



NORTHEAST

BUSINESS GROUP ON HEALTH

COVID-19 Update

Dr Mark Cunningham-Hill

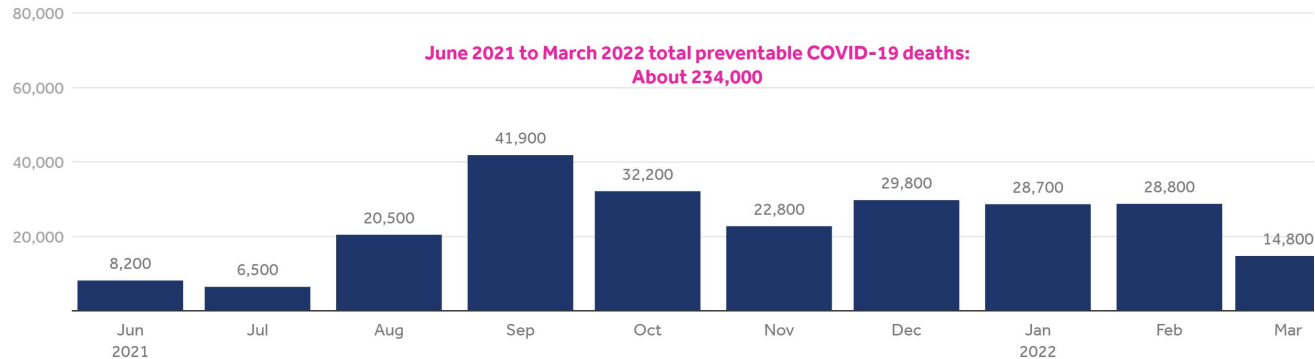
Medical Director NEBGH

Monday May 16th, 2022



How many of those Deaths could have been Prevented?

- 234,000 deaths since June 2021 could have been prevented with primary series vaccination¹
- These vaccine-preventable deaths represent:
 - 60% of all adult COVID-19 deaths since June 2021
 - 24% of all COVID deaths since the start of the pandemic

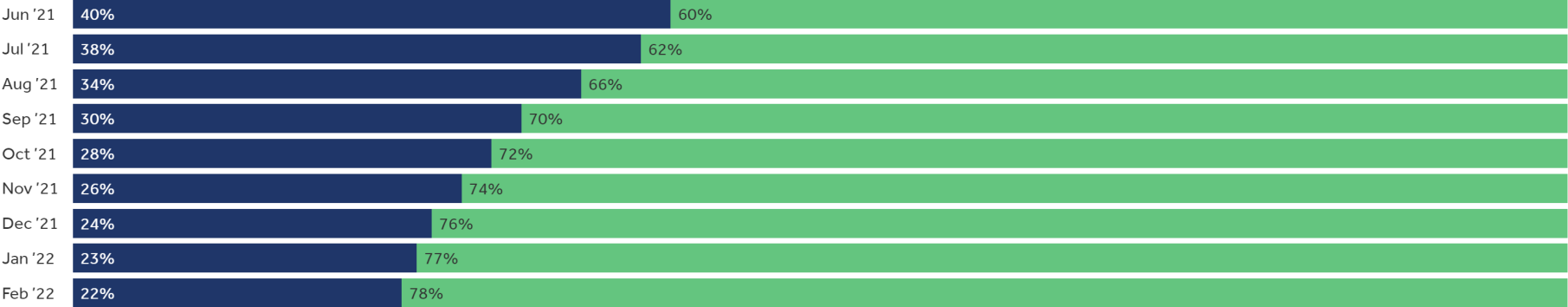


1. <https://www.healthsystemtracker.org/brief/covid19-and-other-leading-causes-of-death-in-the-us/#COVID-19%20deaths%20among%20unvaccinated%20adults%20that%20likely%20could%20have%20been%20prevented%20with%20vaccinations,%20June%202021-March%202022>

Share of adult population and adult COVID-19 deaths by vaccination status, 25 jurisdictions in the U.S., June 2021 to February 2022

■ Unvaccinated ■ Fully vaccinated

Share of adult population



Share of adult COVID-19 deaths



Note: Partially vaccinated people (who typically represent about 1 in 10 people) are excluded from this CDC data source, so, in the chart above, they are evenly distributed between vaccinated and unvaccinated populations. Share of adult population fully vaccinated is for the last week of each month.

