



NORTHEAST
BUSINESS GROUP ON HEALTH

COVID-19 Update

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Monday, January 31st, 2022

GOOD MORNING AMERICA



NEW DEVELOPMENTS

7:13 19°

GMA
COVID-19

OMICRON "STEALTH VARIANT"

OFFICIALS TRACKING NEW SUBVARIANT FOUND IN DOZENS OF COUNTRIES

abc

NEWS MOBILE

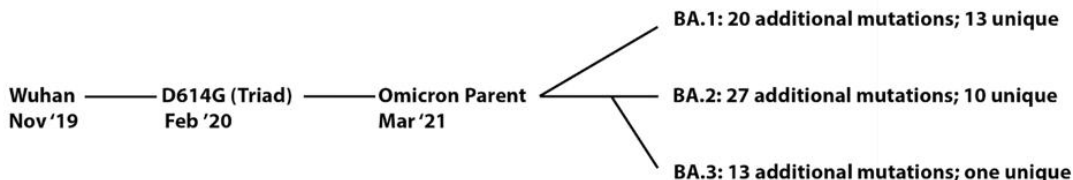
2 ▲ 2.82 ■ S&P 500 4349.93 ▼ 6.52 ■ DOW JONES 34168.09 ▼ 129.64 ■ LOTTERY

Why “Stealth Variant”

- Omicron/BA.1 has a dropped ‘S’ Gene which means a PCR test can identify Omicron/BA.1 from other variants e.g., Delta
- BA.2 doesn’t have the dropped ‘S-Gene’ so need to sequence to identify which variant it is
- NOTE: BA.2 is still identified by PCR and Rapid Antigen Tests

Omicron – BA.1, BA.2 and BA.3

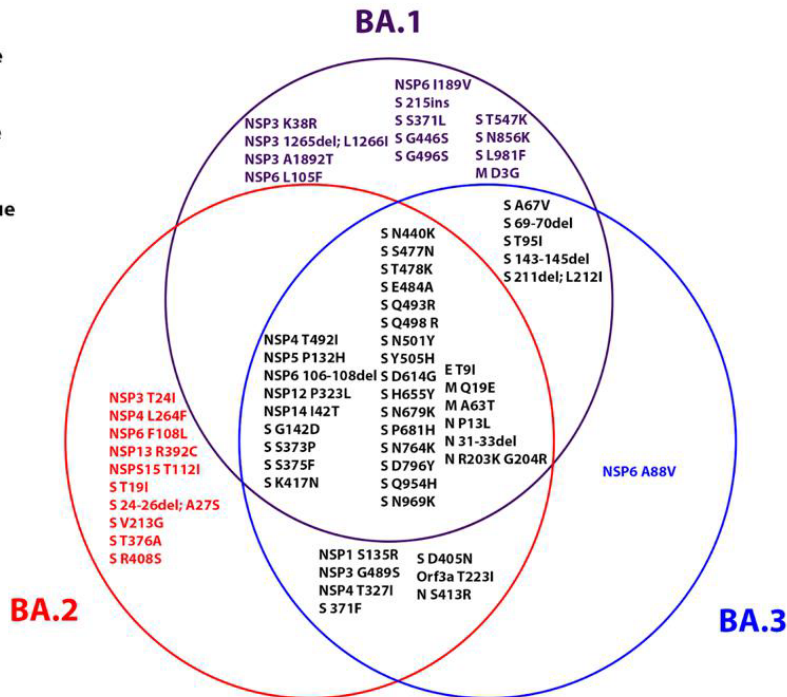
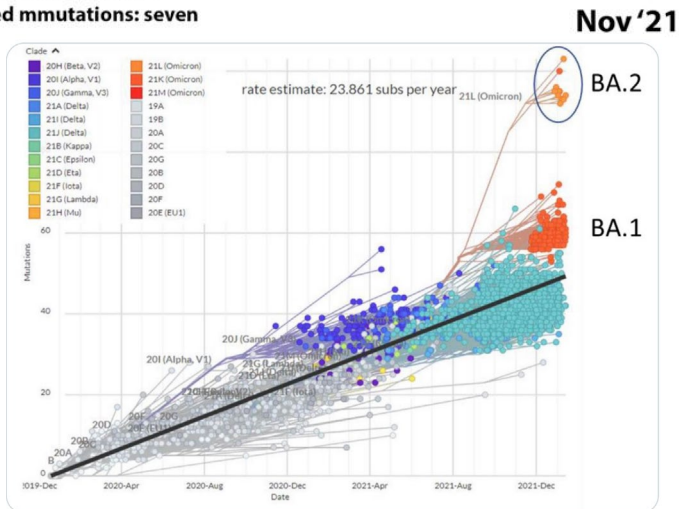
Omicron Family



