



## COVID-19 Digest Issue 68

December 17, 2021

### CLINICAL PEARL

- Cardiac adverse events after COVID-19 vaccination vs cardiac adverse events after COVID-19 infection:
  - **While no cases of myocarditis and pericarditis were reported in COVID-19 vaccine clinical trials, numerous reports of suspected vaccine-related myocarditis have surfaced in the general population since then. [According to a recent UK study](#), an additional 2, 1, and 6 cases of myocarditis occur per 1 million people in the week after one dose of the AstraZeneca/Oxford, Pfizer/BioNTech, and Moderna COVID-19 vaccines, respectively, **while a positive SARS-CoV-2 test is tied to much higher odds of myocarditis and other serious heart conditions.****
  - The team followed 41,644,358 English residents 16 years and older who were vaccinated against COVID-19 from Dec 1, 2020, to Aug 24, 2021. Of all participants, 49.5% had received the AstraZeneca vaccine, while 40.8% received Pfizer and 2.4% received Moderna. 7.3% tested positive for COVID-19.
  - Over the study period, either before or after vaccination, 1,615 and 1,574 patients were hospitalized or died due to myocarditis and pericarditis, respectively (14 patients had both conditions). 385,508 hospitalizations or deaths were attributed to cardiac arrhythmias. **A subgroup analysis by age found a higher risk of vaccine-associated myocarditis only among participants younger than 40.**
  - The data showed an extra 10 myocarditis cases per 1 million people in the 28 days after the second Moderna dose, compared with 40 in the 28 days after a positive COVID-19 test. **Increased cases of pericarditis and abnormal heart rhythms were also seen among those with a COVID-19 diagnosis but not in those who received any type of COVID-19 vaccine.**
  - **Based on the results of this study, the first one to quantify the risk of several rare cardiac adverse events linked with three COVID-19 vaccines and SARS-CoV-2 infection, it appears that COVID-19 vaccination is associated with a small increased risk of myocarditis. By contrast, SARS-CoV-2 infection is associated with a substantial increase in the risk of hospitalization or death from myocarditis, pericarditis and cardiac arrhythmias.**

### PUBLIC HEALTH UPDATES

- CDC [Science Brief: Omicron \(B.1.1.529\) Variant](#)
- [FDA Expands Eligibility for Pfizer-BioNTech COVID-19 Booster Dose to 16- and 17-Year-Olds](#)
- [FDA Authorizes New Long-Acting Monoclonal Antibodies for Pre-exposure Prevention of COVID-19 in Certain Individuals](#)
- WHO
  - News: [WHO News: Omicron spreads but severe cases remain low in South Africa](#)
  - [Enhancing Readiness for Omicron \(B.1.1.529\): Technical Brief and Priority Actions for Member States](#)
- UK
  - [Investigation of SARS-CoV-2 variants: technical briefings](#)
  - [COVID-19 variants identified in the UK](#)
- [Government of Canada: First case of SARS-CoV-2 detected in Canadian wildlife](#)
- World Organisation for Animal Health: [OIE Statement on monitoring white-tailed deer for SARS-CoV-2](#)

### GUIDANCE

- CDPH [Updated Guidance for the Use of Face Coverings](#)





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### RESOURCES

- CDC/IDSA COVID-19 Clinician Call: [Omicron Update Plus the Latest on Molnupiravir](#)
- IDSA Podcast: [COVID-19 Therapeutics - Lessons Learned](#)
- IDSA Media Briefing: [Omicron Variant](#)
- Center for Infectious Disease Research and Policy (CIDRAP) Osterholm Update:
  - [Episode 80: The Emergence of Omicron](#)
  - [Episode 81: The Early Data on Omicron](#)
- Kaiser Family Foundation
  - [An Update on Vaccine Roll-Out for 5-11 Year-olds in the U.S.](#)
  - [Nearly a Quarter of Vaccinated Adults Received a COVID-19 Booster Shot, Up Sharply from October; Most Other Vaccinated Adults Expect to Get a Booster, Though About 1 in 5 Say They Likely Won't](#)
  - [COVID-19 Vaccine Monitor: The Increasing Importance of Partisanship in Predicting COVID-19 Vaccination Status](#)
  - [COVID-19 Vaccine Monitor: Media and Misinformation](#)