Share of adult population and adult COVID-19 deaths by vaccination status, 23 jurisdictions in the U.S., September 2021 to February 2022

■ Unvaccinated ■ Vaccinated with primary series ■ Vaccinated with booster

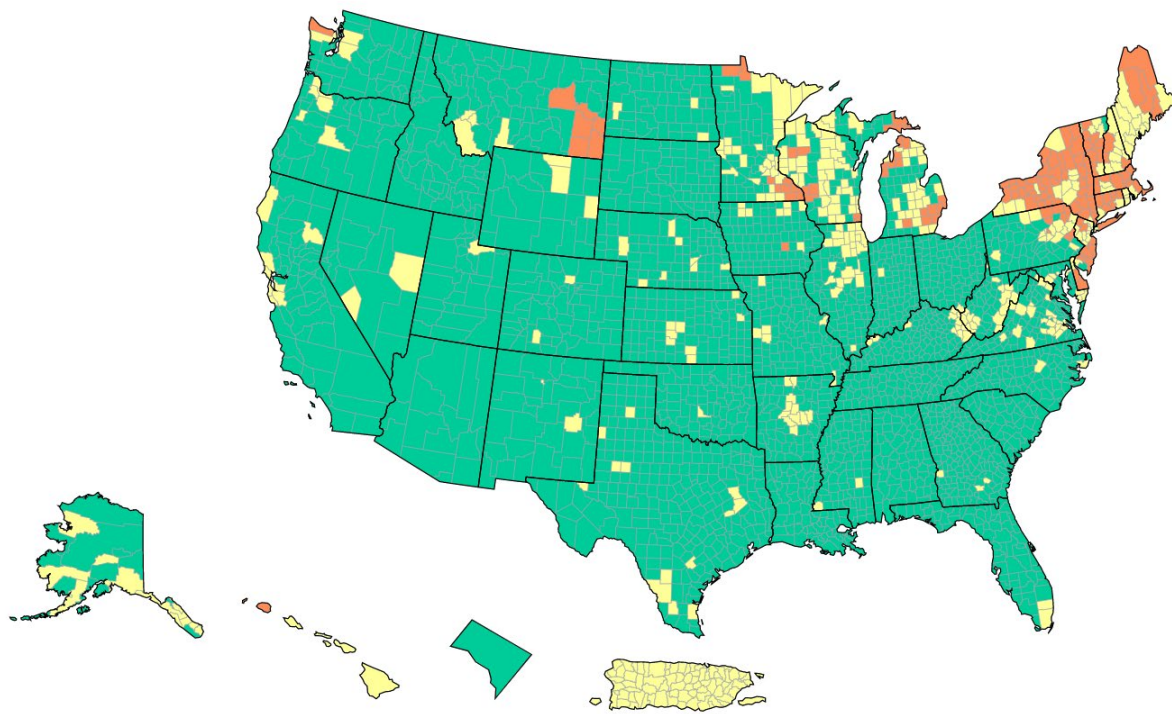
Share of adult population



Share of adult COVID-19 deaths



Note: Partially vaccinated people are excluded from this CDC data source. Share of adult population by vaccination status is for the end of each month.



COVID-19 Community Levels in US by County

	Total	Percent	% Change
High	137	4.25%	1.8%
Medium	456	14.15%	4.28%
Low	2630	81.6%	- 6.09%

