

Archived Editions (COVID-19 Genomics and Precision Public Health Weekly Update)

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COVID-19 Genomics and Precision Public Health Weekly Update Content

- Pathogen and Human Genomics Studies
- Non-Genomics Precision Health Studies
- News, Reviews and Commentaries

Pathogen and Human Genomics Studies

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Wei Jia et al. Nature medicine 2022 2

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with mild disease not resulting in hospitalization or death. In conclusion, we provide evidence that Omicron BA.2 reinfections do occur shortly after BA.1 infections but are rare.

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- Effectiveness of BNT162b2 Vaccine against Critical Covid-19 in Adolescents (https://www.nejm.org/doi/full/10.1056/NEJMoa2117995?query=featured_home)

SM Olson et al, NEJM, February 23, 2022

We used a case-control, test-negative design to assess vaccine effectiveness against Covid-19 resulting in hospitalization, admission to an intensive care unit (ICU), the use of life-supporting interventions (mechanical ventilation, vasopressors, and extracorporeal membrane oxygenation), or death. The overall effectiveness of the BNT162b2 vaccine against hospitalization for Covid-19 was 94% (95% confidence interval [CI], 90 to 96); the effectiveness was 95% (95% CI, 91 to 97) among test-negative controls and 94% (95% CI, 89 to 96) among syndrome-negative controls. The effectiveness was 98% against ICU admission and 98% against Covid-19 resulting in the receipt of life support. All 7 deaths occurred in patients who were unvaccinated.

- Population Immunity and Covid-19 Severity with Omicron Variant in South Africa (https://www.nejm.org/doi/full/10.1056/NEJMoa2119658?query=featured_home)

SA Madhi et al, NEJM, February 23, 2022

We conducted a seroepidemiologic survey from October 22 to December 9, 2021, in Gauteng to determine the seroprevalence of SARS-CoV-2 IgG. We also evaluated Covid-19 epidemiologic trends in Gauteng, including cases, hospitalizations, recorded deaths, and excess deaths from the start of the pandemic through January 12, 2022. Widespread underlying SARS-CoV-2 seropositivity was observed in Gauteng before the omicron-dominant wave of Covid-19. Epidemiologic data showed a decoupling of hospitalizations and deaths from infections while omicron was circulating.

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