

COVID-19 Digest Issue 71

February 2, 2022

CLINICAL PEARL

The authors of a recent pre-print, non-peer reviewed study analyzed clinical and epidemiologic data from • cases testing positive for SARS-CoV-2 infection within the Kaiser Permanente Southern California healthcare system from November 30, 2021 to January 1, 2022, using S gene target failure (SGTF) as assessed by the ThermoFisher TagPath ComboKit assay as a proxy for Omicron infection. Their analyses included 52,297 cases with SGTF (Omicron) and 16,982 cases with non-SGTF (Delta [B.1.617.2]) infections. Hospital admissions occurred among 235 (0.5%) and 222 (1.3%) of cases with Omicron and Delta variant infections, respectively. Among cases first tested in outpatient settings, the adjusted hazard ratios for any subsequent hospital admission and symptomatic hospital admission associated with Omicron variant infection were 0.48 (0.36-0.64) and 0.47 (0.35-0.62), respectively. Rates of ICU admission and mortality after an outpatient positive test were 0.26 (0.10-0.73) and 0.09 (0.01-0.75) fold as high among cases with Omicron variant infection as compared to cases with Delta variant infection. Zero cases with Omicron variant infection received mechanical ventilation, as compared to 11 cases with Delta variant infections throughout the period of follow-up. Median duration of hospital stay was 3.4 (2.8-4.1) days shorter for hospitalized cases with Omicron variant infections as compared to hospitalized patients with Delta variant infections, reflecting a 69.6% (64.0-74.5%) reduction in hospital length of stay.

PUBLIC HEALTH UPDATES

- FDA Limits Use of Certain Monoclonal Antibodies to Treat COVID-19 Due to the Omicron Variant
- NIH <u>The COVID-19 Treatment Guidelines Panel's Statement on Therapies for High-Risk, Nonhospitalized</u> <u>Patients With Mild to Moderate COVID-19</u>
- WHO
 - o SAGE Roadmap for prioritizing uses of COVID-19 vaccines
 - COVAX delivers its 1 billionth COVID-19 vaccine dose
 - o <u>Weekly epidemiological update on COVID-19 25 January 2022</u>
- European Centre for Disease Prevention and Control
 - Assessment of the further spread and potential impact of the SARS-CoV-2 Omicron variant of concern in the EU/EEA, 19th update
 - Interim analysis of COVID-19 vaccine effectiveness against Severe Acute Respiratory Infection due to laboratory-confirmed SARS-CoV-2 among individuals aged 50 years and older, ECDC multi-country study – first update
 - <u>Weekly epidemiological update: Omicron variant of concern (VOC) week 2 (data as of 20 January</u> 2022) EU/EEA
- Government of UK
 - o <u>Omicron sub-lineage BA.2 designated as a variant under investigation (VUI)</u>
 - o <u>COVID-19 vaccine surveillance report week4</u>

GUIDANCE/GUIDELINES

- CDPH Distribution and Ordering of Anti-SARS-CoV-2 Therapeutics
- WHO Interim recommendations for use of the Pfizer–BioNTech COVID-19 vaccine, BNT162b2, under <u>Emergency Use Listing</u>



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RESOURCES

- CDC/IDSA COVID-19 Clinician Call Outpatient COVID-19 Treatment Strategies for High-Risk Populations
- HHS
 - o <u>COVID-19 Therapeutics Locator</u>
 - Hospital Utilization Dashboard
- CDPH
 - Fact Sheets: COVID-19 Therapeutics Allocated by CDPH
 - o <u>Questions and Answers: Treatment Information for Providers and Facilities</u>
- IDSA
 - o Podcasts: Mental Health Stress and Burnout In Health Care Workers
 - Media Briefing:
 - The Latest on Long COVID
 - <u>COVID-19 & Omicron Practical Advice</u>
- Center for Infectious Disease Research and Policy (CIDRAP) Osterholm Update:
 - o Episode 87: Hope Is Not a Strategy
 - Episode 88: Vaccines, Variants, and Long COVID
- CDC National Wastewater Surveillance System (NWSS)
- Biobot Analytics <u>Nationwide Wastewater Monitoring Network</u>
- Stanford Department of Medicine Grand Rounds Long COVID: An Update and the Stanford PACS Clinic
- Kaiser Family Foundation
 - Update on COVID-19 Vaccination of 5-11 Year Olds in the U.S.
 - o KFF COVID-19 Vaccine Monitor: January 2022
 - o The Red/Blue Divide in COVID-19 Vaccination Rates Continues: An Update

