

Dear Colleague

COVID-19 Updates

New York City Department of Health and Mental Hygiene
Updated guidance and scientific literature on COVID-19

May 31 - June 6, 2020



Children ready for school during the 1918 flu epidemic.
[Image courtesy of the State Library and Archives of Florida.](#)

Inside This Newsletter

Updated Data and Guidance

Pediatric COVID-19 Care Considerations

Self-Care for Health Care Workers

Selected Publications About COVID-19

Updated Data and Guidance

The New York City (NYC) Health Department has a new [COVID-19 data page](#), which is updated daily and includes counts and per capita rates of COVID-19 by ZIP code of residence, with case, hospitalization and death rates stratified by age, sex, race/ethnicity, poverty and borough.

NYC Guidance

- [Health Alert #17: Advise Patients When to Seek Essential Care and Plan to Expand In-Person Patient Services](#) (May 29)
- [Health Alert #16: Updated Reporting Requirements for Multisystem Inflammatory Syndrome in Children Associated with COVID-19 \(Formerly Pediatric Multisystem Inflammatory Syndrome\)](#) (May 18)
- [Health Alert #15: Updated NYC Health Department Recommendations for Identifying and Testing Patients with Suspected COVID-19](#) (May 15)
- [Health Alert #14: Updated COVID-19 Recommendations for Discontinuation of Isolation and Monitoring](#) (May 14)

Centers for Disease Control and Prevention Guidance

- [Interim Clinical Guidance for Management of Patients with Confirmed Coronavirus Disease \(COVID-19\)](#)
 - Recent changes include updated information for pediatric management and new information about hypercoagulability and National Institutes of Health Treatment Guidelines.

Stay Up to Date

- Sign up to receive [NYC Health Alerts](#).
- Join the [City Health Information network](#) to receive this newsletter by email.
- Register for the weekly NYC Health Department [COVID-19 Provider Webinar](#).

Pediatric COVID-19 Care Considerations

In three novel coronavirus infections—SARS-CoV, MERS-CoV and SARS-CoV-2—children have been affected less severely and less frequently than adults, although prevalence in children may be underestimated due to asymptomatic infections ([Zimmermann 2020](#)). We have much to learn about the pediatric impact of COVID-19, and concern is emerging about multisystem inflammatory syndrome in children (MIS-C), previously called pediatric multisystem inflammatory syndrome (PMIS).

Multisystem Inflammatory Syndrome in Children (MIS-C)

A clinical syndrome with overlapping features of Kawasaki disease and toxic shock syndrome was first reported among children in the United Kingdom (U.K.) in late April 2020 ([Paediatric Intensive Care Society 2020](#)). Similar cases have since been recognized in [NYC](#) and elsewhere in the [United States](#) (U.S.). Current investigations seek to understand the spectrum of disease, clinical course of illness and optimal treatment. Recent webinars from the [Centers for Disease Control and Prevention](#) (CDC) and the [NYC Health Department](#) featured clinicians discussing clinical presentation of MIS-C as well as early treatment successes and challenges.

A series of eight U.K. cases ([Riphagen 2020](#)) describes both young and older children with illness characterized by persistent fever; a range of the [defining features of Kawasaki disease](#); shock affecting one or more organ systems; and abdominal pain, conjunctivitis and rash as common symptoms. While some of the eight patients had positive polymerase chain reaction (PCR) tests for SARS-CoV-2, all had antibodies to SARS-CoV-2 and evidence of inflammation by numerous laboratory markers.

Although the relationship between SARS-CoV-2 infection and this syndrome remains unclear, pediatricians should maintain a high index of suspicion to assure early treatment of shock, inflammatory disease and possible Kawasaki disease in a setting with pediatric intensive care capacity.

Providers must immediately report all cases of suspected MIS-C that meet [reporting criteria](#) to the NYC Health Department by calling the Provider Access Line (PAL) at 866-692-3641, and should immediately refer suspected cases to specialists in pediatric infectious disease, rheumatology and critical care, as indicated. The NYC Health Department asks providers to conduct both diagnostic and antibody testing for SARS-CoV-2 in all suspected cases, though

reporting is required regardless of laboratory evidence of infection.* NYC providers are also required to report suspected cases to the [New York State Department of Health](#) with the Health Electronic Response Data System (HERDS).

Epidemiology, Clinical Characteristics and Medical Care of COVID-19 in Children

In contrast to seasonal influenza or the 2009 H1N1 pandemic, one of the distinguishing features of COVID-19 has been an apparent lesser burden in the pediatric population ([Docherty 2020](#)). Preliminary data from North American pediatric intensive care units confirm that severe illness in children is significant but far less common than in adults ([Shekerdemian 2020](#)). An early study of COVID-19 identified 2,135 children under age 18 years reported to the Chinese Center for Disease Control and Prevention (China CDC) as of February 8, 2020 ([Dong 2020](#)). Among these cases, 34% were laboratory-confirmed and 66% were suspected; the children showed less severe illness than adults, with 4% asymptomatic, 51% having mild illness, and 39% having moderate illness, and they had a much lower case-fatality rate.

