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GW Infectious Disease Updates

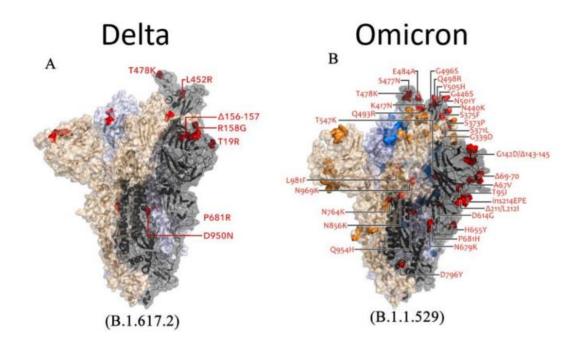
GW Covid-19 Collection

12-9-2021

Covid-19 Clinical Update 12/09/2021

George Washington University

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COVID-19 UPDATE

HANA AKSELROD, MD, MPH GW DIVISION OF INFECTIOUS DISEASES MFA COVID-19 LEAD 12/09/2021

Lions and Tigers Continue To Recover From COVID-19 and First Vaccines Were Administered To Susceptible Species at Smithsonian's National Zoo



- 1. EPIDEMIOLOGY
- 2. TREATMENT
- 3. PREVENTION
- 4. GW UPDATES





New reported cases All time Last 90 days Hot spots AVERAGE DAILY CASES PER 100,000 PEOPLE IN PAST WEEK 200,000 cases 10 30 50 70 100 250 FEW OR NO CASES Hot spots Hospitalized 100,000 Feb. 2021 DAILY AVG. ON DEC. 8 TOTAL REPORTED Cases 121,311 49,505,304 Tests 1,152,160 61,936 Hospitalized Deaths 1,275 791,933 ■ West ■ Midwest ■ South ■ Northeast New Hampshire 80 cases per 100,000

Feb. 2021

Jun.

Feb. 2020

About this data

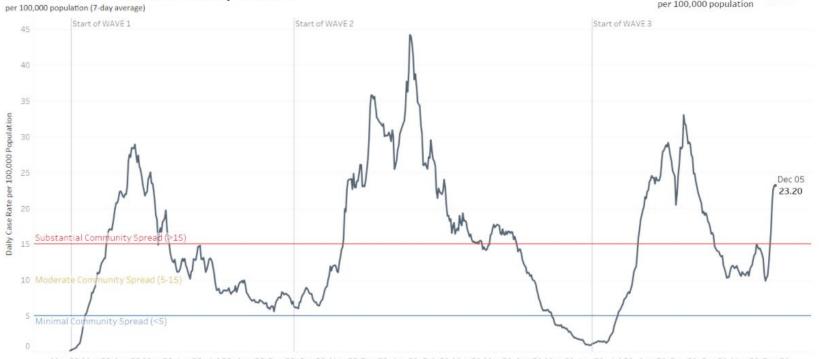
Jun.

Oct.

Oct.



Daily Case Rate: 23.2
per 100,000 population



Mar 20 Mar 20 Apr 20 May 20 Jun 20 Jul 20 Aug 20 Sep 20 Oct 20 Nov 20 Dec 20 Jan 21 Feb 21 Mar 21 Mar 21 Apr 21 May 21 Jun 21 Jul 21 Aug 21 Sep 21 Oct 21 Nov 21 Dec 21 Date of Test Collection

	Weekly Case Rate per 100,000 population	Daily Case Rate per 100,000 population	Hospitalization % of COVID-19 Cases	Contact Attempts among "high risk" cases	Interviews among "high risk" cases	Fully Vaccinated DC residents
Recent Value	162.4	23.2	7.0%	97.7%	86.2%	64.1%
One Month Prior	73.8	10.5	6.4%	99.2%	84.3%	62.5%
7 Day Trend	Worsening	Worsening	Worsening	Improving	Improving	Improving

There are signs that B.1.1.529 may be triggering a new wave in South Africa 20,000 daily cases in South Africa (7-day rolling average) 15,000 Delta Alpha Latest daily figure variants May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec 2020

Tedros Adhanom Ghebreyesus (*)

The Omicron variant reflects the threat of prolonged vaccine injustice. The longer we take to deliver #VaccinEquity, the more we allow the #COVID19 virus to circulate, mutate and become potentially more dangerous.

Source: FT analysis of data from Gisaid and the South African National Health Laboratory Service

At least 201 countries have started vaccinating against COVID-19

South Africa
30.2% received at least one dose
25.3% have been fully vaccinated

nature

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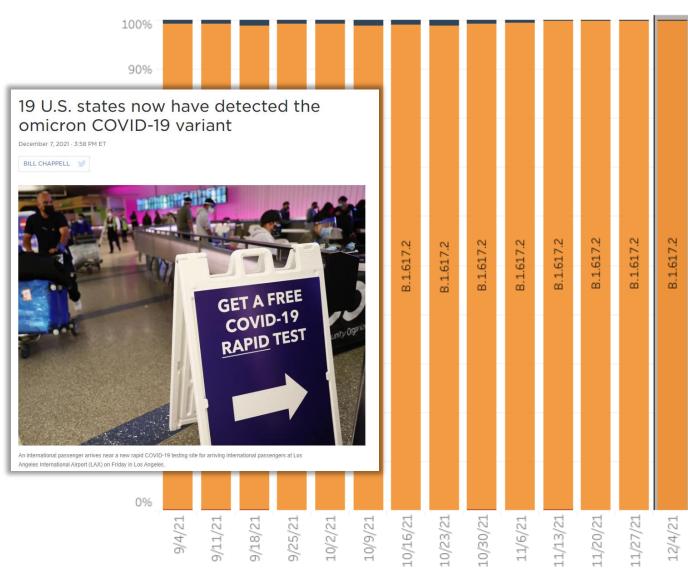
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NEWS | 25 November 2021 | Update 27 November 2021

Heavily mutated Omicron variant puts scientists on alert

Researchers are racing to determine whether a fast-spreading coronavirus variant poses a threat to COVID vaccines' effectiveness.