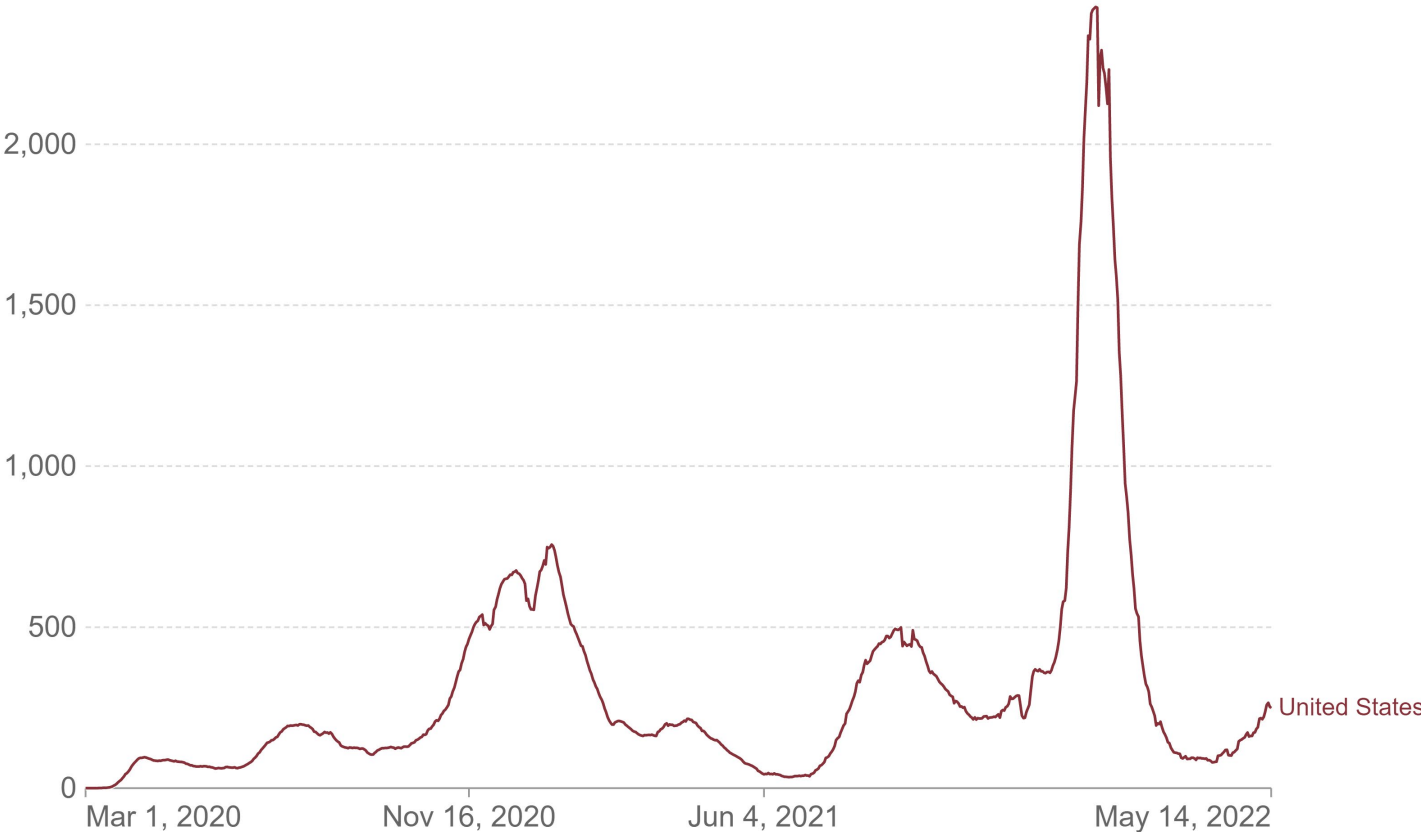
https://covid.cdc.gov/covid-data-tracker/#county-view?list_select_state=all_states&list_select_county=all_counties&data-type=CommunityLevels

SHIERS, JR.
CREATIVIST
1-31-22



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.

