



## COVID-19 Digest Issue 37

January 7, 2020

### CLINICAL PEARL

- *Interpretation of tuberculosis test results in COVID-19-vaccinated persons:*  
According to the CDC, [there is no immunologic reason to believe either a Tuberculin Skin Test \(TST\) \(administered by intradermal placement of 0.1 cc of purified protein derivative\) or blood draw for interferon gamma release assay \(IGRA\) would affect the safety or effectiveness of mRNA COVID-19 vaccines.](#) To date, there is no data to inform the impact of the COVID-19 mRNA vaccines on either TB test for infection (i.e., TST or IGRA).
  - **For healthcare personnel or patients who require baseline TB testing (at onboarding or entry into facilities) at the same time they are to receive an mRNA COVID-19 vaccine:**
    1. Perform TB symptom screening on all healthcare personnel or patients.
    2. If utilizing the IGRA, draw blood for interferon gamma release assay prior to COVID-19 vaccination.
    3. If utilizing the TST, place prior to COVID-19 vaccination.
    4. **If vaccination has been given and testing needs to be performed, defer TST or IGRA until 4 weeks after COVID-19 vaccine 2-dose completion.**
      1. All potential recipients of COVID-19 vaccination should weigh the risks and benefits of delaying TST/IGRA with their providers.
  - **For healthcare personnel who require testing for other reasons:**
    1. Perform TB symptom screening on all healthcare personnel
    2. **Test for infection should be done before or at the same time as the administration of COVID-19 vaccination.** If this is not possible, prioritization of test for TB infection needs to be weighed with the importance of receiving COVID-19 vaccination based on potential COVID-19 exposures and TB risk factors.
      1. Healthcare personnel with high-risk conditions for TB progression should be fully evaluated as soon as possible.
      2. Healthcare personnel without high-risk conditions for TB progression should proceed with contact tracing (i.e., symptom screening, chest radiograph or other imaging, specimen for microbiologic evaluation) but delay test for TB infection (TST or IGRA) if prioritized for receiving COVID-19 vaccination.
      3. All potential recipients of COVID-19 vaccination should weigh the risks and benefits of delaying TST/IGRA with their providers.

### PUBLIC HEALTH UPDATES

- State of California [Public Health Order](#) Ensuring Distribution of Health Care Resources across the State to Ensure Patients Get Life-Saving Care as ICU Capacity is Strained
- San Mateo County Health Alerts
  - [New Fast-Spreading Variant of SARS-CoV-2 Identified](#)
  - [Updated COVID-19 Hospital/Emergency Department Discharge Notification](#)
  - [Mental Health and Substance Use During the Pandemic](#)
- FDA: [Risk of False Results with the Curative SARS-Cov-2 Test for COVID-19](#)





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### GUIDANCE/GUIDELINES

- IDSA and hivma [COVID-19: Considerations for People with HIV](#)
- FDA [FAQ: COVID-19 and Ivermectin Intended for Animals](#)
- CDC Updated [Interim Clinical Considerations for Use of mRNA COVID-19 Vaccines Currently Authorized in the United States](#)

