

## COVID-19 Resource Desk

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Prepared by [System Library Services](#)

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### New Research

\*note, **PREPRINTS** have not undergone formal peer review

**Retracted Articles - see [Retraction Watch](#)**

### Basic Science / Virology / Pre-clinical

- 1. Inhibitors of SARS-CoV-2 Entry: Current and Future Opportunities.** Xiu S, Dick A, Ju H, et al. *J Med Chem.* 2020 Jun 15. doi: 10.1021/acs.jmedchem.0c00502.  
<https://pubs.acs.org/doi/10.1021/acs.jmedchem.0c00502>  
Findings: Viral entry is the first step in the SARS-CoV-2 lifecycle and is mediated by the trimeric spike protein. Being the first stage in infection, entry of SARS-CoV-2 into host cells is an extremely attractive therapeutic intervention point. Within this review, we highlight therapeutic intervention strategies for anti-SARS-CoV, MERS-CoV, and other coronaviruses and speculate upon future directions for SARS-CoV-2 entry inhibitor designs.
- 2. Convergent antibody responses to SARS-CoV-2 in convalescent individuals.** Robbiani DF, Gaebler C, Muecksch F, et al. *Nature.* 2020 Jun 18. doi: 10.1038/s41586-020-2456-9.  
<https://www.nature.com/articles/s41586-020-2456-9>  
Findings: Little is known about the human antibody response to SARS-CoV-2. Here we report on 149 COVID-19 convalescent individuals. Plasmas collected an average of 39 days after the onset of symptoms had variable half-maximal pseudovirus neutralizing titres: less than 1:50 in 33% and below 1:1,000 in 79%, while only 1% showed titres above 1:5,000. Antibody sequencing revealed expanded clones of RBD-specific memory B cells expressing closely related antibodies in different individuals. Despite low plasma titres, antibodies to three distinct epitopes on RBD neutralized at half-maximal inhibitory concentrations (IC50 values) as low as single digit nanograms per millilitre. Thus, most convalescent plasmas obtained from individuals who recover from COVID-19 do not contain high levels of neutralizing activity. Nevertheless, rare but recurring RBD-specific antibodies with potent antiviral activity were found in all individuals tested, suggesting that a vaccine designed to elicit such antibodies could be broadly effective.

### Clinical Syndrome

- 3. Why COVID-19 Silent Hypoxemia is Baffling to Physicians.** Tobin MJ, Laghi F, Jubran A, et al. *Am J Respir Crit Care Med.* 2020 Jun 15. doi: 10.1164/rccm.202006-2157CP.

<https://www.atsjournals.org/doi/abs/10.1164/rccm.202006-2157CP>

Findings: Patients with COVID-19 are described as exhibiting oxygen levels incompatible with life without dyspnea. It is possible that coronavirus has an idiosyncratic action on receptors involved in chemosensitivity to oxygen, but well-established pathophysiological mechanisms can account for most, if not all, cases of silent hypoxemia. These mechanisms include how dyspnea and the respiratory centers respond to low levels of oxygen, how prevailing carbon dioxide tensions (PaCO<sub>2</sub>) blunt the brain's response to hypoxia, effects of disease and age on control of breathing, inaccuracy of pulse oximetry at low oxygen saturations, and temperature-induced shifts in the oxygen dissociation curve. Without knowledge of these mechanisms, physicians caring for hypoxemic patients free of dyspnea are operating in the dark-placing vulnerable COVID-19 patients at considerable risk.

4. **Meta-analysis investigating the relationship between clinical features, outcomes, and severity of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pneumonia.** Li J, He X,

Yuanyuan, Zhang W, et al. *Am J Infect Control*. 2020 Jun 12:S0196-6553(20)30369-2. doi: 10.1016/j.ajic.2020.06.008. [https://www.ajicjournal.org/article/S0196-6553\(20\)30369-2/abstract](https://www.ajicjournal.org/article/S0196-6553(20)30369-2/abstract)

Findings: We included 12 cohort studies including 2445 patients with COVID-19. Compared with non-severe (non-ICU) patients, severe (ICU) disease was associated with a smoking history (P=0.003) and comorbidities including chronic obstructive pulmonary disease (OR=5.08, P<0.001), diabetes (OR=3.17, P<0.001), hypertension (OR=2.40, P<0.001), coronary heart disease (OR=2.66, P<0.001), cerebrovascular diseases (OR=2.68, P=0.008), and malignancy (OR=2.21, P=0.040). We found significant differences between the two groups for fever, dyspnea, decreased lymphocyte and platelet counts, and increased leukocyte count, C-creative protein, procalcitonin, lactose dehydrogenase, aspartate aminotransferase, alanine aminotransferase, creatinine kinase, and creatinine levels (P<0.05). Significant differences were also observed for multiple treatments (P<0.05). Patients in the severe (ICU) group were more likely to have complications and had a much higher mortality rate and lower discharge rate than those with non-severe (non-ICU) disease (P<0.05). Investigation of clinical characteristics and outcomes of severe cases of COVID-19 will contribute to early prediction, accurate diagnosis, and treatment to improve the prognosis of patients with severe illness.

5. **COVID-19 and Cardiac Arrhythmias.** Bhatla A et al. *Heart Rhythm* 2020 Jun 22.

