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COVID-19 Update

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Medical Director, NEBGH

Monday, December 20th 2021

45

OSHA ETS, Executive Order, and NYC mandate

- OSHA ETS:
  - Stay on OSHA ETS overturned
  - To give employers time to implement , OSHA will not issue citations for noncompliance with any requirements of the ETS before **January 10** and will not issue citations for noncompliance with the standard's **testing** requirements before **February 9**, so long as an employer is exercising reasonable, good faith efforts to come into compliance with the standard
  - Written comments on any aspect of the ETS must now be submitted by January 19, 2022
- Federal Contractor mandate
  - Nationwide stay December 7th
- NYC Employee Mandate
  - December 27th most NYC employees would need to show proof of first dose and then 45 days later proof of second dose (mRNA)
  - Businesses may check each worker's proof of vaccination before they enter the workplace each day. They must keep a record of each verification.

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NYC

TO BE POSTED IN PUBLIC-FACING LOCATION

Affirmation of Compliance With
Workplace Vaccination Requirements

Name of Business

Street Address

City   State   ZIP Code

I affirm that I have read the December 13, 2021 Order of the New York City Commissioner of Health requiring vaccination of workers and that my workplace is in compliance with the Order.

Signature   Date

Name (printed)

Title

https://www1.nyc.gov/assets/doh/downloads/pdf/covid/covid-19-vaccination-workplace-requirement-affirmation.pdf

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Pfizer Under 5 Vaccine Trial

- 2 doses of 3 micrograms vaccine
- Immune response in 6months to 2 years
- No immune response in 2-, 3- and 4-year-olds
- Modifying trial to include a 3rd dose booster after 2 months

3 is much more than 2+1

Boosters and why they work

Antibody Quality

Affinity Maturation:
- The process by which B cells produce antibodies with increased affinity for an antigen
- With repeated exposures to the same antigen, a host will produce antibodies of successively greater affinities.
  - A secondary response can elicit antibodies with several fold greater affinity than in a primary response…. A tertiary response even greater
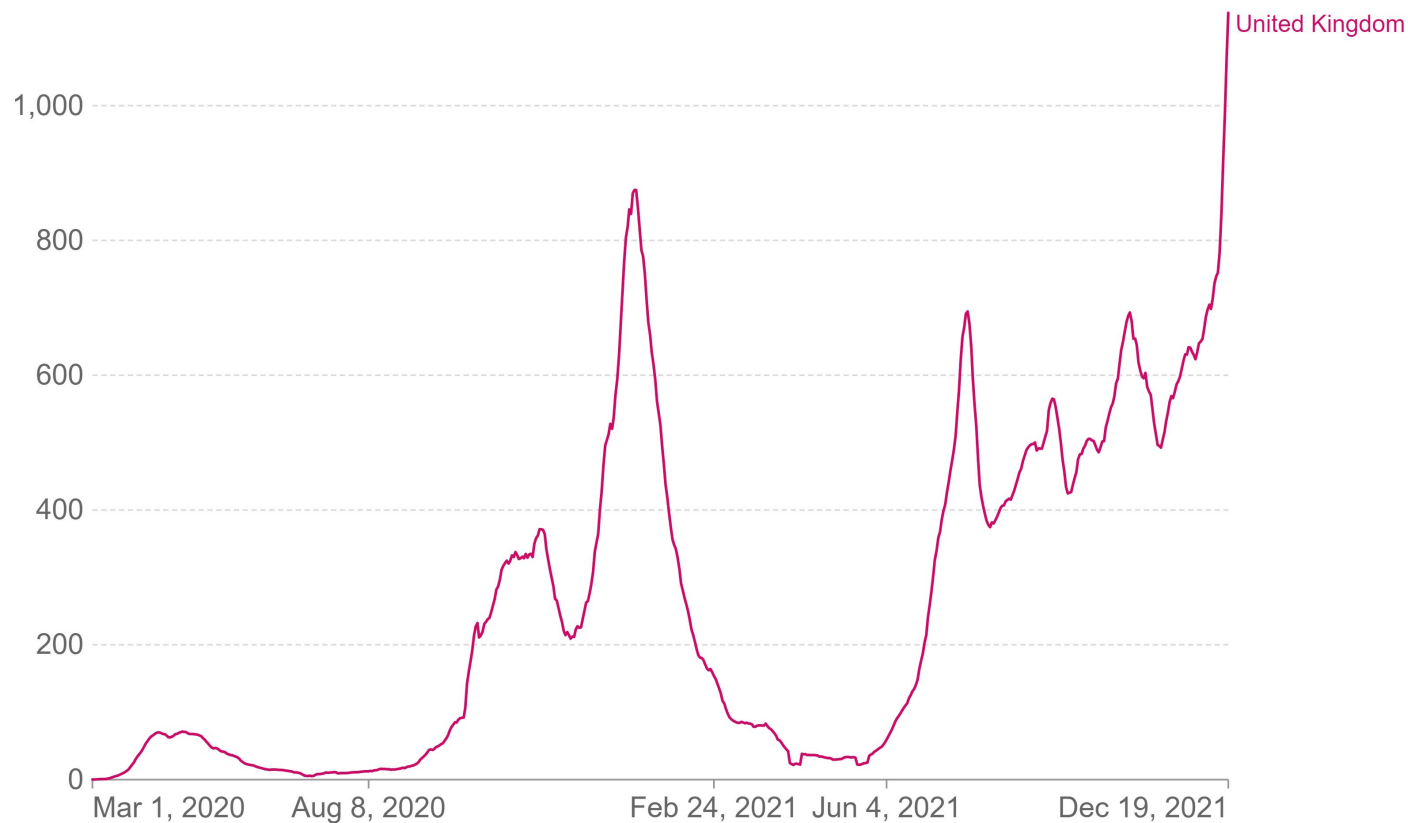
Antibody Quantity