### ACADEMIC/RESEARCH PAPERS

- *New England Journal of Medicine*
  - [Protection against Covid-19 by BNT162b2 Booster across Age Groups](#)
  - [BNT162b2 Vaccine Booster and Mortality Due to Covid-19](#)
  - [Comparative Effectiveness of BNT162b2 and mRNA-1273 Vaccines in U.S. Veterans](#)
  - [Covid-19 mRNA Vaccines — Six of One, Half a Dozen of the Other](#)
  - [Booster Doses and Prioritizing Lives Saved](#)
- *The Lancet*
  - [Safety and immunogenicity of seven COVID-19 vaccines as a third dose \(booster\) following two doses of ChAdOx1 nCov-19 or BNT162b2 in the UK \(COV-BOOST\): a blinded, multicentre, randomised, controlled, phase 2 trial](#)
  - [Immunogenicity, safety, and reactogenicity of heterologous COVID-19 primary vaccination incorporating mRNA, viral-vector, and protein-adjuvant vaccines in the UK \(Com-COV2\): a single-blind, randomised, phase 2, non-inferiority trial](#)
  - [Stimulating severe COVID-19: the potential role of GM-CSF antagonism](#)
  - [Severe breakthrough COVID-19 cases in the SARS-CoV-2 delta \(B.1.617.2\) variant era](#)
- *medRxiv*
  - [Reduced Neutralization of SARS-CoV-2 Omicron Variant by Vaccine Sera and monoclonal antibodies](#)
  - [Antibody titers before and after booster doses of SARS-CoV-2 mRNA vaccines in healthy adults](#)
  - [Higher serological responses and increased vaccine effectiveness demonstrate the value of extended vaccine schedules in combatting COVID-19 in England](#)
- *Cell*
  - [Immunogenicity of standard and extended dosing intervals of BNT162b2 mRNA vaccine](#)
  - [A Single mRNA vaccine dose in COVID-19 patients boosts neutralizing antibodies against SARS-CoV-2 and variants of concern](#)
- *JAMA*
  - [Immunogenicity of Extended mRNA SARS-CoV-2 Vaccine Dosing Intervals](#)
  - [Data Emerge From the UK's COVID-19 Vaccine Extended Dosing Interval](#)
  - [Intention to Vaccinate Children Against COVID-19 Among Vaccinated and Unvaccinated US Parents](#)





