



COVID-19 Digest Issue 70

January 19, 2022

CLINICAL PEARLS

- **New onset of diabetes in children and teens recently diagnosed with COVID 19:**
 - **Recent data** suggest an increased risk for diabetes among persons aged <18 years with COVID-19, which is supported by independent studies in adults. These findings underscore the importance of COVID-19 prevention among all age groups, including vaccination for all eligible children and adolescents, and chronic disease prevention and treatment. **SARS-CoV-2 infection might lead to type 1 or type 2 diabetes through complex and differing mechanisms. Clinicians should be aware of long-term consequences and monitor persons aged <18 years in the months following a SARS-CoV-2 infection for new diabetes onset.**
- **A 10-country recently published study** of more than 3,000 children who tested positive for COVID-19 in emergency departments (EDs) found that 3% went on to develop severe disease within 2 weeks, with risk factors being older age, having chronic conditions, and experiencing symptoms longer.
 - Among the 3,221 children 17 years and younger, 107 (3.3%) experienced severe outcomes within 2 weeks, and 4 (0.12%) died. Among children discharged home from the ED, the risk was much lower. Of note, the children had visited an ED from Mar 7, 2020, to Jun 15, 2021, a span that mostly predated the Delta variant (B1617.2) and well before the current Omicron (B.1.1.529) variant was detected.
 - Of the 3,221 children treated at one of 41 EDs, 2007 (62.3%) were from the United States, 1,694 (52.6%) were male, and 484 (15.0%) had a self-reported chronic illness. They tended to be young, with a median age of 3 years. **After 14 days of follow-up, 735 children (22.8%) were hospitalized, 107 (3.3%) had severe outcomes, and 4 (0.12%) died.** The researchers used a composite measure to define severe outcomes that included intensive interventions during hospitalization, such as positive-pressure ventilation, diagnoses that indicated severe organ impairment and death.
 - **Characteristics associated with severe outcomes included being aged 5 to 9 years (odds ratio [OR], 1.60 compared with kids younger than 1 year), being aged 10 to 17 (OR, 2.39), having a self-reported chronic illness (OR, 2.34), a prior episode of pneumonia (OR, 3.15), symptoms starting 4 to 7 days prior to seeking ED care (vs starting 0-3 days before seeking care: OR, 2.22), and country of residence (Canada vs US: OR, 0.11; Costa Rica vs US: OR, 1.76; Spain vs US: OR, 0.51). Interestingly, asthma was not found to be a risk factor for severe illness.**
 - Among the 2,510 children discharged home from the ED after initial testing and who had complete follow-up, 50 (2.0%) were eventually hospitalized and 12 (0.5%) had severe outcomes. When compared with hospitalized children who tested negative for COVID-19, the risk of severe outcomes was higher among hospitalized COVID-positive patients, with a risk difference of 3.9% (95% confidence interval, 1.1% to 6.9%).
- **COVID-19 Booster Shots:** Citing a need to protect children aged 12 to 15 years from the omicron variant, the FDA recently amended an emergency use authorization for the Pfizer-BioNTech COVID-19 vaccine to **add a booster dose for children aged 12 to 15 years**. The FDA has also **shortened the suggested time between a primary two-dose series and a booster shot of both the Pfizer and the Moderna COVID-19 vaccines from 6 to 5 months**. The interval for a booster shot of the Johnson & Johnson vaccine remains 2 months.





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PUBLIC HEALTH UPDATES

- The White House [FACT SHEET: Biden-Harris Administration Increases COVID-19 Testing in Schools to Keep Students Safe and Schools Open](#)
- Centers for Medicare and Medicaid Services [How to get your At-Home Over-The-Counter COVID-19 Test for Free](#)
- FDA
 - [FDA Shortens Interval for Booster Dose of Moderna COVID-19 Vaccine to Five Months](#)
 - [FDA Takes Multiple Actions to Expand Use of Pfizer-BioNTech COVID-19 Vaccine](#)
 - [Why You Should Not Use Ivermectin to Treat or Prevent COVID-19](#)
- Department of Defense [DoD Awards \\$136.7 Million Contract to MilliporeSigma to Establish Domestic Production Capacity of Critical Material Used in COVID-19 Point-of-Care Tests](#)
- NIH [FDA Authorizes Roche and Siemens At-Home Tests, Which Went Through New Biden Administration Accelerated Review Program; Will Bring Tens of Millions of New Tests Per Month to the U.S.](#)
- WHO [Interim Statement on COVID-19 vaccines in the context of the circulation of the Omicron SARS-CoV-2 Variant from the WHO Technical Advisory Group on COVID-19 Vaccine Composition \(TAG-CO-VAC\)](#)
- South Africa Medical Research Council Media [Preliminary findings from studies in South Africa indicate that omicron has a much higher rate of asymptomatic 'carriage' than other variants of concern](#)
- European Centre for Disease Prevention and Control [Weekly epidemiological update: Omicron variant of concern \(VOC\) – week 2 \(data as of 13 January 2022\) EU/EEA](#)