- Each dose of vaccine increases the number of antibodies (for a time)
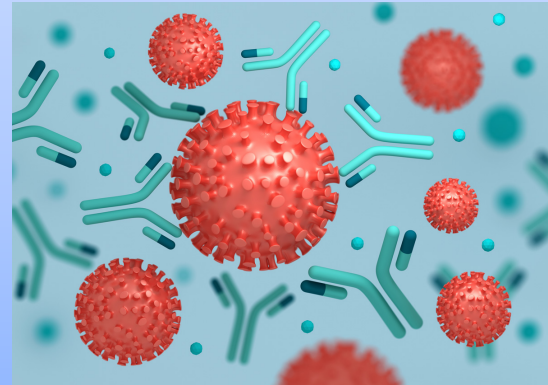
Daily new confirmed COVID-19 cases per million people

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

United Kingdom

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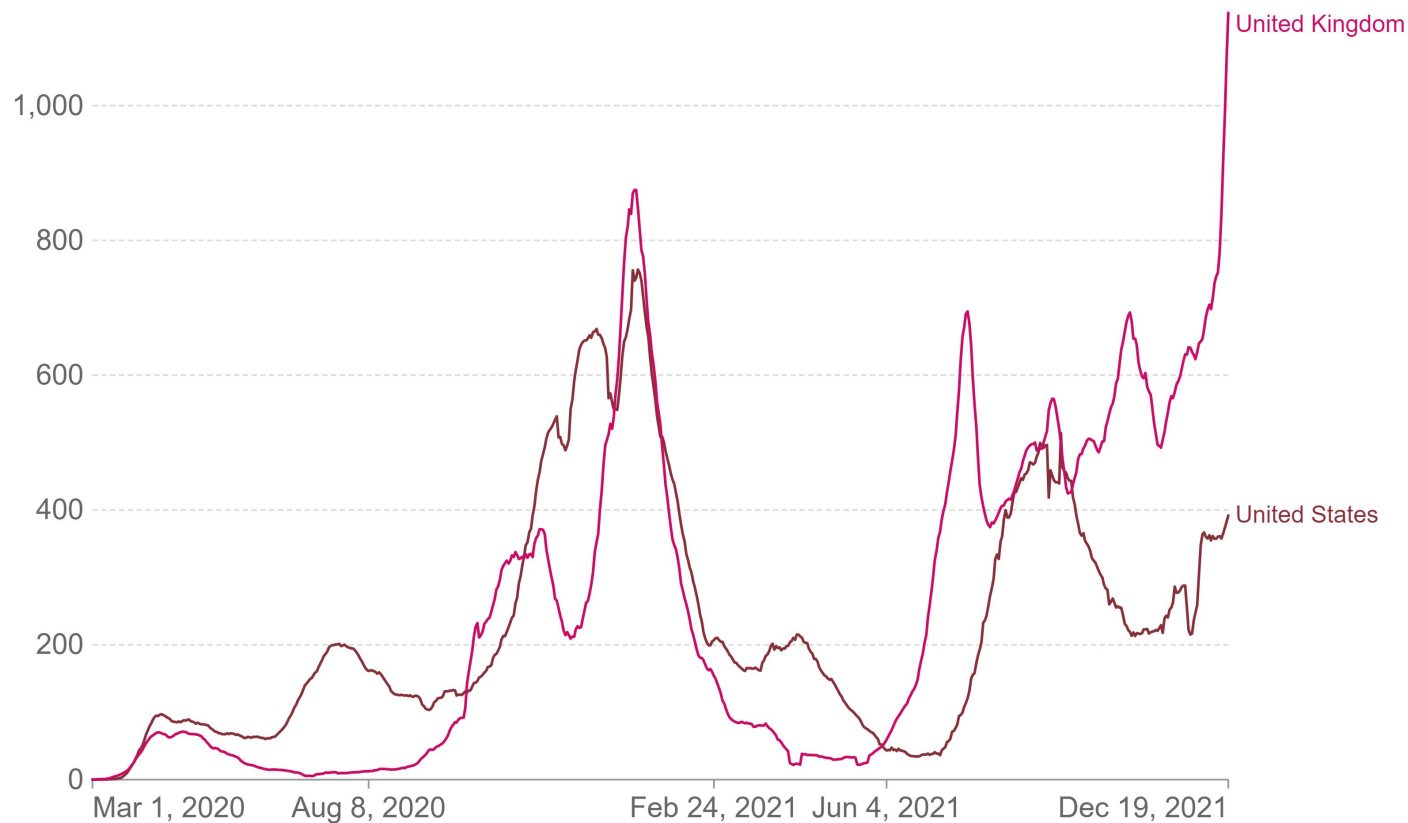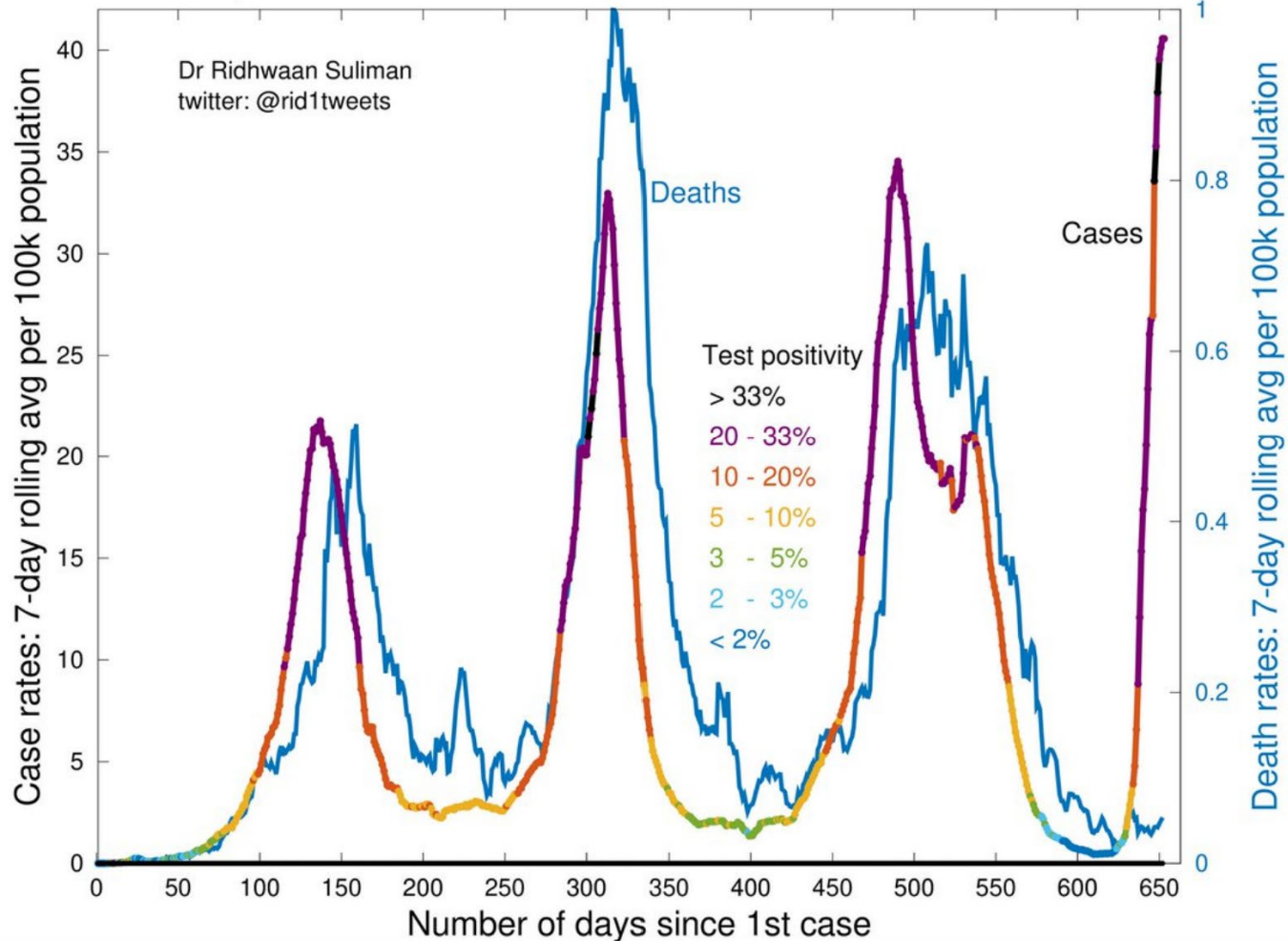
United Kingdom