BA.1 + BA.2 shared mutations: zero

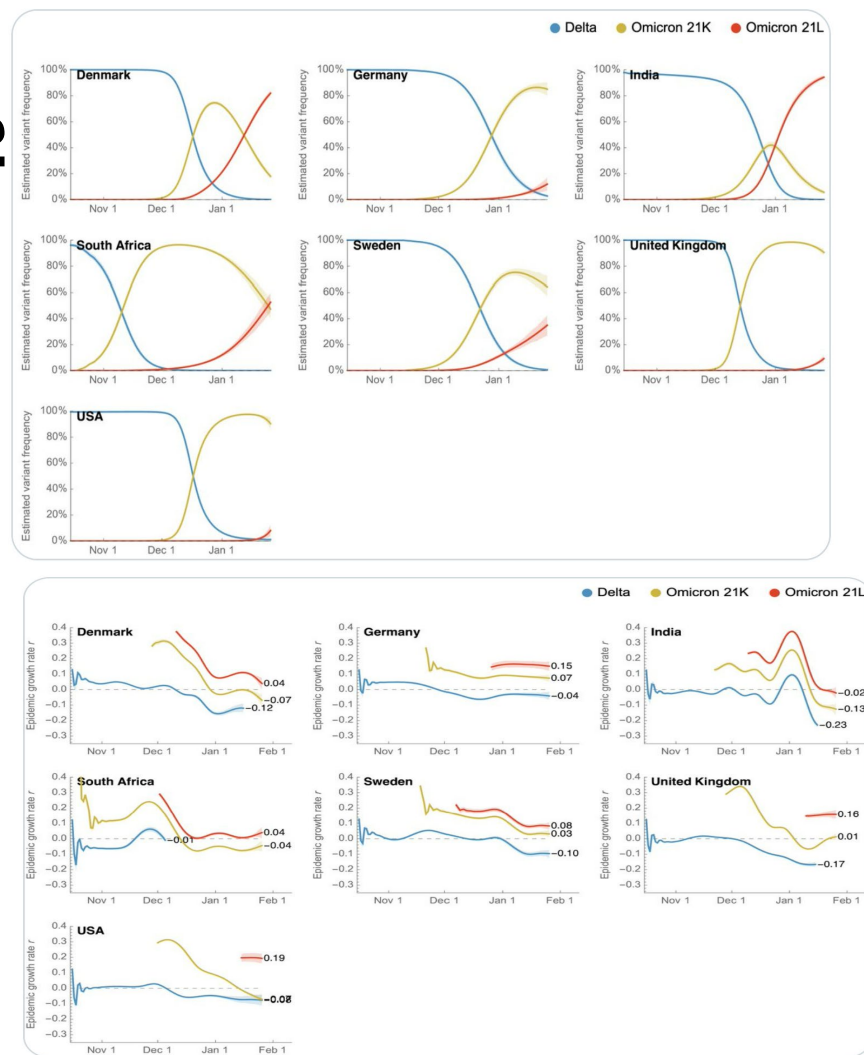
BA.1 + BA.3 shared mutations: five

BA.2 + BA.3 shared mmutations: seven



What we know about BA.2

- The first BA.2 sample was collected in South Africa on 17 November 2021
- Global spread to at least 49 Countries (including the US)
- UK, Germany, India, Singapore and Denmark showing rapidly increasing cases
- Evidence that more infectious than Omicron (1.3-1.5X)
- No evidence of increased severity
- Vaccines – likely still protective
- Twitter ‘noise’ around reinfections

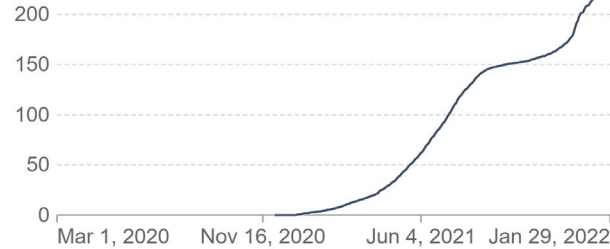


COVID-19 vaccine doses, ICU patients, and confirmed deaths

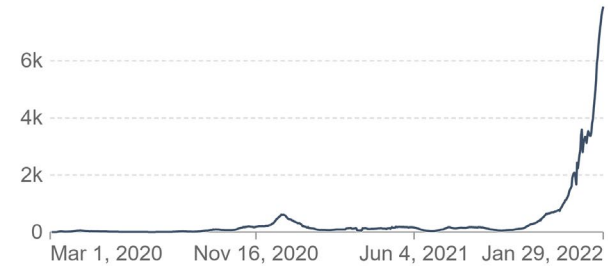
Limited testing and challenges in the attribution of cause of death means the cases and deaths counts may not be accurate.

