

### COVID-19 Press Briefing

December 7, 2021







### Daily Change in COVID-19 Cases, US

January 22, 2020 – December 05, 2021

TOTAL Cases Reported Since 1/22/20

49,002,475

NEW Cases Reported to CDC on 12/5/21

40,105

Change in 7-Day Case Average

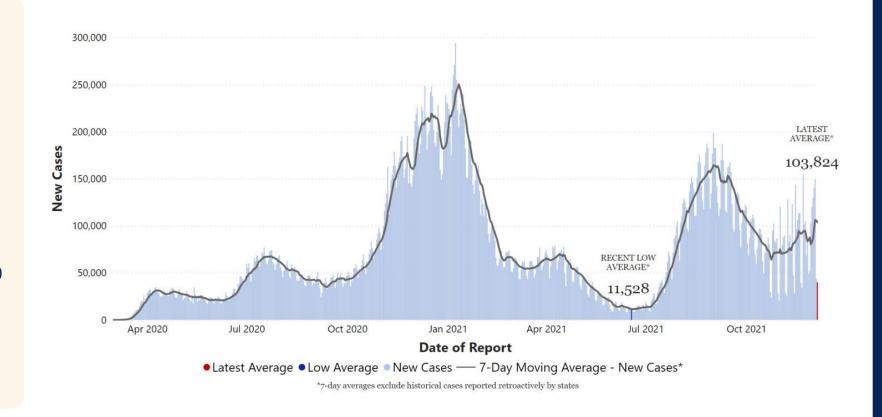
+18.5%

Current 7-Day Case Average (11/29/21 - 12/5/21)

103,824

Prior 7-Day Case Average (11/22/21 - 11/28/21)

87,603







### New Admissions of Patients with Confirmed COVID-19, US

August 1, 2020 – December 04, 2021

Patients Currently Hospitalized with COVID on 12/4/21

39,817

New Admissions on 12/4/21

5,795

Peak in New Admissions (1/5/21)

17,949

Change in 7-Day Average of New Admissions

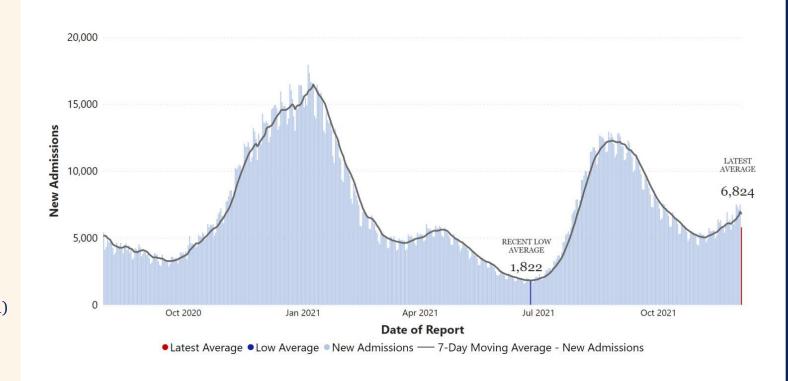
+10.5%

Current 7-Day Average of New Admissions (11/28/21 - 12/4/21)

6,824

Prior 7-Day Average of New Admissions (11/21/21 - 11/27/21)

6,175







### Daily Change in COVID-19 Deaths, US

January 22, 2020 – December 05, 2021

TOTAL Deaths Reported Since 1/22/2020

785,655

NEW Deaths Reported to CDC on 12/5/21

177

Change in 7-Day Death Average

+57.4%

Current 7-Day Death Average (11/29/21 - 12/5/21)