GUIDANCE

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

RESOURCES

- CDC Clinician Outreach and Communication Activity (COCA) Webinars
 - [What Clinicians Need to Know About the New Oral Antiviral Medications for COVID-19](#)
 - [Updates to CDC's COVID-19 Quarantine and Isolation Guidelines in Healthcare and Non-healthcare Settings](#)
- CDC/IDSA COVID-19 Clinician Call [COVID-19 Treatment Updates Plus the Latest on Omicron](#)
- IDSA
 - Vaccine Education Roundtable Series:
 - [Pediatric COVID Vaccine Disparities and Updates](#)
 - [Pediatric Vaccinations and a Case Discussion](#)
 - Podcasts:
 - [COVID-19 Rapid Testing](#)
 - [Combatting COVID-19 Misinformation + Omicron Update](#)
 - Media Briefing: [COVID-19 & Omicron - Practical Advice](#)
- HHS Protect Public Data Hub: [Hospital Utilization](#)
- Center for Infectious Disease Research and Policy (CIDRAP) Osterholm Update:
 - [Episode 85: Smart Testing in the Omicron Surge](#)
 - [Episode 86: The Omicron Crisis](#)





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- World Organisation for Animal Health Statement: [Statement from the Advisory Group on SARS-CoV-2 Evolution in Animals](#)

ACADEMIC/RESEARCH PAPERS

- *New England Journal of Medicine*
 - [Effectiveness of BNT162b2 Vaccine against Critical Covid-19 in Adolescents](#)
 - [Sparing of Severe Covid-19 in Vaccinated Adolescents](#)
 - [Duration of Protection against Mild and Severe Disease by Covid-19 Vaccines](#)
 - [Effectiveness of Covid-19 Vaccines over a 9-Month Period in North Carolina](#)
 - [SARS-CoV-2 Omicron Variant Neutralization in Serum from Vaccinated and Convalescent Persons](#)
 - [Effectiveness of BNT162b2 Vaccine against Omicron Variant in South Africa](#)
- *medRxiv*
 - [High Rate of Asymptomatic Carriage Associated with Variant Strain Omicron](#)
 - [Clinical outcomes among patients infected with Omicron \(B.1.1.529\) SARS-CoV-2 variant in southern California](#)
 - [Waning Effectiveness of the BNT162b2 Vaccine Against Infection in Adolescents](#)
 - [Omicron infection enhances neutralizing immunity against the Delta variant](#)
- *JAMA*
 - [Association of Birth During the COVID-19 Pandemic With Neurodevelopmental Status at 6 Months in Infants With and Without In Utero Exposure to Maternal SARS-CoV-2 Infection](#)
 - [Assessment of Functional Mobility After COVID-19 in Adults Aged 50 Years or Older in the Canadian Longitudinal Study on Aging](#)
 - [Association of a Third Dose of BNT162b2 Vaccine With Incidence of SARS-CoV-2 Infection Among Health Care Workers in Israel](#)
 - [Booster Vaccination to Reduce SARS-CoV-2 Transmission and Infection](#)
 - [Assessment of Administration and Receipt of COVID-19 Vaccines by Race and Ethnicity in US Federally Qualified Health Centers](#)
 - [Outcomes of SARS-CoV-2–Positive Youths Tested in Emergency Departments - The Global PERN–COVID-19 Study](#)
 - [Estimating COVID-19 Infections, Hospitalizations, and Deaths Following the US Vaccination Campaigns During the Pandemic](#)
 - [SARS-CoV-2 Antibody Response to 2 or 3 Doses of the BNT162b2 Vaccine in Patients Treated With Anticancer Agents](#)
 - [A National Strategy for the “New Normal” of Life With COVID](#)
 - [A National Strategy for COVID-19 Medical Countermeasures](#)
 - [Comprehensive Chemosensory Psychophysical Evaluation of Self-reported Gustatory Dysfunction in Patients With Long-term COVID-19 - A Cross-sectional Study](#)
 - [Lottery-Based Incentives and COVID-19 Vaccination Rates in the US](#)
 - [Association of Birth During the COVID-19 Pandemic With Neurodevelopmental Status at 6 Months in Infants With and Without In Utero Exposure to Maternal SARS-CoV-2 Infection](#)
 - [Association of Weight Loss Achieved Through Metabolic Surgery With Risk and Severity of COVID-19 Infection](#)
 - [Association Between Immune Dysfunction and COVID-19 Breakthrough Infection After SARS-CoV-2 Vaccination in the US](#)
 - [US Insurer Spending on Ivermectin Prescriptions for COVID-19](#)