■ Denmark

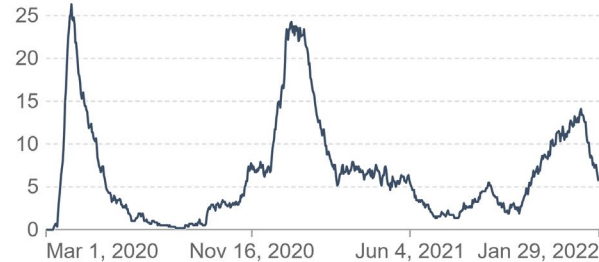
Vaccine doses (per 100)



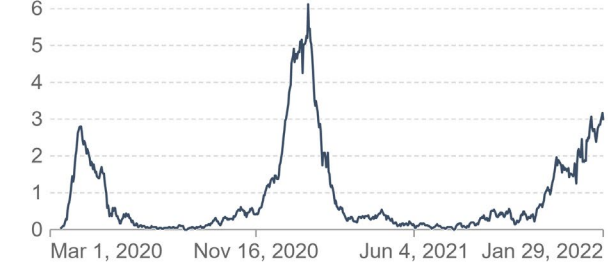
New cases (per 1M)



Patients in ICU (per 1M)

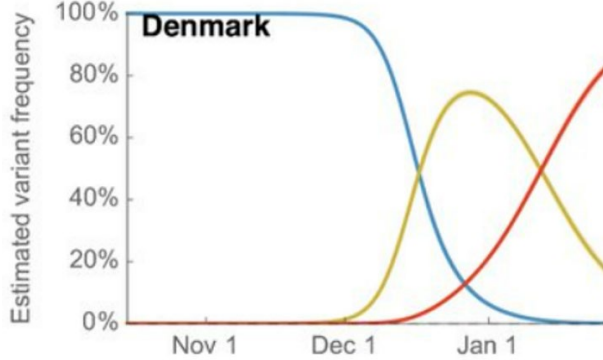


New deaths (per 1M)



Source: Official data collated by Our World in Data, Johns Hopkins University CSSE COVID-19 Data

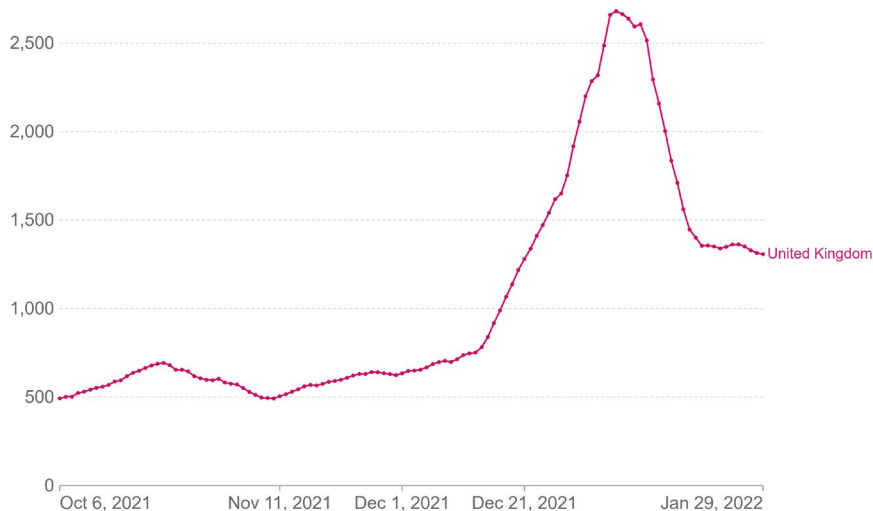
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United Kingdom

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.