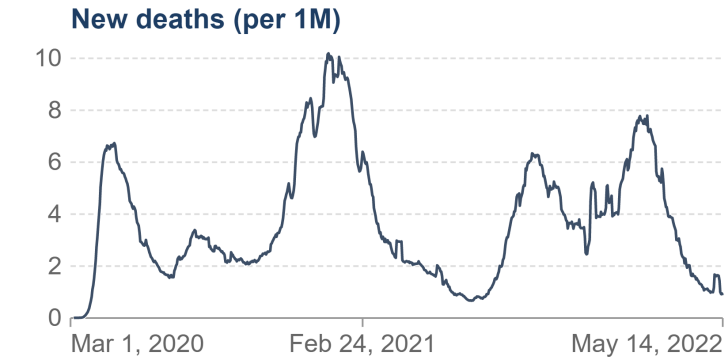
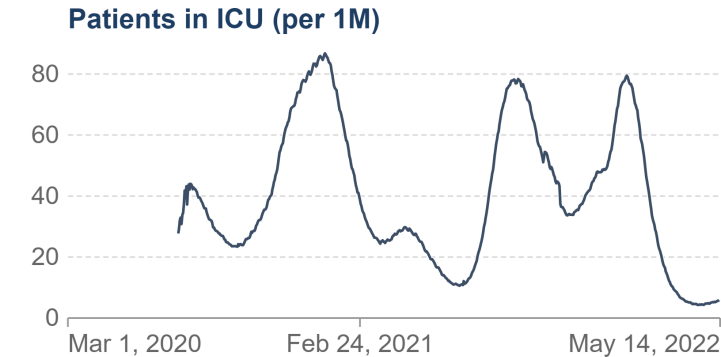
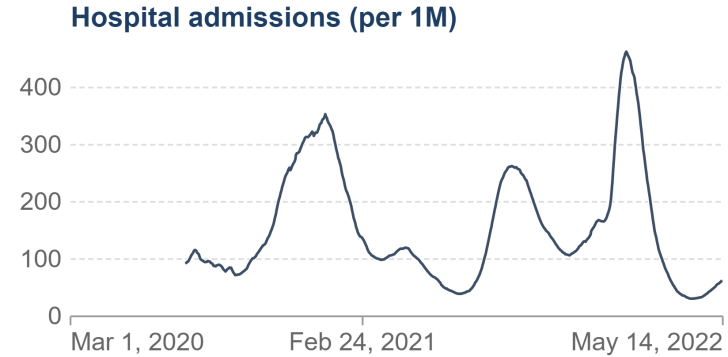
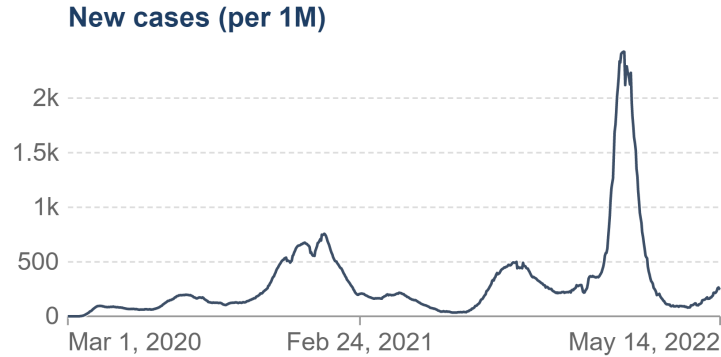


Source: Johns Hopkins University CSSE COVID-19 Data

Confirmed COVID-19 cases, deaths, hospital admissions, and patients in ICU per million people

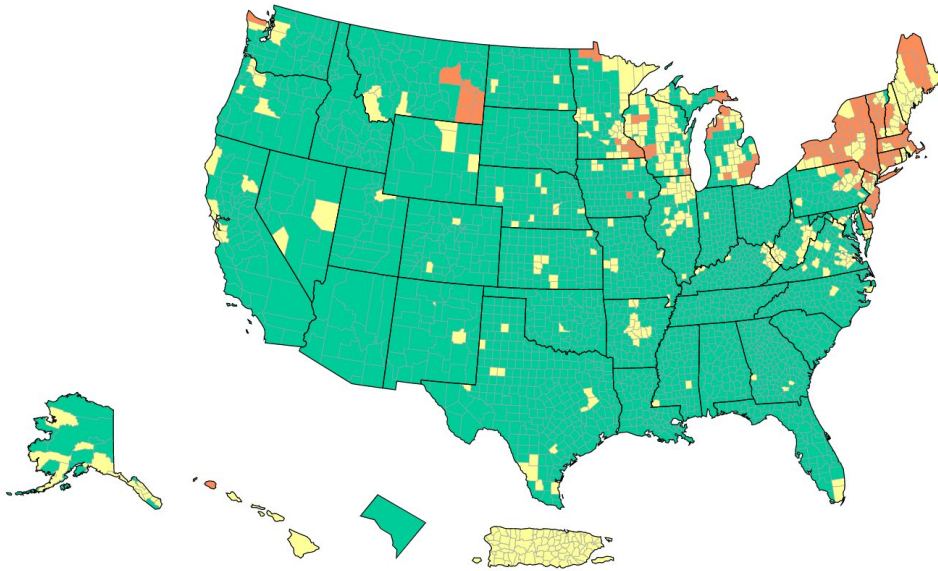
Limited testing and challenges in the attribution of cause of death means the cases and deaths counts may not be accurate.