ACADEMIC/RESEARCH PAPERS

- New England Journal of Medicine
 - o SARS-CoV-2 Omicron Variant Neutralization after mRNA-1273 Booster Vaccination
 - o Effects of a Prolonged Booster Interval on Neutralization of Omicron Variant
 - o <u>Homologous and Heterologous Covid-19 Booster Vaccinations</u>
 - o <u>Lung Transplantation for Covid-19–Related Respiratory Failure in the United States</u>
- medRxiv
 - Association between vaccination status and reported incidence of post-acute COVID-19 symptoms in Israel: a cross-sectional study of patients tested between March 2020 and November 2021
 - <u>Discordant SARS-CoV-2 PCR and Rapid Antigen Test Results When Infectious: A December 2021</u> Occupational Case Series
 - Direct Comparison of SARS-CoV-2 Nasal RT-PCR and Rapid Antigen Test (BinaxNOW[™]) at a Community Testing Site During an Omicron Surge
- JAMA
 - Association Between 3 Doses of mRNA COVID-19 Vaccine and Symptomatic Infection Caused by the SARS-CoV-2 Omicron and Delta Variants
 - <u>Booster Vaccination to Prevent COVID-19 in the Era of Omicron An Effective Part of a Layered Public</u> <u>Health Approach</u>
 - <u>Comparison of mRNA-1273 and BNT162b2 Vaccines on Breakthrough SARS-CoV-</u> <u>2 Infections, Hospitalizations, and Death During the Delta-Predominant Period</u>





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- <u>Myocarditis Cases Reported After mRNA-Based COVID-19 Vaccination in the US From December</u> 2020 to August 2021
- Effect of P2Y12 Inhibitors on Survival Free of Organ Support Among Non–Critically III Hospitalized Patients With COVID-19 - A Randomized Clinical Trial
- <u>Assessment of Clinical Outcomes Among Children and Adolescents Hospitalized With COVID-19 in 6</u> <u>Sub-Saharan African Countries</u>
- Frequency of Adverse Events in the Placebo Arms of COVID-19 Vaccine Trials A Systematic Review and Meta-analysis
- <u>Clinical Outcomes Among Patients With 1-Year Survival Following Intensive Care Unit Treatment for</u> <u>COVID-19</u>
- o <u>Trends in Psychological Distress Among US Adults During Different Phases of the COVID-19 Pandemic</u>
- False-Positive Results in Rapid Antigen Tests for SARS-CoV-2
- o Incidence of New-Onset Type 1 Diabetes Among US Children During the COVID-19 Global Pandemic
- o Changes in COVID-19 Vaccine Hesitancy Among Black and White Individuals in the US
- <u>Association of Major Depressive Symptoms With Endorsement of COVID-19 Vaccine Misinformation</u> <u>Among US Adults</u>
- <u>Physician Health Care Visits for Mental Health and Substance Use During the COVID-19 Pandemic in</u> <u>Ontario, Canada</u>
- Immunogenicity and Safety of a Third SARS-CoV-2 Vaccine Dose in Patients With Multiple Sclerosis and Weak Immune Response After COVID-19 Vaccination
- <u>Association of Convalescent Plasma Treatment With Clinical Status in Patients Hospitalized With</u> <u>COVID-19 - A Meta-analysis</u>
- Emerging Infectious Diseases
 - Effectiveness of mRNA BNT162b2 Vaccine 6 Months after Vaccination among Patients in Large Health Maintenance Organization, Israel
 - <u>Comparative Effectiveness of Coronavirus Vaccine in Preventing Breakthrough Infections among</u> <u>Vaccinated Persons Infected with Delta and Alpha Variants</u>
 - o Comparison of Complications after Coronavirus Disease and Seasonal Influenza, South Korea
 - <u>Serial Interval and Transmission Dynamics during SARS-CoV-2 Delta Variant Predominance, South</u> <u>Korea</u>
 - High-Dose Convalescent Plasma for Treatment of Severe COVID-19
 - <u>Postvaccination Multisystem Inflammatory Syndrome in Adult with No Evidence of Prior SARS-CoV-2</u> <u>Infection</u>
 - o SARS-CoV-2 Cross-Reactivity in Prepandemic Serum from Rural Malaria-Infected Persons, Cambodia
 - o SARS-CoV-2 B.1.619 and B.1.620 Lineages, South Korea, 2021
 - o <u>SARS-CoV-2 Seroprevalence before Delta Variant Surge, Chattogram, Bangladesh, March–June 2021</u>
 - o <u>Surveillance of Rodent Pests for SARS-CoV-2 and Other Coronaviruses, Hong Kong</u>
 - o SARS-CoV-2 Circulation, Guinea, March 2020–July 2021
 - Probable Transmission of SARS-CoV-2 Omicron Variant in Quarantine Hotel, Hong Kong, China, November 2021
 - o Seroprevalence of SARS-CoV-2 Antibodies in Adults, Arkhangelsk, Russia
 - o <u>Predictors of Nonseroconversion after SARS-CoV-2 Infection</u>
 - <u>Return of Norovirus and Rotavirus Activity in Winter 2020–21 in City with Strict COVID-19 Control</u> <u>Strategy, Hong Kong, China</u>





