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
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
Key Omicron Unknowns

- Transmissibility
- Severity of Disease
- Immune Evasion
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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

7-day rolling average

Source: Our World in Data
South Africa: Effective Reproductive Number ($R_e$) Has Risen Since Appearance of Omicron

$R_e$ quantifies how many people are infected on average by an infected person.

Source: https://lbz-shiny.ethz.ch/covid-19-re-international/
South Africa: Omicron Now Dominant

Source: Outbreak.info
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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
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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