



COVID-19 Digest Issue 36

December 31, 2020

CLINICAL PEARL

- **SARS-CoV-2 variant with multiple spike protein mutations: Since November 2020, a variant strain of SARS-CoV-2 has become prevalent in the southeast of England, reportedly accounting for 60% of recent infections in London.** This variant has a mutation in the receptor binding domain (RBD) of the spike protein at position 501, where amino acid asparagine (N) has been replaced with tyrosine (Y). The shorthand for this mutation is N501Y, sometimes noted as S:N501Y to specify that it is in the spike protein. This variant carries many other mutations, including a double deletion (positions 69 and 70). Prior work on variants with N501Y suggests they may bind more tightly to the human angiotensin-converting enzyme 2 (ACE2) receptor. At present, the variant is referred to as “SARS-CoV-2 VOC 202012/01” (i.e., the first variant of concern from 2020, December), or “B.1.1.7.” VOC 202012/01 so far has no known association with animals or animal contact.

While it is known and expected that viruses constantly change through mutation leading to the emergence of new variants, preliminary analysis in the United Kingdom (UK) suggests that this variant is significantly more transmissible than previously circulating variants, with an estimated potential to increase the reproductive number (R0) by 0.4 or greater, and with an estimated increased transmissibility of up to 70%. There is no indication at this point of increased infection severity or increased risk of death associated with the new variant.

To date, the VOC 202012/01 variant has not been identified in San Mateo County. It was recently identified in Colorado and in San Diego. Given the small fraction of US infections that has been sequenced to date (about 51,000 of the 17 million US cases), it is likely that the variant has been in the United States for a while without having been detected. The variant has been detected in multiple European countries, as well as Canada, the Middle East, Southeast Asia and Oceania. On December 18, 2020, the South African government announced that it had also seen the emergence of a new strain in a scenario similar to that in the UK. The South African variant also has the N501Y mutation and several other mutations but emerged completely independently of the UK strain and is not related to it.

PUBLIC HEALTH UPDATES

- CDC [Implications of the Emerging SARS-CoV-2 Variant VOC 202012/01](#)
- CDC and HHS order: [Requirement for Proof of Negative COVID-19 Test for All Air Passengers Arriving from the UK to the US](#)
- Public Health England [Investigation of novel SARS-CoV-2 variant: Variant of Concern 202012/01 Technical briefing 2](#)
- WHO [SARS-CoV-2 Variant – United Kingdom of Great Britain and Northern Ireland](#)

GUIDANCE/GUIDELINES

- CDC
 - [Interim Clinical Considerations for Use of mRNA COVID-19 Vaccines Currently Authorized in the United States](#)
 - [Requirement for Proof of Negative COVID-19 Test for All Air Passengers Arriving from the UK to the US](#)





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RESOURCES

- CDC Clinician Outreach and Communication Activity (COCA) Webinars:
 - [COVID-19 Vaccines: Update on Allergic Reactions, Contraindications, and Precautions](#)
 - [Making Practical Decisions for Crisis Standards of Care at the Bedside During the COVID-19 Pandemic](#)
- FDA [Pfizer-BioNTech COVID-19 Vaccine Frequently Asked Questions](#)
- UCSF Department of Medicine [Covid-19: The CDC, the Vaccine Roll-Out, and Ethics and Policy Issues Surrounding Immunity Passports](#)
- Google Podcasts:
 - [Coronavirus Vaccine FDA Update](#)
 - [COVID-19 Vaccines and Herd Immunity](#)
 - [Coronavirus Vaccine Update With Anthony Fauci](#)
- IDSA and AABB [Clarifying the Emergency Use Authorization Framework for COVID-19 Convalescent Plasma: Considerations for Clinicians](#)
- IDSA Podcast- [COVID-19: The Latest on Monoclonal Antibodies](#)
- American Academy of Pediatrics [Children and COVID-19: State-Level Data Report](#)
- [WHO Director-General's opening remarks at the media briefing on COVID-19 - 14 December 2020](#)
- [TSA checkpoint travel numbers for 2020 and 2019](#)
- Lilly [Bamlanivimab Frequently Asked Questions](#)
- Johns Hopkins University [COVID-19 Risk Tools](#)
- JAMA JN Learning Podcast [COVID-19 Conspiracies and Beyond: How Physicians Can Deal With Patients' Misinformation](#)