○ **Appendix A: Triage of persons presenting for mRNA COVID-19 vaccination**

	MAY PROCEED WITH VACCINATION	PRECAUTION TO VACCINATION	CONTRAINDICATION TO VACCINATION
CONDITIONS	<p><b>CONDITIONS</b></p> <ul style="list-style-type: none"> <li>• Immunocompromising conditions</li> <li>• Pregnancy</li> <li>• Lactation</li> </ul> <p><b>ACTIONS</b></p> <ul style="list-style-type: none"> <li>• Additional information provided*</li> <li>• 15 minute observation period</li> </ul>	<p><b>CONDITIONS</b></p> <ul style="list-style-type: none"> <li>• Moderate/severe acute illness</li> </ul> <p><b>ACTIONS</b></p> <ul style="list-style-type: none"> <li>• Risk assessment</li> <li>• Potential deferral of vaccination</li> <li>• 15-minute observation period if vaccinated</li> </ul>	<p><b>CONDITIONS</b></p> <ul style="list-style-type: none"> <li>• None</li> </ul> <p><b>ACTIONS</b></p> <ul style="list-style-type: none"> <li>• N/A</li> </ul>
ALLERGIES	<p><b>ALLERGIES</b></p> <ul style="list-style-type: none"> <li>• History of allergies that are unrelated to components of an mRNA COVID-19 vaccine<sup>†</sup>, other vaccines, injectable therapies, or polysorbate, such as:</li> <li>• Allergy to oral medications (including the oral equivalent of an injectable medication)</li> <li>• History of food, pet, insect, venom, environmental, latex, etc., allergies</li> <li>• Family history of allergies</li> </ul> <p><b>ACTIONS</b></p> <ul style="list-style-type: none"> <li>• 30-minute observation period: Persons with a history of anaphylaxis (due to any cause)</li> <li>• 15-minute observation period: All other persons</li> </ul>	<p><b>ALLERGIES</b></p> <ul style="list-style-type: none"> <li>• History of any immediate allergic reaction<sup>‡</sup> to vaccines or injectable therapies (except those related to component of mRNA COVID-19 vaccines<sup>†</sup> or polysorbate, as these are contraindicated)</li> </ul> <p><b>ACTIONS:</b></p> <ul style="list-style-type: none"> <li>• Risk assessment</li> <li>• Consider deferral of vaccination and/or referral to allergist-immunologist</li> <li>• 30-minute observation period if vaccinated</li> </ul>	<p><b>ALLERGIES</b></p> <ul style="list-style-type: none"> <li>• History of the following are contraindications to receiving either of the mRNA COVID-19 vaccines<sup>†</sup>:</li> <li>• Severe allergic reaction (e.g., anaphylaxis) after a previous dose of an mRNA COVID-19 vaccine or any of its components</li> <li>• Immediate allergic reaction<sup>‡</sup> of any severity to a previous dose of an mRNA COVID-19 vaccine or any of its components<sup>^</sup> (including polyethylene glycol)<sup>#</sup></li> <li>• Immediate allergic reaction of any severity to polysorbate<sup>^#</sup></li> </ul> <p><b>ACTIONS</b></p> <ul style="list-style-type: none"> <li>• Do not vaccinate<sup>#</sup></li> <li>• Consider referral to allergist-immunologist</li> </ul>

\* See Special Populations section for information on patient counseling in these groups

<sup>†</sup> Refers only to mRNA COVID-19 vaccines currently authorized in the United States (i.e., Pfizer-BioNTech, Moderna COVID-19 vaccines)

<sup>‡</sup> Immediate allergic reaction to a vaccine or medication is defined as any hypersensitivity-related signs or symptoms consistent with urticaria, angioedema, respiratory distress (e.g., wheezing, stridor), or anaphylaxis that occur within four hours following administration.





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### ○ Appendix C: Distinguishing allergic reactions from other types of reactions

Characteristic	Immediate allergic reactions (including anaphylaxis)	Vasovagal reaction	Vaccine side effects (local and systemic)
Timing after vaccination	Most occur within 15-30 minutes of vaccination	Most occur within 15 minutes	Median of 1 to 3 days after vaccination (with most occurring day after vaccination)
<b>Signs and symptoms</b>			
Constitutional	Feeling of impending doom	Feeling warm or cold	Fever, chills, fatigue
Cutaneous	Skin symptoms present in ~90% of people with anaphylaxis, including pruritus, urticaria, flushing, angioedema	Pallor, diaphoresis, clammy skin, sensation of facial warmth	Pain, erythema or swelling at injection site; lymphadenopathy in same arm as vaccination
Neurologic	Confusion, disorientation, dizziness, lightheadedness, weakness, loss of consciousness	Dizziness, lightheadedness, syncope (often after prodromal symptoms for a few seconds or minutes), weakness, changes in vision (such as spots of flickering lights, tunnel vision), changes in hearing	Headache
Respiratory	Shortness of breath, wheezing, bronchospasm, stridor, hypoxia	Variable; if accompanied by anxiety, may have an elevated respiratory rate	N/A
Cardiovascular	Hypotension, tachycardia	Variable; may have hypotension or bradycardia during syncopal event	N/A
Gastrointestinal	Nausea, vomiting, abdominal cramps, diarrhea	Nausea, vomiting	Vomiting or diarrhea may occur
Musculoskeletal	N/A	N/A	Myalgia, arthralgia
<b>Vaccine recommendations</b>			
Receive 2 <sup>nd</sup> dose of mRNA COVID-19	No	Yes	Yes