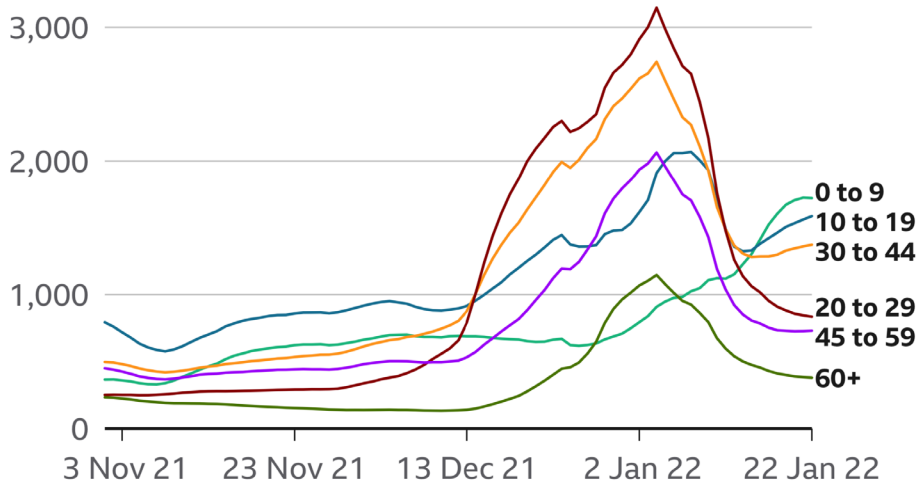
Source: Johns Hopkins University CSSE COVID-19 Data

Our World
in Data

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Cases rising in younger age groups

Weekly cases per 100,000 people in England



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

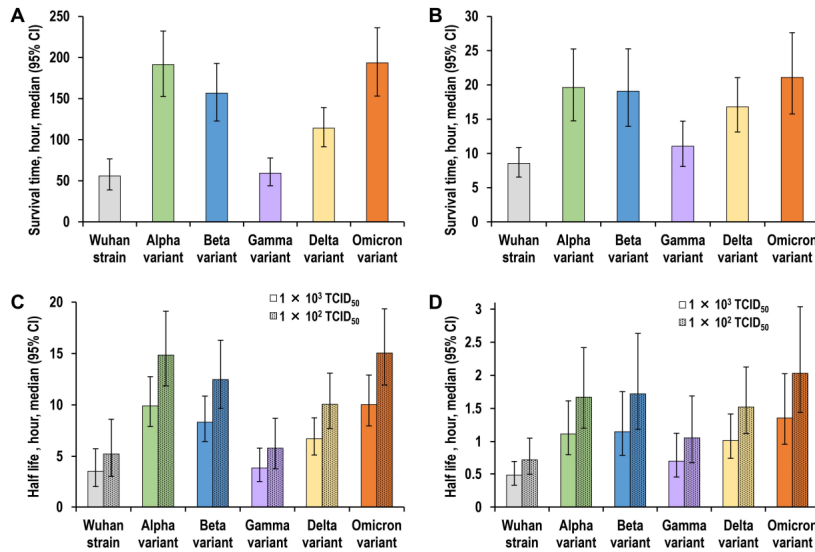


Figure 1. Survival times and half-lives of viruses on plastic and skin surfaces. (A, C)

Survival times (A) and half-lives (C) of various viruses on a plastic surface. (B, D) Survival times (B) and half-lives (D) of various viruses on the human skin surface. Survival time was defined as the time until the virus on the surface could no longer be detected. All half-lives in the graphs refer to the half-life when 1×10^2 or 1×10^3 TCID₅₀ (50% tissue culture infectious dose) of virus remained on the skin surface. Data are expressed as the median \pm 95% confidence interval.

- Increased surface survival – especially Alpha, Beta and Omicron
- Lab study with lots of caveats
- Translate into real world:
 - Fomite transmission not completely zero, maybe slightly higher for Omicron
 - Good public health – washing hands still adds benefit
 - Excessive/deep cleaning case by case versus routine
 - **Airborne still the primary route of infection**