ACADEMIC/RESEARCH PAPERS

- *Centre for Mathematical Modeling of Infectious Diseases Repository*
 - [Estimated transmissibility and severity of novel SARS-CoV-2 Variant of Concern 202012/01 in England](#)
- *medRxiv*
 - [S-variant SARS-CoV-2 is associated with significantly higher viral loads in samples tested by ThermoFisher TaqPath RT-QPCR](#)
 - [Emergence and rapid spread of a new severe acute respiratory syndrome-related coronavirus 2 \(SARS-CoV-2\) lineage with multiple spike mutations in South Africa](#)
- *JAMA*
 - [Variation in US Hospital Mortality Rates for Patients Admitted With COVID-19 During the First 6 Months of the Pandemic](#)
 - [Decreased COVID-19 Mortality—A Cause for Optimism](#)
 - [Assessment of Maternal and Neonatal SARS-CoV-2 Viral Load, Transplacental Antibody Transfer, and Placental Pathology in Pregnancies During the COVID-19 Pandemic](#)
 - [Analyses of Risk, Racial Disparity, and Outcomes Among US Patients With Cancer and COVID-19 Infection](#)
 - [National Trends in the US Public's Likelihood of Getting a COVID-19 Vaccine—April 1 to December 8, 2020](#)
 - [Mandating COVID-19 Vaccines](#)
 - [Reassuring the Public and Clinical Community About the Scientific Review and Approval of a COVID-19 Vaccine](#)
 - [Assessment of Air Contamination by SARS-CoV-2 in Hospital Settings](#)





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- *International Journal of Infectious Diseases*
 - [Possible Aerosol Transmission of COVID-19 Associated with an Outbreak in an Apartment in Seoul, South Korea, 2020](#)
- *BMJ Journal*
 - [Patient outcomes after hospitalisation with COVID-19 and implications for follow-up: results from a prospective UK cohort](#)
- *Clinical Infectious Diseases*
 - [Characteristics of Adults aged 18–49 Years without Underlying Conditions Hospitalized with Laboratory-Confirmed COVID-19 in the United States, COVID-NET — March–August 2020](#)
 - [Symptomatic SARS-CoV-2 reinfection of a health care worker in a Belgian nosocomial outbreak despite primary neutralizing antibody response](#)
- *Clinical Otolaryngology*
 - [Course of symptoms for loss of sense of smell and taste over time in one thousand forty-one healthcare workers during the Covid-19 pandemic: Our experience](#)
- *Journal of Internal Medicine*
 - [Gastrointestinal Bleeding in Hospitalized COVID-19 Patients: A Propensity Score Matched Cohort Study](#)
- *Diabetes Care*
 - [Association between achieving inpatient glycemic control and clinical outcomes in hospitalized patients with COVID-19: a multicenter, retrospective hospital-based analysis](#)
- *Surgery for Obesity and Related Diseases*
 - [Association of prior metabolic and bariatric surgery with severity of coronavirus disease 2019 \(COVID-19\) in patients with obesity](#)
- *New England Journal of Medicine*
 - [Shedding of Viable SARS-CoV-2 after Immunosuppressive Therapy for Cancer](#)
 - [Severe Covid-19](#)
 - [Rapid Response to an Outbreak in Qingdao, China](#)
 - [Racial Bias in Pulse Oximetry Measurement](#)
- *Preventing Chronic Disease*
 - [Emergency Preparedness and Risk Communication Among African American Churches: Leveraging a Community-Based Participatory Research Partnership COVID-19 Initiative](#)
- *Health Affairs*
 - [Increased Intensity Of PCR Testing Reduced COVID-19 Transmission Within Countries During The First Pandemic Wave](#)
- *The Lancet*
 - [Buyer beware: inflated claims of sensitivity for rapid COVID-19 tests](#)
- *Emerging Infectious Diseases*
 - [Aspergillosis Complicating Severe Coronavirus Disease](#)
 - [Nosocomial Coronavirus Disease Outbreak Containment, Hanoi, Vietnam, March–April 2020](#)
 - [Performance of Nucleic Acid Amplification Tests for Detection of Severe Acute Respiratory Syndrome Coronavirus 2 in Prospectively Pooled Specimens](#)
 - [Intrafamilial Exposure to SARS-CoV-2 Associated with Cellular Immune Response without Seroconversion, France](#)
 - [Cellular Immunity in COVID-19 Convalescents with PCR-Confirmed Infection but with Undetectable SARS-CoV-2–Specific IgG](#)
 - [IgG Seroconversion and Pathophysiology in Severe Acute Respiratory Syndrome Coronavirus 2 Infection](#)