A systematic review of 18 studies (17 in China and one in Singapore; involving 1,065 patients) assessed and summarized clinical features and management of children with SARS-CoV-2 ([Castagnoli 2020](#)). Most pediatric patients were asymptomatic or presented with mild symptoms, including fever, dry cough and fatigue; one infant presented with pneumonia complicated by shock and kidney failure and was successfully treated with intensive care. Most pediatric patients were hospitalized, even those who were asymptomatic. Symptomatic children received mainly supportive care and most recovered within one to two weeks. No deaths were reported in children younger than age 9 years, and one death was reported among children ages 10 to 19 years. The authors emphasized the need for epidemiological and clinical studies from other affected areas of the world to inform both pediatric prevention and treatment.

Higher-Risk Subgroups and Other Areas for Further Investigation

Though children have been considered at lower risk for severe COVID-19 complications, recent studies and commentaries point to some vulnerable pediatric subgroups. A U.S. study found an inverse relationship between age and body mass index among patients with COVID-19 admitted

*Because NYC is an area with ongoing transmission of SARS-CoV-2, laboratory confirmation of SARS-CoV-2 detection by PCR or evidence of past infection by serologic testing is not required to meet criteria for reporting.

to intensive care ([Kass 2020](#)), warning that the high prevalence of obesity in the U.S. could contribute to more severe COVID-19 among younger patients.

In China, [Dong et al](#) observed more severe illness among preschool-aged children and infants. In neonatal settings, stringent infection control measures were applied to prevent transmission from birth parents to children, and one case of transmission from a birth parent with confirmed COVID-19 was reported ([Chan 2020](#)); the authors note that although SARS-CoV-2 RNA has not been detected in breast milk, breastfeeding may pose a post-infection risk due to viral shedding from the respiratory tract.

Various studies highlight that children could have a significant role in SARS-CoV-2 community transmission due to greater upper respiratory tract involvement and prolonged viral shedding ([Cai 2020](#); [Chan 2020](#); [Cruz 2020](#)).

Semiquantitative reverse transcription real-time PCR results from a nosocomial outbreak in a German pediatric dialysis unit that involved 13 patients, seven accompanying persons and 28 health care workers suggest that individuals with high viral load pose a risk of spread in pediatric hospital settings, which requires that they institute appropriate infection control measures ([Schwierzeck 2020](#)).

Psychological and Social Considerations

A cohort study of 2,330 children in two primary schools in Hubei, China, found a higher prevalence of depression (23%) and anxiety (19%) than in other studies of school-aged children in China ([Xie 2020](#)). Family violence may also increase during COVID-19 due to social isolation, stress, increased caregiving burden, and loss or uncertainty. Providers can assist by assessing risk for violence and supporting parents with stress mitigation strategies ([Humphreys 2020](#)).

Available Support for Children in NYC

Stay-at-home measures to impede the spread of COVID-19 can have unintended consequences for the health of children and families.

- **Food security:** A [recent survey](#) in NYC found that 45% of parents of young children reported reducing or skipping meals for themselves and 22% reported doing so for their children. The NYC Health Department encourages providers to screen for food security and refer parents to [available resources](#).
- **Health care coverage:** Patients may be reluctant to seek care if they have lost health insurance coverage; [311](#) can connect them to enrollment experts who can provide

guidance in coverage options and enrolling in a new plan. NYC Health + Hospitals provides care to all New Yorkers, regardless of immigration status, insurance status or ability to pay. Patients can call 844-NYC-4NYC or 311 for more information.

- **Preventive medical care:** [Vaccine doses](#) administered to NYC children have declined 63%, compared with the same time last year, and by 91% for children older than age 2 years. NYC Health + Hospitals is providing [free childhood vaccines](#) at locations throughout the city for families that cannot access their regular provider as well as for families without health care coverage.

Self-Care for Health Care Workers

Health care workers, including clinical providers, administrators and maintenance staff, face unique stressors and challenges related to the COVID-19 pandemic, such as evolving information and supply shortages, as well as increased risk of infection, workload and patient death toll. Some health care workers are working remotely and at the same time learning how to adapt their services to telehealth while staying connected to patients and coworkers. Many are experiencing these stressors on top of worrying about family, taking care of children, financial stressors and navigating physical distancing. It is natural to feel overwhelmed and have trouble coping.

Take Care of Yourself

It is important to think of self-care as not just something you learned in your training or something to recommend to patients or coworkers but a crucial component of keeping yourself healthy and safe throughout this pandemic.