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- [Implementation of State Vaccine Incentive Lottery Programs and Uptake of COVID-19 Vaccinations in the United States](#)
- [Efficacy and Safety of COVID-19 Convalescent Plasma in Hospitalized Patients - A Randomized Clinical Trial](#)
- [Effect of High-Flow Oxygen Therapy vs Conventional Oxygen Therapy on Invasive Mechanical Ventilation and Clinical Recovery in Patients With Severe COVID-19 - A Randomized Clinical Trial](#)
- [Trends in the Incidence of New-Onset Anorexia Nervosa and Atypical Anorexia Nervosa Among Youth During the COVID-19 Pandemic in Canada](#)
- [Adherence of Clinical Practice Guidelines for Pharmacologic Treatments of Hospitalized Patients With COVID-19 to Trustworthy Standards - A Systematic Review](#)
- [Association of COVID-19 Vaccination With SARS-CoV-2 Infection in Patients With Cancer - A US Nationwide Veterans Affairs Study](#)
- [Sociodemographic Characteristics, Comorbidities, and Mortality Among Persons Diagnosed With Tuberculosis and COVID-19 in Close Succession in California, 2020](#)
- [Assessment of a Hotel-Based Protective Housing Program for Incidence of SARS-CoV-2 Infection and Management of Chronic Illness Among Persons Experiencing Homelessness](#)
- *BMJ*
  - [Remdesivir for severe covid-19: a clinical practice guideline](#)
- *Emerging Infectious Diseases*
  - [Effectiveness of mRNA BNT162b2 Vaccine 6 Months after Vaccination among Patients in Large Health Maintenance Organization, Israel](#)
  - [Comparative Effectiveness of Coronavirus Vaccine in Preventing Breakthrough Infections among Vaccinated Persons Infected with Delta and Alpha Variants](#)
  - [Probable Transmission of SARS-CoV-2 Omicron Variant in Quarantine Hotel, Hong Kong, China, November 2021](#)
  - [Risk Factors for SARS-CoV-2 Infection Among US Healthcare Personnel, May–December 2020](#)
- *BMC Public Health*
  - [Epidemiological features of COVID-19 patients with prolonged incubation period and its implications for controlling the epidemics in China](#)
- *PNAS*
  - [A serum-stable RNA aptamer specific for SARS-CoV-2 neutralizes viral entry](#)
- *Nature*
  - [Risks of myocarditis, pericarditis, and cardiac arrhythmias associated with COVID-19 vaccination or SARS-CoV-2 infection](#)
  - [Delayed induction of type I and III interferons mediates nasal epithelial cell permissiveness to SARS-CoV-2](#)
  - [Increased personal protective equipment litter as a result of COVID-19 measures](#)
  - [The germinal centre B cell response to SARS-CoV-2](#)
- *Immunology*
  - [Whole blood-based measurement of SARS-CoV-2-specific T cells reveals asymptomatic infection and vaccine immunogenicity in healthy subjects and patients with solid-organ cancers](#)
- *Cancer*
  - [Impact of the COVID-19 pandemic on diagnosis of new cancers: A national multicenter study of the Veterans Affairs Healthcare System](#)





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- *Circulation*
  - [Rise in Blood Pressure Observed Among US Adults During the COVID-19 Pandemic](#)
  - [Clinically Suspected Myocarditis Temporally Related to COVID-19 Vaccination in Adolescents and Young Adults](#)
- *Blood*
  - [Anti-CD38 therapy impairs SARS-CoV-2 vaccine response against Alpha and Delta variants in Multiple Myeloma patients](#)
- *Thrombosis Research*
  - [The association between anticoagulation and adverse outcomes after a positive SARS-CoV-2 test among older outpatients: A population based cohort study](#)
- *Molecular Therapy*
  - [Debulking SARS-CoV-2 in saliva using angiotensin converting enzyme 2 in chewing gum to decrease oral virus transmission and infection](#)
- *Journal of Antimicrobial Chemotherapy*
  - [Respiratory antibacterial prescribing in primary care and the COVID-19 pandemic in England, winter season 2020–21](#)
- *The Journals of Gerontology*
  - [Experiencing and Forecasting COVID-19 Daily Stress on Mental Health Reactivity Across Age and Race](#)

## MMWR

- [SARS-CoV-2 B.1.1.529 \(Omicron\) Variant — United States, December 1–8, 2021](#)
- [Booster and Additional Primary Dose COVID-19 Vaccinations Among Adults Aged ≥65 Years — United States, August 13, 2021–November 19, 2021](#)
- [Comparative Effectiveness and Antibody Responses to Moderna and Pfizer-BioNTech COVID-19 Vaccines among Hospitalized Veterans — Five Veterans Affairs Medical Centers, United States, February 1–September 30, 2021](#)
- [Report of Health Care Provider Recommendation for COVID-19 Vaccination Among Adults, by Recipient COVID-19 Vaccination Status and Attitudes — United States, April–September 2021](#)
- [Community-Based Testing Sites for SARS-CoV-2 — United States, March 2020–November 2021](#)