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- [Limited Specificity of Serologic Tests for SARS-CoV-2 Antibody Detection, Benin](#)
- [Territory-Wide Study of Early Coronavirus Disease Outbreak, Hong Kong, China](#)
- [Prevalence of SARS-CoV-2, Verona, Italy, April–May 2020](#)
- [Large-Scale Testing of Asymptomatic Healthcare Personnel for Severe Acute Respiratory Syndrome Coronavirus 2](#)
- [Coronavirus Disease among Workers in Food Processing, Food Manufacturing, and Agriculture Workplaces](#)
- [Risk for SARS-CoV-2 Infection in Healthcare Workers, Turin, Italy](#)
- [Waning Antibody Responses in Asymptomatic and Symptomatic SARS-CoV-2 Infection](#)
- [Impact of a Nationwide Lockdown on SARS-CoV-2 Transmissibility, Italy](#)
- [Attitudes about COVID-19 Lockdown among General Population, France, March 2020](#)
- [SARS-CoV-2 Cluster in Nursery, Poland](#)
- [Superspreading Event of SARS-CoV-2 Infection at a Bar, Ho Chi Minh City, Vietnam](#)
- [Racial and Workplace Disparities in Seroprevalence of SARS-CoV-2, Baton Rouge, Louisiana, USA](#)
- [Postmortem Stability of SARS-CoV-2 in Nasopharyngeal Mucosa](#)
- [Absence of SARS-CoV-2 Transmission from Children in Isolation to Guardians, South Korea](#)

MMWR

- [Health Center Testing for SARS-CoV-2 During the COVID-19 Pandemic — United States, June 5–October 2, 2020](#)
- [Telehealth Practice Among Health Centers During the COVID-19 Pandemic — United States, July 11–17, 2020](#)
- [Factors That Might Affect SARS-CoV-2 Transmission Among Foreign-Born and U.S.-Born Poultry Facility Workers — Maryland, May 2020](#)
- [Estimated Resource Costs for Implementation of CDC’s Recommended COVID-19 Mitigation Strategies in Pre-Kindergarten through Grade 12 Public Schools — United States, 2020–21 School Year](#)
- [The Advisory Committee on Immunization Practices’ Interim Recommendation for Use of Pfizer-BioNTech COVID-19 Vaccine — United States, December 2020](#)
- [Factors Associated with Positive SARS-CoV-2 Test Results in Outpatient Health Facilities and Emergency Departments Among Children and Adolescents Aged <18 Years — Mississippi, September–November 2020](#)

HOT OFF THE (LAY) PRESS

- *The Washington Post*
 - [First case of highly infectious coronavirus variant detected in Colorado](#)
- *CNN*
 - [Here's what we know about the new Covid-19 variant found in Colorado](#)
- *The New York Times*
 - [Coronavirus Variant Is Indeed More Transmissible, New Study Suggests](#)
 - [The U.K. imposes tighter virus rules on much of England, citing concern about the spread of a new variant.](#)
 - [The U.S. will require airline passengers traveling from Britain to test negative for the coronavirus within 72 hours of departure, starting on Monday.](#)
 - [1 of every 17 people in the U.S. has been infected, and 1 in 1,000 has died. Yet the worst may lie ahead.](#)
 - [The E.U. is beginning its official coronavirus vaccine rollout, a day after some member nations quietly started administering doses early.](#)