United States

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Daily COVID-19 cases and deaths in South Africa

South Africa – Study

- Vaccine effectiveness:
  - The two-dose Pfizer-BioNTech vaccination provides 70% protection against severe complications of COVID-19 requiring hospitalization, and 33% protection against COVID-19 infection, during the current Omicron wave.
- Reinfection risk:
  - For individuals who have had COVID-19 previously, the risk of reinfection with Omicron is significantly higher, relative to prior variants.
- Severity:
  - The risk of hospital admission among adults diagnosed with COVID-19 is 29% lower for the Omicron variant infection compared to infections involving the D614G mutation in South Africa's first wave in mid-2020, after adjusting for vaccination status
- Children:
  - Despite very low absolute incidence, preliminary data suggests that children have a 20% higher risk of hospital admission in Omicron-led fourth wave in South Africa, relative to the D614G-led first wave.

https://www.discovery.co.za/corporate/news-room

Daily new confirmed COVID-19 cases & deaths per million people

7-day rolling average. Limited testing and challenges in the attribution of cause of death means the cases and deaths counts may not be accurate.

■ United Kingdom

New cases (per 1M)

New deaths (per 1M)

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■ United States

New cases (per 1M)

New deaths (per 1M)

METRIC	PAST # OF DAYS	LOCATIONS
Cases per 100K	All time	New York City metro, NY-NJ-PA; Chicago metro...

New York City metro
Chicago metro area
Miami metro area
Houston metro area
Florida