Seasonality

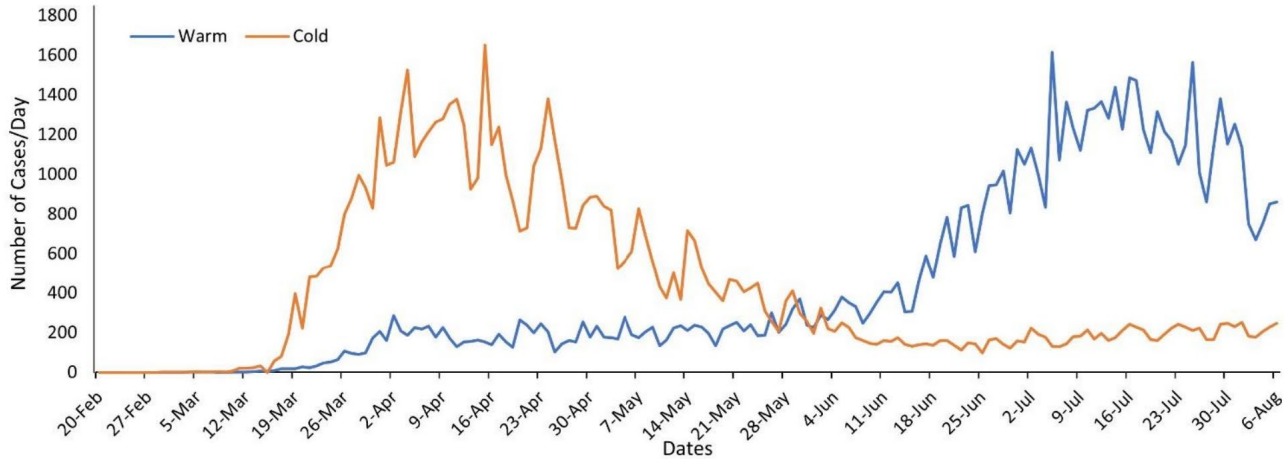
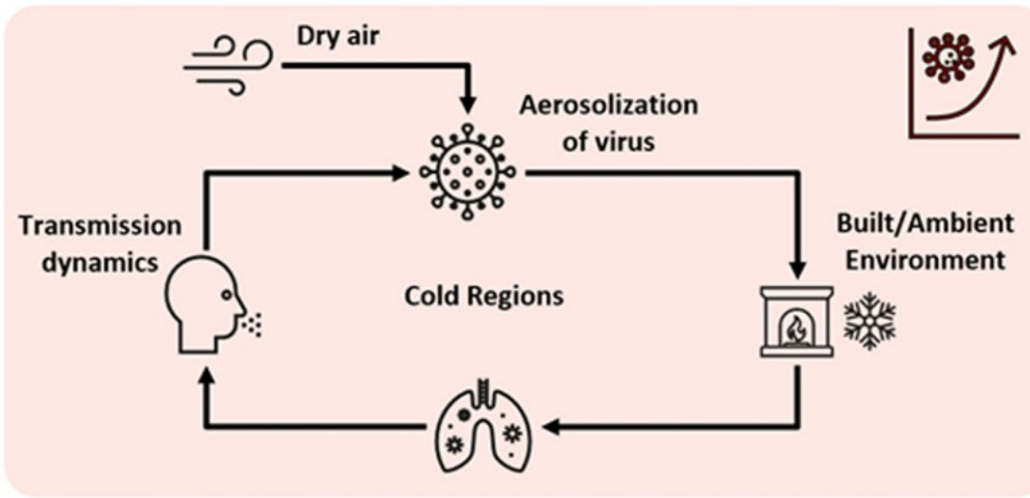


Figure S3: Time series of total infected cases per day in cold and warm regions of the United States of America (Year 2020 only).

