

COVID-19 Press Briefing

January 26, 2022







Daily Change in COVID-19 Cases, US

January 22, 2020 – January 24, 2022

TOTAL Cases Reported Since 1/22/20

71,818,876

NEW Cases Reported to CDC on 1/24/22

1,140,580

Change in 7-Day Case Average

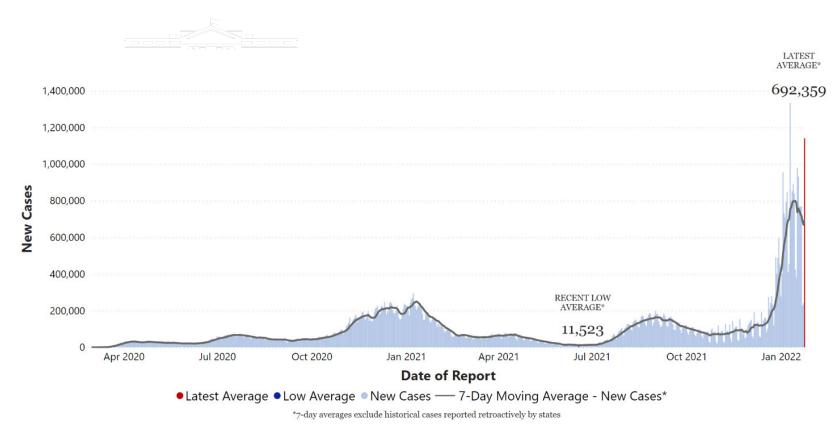
-6.2%

Current 7-Day Case Average (1/18/22 - 1/24/22)

692,359

Prior 7-Day Case Average (1/11/22 - 1/17/22)

737,733







New Admissions of Patients with Confirmed COVID-19, US

August 1, 2020 – January 23, 2022

Patients Currently Hospitalized with COVID on 1/23/22

134,359

New Admissions on 1/23/22

16,238

Peak in New Admissions (1/12/22)

23,045

Change in 7-Day Average of New Admissions

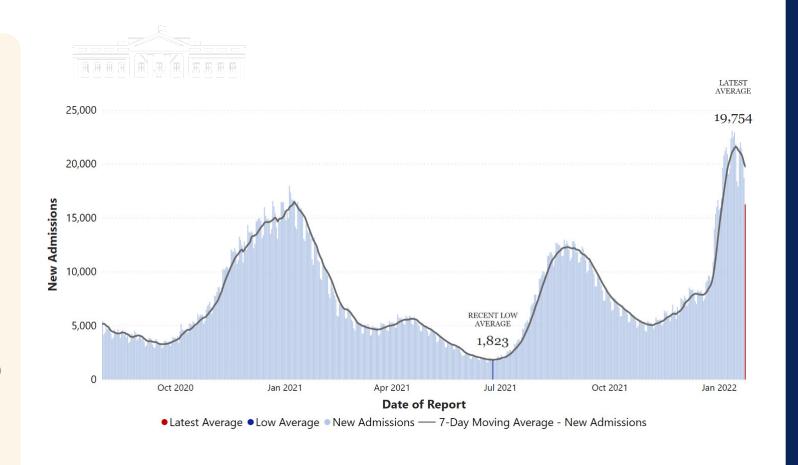
-8.2%

Current 7-Day Average of New Admissions (1/17/22 - 1/23/22)

19,754

Prior 7-Day Average of New Admissions (1/10/22 - 1/16/22)

21,509







Daily Change in COVID-19 Deaths, US

January 22, 2020 – January 24, 2022

TOTAL Deaths Reported Since 1/22/2020

866,968

NEW Deaths Reported to CDC on 1/24/22

2,643

Change in 7-Day Death Average

+20.9%

Current 7-Day Death Average (1/18/22 - 1/24/22)

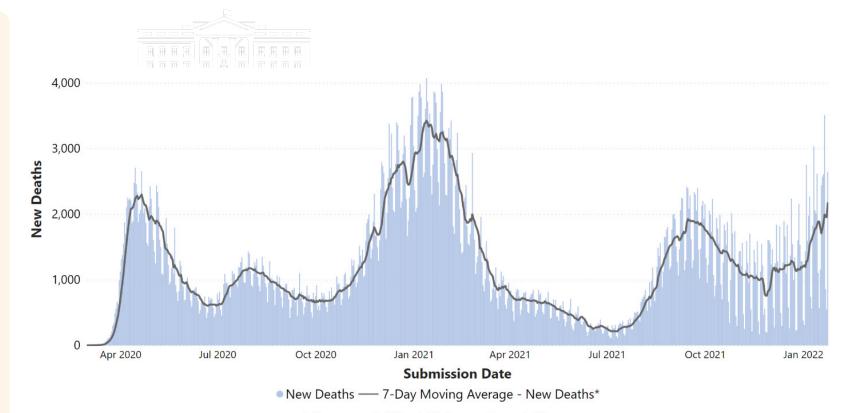
2,166

Prior 7-Day Death Average (1/11/22 - 1/17/22)