■ United States



COVID-19 Community Levels in US by County

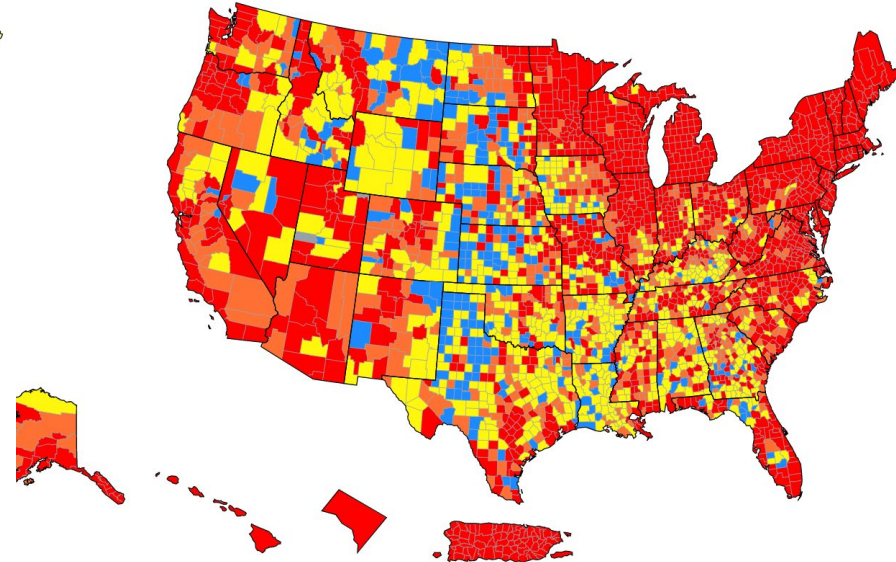
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https://covid.cdc.gov/covid-data-tracker/#county-view?list_select_state=all_states&list_select_county=all_counties&data-type=CommunityLevels

Community Transmission in US by County

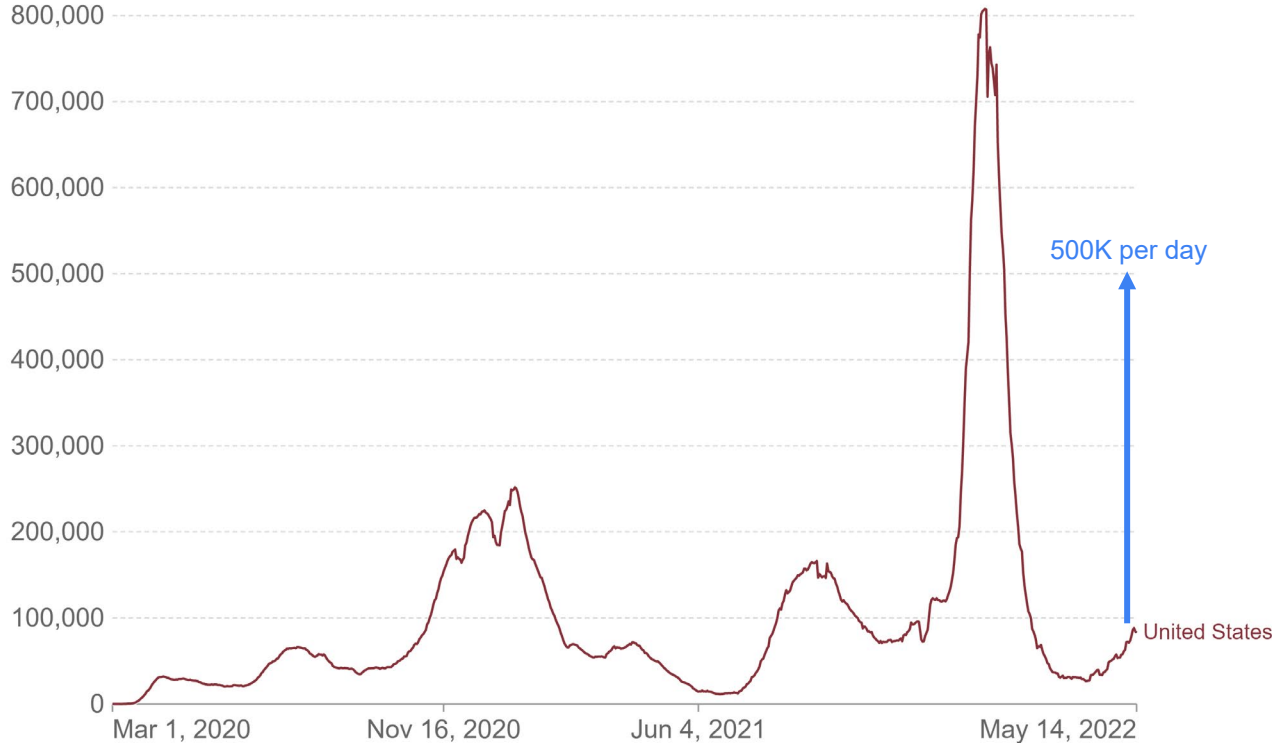
	Total	Percent	% Change
High	1597	49.57%	12.41%
Substantial	557	17.29%	- 1.83%
Moderate	758	23.53%	- 7.05%
Low	308	9.56%	- 3.51%



https://covid.cdc.gov/covid-data-tracker/#county-view?list_select_state=all_states&list_select_county=all_counties&data-type=Risk