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- [Effect of Subcutaneous Casirivimab and Imdevimab Antibody Combination vs Placebo on Development of Symptomatic COVID-19 in Early Asymptomatic SARS-CoV-2 Infection - A Randomized Clinical Trial](#)
- [Realizing the Potential of Anti-SARS-CoV-2 Monoclonal Antibodies for COVID-19 Management](#)
- *The Journal of Infectious Diseases*
 - [Effect of influenza vaccination on risk of COVID-19 – A prospective cohort study of 46,000 health care workers](#)
 - [Lung function decline in relation to COVID-19 in the general population: a matched cohort study with pre-pandemic assessment of lung function](#)
 - [Intrauterine fetal demise in the third trimester of pregnancy associated with mild infection with the SARS-CoV-2 Delta variant without protection from vaccination](#)
 - [SARS-CoV-2 placentitis associated with B.1.617.2 \(Delta\) variant and fetal distress or demise](#)
 - [SARS-CoV-2 infection during pregnancy and associated perinatal health outcomes: a national US cohort study](#)
- *The Lancet*
 - [The effect of maternal SARS-CoV-2 infection timing on birth outcomes: a retrospective multicentre cohort study](#)
- *Pediatrics*
 - [Human Milk SARS-CoV-2 Antibodies up to 6 Months After Vaccination](#)
- *International Journal of Infectious Diseases*
 - [Persistence of clinically relevant levels of SARS-CoV2 envelope gene subgenomic RNAs in non-immunocompromised individuals](#)
 - [Seroprevalence of IgG antibodies against SARS-CoV-2 in India, March 2020 to August 2021: a systematic review and meta-analysis](#)
- *American Journal of Infection Control*
 - [Factors and Reasons Associated with Low COVID-19 Vaccine Uptake among Highly Hesitant Communities in the US](#)
- *Journal of Infection*
 - [Increased mortality in COVID-19 patients with fungal co- and secondary infections admitted to intensive care or high dependency units in NHS hospitals in England](#)
- *Nature*
 - [Multi-ancestry fine mapping implicates OAS1 splicing in risk of severe COVID-19](#)
 - [SARS-CoV-2 infection and COVID-19 vaccination rates in pregnant women in Scotland](#)
 - [Cross-reactive memory T cells associate with protection against SARS-CoV-2 infection in COVID-19 contacts](#)
 - [Broadly neutralizing antibodies overcome SARS-CoV-2 Omicron antigenic shift](#)
 - [SARS-CoV-2 infection in free-ranging white-tailed deer](#)
- *Imperial College London*
 - [The SARS-CoV-2 variant, Omicron, shows rapid replication in human primary nasal epithelial cultures and efficiently uses the endosomal route of entry](#)
- *UK Health Security Agency*
 - [SARS-CoV-2 variants of concern and variants under investigation in England – Technical Briefing 34](#)
- *Annals of Internal Medicine*
 - [Antibody Response to a Fourth Messenger RNA COVID-19 Vaccine Dose in Kidney Transplant Recipients: A Case Series](#)