1,791

Forecasted New Deaths in the week ending 02/12/22)

9,800 to 35,700

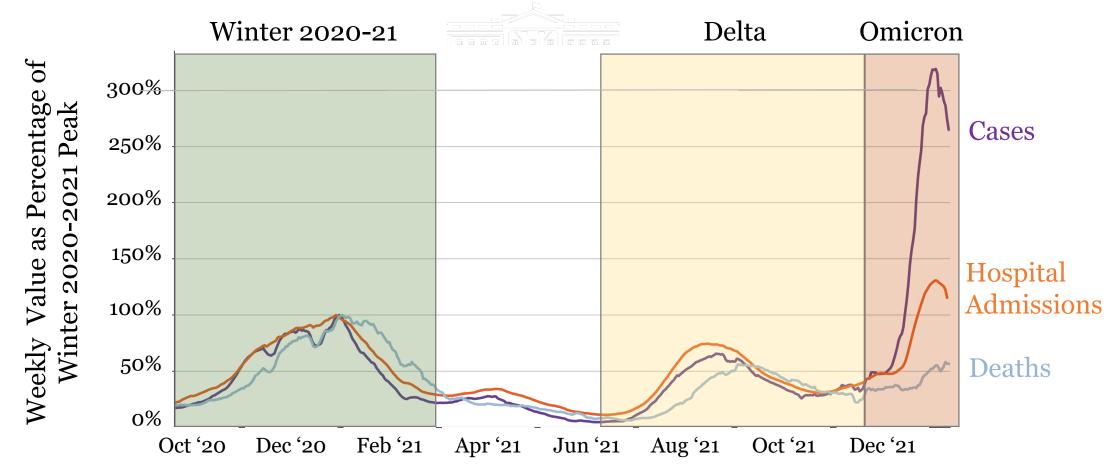


*7-day averages exclude historical deaths reported retroactively by states





Cases, hospitalizations, and deaths during Omicron period compared with Delta period and Winter 2020–21









Published online December 15, 2021

Perspective

Universal Coronavirus Vaccines — An Urgent Need

David M. Morens, M.D., Jeffery K. Taubenberger, M.D., Ph.D., and Anthony S. Fauci, M.D.





- In the past 20 years, three coronaviruses have caused major disease outbreaks – SARS, MERS, COVID-19
- Since September 2020, five SARS-CoV-2 Variants of Concern have emerged – alpha, beta, gamma, delta, omicron
- Innovative approaches are needed to induce broad and durable protection against coronaviruses, known and unknown

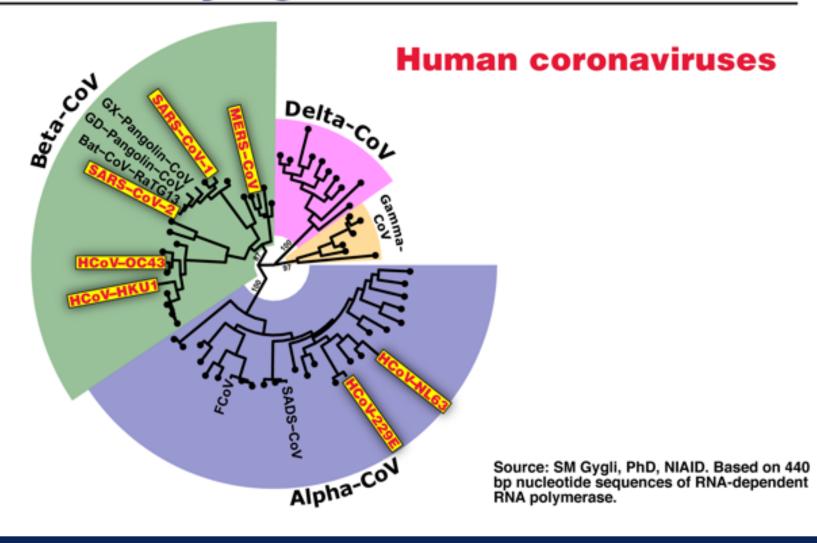


Pan-Coronavirus Vaccines





Coronavirus Phylogenetic Tree



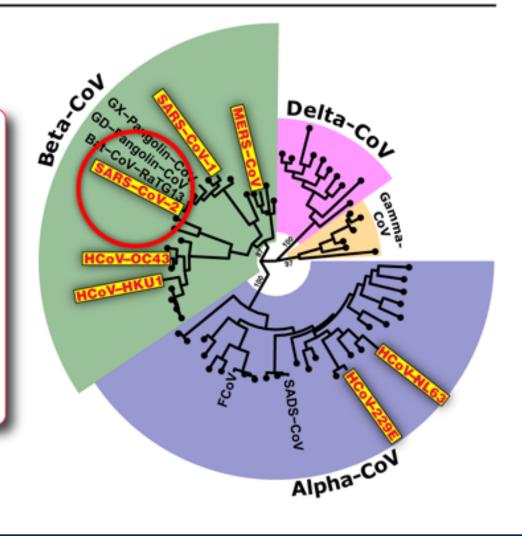




Pan-SARS-CoV-2 Vaccine

WHO Variants of Concern:

