid workers
 - Influenza and COVID boosters can be given at the same time!
 - Consider further optimizing workplace ventilation systems
 - Remember masks really do work (look at 2020-2021 flu season) so don't forget to encourage (or even require) their use

Monkeypox

U.S. Monkeypox Case Trends Reported to CDC



Cases Reported in 2022



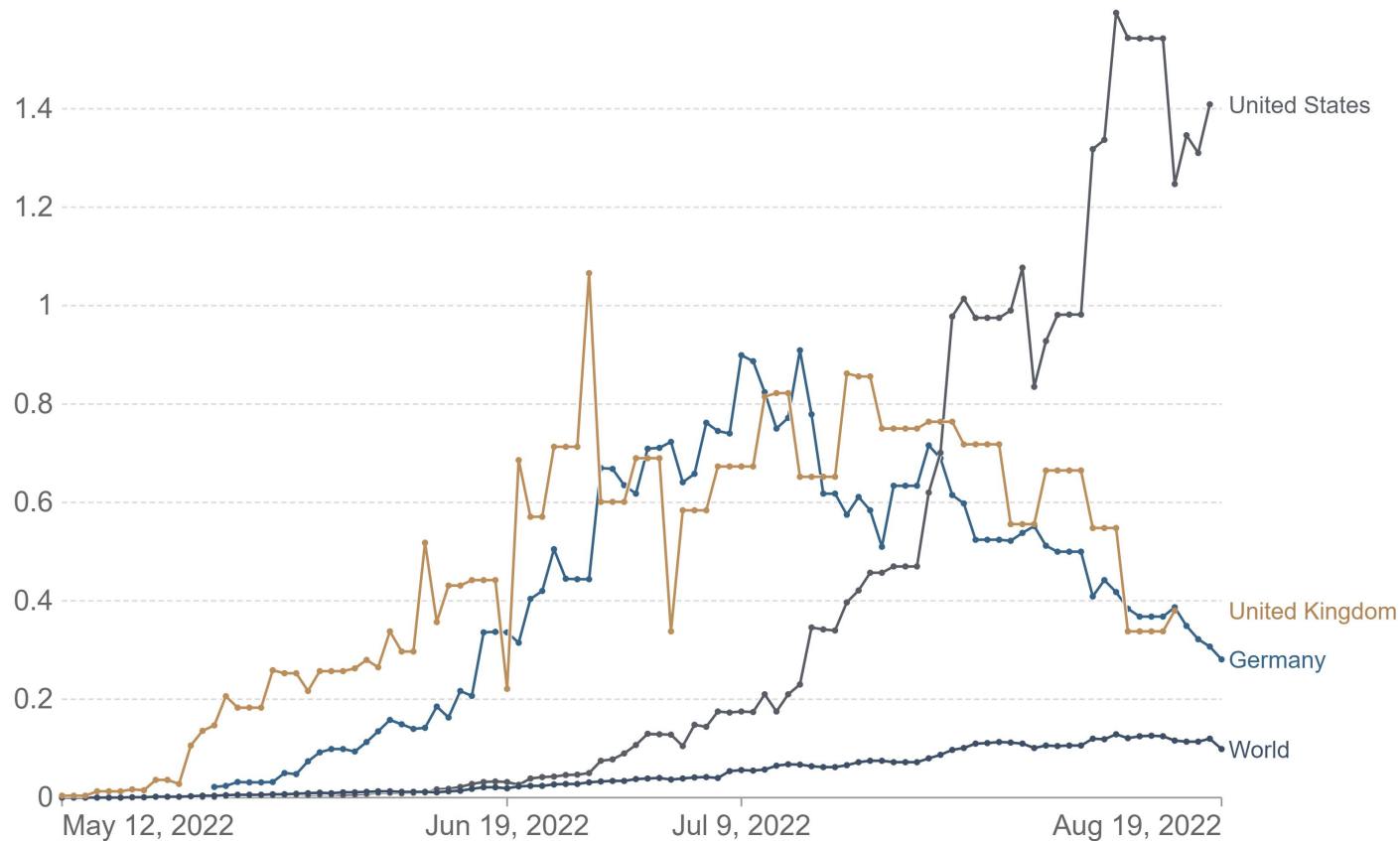
Questionable Response

- Despite having a strategic supply vaccine distribution didn't go well:
 - Fill facility not approved so doses couldn't be used
 - Shipment delays
 - Antiquated IT systems failing to track shipments
 - Giving 20% of a dose without data to support
 - Delaying second dose (some evidence that this is okay)
- Antivirals
 - Supply of antivirals for smallpox which have been approved for use in Europe but FDA have not approved

Monkeypox: Daily confirmed cases per million people

7-day rolling average

Our World
in Data



Source: Data produced by the 'Global.health' team — available at github.com/globaldothealth/monkeypox

Questions

Upcoming NEBGH virtual events:

- **Sept. 8** – Digital Health Tech's Hot Summer: What's On the Horizon?
- **Sept. 12** – Monday Bi-Weekly COVID-19 Update w/ Dr. Mark
- **Sept. 26** – Monday Bi-Weekly COVID-19 Update w/ Dr. Mark
- **Sept. 27** – Global Benefits and Employee Wellbeing
- **Oct. 6** – Up and Comers with Deb Mackin
- **Dec. 6** – 28th Annual Tribute to Leadership