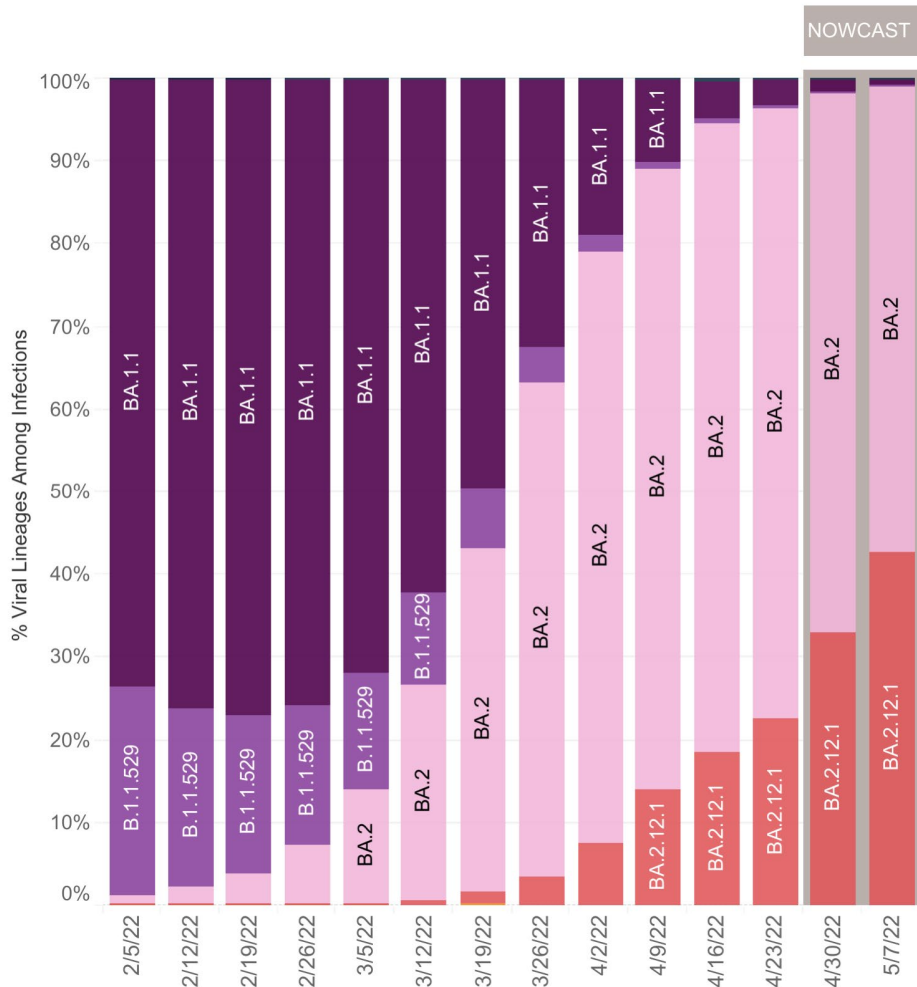
Daily new confirmed COVID-19 cases

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



Why do cases matter?

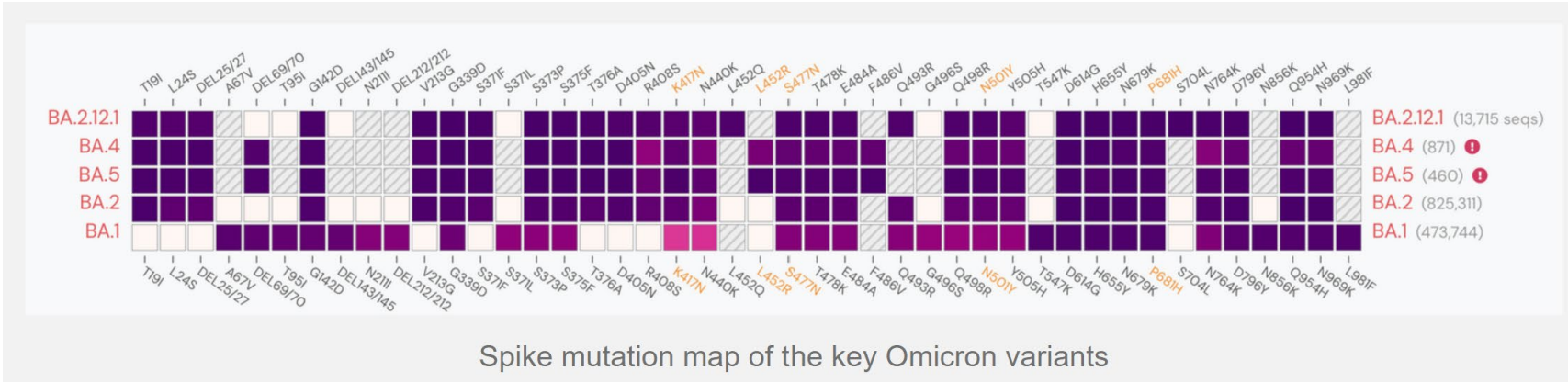
- Long Covid
- Cause sickness, hospitalizations and deaths
- Provide opportunity for new variants