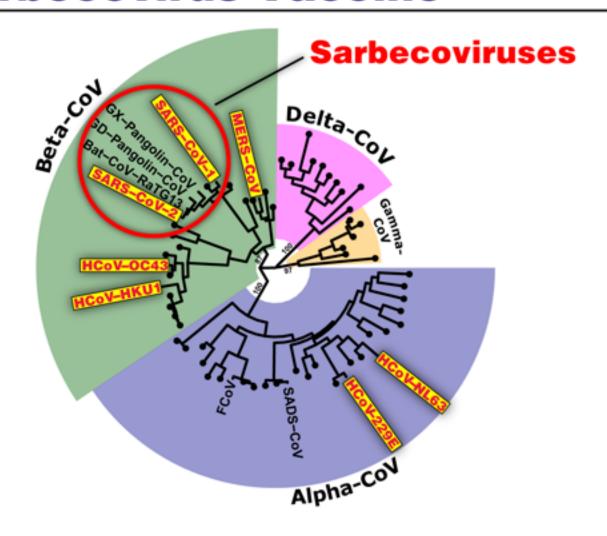
- Alpha
- Beta
- Gamma
- Delta
- Omicron







Pan-Sarbecovirus Vaccine







NIAID Research on Pan-Coronavirus Vaccines

- NIAID has invested/awarded >\$3.5 billion overall on coronavirus research since the COVID-19 pandemic began
- Coronavirus vaccine research (total so far): \$1.4 billion
 - Substantial investment in pan-coronavirus vaccine research in intramural and extramural programs
- Sept. 2021-Jan. 2022 awards: \$42.8 million in funding over 3 years, to 4 academic institutions, for research to develop vaccines to protect against multiple types of coronaviruses and viral variants
- Additional awards anticipated in fiscal year 2022



Ongoing Projects: 5 Examples of Promising Pan-Coronavirus Vaccine Candidates

scientific reports

A Platform Incorporating
Trimeric Antigens into
Self-assembling Nanoparticles
Reveals SARS-CoV-2-spike
Nanoparticles to Elicit
Substantially Higher
Neutralizing Responses than
Spike Alone

B Zhang, PD Kwong et al.

nature Vol. 594
No. 7864

Neutralizing Antibody Vaccine for Pandemic and Pre-Emergent Coronaviruses

KO Saunders, BF Haynes et al.



Mosaic Nanoparticles Elicit Cross-Reactive Immune Responses to Zoonotic Coronaviruses in Mice

AA Cohen, PJ Bjorkman et al.

Science December 16, 2021
Translational
Medicine

A SARS-CoV-2 Ferritin
Nanoparticle Vaccine Elicits
Protective Immune Responses
in Nonhuman Primates

MG Joyce, K Modjarrad et al.

Cell

Published online September 15, 2021

Elicitation of Broadly Protective Sarbecovirus Immunity by Receptor-Binding Domain Nanoparticle Vaccines

AC Walls, D Veesler et al.

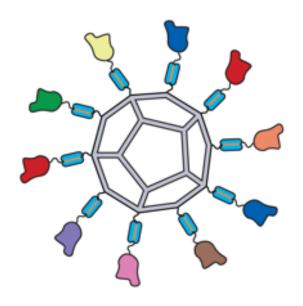


Vaccine Construct Vaccine Vaccine Vaccine Platform

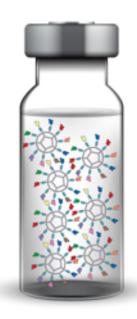




Example of a Pan-Coronavirus Vaccine Concept



Nanoparticle with different spike protein fragments



Vaccine



Diverse antibody response

Source: Bjorkman et al. 2021 Science





Example of a Universal Beta-Coronavirus Vaccine Concept



Source: Taubenberger, et al. 2022 Unpublished



vaccine consisting of SARS-CoV-2 and several different coronaviruses delivered by intranasal mist

Key Points

Pan-coronavirus vaccine candidates will take time to develop

Our current vaccine regimens provide strong protection against severe COVID-19 and death

Do not wait to receive your primary vaccine regimen or booster, if you are eligible





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