### RESOURCES

- CDC [COVID-19 Vaccine Training Modules](#):
  - [COVID-19 Vaccine Training: General Overview of Immunization Best Practices for Healthcare Providers](#)
  - [Moderna COVID-19 Vaccine: What Healthcare Professionals Need to Know](#)
  - [Pfizer-BioNTech COVID-19 Vaccine: What Healthcare Professionals Need to Know](#)
- Immunization Action Coalition [Ask the Experts: COVID-19 and Routine Vaccination](#)
- CDC/IDSA COVID-19 Real-Time Learning Network [Vaccines Information and FAQ](#)
- American Academy of Pediatrics [COVID-19 Vaccine: Frequently Asked Questions](#)
- CDC [Update on COVID-19](#) Press Briefing Transcript
- ARCTIC Network: [Preliminary genomic characterisation of an emergent SARS-CoV-2 lineage in the UK defined by a novel set of spike mutations](#)
- This Week in Virology podcast: [Persistence of SARS-CoV-2 immune memory](#)
- JAMA Network Learning podcast: [Understanding SARS-CoV-2 Genetic Variants](#)

### ACADEMIC/RESEARCH PAPERS

- *Imperial College London*
  - [Report 42 - Transmission of SARS-CoV-2 Lineage B.1.1.7 in England: insights from linking epidemiological and genetic data](#)
- *bioRxiv*
  - [Recurrent emergence and transmission of a SARS-CoV-2 Spike deletion H69/V70](#)





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- *medRxiv*
  - [S gene dropout patterns in SARS-CoV-2 tests suggest spread of the H69del/V70del mutation in the US](#)
- *Nature*
  - [The S1 protein of SARS-CoV-2 crosses the blood–brain barrier in mice](#)
  - [Analysis of vitamin D level among asymptomatic and critically ill COVID-19 patients and its correlation with inflammatory markers](#)
- *E Clinical Medicine*
  - [Safety and immunogenicity of INO-4800 DNA vaccine against SARS-CoV-2: A preliminary report of an open-label, Phase 1 clinical trial](#)
- *New England Journal of Medicine*
  - [Efficacy and Safety of the mRNA-1273 SARS-CoV-2 Vaccine](#)
  - [Business Not as Usual — Covid-19 Vaccination in Persons with Substance Use Disorders](#)
  - [Vaccinating Detained Migrants against SARS-CoV-2 — Preventing Another Tragedy](#)
  - [Microvascular Injury in the Brains of Patients with Covid-19](#)
- *Journal of Clinical Immunology*
  - [SARS-CoV-2-Induced ARDS Associates with MDSC Expansion, Lymphocyte Dysfunction, and Arginine Shortage](#)
- *Journal of Medical Virology*
  - [SARS-CoV-2 nucleocapsid protein intranasal inoculation induces local and systemic T cell responses in mice](#)
- *JAMA*
  - [National Trends in the US Public’s Likelihood of Getting a COVID-19 Vaccine—April 1 to December 8, 2020](#)
  - [Mandating COVID-19 Vaccines](#)
  - [Problems With Paying People to Be Vaccinated Against COVID-19](#)
  - [Genetic Variants of SARS-CoV-2—What Do They Mean?](#)
  - [Uptake and Accuracy of the Diagnosis Code for COVID-19 Among US Hospitalizations](#)
  - [Hospital Readmission Is Common Among COVID-19 Survivors](#)
  - [Diagnosis, Management, and Pathophysiology of Arterial and Venous Thrombosis in COVID-19](#)
  - [Risk Factors Associated With All-Cause 30-Day Mortality in Nursing Home Residents With COVID-19](#)
  - [Beyond Age—Improvement of Prognostication Through Physical and Cognitive Functioning for Nursing Home Residents With COVID-19](#)
  - [Sorting Out Whether Vitamin D Deficiency Raises COVID-19 Risk](#)
  - [Early Outcomes From Early Tracheostomy for Patients With COVID-19](#)
- *International Journal of Infectious Diseases*
  - [A five-day course of ivermectin for the treatment of COVID-19 may reduce the duration of illness](#)
- *The Journal of Infectious Diseases*
  - [Fostamatinib Inhibits Neutrophils Extracellular Traps Induced by COVID-19 Patient Plasma: A Potential Therapeutic](#)
- *Open Forum Infectious Diseases*
  - [Prevalence of Co-Infection at the Time of Hospital Admission in COVID-19 Patients, A Multicenter Study](#)
  - [SARS-CoV-2 Viral Load on Admission Is Associated With 30-Day Mortality](#)