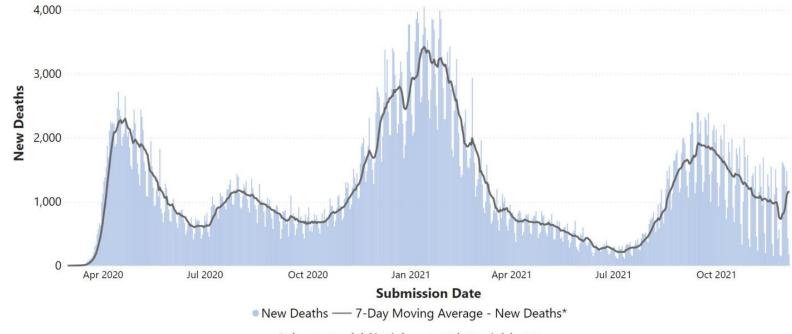
1,155

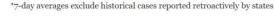
Prior 7-Day Death Average (11/22/21 - 11/28/21)

734

Forecasted Total Deaths by 12/25/21

805,000 to 817,000



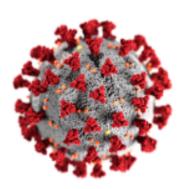






Transmissibility

Severity of Disease

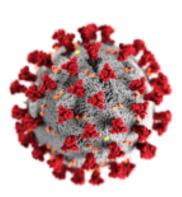






Transmissibility

Severity of Disease



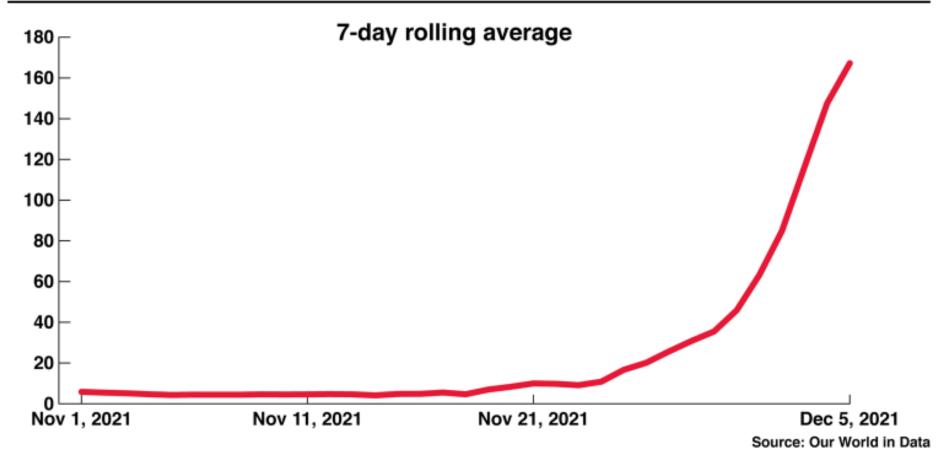




## Omicron May Be More Transmissible Than Delta

- Omicron has mutations seen in other variants that are associated with more evasion of immunity and increased infectivity
- Real-world evidence from South Africa
  - Rapid increase in cases
  - Increase of the effective reproductive number
  - Rapid replacement of Delta variant by Omicron

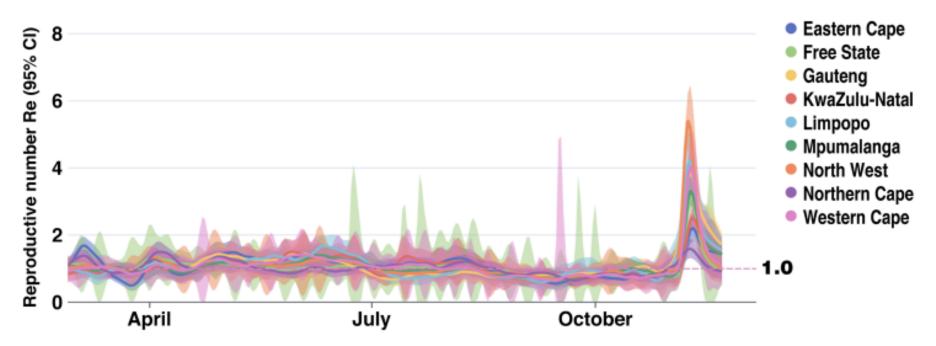
# Daily New Confirmed COVID-19 Cases per Million People: South Africa