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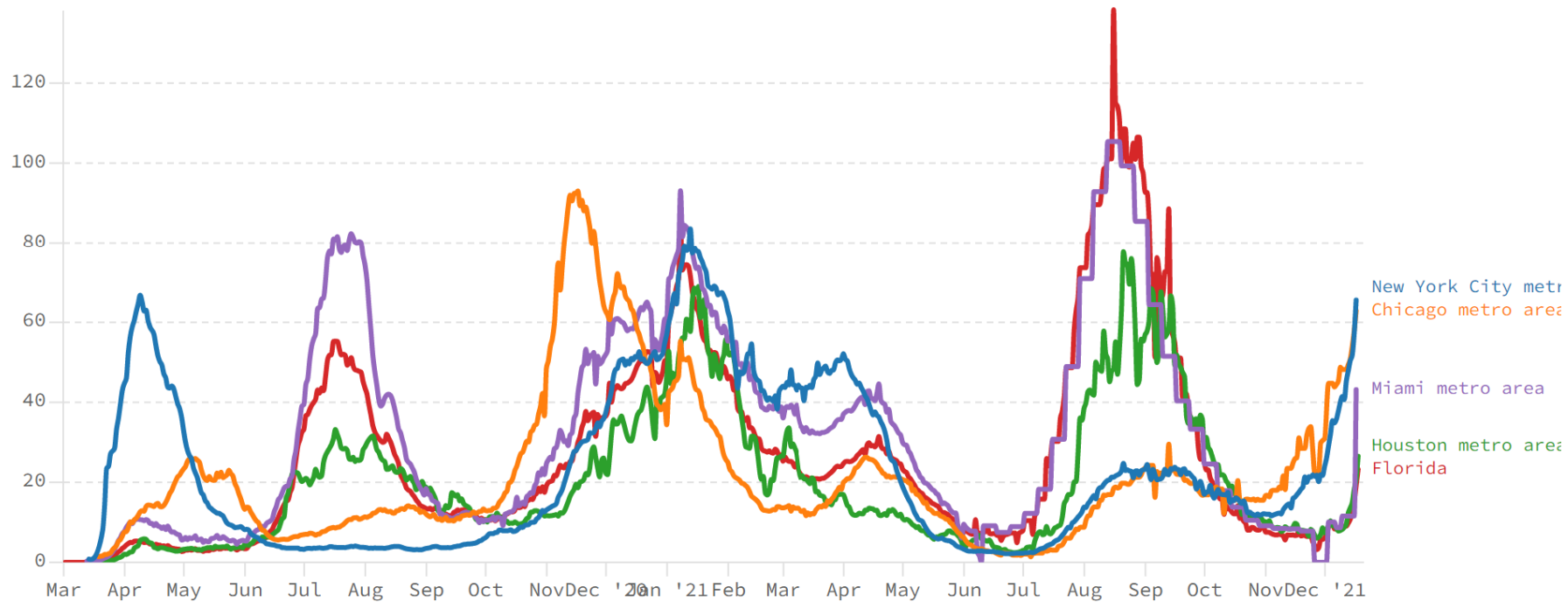
Symptoms

With Vaccine or pre-existing immunity:
Immunity kicks in FAST after exposure, along w symptoms and causes symptoms to start before the virus grows high

COVID-19 CORONAVIRUS VACCINE

- Symptoms are often a result of the immune response (not the virus)
- Vaccine pushes immunity to detect the virus FAST (that's literally their purpose) BEFORE the virus grows up.
- The FAST immune response elicited by vaccines helps suppress the virus for a day or more before the virus either is cleared or grows high
- Thus, vaccines are literally doing their job, initiates immune response and thus symptoms FAST before people become contagious
- Therefore, a test designed to detect infectious levels of virus will be negative for 1-3 days of symptoms before the virus grows high

No vaccine or pre-existing immunity:
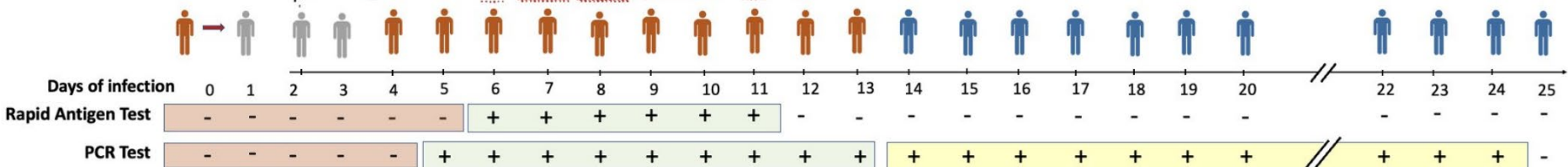Immunity is slow to kick in, the virus grows fast and immunity (i.e. symptoms) begin late

Symptoms

Rapid Antigen Tests turn positive when it matters most... when people are infectious

Infectious / Culturable Virus

PCR Positive but not infectious

Exposed

Days of infection	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	22	23	24	25
Rapid Antigen Test	-	-	-	-	-	-	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-
PCR Test	-	-	-	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-

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Questions

Upcoming NEBGH virtual events:
- **Jan. 10** – Monday COVID-19 Update w/ Dr. Mark
- **Jan. 12** – Maximizing PBM Savings: An Employer-Only Discussion