- **Take breaks as you are able.** Even if for just a minute or two, allow yourself to stop and refocus on where you are, how you are feeling and what you must do next.
- **Engage in fun, relaxing activities.** Be sure to set aside time for something outside of work that you enjoy. Reading, watching a movie or taking a walk.
- **Limit your exposure to the news.** Too much time watching or listening to news reports can become overwhelming. Seek updates and guidance two or three times per day.
- **Eat and sleep regularly.** In stressful situations, we often forget our most basic needs. Make time for adequate rest, healthy eating and engaging in physical activity.
- **Stay connected.**
 - Check in with family, friends and loved ones. Use text, video chat, phone or social media. A quick hello can remind you that people are grateful for your hard work and commitment.

- Check in with colleagues while working. Speak with supervisors and coworkers, acknowledge the stress everyone shares and support each other.
- Identify and use your support network. Know whom to reach out to when you feel sad or angry or need a break. Identify activities that help you cope with specific feelings, so they are ready to respond when needed.

Look Out for Your Coworkers

Pay attention to the way your coworkers talk and behave. This can help you recognize when someone may be struggling emotionally and thinking about suicide. It can be more challenging to notice warning signs of suicide in others if you are working in a busy setting or remotely and not seeing your coworkers every day. Be mindful of the following warning signs:

- Talking about death or suicide,
- Showing feelings of hopelessness,
- Saying they are a burden,
- Avoiding friends and family,
- Losing interest in activities,
- Displaying extreme mood swings,
- Giving away possessions,
- Saying goodbye to coworkers.

Check in with your coworkers to see how they are coping, especially those with a history of suicide, depression, anxiety or other mental illness, or those who have experienced a recent loss.

Support and Help are Available

If your symptoms of stress become overwhelming, or if you are thinking about suicide or know someone who is, reach out for support and help. You can contact NYC Well, a confidential 24/7 helpline staffed by trained counselors who can provide brief counseling and referrals to care in over 200 languages. Call 888-NYC-WELL (888-692-9355), text “WELL” to 65173 or chat at nyc.gov/nycwell.

The NYS COVID-19 Emotional Support Helpline at 844-863-9314 is staffed from 8 a.m. to 10 p.m., seven days a week, with specially trained volunteer professionals who are there to listen, support and offer referrals if needed.

If you or someone you know is at immediate risk of hurting themselves, or in immediate danger because of a health condition or other situation, call 911.

Selected Publications About COVID-19

The following summaries describe COVID-19 outbreaks in vulnerable congregate residential settings (e.g., correctional facilities); decreased myocardial infarction rates when COVID-19 incidence increased; epidemiological and pathological assessments of cardiovascular disease in COVID-19, including prevention of thromboses; further COVID-19 clinical epidemiology; hydroxychloroquine treatment in COVID-19 patients; COVID-19 among patients with bacille Calmette-Guerin (BCG) vaccination; and the pandemic’s impact on childhood vaccination.

Bramer CA, Kimmins LM, Swanson R, et al. [Decline in child vaccination coverage during the COVID-19 pandemic—Michigan Care Improvement Registry, May 2016-May 2020](#). *MMWR Morb Mortal Wkly Rep.* 2020;69:630-631.

Vaccination coverage declined in all milestone age cohorts, except for birth-dose hepatitis B coverage, which is typically administered in the hospital setting.

Docherty AB, Harrison EM, Green CA, et al. [Features of 16,749 hospitalised UK patients with COVID-19 using the ISARIC WHO Clinical Characterisation Protocol](#). *MedRxiv*. Published online April 28, 2020. (not peer-reviewed)

Patients exhibited distinct clusters of symptoms: respiratory (cough, sputum, sore throat, runny nose, ear pain, wheeze and chest pain); systemic (myalgia, joint pain and fatigue); and enteric (abdominal pain, vomiting and diarrhea). At the end of the study period, 33% had died, 17%

were still receiving care and 49% had been discharged; among the 17% who required intensive care, only 31% had been discharged.

Geleris J, Sun Y, Platt J, et al. [Observational study of hydroxychloroquine in hospitalized patients with COVID-19](#). *New Engl J Med*. Published online May 7, 2020.

Hydroxychloroquine was used to treat 59% of 1,376 patients with laboratory-confirmed COVID-19 admitted to a NYC hospital. After adjustment for patients' baseline characteristics, hydroxychloroquine use was not associated with intubation or death (hazard ratio, 1.04; 95% CI, 0.82 to 1.32).

Hamiel U, Kozer E, Youngster I. [SARS-CoV-2 rates in BCG-vaccinated and unvaccinated young adults](#). *JAMA*. Published online May 13, 2020.

In this cohort of Israeli adults ages 35 to 41 years, BCG vaccination in childhood was associated with a similar rate of positive test results for SARS-CoV-2 compared with no vaccination.