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- *Cancer Cell*
  - [SARS-CoV-2 Viral Load Predicts Mortality in Patients with and without Cancer Who Are Hospitalized with COVID-19](#)
- *BMJ Journal*
  - [Inactivated trivalent influenza vaccination is associated with lower mortality among patients with COVID-19 in Brazil](#)
  - [‘Long-COVID’: a cross-sectional study of persisting symptoms, biomarker and imaging abnormalities following hospitalisation for COVID-19](#)
  - [Impact of cardiovascular disease and risk factors on fatal outcomes in patients with COVID-19 according to age: a systematic review and meta-analysis](#)
- *Journal of American College of Cardiology*
  - [Reversible Myocardial Injury Associated With SARS-CoV-2 in an Infant](#)
- *Journal of Internal Medicine*
  - [Gastrointestinal Bleeding in Hospitalized COVID-19 Patients: A Propensity Score Matched Cohort Study](#)
- *eLife*
  - [A novel haemocytometric COVID-19 prognostic score developed and validated in an observational multicentre European hospital-based study](#)
- *Annals of Internal Medicine*
  - [Update Alert 4: Masks for Prevention of Respiratory Virus Infections, Including SARS-CoV-2, in Health Care and Community Settings](#)
- *Clinical Infectious Diseases*
  - [Field performance and public health response using the BinaxNOW TM Rapid SARS-CoV-2 antigen detection assay during community-based testing](#)
- *Emerging Infectious Diseases*
  - [Genomic Evidence of In-Flight Transmission of SARS-CoV-2 Despite Predeparture Testing](#)

## MMWR

- [Allergic Reactions Including Anaphylaxis After Receipt of the First Dose of Pfizer-BioNTech COVID-19 Vaccine — United States, December 14–23, 2020](#)
- [Performance of an Antigen-Based Test for Asymptomatic and Symptomatic SARS-CoV-2 Testing at Two University Campuses — Wisconsin, September–October 2020](#)
- [Implications of Shortened Quarantine Among Household Contacts of Index Patients with Confirmed SARS-CoV-2 Infection — Tennessee and Wisconsin, April–September 2020](#)
- [The Advisory Committee on Immunization Practices’ Interim Recommendation for Use of Moderna COVID-19 Vaccine — United States, December 2020](#)
- [The Advisory Committee on Immunization Practices’ Updated Interim Recommendation for Allocation of COVID-19 Vaccine — United States, December 2020](#)

## HOT OFF THE (LAY) PRESS

- *WHO Disease Outbreak News*
  - [SARS-CoV-2 Variants](#)
- *The New York Times*
  - [Discovery of Virus Variant in Colorado and California Alarms Scientists](#)