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- Open Forum Infectious Diseases
 - Sustained Reduction in Urgent Care Antibiotic Prescribing During the COVID-19 pandemic: An Academic Medical Center's Experience
- The Lancet
 - o <u>Three-dose vaccination elicits neutralising antibodies against omicron</u>
 - Early assessment of the clinical severity of the SARS-CoV-2 omicron variant in South Africa: a data linkage study
- BMJ
 - Diagnostic accuracy of rapid point-of-care tests for diagnosis of current SARS-CoV-2 infections in children: a systematic review and meta-analysis
- PLOS
 - Knowledge barriers in a national symptomatic-COVID-19 testing programme
 - Overall and cause-specific hospitalisation and death after COVID-19 hospitalisation in England: A cohort study using linked primary care, secondary care, and death registration data in the OpenSAFELY platform
- Nature
 - o The UGT2A1/UGT2A2 locus is associated with COVID-19-related loss of smell or taste
 - o <u>No infectious SARS-CoV-2 in breast milk from a cohort of 110 lactating women</u>
 - o <u>COVID-19: endemic doesn't mean harmless</u>
- Science
 - o Neutralization of SARS-CoV-2 Omicron by BNT162b2 mRNA vaccine-elicited human sera
 - o <u>Vaccination with BNT162b2 reduces transmission of SARS-CoV-2 to household contacts in Israel</u>
 - o Indirect protection of children from SARS-CoV-2 infection through parental vaccination
- Cell
 - o SARS-CoV-2 breakthrough infections elicit potent, broad and durable neutralizing antibody responses
 - Multiple Early Factors Anticipate Post-Acute COVID-19 Sequelae
- Eurosurveillance
 - <u>Reduced risk of hospitalisation among reported COVID-19 cases infected with the SARS-CoV-2</u> Omicron BA.1 variant compared with the Delta variant, Norway, December 2021 to January 2022
 - Increased risk of infection with SARS-CoV-2 Omicron BA.1 compared with Delta in vaccinated and previously infected individuals, the Netherlands, 22 November 2021 to 19 January 2022
- European Respiratory Journal
 - <u>Pulse oximeters' measurements vary across ethnic groups: An observational study in patients with</u> <u>Covid-19 infection</u>
- Canadian Medical Association Journal
 - <u>Remdesivir for the treatment of patients in hospital with COVID-19 in Canada: a randomized</u> <u>controlled trial</u>
- Japan National Institute of Infectious Diseases
 - <u>Active epidemiological investigation on SARS-CoV-2 infection caused by Omicron variant (Pango</u> <u>lineage B.1.1.529) in Japan: preliminary report on infectious period</u>
- Annals of Internal Medicine
 - Antibody Response to a Fourth Messenger RNA COVID-19 Vaccine Dose in Kidney Transplant Recipients: A Case Series
- Blood Advances
 - <u>CD19-positive lymphocyte count is critical for acquisition of anti-SARS-CoV-2 IgG</u> <u>after vaccination in B-cell lymphoma</u>