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- *Obstetrics and Gynecology*
 - [Neutralizing Antibodies and Cytokines in Breast Milk After Coronavirus Disease 2019 \(COVID-19\) mRNA Vaccination](#)
 - [Association Between Menstrual Cycle Length and Coronavirus Disease 2019 \(COVID-19\) Vaccination - A U.S. Cohort](#)
- *Annals of Oncology*
 - [COVID-19 vaccination and breakthrough infections in patients with cancer](#)
- *American Chemical Society*
 - [Development and Application of a Polydimethylsiloxane-Based Passive Air Sampler to Assess Personal Exposure to SARS-CoV-2](#)
- *Journal of Translational Medicine*
 - [Paradoxical sex-specific patterns of autoantibody response to SARS-CoV-2 infection](#)
- *Global Challenges*
 - [T-Cup: A Cheap, Rapid, and Simple Home Device for Isothermal Nucleic Acid Amplification](#)

MMWR

- [Risk for Newly Diagnosed Diabetes >30 Days After SARS-CoV-2 Infection Among Persons Aged <18 Years — United States, March 1, 2020–June 28, 2021](#)
- [Racial and Ethnic Disparities in Receipt of Medications for Treatment of COVID-19 — United States, March 2020–August 2021](#)
- [Effectiveness of BNT162b2 \(Pfizer-BioNTech\) mRNA Vaccination Against Multisystem Inflammatory Syndrome in Children Among Persons Aged 12–18 Years — United States, July–December 2021](#)
- [Risk Factors for Severe COVID-19 Outcomes Among Persons Aged ≥18 Years Who Completed a Primary COVID-19 Vaccination Series — 465 Health Care Facilities, United States, December 2020–October 2021](#)
- [Receipt of COVID-19 Vaccine During Pregnancy and Preterm or Small-for-Gestational-Age at Birth — Eight Integrated Health Care Organizations, United States, December 15, 2020–July 22, 2021](#)

HOT OFF THE (LAY) PRESS

- *New York Times*
 - [Americans can now order four free at-home coronavirus tests after the Biden administration launched its website a day early.](#)
 - [Omicron and the Need for Speed](#)
 - [New Virus Cases Begin to Slow in U.S. Cities Where Omicron Hit First](#)
 - [For the first time, the C.D.C. said cloth masks weren't as effective as other options. "Wear the most protective mask you can," the agency urged.](#)
 - [Some experts call for a switch from nasal swabs to saliva-based tests, to better detect Omicron.](#)
 - [Americans will be able to order free coronavirus tests online beginning Wednesday, U.S. officials said. They should ship within 7 to 12 days.](#)
 - [The U.S. will buy 500 million more home tests for Americans, and President Biden said he'd announce a plan to provide high-quality masks.](#)
 - [A new Biden administration plan will require private insurers to cover the cost for eight at-home coronavirus tests per person per month.](#)