Li D, Jin M, Bao P, Zhao W, Zhang S. [Clinical characteristics and results of semen tests among men with coronavirus disease 2019](#). *JAMA Netw Open*. 2020;3(5):e208292.

SARS-CoV-2 was found in the semen of six of 38 men and adolescent boys with laboratory-confirmed COVID-19 (in four of 15 patients with acute COVID-19 and two of 23 recovering patients).

Luers JC, Rokohl AC, Loreck N, et al. [Olfactory and gustatory dysfunction in coronavirus disease 19](#). *Clin Infect Dis*. Published online May 1, 2020.

Among 72 patients in Germany with PCR-confirmed COVID-19, 49 (68%) reported both olfactory and gustatory dysfunction, and another five (7%) reported dysfunction in one sense. These symptoms emerged on average four days after COVID-19 symptom onset.

Mehra MR, Desai SS, Kuy S, Henry TD, Patel AN. [Cardiovascular disease, drug therapy, and mortality in COVID-19](#). *N Engl J Med*. Published online May 1, 2020.

Among 8,910 COVID-19 patients from 169 hospitals worldwide, risk of in-hospital death was associated with those age 65 years or older; coronary artery disease; cardiac arrhythmias; chronic obstructive pulmonary disease; heart failure; and current smoking. Use of angiotensin-converting enzyme (ACE) inhibitors and angiotensin II receptor blockers (ARBs) were not associated with an increased risk of in-hospital death.

Oxley TJ, Mocco J, Majidi S. [Large-vessel stroke as a presenting feature of COVID-19 in the young](#). *N Engl J Med*. 2020;382:e60.

Series of five cases of large-vessel stroke in patients younger than age 50 years who presented at Mount Sinai Hospital in NYC and were later diagnosed with COVID-19.

Paranjpe I, Fuster V, Lala A, et al. [Association of treatment dose anticoagulation with in-hospital survival among hospitalized patients with COVID-19](#). *J Am Coll Cardiol*. Published online May 6, 2020.

Among 2,773 hospitalized COVID-19 patients at a NYC hospital system, 786 (28%) received systemic anticoagulation. While patients who received anticoagulation were more likely to require invasive mechanical ventilation (29.8% vs. 8.1%; $P < 0.001$), longer duration of anticoagulation treatment had reduced risk of mortality (adjusted hazard ratio, 0.86 per day; 95% CI, 0.82-0.89; $P < 0.001$).

Reynolds HR, Adhikari S, Pulgarin C, et al. [Renin–angiotensin–aldosterone system inhibitors and risk of COVID-19](#). *N Engl J Med*. Published online May 1, 2020.

Among 12,594 patients tested for SARS-CoV-2, the use of ACE inhibitors, ARBs, beta-blockers, calcium-channel blockers or thiazide diuretics was not associated with testing positive or severe COVID-19.

Sit THC, Brackman CJ, Ip SM, et al. [Infection of dogs with SARS-CoV-2](#). *Nature*. Published online May 14, 2020.

Two of 15 dogs from households with confirmed human cases of COVID-19 in Hong Kong SAR were infected with SARS-CoV-2, with identical viral genetic sequences to the respective human cases.

Solomon MD, McNulty EJ, Rana JS, et al. [The COVID-19 pandemic and the incidence of acute myocardial infarction](#). *N Engl J Med*. Published online May 19, 2020.

In a large diverse community setting in California, the weekly rates of hospitalization for acute myocardial infarction decreased by up to 48% during the COVID-19 period.

Wallace M, Marlow M, Simonson S, et al. [Public health response to COVID-19 cases in correctional and detention facilities—Louisiana, March–April 2020](#). *MMWR Morb Mortal Wkly Rep*. 2020;69:594-598.

In Louisiana, 46 facilities reported 489 COVID-19 cases among incarcerated or detained persons and 253 cases among staff members.

Wei T, Zhujun C, Mingfeng H, et al. [Hydroxychloroquine in patients with mainly mild to moderate coronavirus disease 2019: open label, randomised controlled trial](#). *BMJ*. 2020;369:m1849.

This non-blinded randomized controlled trial did not result in a significantly higher probability of negative conversion of SARS-CoV-2 compared to standard of care alone in patients admitted with persistent to moderate COVID-19.

Wichmann D, Sperhake JP, Lütgehetmann M, et al. [Autopsy findings and venous thromboembolism in patients With COVID-19: a prospective cohort study](#). *Ann Intern Med*. Published online May 6, 2020.

Autopsies of the first 12 COVID-19 patients who died at a medical center in Hamburg, Germany, revealed deep venous thrombosis in seven patients (58%) in whom venous thromboembolism was not suspected before death. Pulmonary embolism was the direct cause of four deaths. In all patients, SARS-CoV-2 RNA was detected in the lung at high concentrations.