USA

WHO label	Lineage #	US Class	%Total	95%PI	
Delta	B.1.617.2	voc	99.9%	99.8-99.9%	
	AY.1	VOC	0.1%	0.0-0.1%	
	AY.2	VOC	0.0%	0.0-0.0%	
Omicron	B.1.1.529	VOC	0.0%	0.0-0.0%	
Other	Other*		0.1%	0.0-0.1%	

^{*} Enumerated lineages are US VOC and lineages circulating above 1% nationally in at least one week period. "Other" represents the aggregation of lineages which are circulating <1% nationally during all weeks displayed.

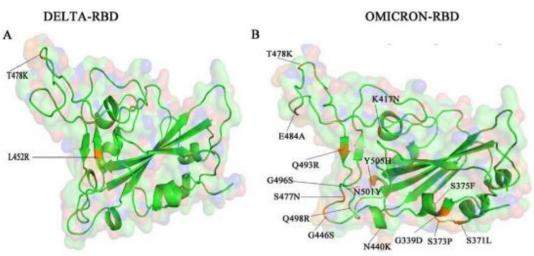
^{**} These data include Nowcast estimates, which are modeled projections that may differ from weighted estimates generated at later dates

AY.3-AY.125 and their sublineages are aggregated with B.1.617.2.

Omicron: What Is Known*

- Transmissibility: similar to or higher than Delta?*
 - Steep rise in cases in S. Africa, superspreader events in Europe
 - Detected by current PCR (multiple targets; may distinguish S-target "dropout" on some) and antigen (conserved epitopes) tests
- Ability to infect vaccinated or previously infected people
 - How does risk compare for vaccinated vs. not?
 - What relationship to time since vaccination?
 - Protection restored by booster?
 - Neutralization studies:
 - Antibody neutralization in sera of vaccinated pts ↓20-40x *
 - Pfizer: 3rd dose of vaccine improves neutralization ↑25x *
 - mAb efficacy: REGEN-COV may be affected, GSK may be preserved? *
- Severity of disease: may be similar or milder?*
 - * "Publication by Twitter" and "expert opinion" a.k.a. "written in jello"









Treatment and Prevention Updates

MOLNUPIRAVIR

- Updated MOVE-OUT data: 30% reduction in hospitalization (was 50% in interim analysis)
- Concerns about mutagenesis potential (see: https://www.pharmaceutical-technology.com/features/molnupiravir-safety-questions-approvals-approach/)
- FDA Advisory Committee split vote in support of approval; final decision pending

FLUVOXAMINE

 Promising study in Lancet Global Health but some issues with outcomes, see https://www.the-scientist.com/news-opinion/a-closer-look-at-the-new-fluvoxamine-trial-data-69369

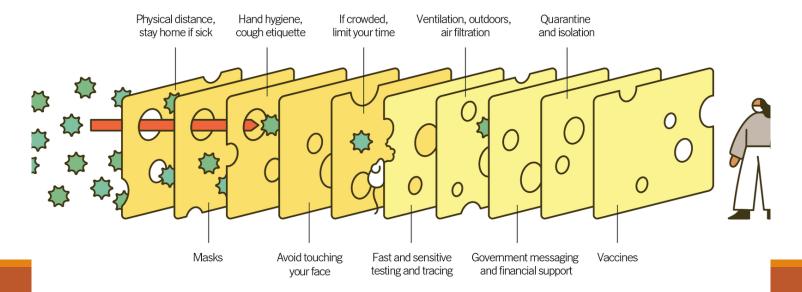
EVUSHIELD (TIXAGEVIMAB + CILGAVIMAB)

FDA approved for **PrEP of COVID-19** in:

- Ages 12+, weight >40 kg
- Not currently infected with SARS-CoV-2 or within incubation period of a known exposure
- Moderate to severely immunocompromised, or
- Have a history of severe adverse reactions to a COVID-19 vaccine precluding vaccination with vaccine(s) approved for their age group

Prevention Recap

- 1. Significantly immunocompromised: need 3rd dose, given ≥1 month after #2.
- 2. J&J recipients: need 2nd dose, given ≥6 months after #1.
- 3. Ages 16+: booster/3rd dose, given ≥6 months after #2. Can "mix & match."
- 4. Combine multiple interventions for optimal prevention.







GW Updates

- COVID-19 Vaccine Clinic at 949 23rd St. NW
 - https://www.gwdocs.com/patients-visitors/covid-19updates/covid-19-vaccination-information/*
- Monoclonal antibodies for high-risk infected:
 - Available at GWUH ED
 - DHHS Locator: https://combatcovid.hhs.gov/i-have-covid-19-now/monoclonal-antibodies-high-risk-covid-19-positive-patients
 - Availability of new AZ mAb for PrEP: TBD
- Safety advisory:
 - Low threshold of suspicion to re-test inpatients.
 - Holiday celebrations: Swiss Cheese
 - Encourage family to get boosters.
 - Consider pre-ordering rapid tests.
 - GW campus testing: https://mychc.gwu.edu/ *



https://combatcovid.hhs.gov/i-have-covid-19-now/monoclonalantibodies-high-risk-covid-19-positive-patients