## HOT OFF THE (LAY) PRESS

- *New York Times*
  - [Booster doses of the Moderna and Pfizer vaccines are likely to offer substantial protection from the Omicron variant, Dr. Anthony Fauci said.](#)
  - [A C.D.C. panel recommended other Covid vaccines over J.&J.'s, citing the link to a rare but potentially fatal blood clotting disorder.](#)
  - [Pfizer said trials of its Covid pill confirmed that it helped stave off severe disease. A lab study found it worked against Omicron.](#)
  - [British studies warn of Omicron's speed and one notes the need for boosters](#)
  - [Britain's Omicron restrictions](#)
  - [Over 200 million Americans are fully vaccinated as threat of omicron looms](#)
  - [As U.S. nears 800,000 virus deaths, 1 out of every 100 older Americans has perished](#)
  - [Why Hospitalizations Are Now a Better Indicator of Covid's Impact](#)
  - [The Mystery of Imperial County's Vaccination Rate](#)





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- [The Supreme Court refused to block New York's vaccine mandate for health care workers, which allows medical, but not religious, exemptions.](#)
- [New York City will implement a sweeping vaccine mandate for all private employers that will take effect Dec. 27, Mayor Bill de Blasio said.](#)
- [The F.D.A. authorized Pfizer boosters for 16- and 17-year-olds, clearing the way for several million teenagers to get an additional shot.](#)
- [Pfizer Says Its Booster Offers Strong Protection Against Omicron](#)
- [Answers to Your Questions About Covid Booster Shots and Omicron](#)
- [Emphasizing Tests, Biden Vows to Fight Omicron With 'Science and Speed'](#)
- [Why Didn't the U.S. Detect Omicron Cases Sooner?](#)
- [U.S. Enforces Stricter Virus Testing Rules for Travelers](#)
- [The Omicron variant appears to be spreading over twice as fast as Delta in South Africa, scientists said. How vaccines affect it remains unclear.](#)
- [How 2 Flights to Europe May Have Spurred Spread of New Variant](#)
- [In Its War on Covid-19, China Calls on 'Little Inoculated Warriors'](#)
- [A Christmas party in Norway becomes a possible Omicron-spreading event, and other international news](#)
- **CNN**
  - [UK to offer booster shots to all adults, just three months after their second dose](#)
- **Discovery Health Press Releases**
  - [Discovery Health, South Africa's largest private health insurance administrator, releases at-scale, real-world analysis of Omicron outbreak based on 211 000 COVID-19 test results in South Africa, including collaboration with the South Africa](#)
- **Reuters**
  - [Germany imposes curbs on unvaccinated, to make shots mandatory](#)
  - [Denmark sees society-wide infection with Omicron variant](#)
  - [England has community transmission of Omicron variant, health minister says](#)
  - [Swiss again deploy army to help cope with pandemic](#)
  - [S.Africa's health body sees threefold higher risk of reinfection from Omicron](#)
  - [Two hippos in Belgian zoo test positive for COVID-19](#)
  - [Roche develops new research test kits for Omicron variant](#)
- **Politico**
  - [Boris Johnson warns of Omicron 'tidal wave' as he vows faster booster jabs](#)
  - [Biden health team ruled out free Covid tests for all over cost, logistics](#)
- **Wall Street Journal**
  - [Biden and Local Officials Avoid Lockdowns, New Mask Mandates in Omicron Fight](#)
  - [U.S. Plans to Fast-Track Revamped Covid-19 Vaccines](#)
- **CNBC News**
  - [Pfizer CEO says fourth Covid vaccine doses may be needed sooner than expected due to omicron](#)
- **FDA News**
  - [U.S.-Based COVID-19 Vaccine Makers are Gearing up to Face Omicron with Biden Administration's Help](#)
- **STAT News**
  - [Covid antivirals could be pandemic game-changers. But Americans might struggle to access them](#)