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- [At least 33 countries have identified infections with the new, more contagious variant of the virus first found in Britain.](#)
- [U.S. Officials Say Covid-19 Vaccination Effort Has Lagged](#)
- [Scientists are studying vaccine data to see if the Moderna supply can be doubled by cutting doses in half, a move that could help alleviate shortages.](#)
- [More Americans are receiving Covid-19 vaccinations. Many endure chaos to get them](#)
- [In Minority Communities, Doctors Are Changing Minds About Vaccination](#)
- [Early Vaccine Doubters Now Show a Willingness to Roll Up Their Sleeves](#)
- [Boston Doctor Reports Serious Allergic Reaction After Getting Moderna's Covid Vaccine](#)
- [How the Pfizer-BioNTech Vaccine Works](#)
- [Prime Minister Boris Johnson closed schools and imposed a strict national lockdown in England, as a coronavirus variant continued to spread quickly.](#)
- [U.K. Authorizes Covid-19 Vaccine From Oxford and AstraZeneca](#)
- [Britain begins giving clinically authorized and tested Oxford-AstraZeneca shots](#)
- [India gave approval to the Oxford-AstraZeneca vaccine, as well as a local version, for emergency use in a promising move for the developing world.](#)
- [Britain Opens Door to Mix-and-Match Vaccinations, Worrying Experts](#)
- [Small Number of Covid Patients Develop Severe Psychotic Symptoms](#)
- [This Is Why Nursing Homes Failed So Badly](#)
- [How Taiwan Plans to Stay \(Mostly\) Covid-Free](#)
- [New Data Triples Russia's Covid-19 Death Toll](#)
- [The Lull Before the Surge on Top of the Surge](#)
- *The Wall Street Journal*
  - [Year Ends With Record-Setting Month in U.S. for Covid-19](#)
  - [U.K. Delays Second Covid-19 Vaccine Dose as Europe Ponders How to Speed Up Immunization](#)
- *Politico*
  - [Feds may cut Moderna vaccine doses in half so more people get shots, Warp Speed adviser says](#)
- *CNBC*
  - [U.S. could ramp up slow Covid vaccine rollout by giving two half volume doses of Moderna shot, Slaoui says](#)
  - [Covid variant in South Africa is 'more of a problem' than the one in UK, official says](#)
- *AP News*
  - [Just 1% of Californians immunized amid slow vaccine rollout](#)
  - [Germany extends lockdown until Jan 31 and toughens curbs](#)
- *STAT News*
  - [Britain gambles on Covid-19 vaccines, upping the stakes for the rest of us](#)
  - [Primary care doctors are being left behind in the vaccine rollout](#)
  - [Messonnier: The slow vaccine rollout should speed up 'pretty massively' in coming weeks](#)
  - [Pfizer and BioNTech speed up timeline for offering Covid-19 vaccine to placebo volunteers](#)
- *The Washington Post*
  - [It's time to consider delaying the second dose of coronavirus vaccine](#)
  - [At least 4.6 million people have been vaccinated in the U.S. 15.4 million doses have been distributed.](#)
  - [Wealthy donors received vaccines through Florida nursing home](#)
  - [Nebraska governor says citizens, legal residents will get vaccine priority over undocumented immigrants](#)