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- [As More Teachers' Unions Push for Remote Schooling, Parents Worry. So Do Democrats.](#)
- [The Supreme Court's conservative majority seemed skeptical of the federal mandate that large employers require vaccinations or testing.](#)
- [Early Data Hints at Omicron's Potential Toll Across America](#)
- [Six advisers to President Biden's transition team urged him to change his Covid strategy to address the "new normal" of living with the virus.](#)
- [The C.D.C. endorses Pfizer-BioNTech boosters for children 12 years of age and older](#)
- [In omicron hot spots, hospitals fill up, but I.C.U.s may not](#)
- ['It's Chaos' as Schools Confront Omicron](#)
- [The F.D.A. cleared boosters of the Pfizer-BioNTech vaccine for 12- to 15-year-olds. The C.D.C. is expected to sign off before shots are given out.](#)
- [Fauci says he's more concerned about the strain to hospitals than the record number of cases](#)
- [With Omicron's Rise, Americans Brace for Returning to School and Work](#)
- [New studies on animals suggest why Omicron is less severe than earlier variants: It seems to cause much less damage to the lungs.](#)
- [Omicron Is Not More Severe for Children, Despite Rising Hospitalizations](#)
- **CNN**
 - [19 states have fewer than 15% of ICU beds left as health care staffing shortages complicate care](#)
 - [Nearly a quarter of hospitals are reporting a critical staff shortage as Omicron drives a rise in Covid-19 cases](#)
- **NBC News**
 - [Wastewater samples reveal record levels of coronavirus across U.S.](#)
- **The Wall Street Journal**
 - [Hospitals Cut Beds as Nurses Call In Sick With Covid-19](#)
 - [Schools See Big Drop in Attendance as Students Stay Away, Citing Covid-19](#)
 - [Omicron Surge Stymies Public-Transit Systems](#)
- **The Washington Post**
 - [CDC weighs recommending better masks against omicron variant](#)
 - [Israeli study reports fivefold jump in antibodies with 4th Pfizer vaccine shot](#)
 - [U.S. approaches new records as experts debate which numbers are most important](#)
- **Reuters**
 - [Italy extends COVID vaccine mandate to everyone over 50](#)
 - [Ecuador makes COVID-19 vaccination obligatory](#)
- **Haaretz News**
 - [Fourth COVID Shot Boosts Protection Fivefold, Israeli Study Suggests](#)
- **Israel's Prime Minister's Office**
 - [PM Bennett Announces Israelis 60+ and Medical Workers to receive 4th Vaccine](#)
- **The Telegraph**
 - [Fourth Covid jab: We can't vaccinate the planet every six months, says JCVI chief](#)
- **The New Yorker**
 - [Do the Omicron Numbers Mean What We Think They Mean?](#)
 - [How Soon Will COVID Be "Normal"?](#)
- **AP News**
 - [Kids' low COVID-19 vaccination rates called a 'gut punch'](#)
 - [Home COVID tests to be covered by insurers starting Saturday](#)





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- *NPR*
 - [The Postal Service is seeking a temporary delay from the vaccine mandate](#)
 - [The COVID antiviral drugs are here but they're scarce. Here's what to know](#)
- *The Atlantic*
 - [Should Teen Boys Get Boosted?](#)
 - [Omicron Is Forcing Us to Rethink Mild COVID](#)
 - [Stop Wasting COVID Tests, People](#)
- *Time*
 - [5 Ways to Feel Happier During the Pandemic, According to Science](#)
- *Wired*
 - [This AI Software Nearly Predicted Omicron's Tricky Structure](#)
- *American Red Cross Press Releases*
 - [Red Cross Declares First-ever Blood Crisis amid Omicron Surge](#)
- *Pharmaceutical Business Review*
 - [Ascleptis expands ritonavir oral tablets production amid Covid-19 surge](#)
- *AstraZeneca Press Releases*
 - [New Vaxzevria data further support its use as third dose booster](#)
- *Novavax Press Releases*
 - [Novavax Submits Final Data Packages to U.S. FDA as Prerequisite to Emergency Use Authorization Application Request for COVID-19 Vaccine](#)
- *Los Angeles Times*
 - [California surpasses astonishing 6 million COVID infections as Omicron wave expands](#)
- *Mercury News*
 - [Coveted COVID tests causing 4-hour traffic jams as omicron explodes in Bay Area](#)
- *San Francisco Chronicle*
 - [Has omicron crested in the Bay Area? Sewage samples seem to suggest so](#)
 - [California hospitals brace for tsunami of omicron patients. Will health system be ready?](#)
 - [Sonoma County bans large gatherings, advises residents to shelter in place for next 30 days](#)
 - [Forming a picture of what life could be like after the omicron surge](#)
 - [After 700 people test positive for COVID, Stanford puts off in-person classes](#)
 - [When should you go to the E.R. with COVID symptoms as California hospitalizations rise?](#)
 - [Bay Area hospitals struggle with omicron surge and nursing shortage as California extends mask mandate](#)
 - [Bay Area, California mark record-high spike in coronavirus cases](#)
 - [Why some Bay Area medical experts see a coronavirus endgame within months](#)
 - [San Francisco now has 3rd highest COVID transmission rate in California](#)

EPIDEMIOLOGY UPDATES

- [CDC COVID Data Tracker](#)
 - [COVID-19 Vaccinations in the United States – 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 [CDPH Website](#) and the [NYT Map and Table](#) (includes data by county)
 - **California [COVID-19 Statewide Update](#) as of January 19, 2022**





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- [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](#)
- [Covid-WEB \(Wastewater Epidemiology for the Bay Area\)](#)
- [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](#)