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- [Britain became the first country to authorize the cheap and easy-to-store coronavirus vaccine developed by AstraZeneca and the University of Oxford.](#)
- [A Chinese company said its Covid-19 vaccine had proved effective in late-stage trials, bringing a China-made vaccine a step closer to global use.](#)
- [Nearly 2.8 Million People in the U.S. Have Gotten a Covid-19 Vaccine](#)
- [The Vaccines Are Supposed to Be Free. Surprise Bills Could Happen Anyway.](#)
- [How much herd immunity is enough?](#)
- [Pulse Oximeter Devices Have Higher Error Rate in Black Patients](#)
- [How much coronavirus a person carries could predict how sick they'll get](#)
- [A Timeline of the Coronavirus Pandemic](#)
- *The New Yorker*
 - [The Plague Year - The mistakes and the struggles behind America's coronavirus tragedy.](#)
- *Center for Infectious Disease Research and Policy News*
 - [Multiple countries report UK SARS-CoV-2 variant cases](#)
 - [Variant virus gains bigger foothold in UK as cases surge](#)
- *BBC News*
 - [Coronavirus: Cases of new variant appear worldwide](#)
- *BMJ News*
 - [Covid-19: New coronavirus variant is identified in UK](#)
- *Vox*
 - [The new UK coronavirus mutations, explained](#)
- *Reuters*
 - [Another new coronavirus variant found in Nigeria, says Africa CDC](#)
 - [Explainer: The new coronavirus variant in South Africa - Are concerns justified?](#)
- *Science Speaks: Global ID News*
 - [COVID-19: South African variant may be worse than UK variant](#)
- *Medscape*
 - [New Variant of SARS-CoV-2: FAQs](#)
- *Thermo Fisher Statement*
 - [Thermo Fisher's COVID-19 tests: designed with virus mutations in mind](#)
- *NIH News*
 - [Phase 3 trial of Novavax investigational COVID-19 vaccine opens](#)
- *Medium Coronavirus Blog*
 - [Are the Covid-19 Vaccines Safe?](#)
- *Forbes*
 - [What Are The Long-Term Safety Risks Of The Pfizer and Moderna Covid-19 Vaccines?](#)
- *CNET*
 - [COVID-19 vaccines are safe, even with long-term data lacking](#)
- *The Wall Street Journal*
 - [Highly Touted Monoclonal Antibody Therapies Sit Unused in Hospitals](#)
 - [Covid-19 Test Makers Aim to Broaden Virus Testing Well Into Spring](#)
 - [When Will Covid Vaccines Be Available for Kids?](#)
 - [Covid-19 Vaccine Makers Turn Toward Testing Children](#)