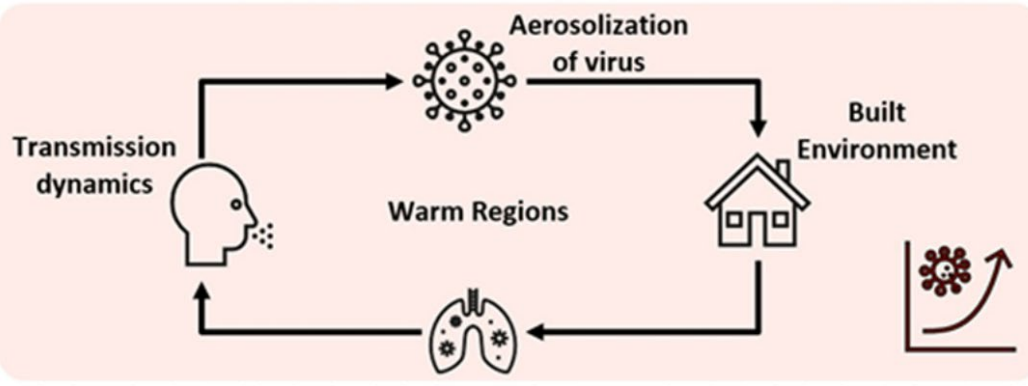
Ambient
Temperature
<17°C
<62°F



Tolerable
Temperature
17°-24°C
62°-75°F



Ambient
Temperature
>24°C
>75°F



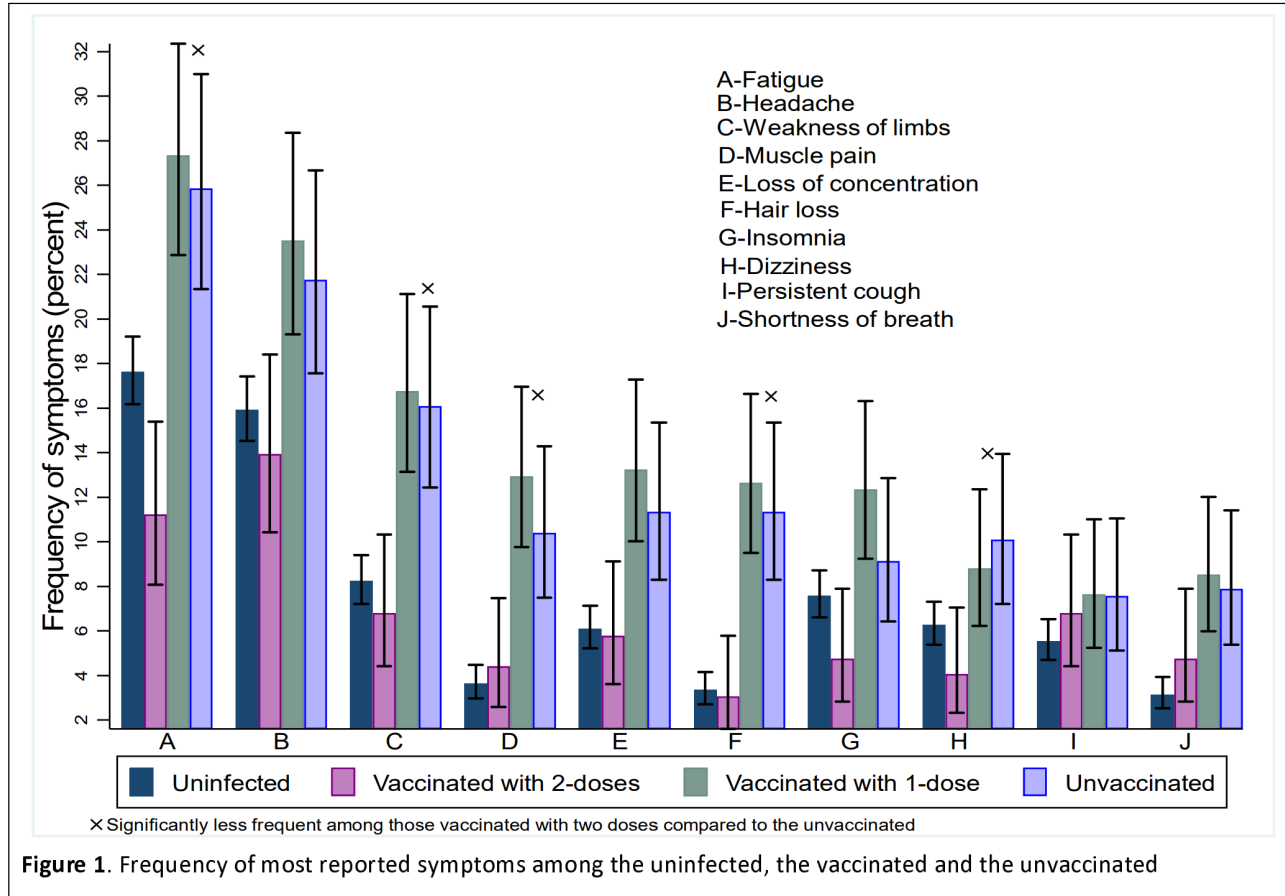
FACTORS

- Dry air ↓ droplet size ↑ aerosols
- Move indoors;
 - Proximity
 - Recirculated air

- Outdoors

- Move indoors
- A/C dries air ↓ droplet size ↑ aerosols
- Inadequate ventilation