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- American Journal of Epidemiology
 - A prospective cohort study of COVID-19 vaccination, SARS-CoV-2 infection, and fertility
- Journal of the American Heart Association
 - <u>Longitudinal Assessment of Cardiac Outcomes of Multisystem Inflammatory Syndrome in Children</u> <u>Associated With COVID-19 Infections</u>
 - Clinical and Experimental Immunology
 - <u>SARS-CoV-2 vaccine responses following CD20-depletion treatment in patients with haematological</u> <u>and rheumatological disease: a West Midlands Research Consortium study</u>
- Journal of Natural Products
 - Cannabinoids Block Cellular Entry of SARS-CoV-2 and the Emerging Variants
- US Government Accountability Office
 - <u>COVID-19:Significant Improvements Are Needed for Overseeing Relief Funds and Leading Responses</u> to Public Health Emergencies

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- <u>Effectiveness of a Third Dose of Pfizer-BioNTech and Moderna Vaccines in Preventing COVID-19</u> <u>Hospitalization Among Immunocompetent and Immunocompromised Adults — United States, August-December 2021</u>
- <u>Effectiveness of a Third Dose of mRNA Vaccines Against COVID-19–Associated Emergency Department and</u> <u>Urgent Care Encounters and Hospitalizations Among Adults During Periods of Delta and Omicron Variant</u> <u>Predominance — VISION Network, 10 States, August 2021–</u>
- <u>Trends in Disease Severity and Health Care Utilization During the Early Omicron Variant Period Compared</u> with Previous SARS-CoV-2 High Transmission Periods — United States, December 2020–January 2022
- <u>COVID-19 Incidence and Death Rates Among Unvaccinated and Fully Vaccinated Adults with and Without</u> <u>Booster Doses During Periods of Delta and Omicron Variant Emergence — 25 U.S. Jurisdictions, April 4–</u> <u>December 25, 2021</u>
- <u>Notes from the Field: Early Evidence of the SARS-CoV-2 B.1.1.529 (Omicron) Variant in Community</u> Wastewater — United States, November–December 2021
- <u>COVID-19 Cases and Hospitalizations by COVID-19 Vaccination Status and Previous COVID-19 Diagnosis</u> <u>California and New York, May–November 2021</u>
- Use of the Janssen (Johnson & Johnson) COVID-19 Vaccine: Updated Interim Recommendations from the Advisory Committee on Immunization Practices United States, December 2021

HOT OFF THE (LAY) PRESS

- New York Times
 - o <u>'Stealth' variant no cause for alarm, but could slow case decline</u>
 - o The F.D.A. grants Moderna's vaccine full approval.
 - As COVID shots for kids stall, appeals are aimed at weary parents
 - o Yes, omicron is loosening its hold. But the pandemic has not ended
 - o <u>A new poll asks: Why do some vaccinated people not get boosters</u>
 - <u>As New York reports glimmers of hope, states in the West are under pressure</u>
 - o <u>Omicron's spread could lead to 'stabilization and normalization,' a top W.H.O. official</u>
 - <u>Covid Hospitalization Plateau In Some Parts of the U.S.</u>, While A Crisis Remains In <u>Others</u>



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- <u>Pfizer and Moderna booster shots were extremely effective in preventing those infected with</u> <u>Omicron from being hospitalized, C.D.C. data shows.</u>
- The Biden administration is preparing to give away 400 million N95 masks at health centers and pharmacies across the U.S.
- o Biden administration to issue 400 million masks from national stockpile
- The Biden administration will give away masks in the 'largest deployment' of such equipment in U.S. history
- CNN
 - o FDA considers limiting authorization of certain monoclonal antibody treatments
- The Wall Street Journal
 - o Omicron Leaves Nurses Stretched Thin and Seeking Help From Burnout
- The Washington Post
 - U.S. coronavirus hospitalizations slow, with the Northeast showing a steep decline
 - o <u>There's a new version of omicron but so far it doesn't appear to be more dangerous</u>
 - o U.S. tops highest seven-day death average since last year
 - o <u>Preventing the next pandemic requires a health overhaul</u>
- The Hill
 - o Biden administration limits use of two monoclonal antibody treatments
- Reuters
 - o Is COVID retreating in the U.S.? Data paints encouraging scenario
 - o Austria set to make COVID shots compulsory after bill clears parliament
 - o EU told to prepare for fourth COVID vaccine doses, if needed
- Kaiser Health News
 - o Pharmacies Are Turning Away Immunocompromised Patients Seeking 4th Covid Shot
 - o <u>CDC Tells Pharmacies to Give 4th Covid Shots to Immunocompromised Patients</u>
- The New Yorker
 - Even as Omicron Wanes, New York City's Teachers Are in a Holding Pattern
- AP News
 - o <u>COVID-19 vaccine booster drive is faltering in the US</u>
- CBS News
 - o Lawmakers call for investigation into reports of at-home COVID test price gouging
- USA Today
 - o <u>America's pandemic worries are higher now than before vaccines were widely available, poll finds</u>
- NPR
 - o <u>Pfizer and BioNTech begin testing an omicron-specific COVID-19 vaccine</u>
 - o <u>12 Surprising Ways People are Finding Joy in the Pandemic</u>
 - o Los Angeles school district tells students to upgrade from cloth masks
 - o <u>'Risk No Matter Where I Go': For Many Disabled People, A Future of Ever-Present COVID Is Daunting</u>
 - <u>Community COVID Clinics Fill Crucial Need in Underserved Communities But Are Strapped for</u> <u>Resources</u>
- Politico
 - o How many health care workers are vaccinated? It's anyone's guess.
- The Atlantic
 - Will Omicron Leave Most of Us Immune?
 - o <u>The Worst of the Omicron Wave Could Still Be Coming</u>