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- *American Academy of Pediatrics News*
 - [AAP: Include children in COVID-19 vaccine trials](#)
- *NBC News*
 - [Meet the youngest participants in Covid-19 vaccine trials: Teens and tweens](#)
- *Healthline*
 - [Here's When We May Get a COVID-19 Vaccine for Children](#)
- *Kaiser Health News*
 - [Pediatricians Want Kids to Be Part of COVID Vaccine Trials](#)
 - [Hospitals Scramble to Prioritize Which Workers Are First for COVID Shots](#)
 - [As the Terror of COVID Struck, Health Care Workers Struggled to Survive. Thousands Lost the Fight.](#)
- *Kaiser Family Foundation*
 - [Both Remote and On-Site Workers are Grappling with Serious Mental Health Consequences of COVID-19](#)
- *STAT News*
 - ['Every day is an emergency': The pandemic is worsening psychiatric bed shortages nationwide](#)
 - [On the road to herd immunity, vaccination speeds the journey](#)
- *MarketWatch*
 - [How many people have to get vaccinated against COVID-19 to reach herd immunity? 'The faster we do it, the faster we get back to life'](#)
- *Healio*
 - [Icosapent ethyl appears to reduce inflammation, improve symptoms in COVID-19](#)
- *The San Diego Union Tribune*
 - [Drop in cancer diagnoses masking an urgent health concern](#)
- *AP News*
 - [More COVID-19 vaccines in the pipeline as US effort ramps up](#)
 - [California hospitals delay surgeries amid virus surge](#)
- *NPR/KQED*
 - [California's COVID-19 Surge Sparks Battle Between Hospitals and Nurses Over Workload](#)
 - [California Is Overriding Its Limits On Nurse Workloads As COVID-19 Surges](#)
 - ['It's So Much Worse Than Before.' Dread And Despair Haunt Nurses Inside LA's ICUs](#)
 - [Federal Data Reveal Which Hospitals Are Dangerously Full This Week. Is Yours?](#)
 - [Coronavirus Is Surging: How Severe Is Your State's Outbreak?](#)
 - [Immigrant Advocates Sound Alarm Over Escalating COVID-19 Outbreak in Yuba County Jail](#)
 - [Correctional Facilities Are COVID-19 Hot Spots. Why Don't They Get Vaccine Priority?](#)
 - ['Trusted Messengers, Trusted Messages': How To Overcome Vaccine Hesitancy](#)
 - [Door To Door In Miami's 'Little Havana' To Build Trust For Testing And Vaccination](#)
 - [U.K. Approves AstraZeneca-Oxford Coronavirus Vaccine](#)
 - [Do-It-Yourself Contact Tracing Is A 'Last Resort' In Communities Besieged By COVID-19](#)
 - [For Overwhelmed And Burnt Out COVID-19 Contact Tracers, Help Is \(Hopefully\) Coming](#)
 - [Mask Up! How Public Health Messages Collide With Facebook's Political Ads Ban](#)
 - [For Scientists Who Study Virus Transmission, 2020 Was A Watershed Year](#)
- *Bloomberg*
 - [These Places Thought They'd Nailed the Virus. It's Creeping Back](#)
- *South China Morning Post*
 - [Did half a million people in Wuhan contract the coronavirus?](#)





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- *KevinMD.com*
 - [A letter to Black America for those who do not want to take the COVID-19 vaccine](#)
- *Los Angeles Daily News*
 - [LA's MLK Hospital slammed by COVID, highlighting virus impact on Black communities](#)
- *The Los Angeles Times*
 - [California becomes the first state to surpass 2 million coronavirus cases](#)
 - [A new post-Christmas COVID-19 surge as holidays create 'viral wildfire'.](#)
 - ['He's dying, aren't you going to help him?' Hospitals serving poor, nonwhite L.A. hit hardest by COVID-19.](#)
- *Mercury News*
 - [Santa Clara County records most coronavirus cases ever since start of pandemic, officials say](#)
- *San Francisco Chronicle*
 - [California to extend stay-at-home orders as hospitals hit breaking point](#)
 - [Data shows California's coronavirus surge is worst in nation — by a big margin](#)
 - ['Dangerous time': Some Bay Area hospitals close to running out of ICU beds as death tolls near records](#)
 - [Bay Area nurses battle hospitals over how many patients they can handle as coronavirus cases surge](#)
 - [How the Bay Area's latest coronavirus surge is hitting low-income communities of color](#)
 - [Will Bay Area's coronavirus surge get as bad as L.A. County's? Experts compare the crises](#)
 - [Several California hospitals delay nonemergency surgeries amid fears that surge will continue](#)
 - [In California, older adults may be next in line to get coronavirus vaccines](#)
 - [Virus vaccinations begin at California prison medical site](#)
- *San Francisco Business Times*
 - [Next Likely Groups in CA Vaccine Roll Out, Newsom warns of 'line skipping'](#)

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 December 31, 2020**
- [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](#)