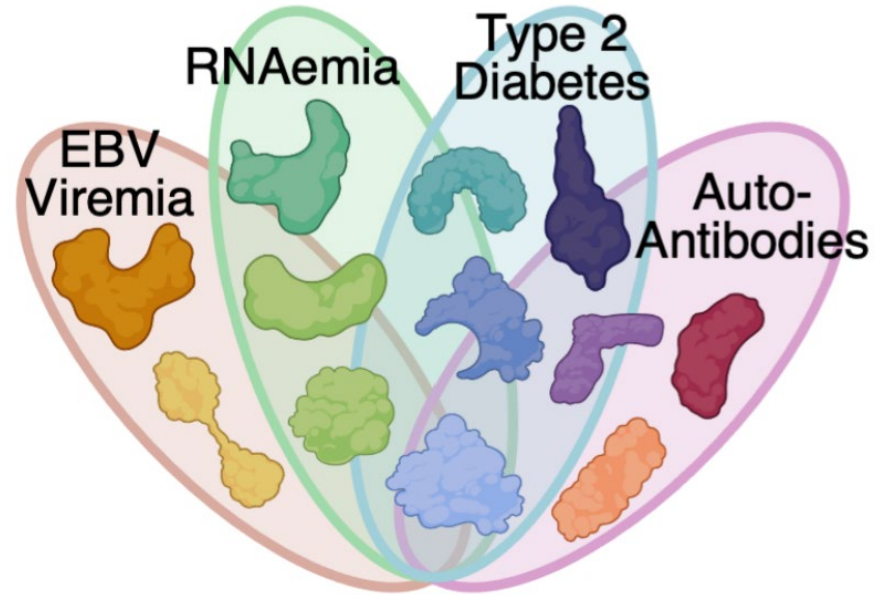
Long COVID and Vaccination



<https://www.medrxiv.org/content/10.1101/2022.01.05.22268800v2.full.pdf>

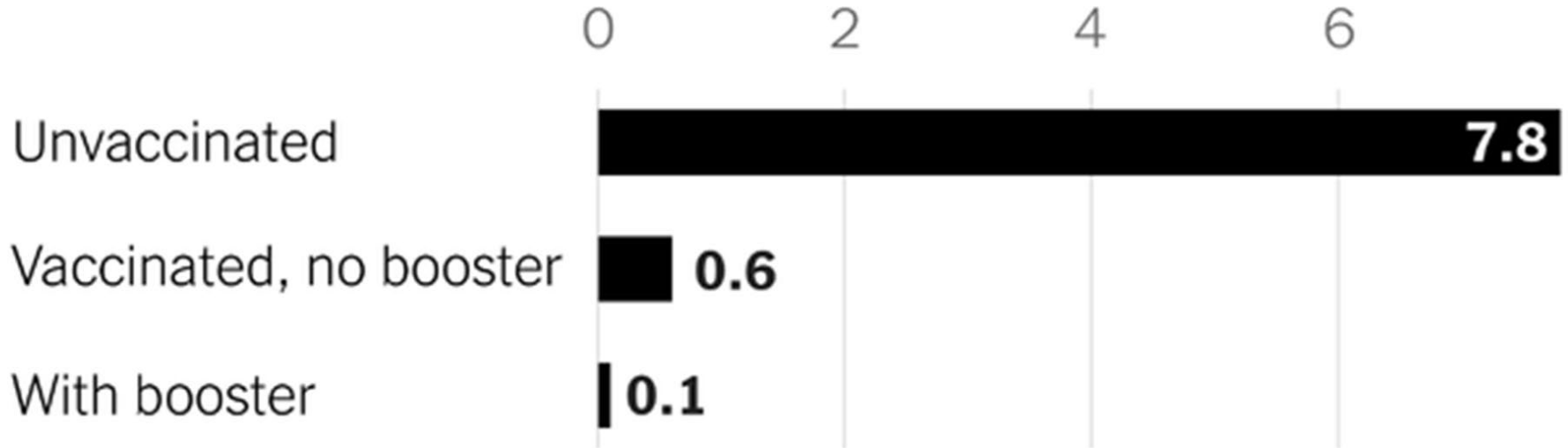
Risk Factors For Long-COVID (PASC)

- High viral load
- Presence of autoantibodies
- Reactivation of Epstein-Barr Virus
- Type 2 Diabetes