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- *Fierce Pharma*
  - [Pfizer boosts Paxlovid manufacturing capacity as Merck's rival COVID pill hits surprise efficacy setback](#)
- *Science Alert*
  - [How Can mRNA Vaccines Be Updated to Target Omicron? A Microbiologist Explains](#)
- *Popular Science*
  - [Researchers are racing to figure out if Omicron can beat our vaccines](#)
- *Advanced Science News*
  - [An inhaled COVID-19 vaccine makes it to human trials](#)
- *GSK Press Releases*
  - [Preclinical studies demonstrate sotrovimab retains activity against the full combination of mutations in the spike protein of the Omicron SARS-CoV-2 variant](#)
- *REGENERON Press Releases*
  - [Regeneron Evaluating REGEN-COV® and Next Generation Antibodies against New Omicron COVID-19 Variant](#)
- *NBC News*
  - [CDC zeroes in on anime convention to understand omicron variant](#)
  - [Biden administration sending 9 million Covid vaccine doses to Africa](#)
  - [NY COVID Cases Top 11K for 1st Time Since January as Hochul Announces 5 Omicron Cases](#)
- *ABC News*
  - [Omicron detected in Houston's wastewater, Houston Health Department reports](#)
- *The Washington Post*
  - [Biden's at-home coronavirus test program epitomizes our public health failures](#)
  - [Those new covid measures Biden announced? Europe's been doing that and more for a while.](#)
  - ['To beat covid, we have to shut it down worldwide,' Biden says](#)
  - [California and New York reinstate indoor mask mandates amid omicron concerns](#)
  - [Preliminary data suggest omicron is more transmissible, causes milder cases than delta, WHO says](#)
  - [Coronavirus vaccine demand grows in U.S. amid omicron variant concerns, booster eligibility expansion](#)
- *The New Yorker*
  - [Will the Omicron Travel Restrictions Work?](#)
- *AP News*
  - [The AP Interview: CDC chief says omicron mostly mild so far](#)
  - [WHO says measures used against delta should work for omicron](#)
  - [State of Minnesota: 98% occupancy rate in hospital intensive care units](#)
- *AXIOS*
  - [Chief justice rejects request to block air travel mask mandate](#)
  - [Axios-Ipsos poll: The danger of vaccine mandates](#)
  - [Axios-Ipsos poll: Shrugging off Omicron](#)
  - [Millions of America's seniors are vulnerable to Omicron](#)
- *NPR*
  - [Pro-Trump counties now have far higher COVID death rates. Misinformation is to blame](#)
- *Bloomberg*
  - [Delta Sends Hospital Admissions Up in 39 States as Omicron Lands](#)
  - [Supply-Chain Crisis Only Getting Worse With China's 7-Week Port Quarantine](#)





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- *Los Angeles Times*
  - [Pfizer says its COVID-19 booster shot offers protection against the Omicron variant](#)
  - [California orders statewide mask requirement starting Wednesday amid rising coronavirus cases](#)
- *San Francisco Chronicle*
  - [How a Stanford COVID case illustrates the possible connection between omicron and HIV](#)
  - [As omicron arrives, Bay Area health officials urge boosters for all. But many sites are booked up](#)

### EPIDEMIOLOGY UPDATES

- [CDC COVID Data Tracker](#)
  - [COVID-19 Vaccinations in the United States](#)
- [Johns Hopkins COVID-19 in the USA](#) – daily summary of key data on COVID-19 in the U.S.
- [American Academy of Pediatrics Children and COVID-19: State Level Data Report](#)
- [California COVID-19 by the numbers](#) are available on the [CDPH Website](#) and the [NYT Map and Table](#) (includes data by county)
  - **California [COVID-19 Statewide Update](#) as of December 17, 2021**
- [San Mateo County COVID-19 Dashboard](#)
- [Santa Clara County COVID-19 Dashboard](#)

### ADDITIONAL COVID-19 RESOURCES

- [San Mateo County COVID-19 Guidance and Resources for Clinicians and Facilities – COVID-19 Digests](#)
- [Palo Alto Online tracking the coronavirus in San Mateo and Santa Clara counties](#)
- [California COVID-19 Data and Tools](#)
- [CDPH COVID-19 Assessment and Modeling Tool](#)
- [California Department of Corrections and Rehabilitations Population COVID-19 Tracking Dashboards](#)
- [CDC Interactive Serology Dashboard for Commercial Laboratory Surveys](#)
- [HHS Coronavirus Data Hub](#)
- [COVID-19 Nursing Home Data](#)