- 43% of new cases were attributable to BA.2.12.1
- BA.2.12.1 dominant in the Northeast
- BA.2.12.1 is out-competing BA.2 with its 25% higher transmission rate

Variants

- BA.2.12.1 is quite distinct from Omicron BA.1 and BA.2 - there is a key, unique mutation L452Q
- BA.4 and BA.5, have multiple different mutations (including L452R, F486V and R493Q) from BA.2



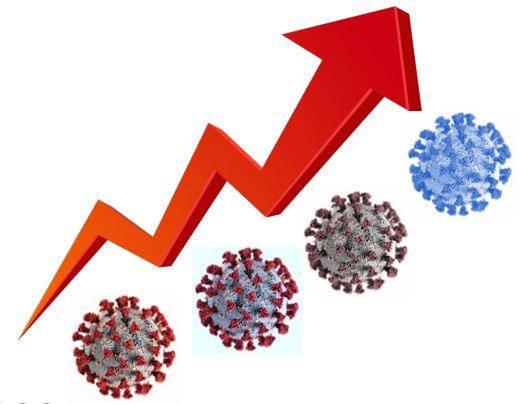
- BA.2.12.1 and BA.4/BA.5 pose a further challenge to our immune system recognition, with minimal cross-immunity compared with BA.1
- For the 40-50% of Americans were infected with BA.1 and without added protection from vaccination, they will be vulnerable to BA.2.12.1 infection
- Also, may impact BA.1 specific vaccines

Variants

- After the wild type – 4 major variants have been successful - Alpha, Beta, Gamma, and Delta
- Then came Omicron BA.1 rapidly having subvariants outcompeting one another - BA.2, BA.2.12.1, BA.4 and BA.5
- Predominantly because of more immune evasion
 - More repeat infections
 - More breakthrough infections – vaccine efficacy against severe disease dropped from 95% to 80% - 4x more people at risk
 - Data on BA2.12.1, BA.4 and BA.5 – yet to be determined
- Many cases provides opportunity for new variants especially in infections in those who are immunocompromised

In Summary

- Accelerated evolution of the virus
- Increased immune escape of new variants
- Progressively higher transmissibility and infectiousness
- Substantially less protection from transmission by vaccines and boosters
- Some reduction on vaccine/booster protection against hospitalization and death
- High vulnerability from infection-acquired immunity only
- Likelihood of more noxious new variants in the months ahead



Actions for now!