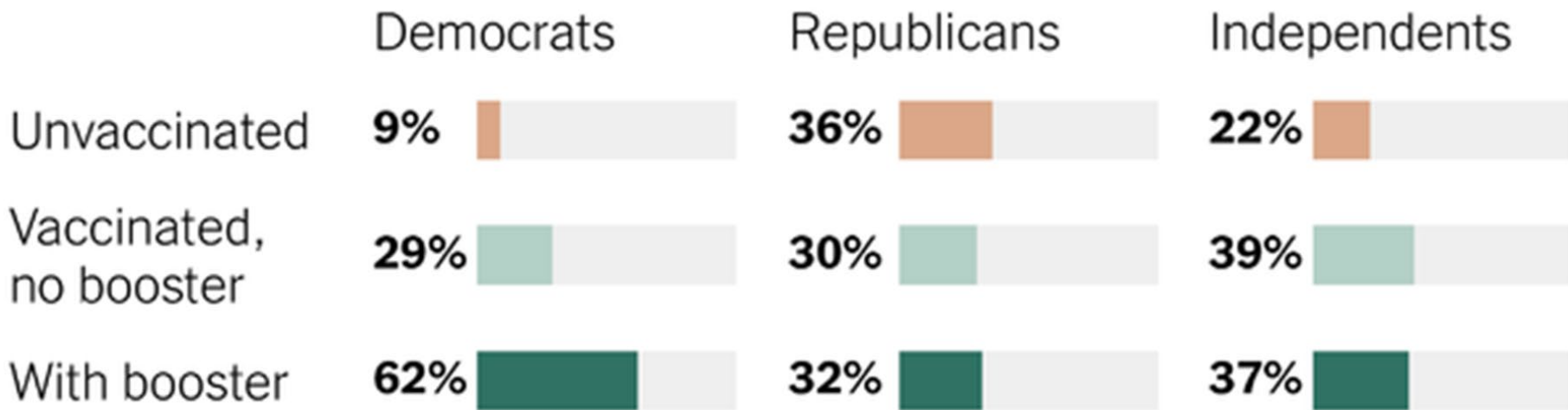
Weekly average deaths per 100,000

From Oct. to Nov. 2021



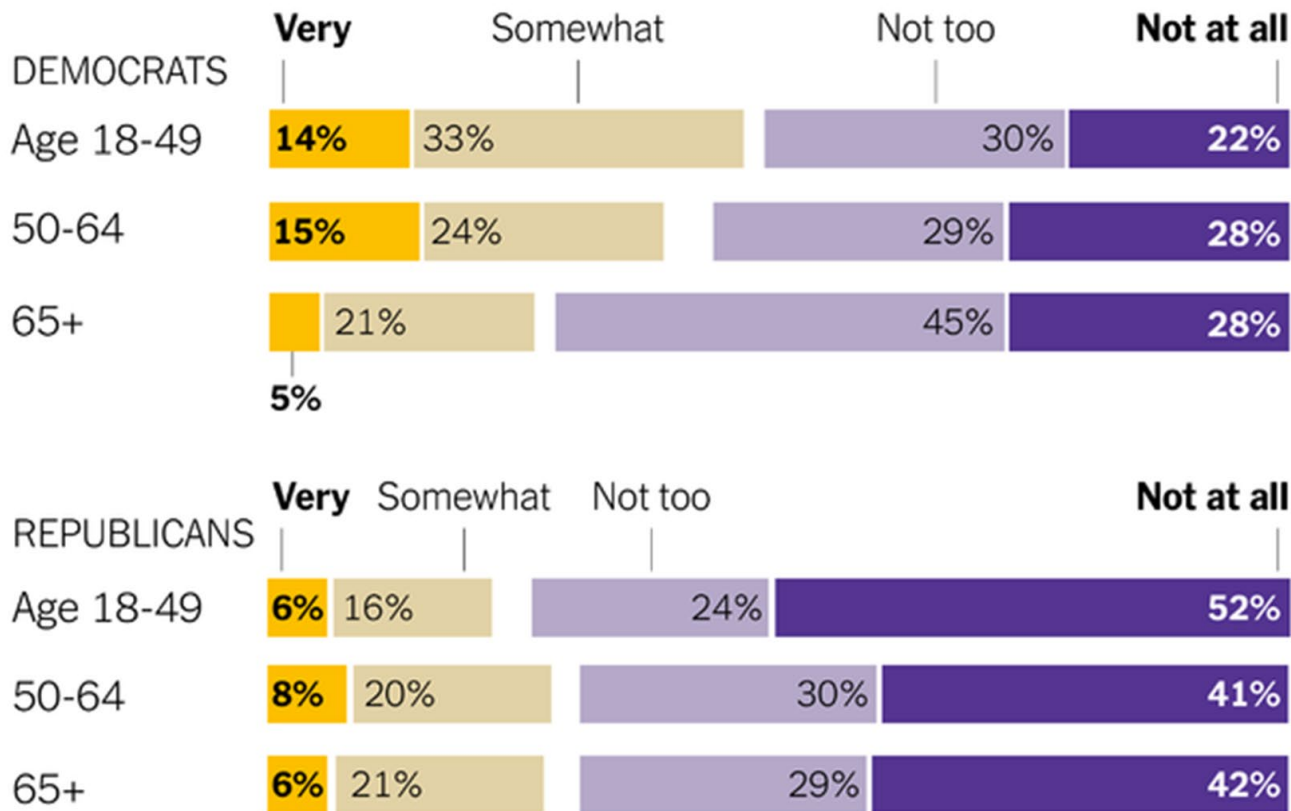
Based on 25 U.S. jurisdictions. | Source: C.D.C.

U.S. adults by political affiliation and vaccination status



From a survey of 1,536 adults in Jan. 2022. | Source: Kaiser Family Foundation

How worried are you that you will become seriously sick from the coronavirus?



From a survey of 1,536 adults in Jan. 2022. | Source: Kaiser Family Foundation



Questions

Upcoming NEBGH virtual events:

- **Feb. 7** – Monday COVID-19 Update w/ Dr. Mark
- **Feb. 10** – Software to Treat Disease: Prescription Digital Therapeutics
- **Mar. 22** - Prevention and Support for Substance Use Struggles