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- Foreign Affairs
 - o The Pandemic of Unknowns Reaching a New Normal in an Age of Uncertainty
- Vox News
 - Why Covid-19 is always one step ahead of the US response
 - The parents of the youngest children are not okay
- Popular Science
 - o Inside the lab using bones to study COVID and hearing loss
 - o Why healthy, vaccinated people should still care about Omicron
 - o Some people still can't smell or taste a year after COVID
- CEPI News
 - o <u>CEPI and Institut Pasteur de Dakar partner to advance COVID-19 vaccine manufacturing in Africa</u>
- Pfizer Press Releases
 - <u>Pfizer and BioNTech Initiate Study to Evaluate Omicron-Based COVID-19 Vaccine in Adults 18 to 55</u> <u>Years of Age</u>
- Moderna Press Releases
 - MODERNA ANNOUNCES FIRST PARTICIPANT DOSED IN PHASE 2 STUDY OF OMICRON-SPECIFIC
 BOOSTER CANDIDATE AND PUBLICATION OF DATA ON BOOSTER DURABILITY AGAINST OMICRON
 VARIANT
- UNICEF
 - o <u>COVID:19 Scale of education loss 'nearly insurmountable', warns UNICEF</u>
- Los Angeles Times
 - o <u>'Just wear a mask and don't tell anyone': workplaces are filling up with sick employees</u>
 - o San Francisco mask, vaccination proof rules as omicron recedes
 - o <u>Coronavirus transmission rates are falling across California, bringing guarded optimism</u>
 - o <u>Omicron leaves testing labs overwhelmed, causing frustrating delays to get results</u>
- San Francisco Chronicle
 - o <u>Why it's suddenly easier to get a COVID test in the Bay Area</u>
 - <u>Bay Area officials begin to plot when to ease mask mandates and other COVID restrictions as cases</u> <u>slow</u>
 - o <u>Here's where in the Bay Area omicron is still surging</u>
 - o <u>COVID cases may have peaked, but hospitals still face a torrent of patients</u>
 - o COVID in California: Santa Clara County is giving away at-home test kits
 - o Number of S.F. hospital patients with COVID nears all-time high

EPIDEMIOLOGY UPDATES

- CDC COVID Data Tracker
 - o <u>COVID-19 Vaccinations in the United States</u> new data!
- 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 <u>CDPH Website</u> and the <u>NYT Map and</u> <u>Table</u> (includes data by county)
 - California <u>COVID-19 Statewide Update</u> as of February 2, 2022
- <u>San Mateo County COVID-19 Dashboard</u>
- Santa Clara County COVID-19 Dashboard





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ADDITIONAL COVID-19 RESOURCES

- San Mateo County COVID-19 Guidance and Resources for Clinicians and Facilities COVID-19 Digests
- <u>Covid-WEB (Wastewater Epidemiology for the Bay Area)</u>
- Palo Alto Online tracking the coronavirus in San Mateo and Santa Clara counties
- California COVID-19 Data and Tools
- <u>CDPH COVID-19 Assessment and Modeling Tool</u>
- California Department of Corrections and Rehabilitations Population COVID-19 Tracking Dashboards
- CDC Interactive Serology Dashboard for Commercial Laboratory Surveys
- HHS Coronavirus Data Hub
- <u>COVID-19 Nursing Home Data</u>