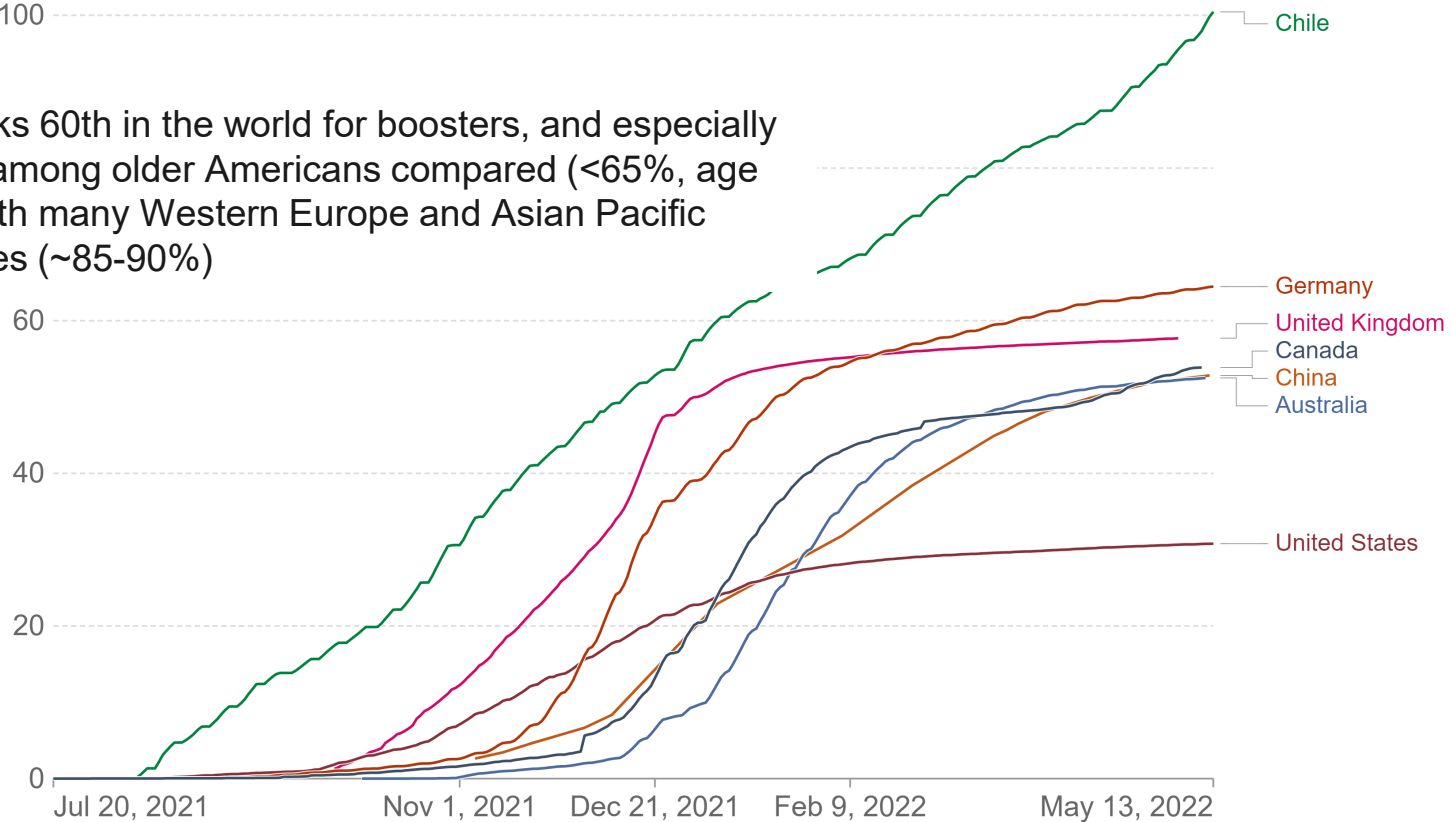
- Get nasal vaccines finalized (mucosal immunity)
- Accelerating development of a pan- β -coronavirus vaccine – providing broad immunity
- New effective medications
 - Paxlovid – 5 day rebound, risk of resistance
 - Monoclonal antibodies – evolving virus makes many ineffective
- Boosters

COVID-19 vaccine boosters administered per 100 people

Total number of vaccine booster doses administered, divided by the total population of the country. Booster doses are doses administered beyond those prescribed by the original vaccination protocol.

100

US ranks 60th in the world for boosters, and especially poorly among older Americans compared (<65%, age 60+) with many Western Europe and Asian Pacific countries (~85-90%)



Zero COVID Strategies don't work against highly infectious variants such as Omicron (Australia, NZ, Taiwan, Singapore, Hong Kong China)



Zero COVID Death Strategy

Leverage and build on the tools we have – vaccines, drugs etc. (Not stop funding COVID response)

Sensible (realistic) public health measures – masking (when appropriate) and ventilation

Access to testing

Protect the vulnerable – 65+, high-risk and immunocompromised

Consistent effective communication/messaging

Employers can play a significant role

A close-up photograph of a pink and red flower, possibly a gerbera, with a green background. The flower's petals are a mix of vibrant pink and deep red, with some yellow stamens visible in the center. The background is a soft, out-of-focus green, suggesting foliage. The overall image has a slightly grainy texture.

**Hope for the best
Expect the Worst
Prepare for both**

Questions

Upcoming NEBGH virtual events:

- **May 18** - CAA Transparency in Coverage Rules: What We Know
- **May 23** – Monday COVID-19 Update
- **June 16** - Benefits Leadership for a Changing World: Accept the Challenge!