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- [U.K. variant continues to spread around the world as coronavirus pandemic enters 2021](#)
- *NPR/KQED*
  - [New COVID-19 Variant Spreads To Dozens Of Countries](#)
  - [Florida Becomes 3rd U.S. State To Identify New Coronavirus Variant](#)
  - [Some Health Care Workers Are Hesitant About Getting COVID-19 Vaccines](#)
  - [Some Health Care Workers Say They Are 'Forgotten' In COVID-19 Vaccination Plans](#)
  - [China Approves Its Homegrown COVID-19 Vaccine For Widespread Use](#)
  - [LA County Paramedics Told Not To Transport Some Patients With Low Chance Of Survival](#)
  - [Hard-Hit California Hospitals Receive Military Support](#)
  - [San Mateo County Adds New ICU Beds, Staff to Sequoia Hospital](#)
  - ['Toxic Individualism': Pandemic Politics Driving Health Care Workers From Small Towns](#)
  - [Massive 1-Year Rise In Homicide Rates Collided With The Pandemic In 2020](#)
- *National Geographic*
  - [Why new coronavirus variants 'suddenly arose' in the U.K. and South Africa](#)
  - [What we've learned about how our immune system fights COVID-19](#)
  - [They spent 12 years solving a puzzle. It yielded the first COVID-19 vaccines.](#)
  - [When the world reopens, will art museums still be there?](#)
- *The Atlantic*
  - [The Mutated Virus Is a Ticking Time Bomb](#)
  - [Where Year Two of the Pandemic Will Take Us](#)
- *The Guardian*
  - [Our key findings about US healthcare worker deaths to date](#)
- *CNN*
  - [One American dies from Covid-19 every 33 seconds as the vaccine rollout hits snags](#)
  - [UK Prime Minister imposes harsh lockdown as new Covid-19 variant spreads](#)
- *Science*
  - [Suspicious grow that nanoparticles in Pfizer's COVID-19 vaccine trigger rare allergic reactions](#)
  - [Viral mutations may cause another 'very, very bad' COVID-19 wave, scientists warn](#)
  - [Novavax launches pivotal U.S. trial of dark horse COVID-19 vaccine after manufacturing delays](#)
  - [Makers of successful COVID-19 vaccines wrestle with options for placebo recipients](#)
  - [Scientists criticize 'rushed' approval of Indian COVID-19 vaccine without efficacy data](#)
- *NEJM Journal Watch*
  - [Ivermectin for COVID-19 — Breakthrough Treatment or Hydroxychloroquine Redux?](#)
- *Medscape*
  - [Outpatient Strategies for COVID-19 Therapy: Clinical Equipoise in Defense of Pascal](#)
  - [COVID-19 Anticoagulation Trials 'Paused' for Futility, Safety](#)
- *Medpage Today*
  - [Why PCR Cycle Threshold Is Useful in Coronavirus Testing](#)
- *Bloomberg*
  - [Wuhan's Covid Cases May Have Been 10 Times Higher, Study Shows](#)
  - [China Is Making It Harder to Solve the Mystery of How Covid Began](#)
- *Office of Governor Newsom*
  - [Governor Newsom Unveils California's Safe Schools for All Plan](#)





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- *California Department of Public Health Office of Communications*
  - [State Issues Public Health Order Ensuring Distribution of Health Care Resources across the State to Ensure Patients Get Life-Saving Care as ICU Capacity is Strained](#)
- *The Los Angeles Times*
  - [It's 'World War III,' says LA County doctor beset by intensely sick COVID-19 patients](#)
  - [Some L.A. County mortuaries and funeral homes simply have no more room for the dead](#)
  - [From Costco and Target to TV sitcom sets, LA workplaces emerge as likely pathways for coronavirus spread](#)
  - [LA homeless sites 'overwhelmed' by COVID-19: 'These are the toughest times'](#)
- *Business Insider*
  - [Stanford Medicine accidentally vaccinated non-frontline workers over the weekend](#)
- *San Francisco Chronicle*
  - [California imposes new health order forcing hospitals with available capacity to accept transfer patients](#)
  - [Ambulances wait for hours outside Santa Clara County emergency rooms as hospital crisis worsens](#)
  - [Deadly outbreak at Kaiser San Jose grows to 60 infections while county studies if new variant is involved](#)
  - [Grim start to 2021 as both S.F. and California set coronavirus records](#)
  - [California cases jump to over 70,000 in a day as state braces for post-holiday surge. 'This week is critical'](#)
  - [New, highly contagious coronavirus strain arrives in California, as state passes 25,000 deaths](#)
  - ['In the abyss': Why Bay Area health care experts fear January](#)
  - [Newsom to propose \\$300 million for COVID vaccine distribution in California budget](#)
  - [California's vaccination efforts are off to a slow start. Here's why](#)
  - [San Quentin Prison COVID releases delayed by state Supreme Court](#)

### EPIDEMIOLOGY UPDATES

- **US Leads the World in Confirmed COVID-19 Cases** per [Johns Hopkins University Center for Systems Science and Engineering Dashboard Website](#)
- [Johns Hopkins COVID-19 in the USA](#) – daily summary of key data on COVID-19 in the U.S.
- **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 7, 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](#)
- [COVID-19 Nursing Home Data](#)
- [HHS Coronavirus Data Hub](#)
- [CDC Interactive Serology Dashboard for Commercial Laboratory Surveys](#)