# South Africa: Effective Reproductive Number (R<sub>e</sub>) Has Risen Since Appearance of Omicron

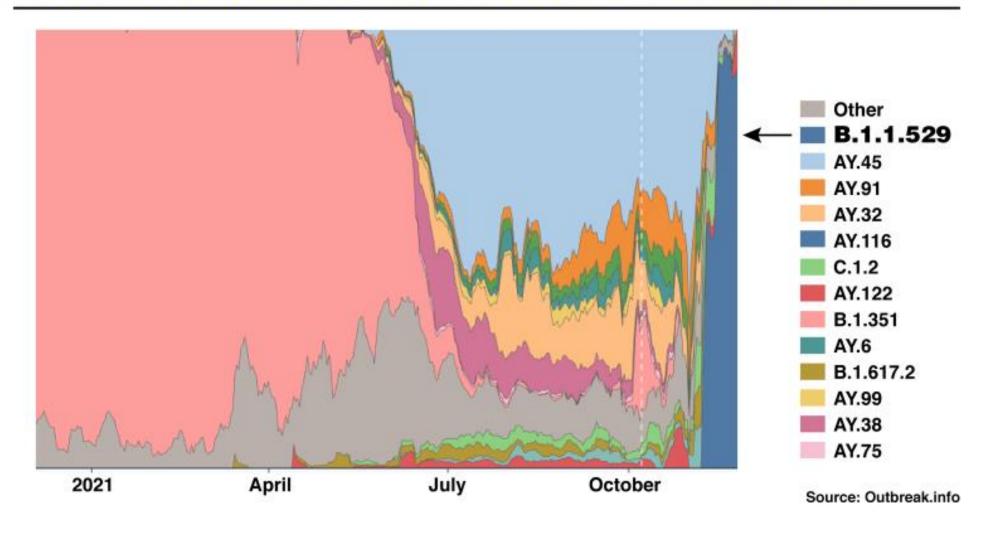


R<sub>e</sub> quantifies how many people are infected on average by an infected person.

Source: https://ibz-shiny.ethz.ch/covid-19-re-international/



### **South Africa: Omicron Now Dominant**

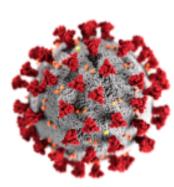






Transmissibility

Severity of Disease







# Early Data on Severity of Disease from South Africa

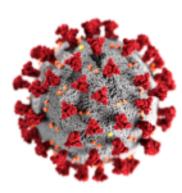
- Dec. 4, 2021 report from Steve Biko/Tshwane District Hospital Complex
- A different clinical picture compared to previous waves in S. Africa
  - 70% of COVID-19 cases did not need supplemental oxygen
  - Few patients developed COVID-19 pneumonia or required high-level care
  - Average hospital stay 2.8 days vs. 8.5 days recorded in the region over previous 18 months
  - Most serious outcomes were among unvaccinated patients

Source: samrc.sc.za, 12/4/2021



Transmissibility

Severity of Disease









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Posted December 2, 2021

#### Increased Risk of SARS-CoV-2 Reinfection Associated With Emergence of the Omicron Variant in South Africa

JRC Pulliam, H Moultrie et al.

- Omicron appears to have an increased propensity for re-infection of previously infected people, compared to the Beta and Delta variants that caused South Africa's earlier infection waves
- Magnitude of effect: ~3-fold greater re-infection risk





### Examples of Research Underway/ Planned to Answer Key Questions

- Laboratory studies to determine how well sera from people who were vaccinated and/or previously infected neutralize the Omicron variant
  - Live-virus assays + pseudovirus assays looking at immune responses
  - Sera from vaccinees who received licensed and EUA vaccines, in different doses, with and without boosts
  - Tests of susceptibility to monoclonal antibodies and antivirals
- Studies in animal models to evaluate immune protection from vaccines and previous infection; disease pathogenesis; efficacy of antivirals
- Epidemiological and clinical studies







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