DOI:<https://doi.org/10.1016/j.hrthm.2020.06.01>

[https://www.heartrhythmjournal.com/article/S1547-5271\(20\)30594-4/fulltext](https://www.heartrhythmjournal.com/article/S1547-5271(20)30594-4/fulltext)

Findings: Among 700 patients (mean age 50±18 years, 45% men, 71% African American, and 11% received ICU care), there were 9 cardiac arrests, 25 incident AF events, 9 clinically significant bradyarrhythmias, and 10 NSVTs. All cardiac arrests occurred among patients admitted to the ICU. In addition, admission to the ICU was associated with incident AF (OR 4.68 [95% CI 1.66 – 13.18]) and NSVT (OR 8.92 [95% CI 1.73 – 46.06]) after multivariable adjustment. Also, age and incident AF (OR 1.05 [95% CI 1.02 – 1.09]); and prevalent heart failure and bradyarrhythmias (OR 9.75 [95% CI 1.95 – 48.65]) were independently associated. Only cardiac arrests were associated with acute, in-hospital mortality. Cardiac arrests and arrhythmias are

likely the consequence of systemic illness and not solely the direct effects of COVID-19 infection.

6. **Hypermetabolism and COVID-19.** Yu PJ, Cassiere H, DeRosa S, et al. *JPEN J Parenter Enteral Nutr.* 2020 Jun 19. doi: 10.1002/jpen.1948.

<https://onlinelibrary.wiley.com/doi/10.1002/jpen.1948>

Findings: Critically ill patients with COVID-19 are in an extreme hypermetabolic state. This may explain the high failure rates for mechanical ventilation for these patients and highlights the potential need for increased nutritional requirements for such patients.

### Diagnosics & Screening

7. **A predictive tool for identification of SARS-CoV-2 PCR-negative emergency department patients using routine test results.** Joshi RP, Pejaver V, Hammarlund NE. *J Clin Virol.* 2020 Jun 10;129:104502. doi: 10.1016/j.jcv.2020.104502.

<https://www.sciencedirect.com/science/article/pii/S1386653220302444?via%3Dihub>

Findings: A decision support tool that utilizes components of complete blood count and patient sex for prediction of SARS-CoV-2 PCR positivity demonstrated a C-statistic of 78 %, an optimized sensitivity of 93 %, and generalizability to other emergency department populations. By restricting PCR testing to predicted positive patients in a hypothetical scenario of 1000 patients requiring testing but testing resources limited to 60 % of patients, this tool would allow a 33 % increase in properly allocated resources. A prediction tool based on complete blood count results can better allocate SARS-CoV-2 testing and other health care resources such as personal protective equipment during a pandemic surge.

8. **Diagnosing COVID-19 in the Emergency Department: A Scoping Review of Clinical Exam, Labs, Imaging Accuracy and Biases.** Carpenter CR, Mudd P, West CP, et al. *Acad Emerg Med.* 2020 Jun 16. doi: 10.1111/acem.14048.

<https://onlinelibrary.wiley.com/doi/abs/10.1111/acem.14048>

Findings: Emergency departments (ED) encountered decreased patient volumes before some in Seattle, New York City, New Orleans, and Detroit experienced waves of COVID-19 patients mixed with asymptomatic patients or those concerned about potential exposures. Diagnosing COVID-19 was hampered by inadequate supplies of reagents and kits, which was compounded by clinical and radiographic features that overlap with numerous seasonal viral respiratory infections.

### Epidemiology & Public Health

9. **Genomewide Association Study of Severe Covid-19 with Respiratory Failure.** Ellinghaus D, Degenhardt F, Bujanda L, et al. *NEJM* June 17, 2020 DOI: 10.1056/NEJMoa2020283

<https://www.nejm.org/doi/full/10.1056/NEJMoa2020283?query=TOC>

Findings: Genomewide association analysis may allow for the identification of potential genetic factors involved in the development of Covid-19. We conducted a study involving 1980 patients with Covid-19 and severe disease at seven hospitals in the Italian and Spanish epicenters of the

SARS-CoV-2 pandemic. We identified a 3p21.31 gene cluster as a genetic susceptibility locus in patients with Covid-19 with respiratory failure and confirmed a potential involvement of the ABO blood-group system.

**10. Community Susceptibility and Resiliency to COVID-19 across the Rural-Urban Continuum in the United States.** Peters DJ. *J Rural Health*. 2020 Jun 16. doi: 10.1111/jrh.12477.

<https://onlinelibrary.wiley.com/doi/abs/10.1111/jrh.12477>

Findings: About 33% of rural counties are highly susceptible to COVID-19, driven by older and health-compromised populations, and care facilities for the elderly. Major vulnerabilities in rural counties include fewer physicians, lack of mental health services, higher disability, and more uninsured. Poor Internet access limits telemedicine. Lack of social capital and social services may hinder local pandemic recovery. Meat processing facilities drive risk in micropolitan counties. Although metropolitan counties are less susceptible due to healthier and younger populations, about 6% are at risk due to community spread from dense populations. Metropolitan vulnerabilities include minorities at higher health and diabetes risk, language barriers, being a transportation hub that helps spread infection, and acute housing distress. There is an immediate need to know specific types of susceptibilities and vulnerabilities ahead of time to allow local and state health officials to plan and allocate resources accordingly. In rural areas it is essential to shelter-in-place vulnerable populations, whereas in large metropolitan areas general closure orders are needed to stop community spread. Pandemic response plans should address vulnerabilities.

**11. Characteristics Associated with Hospitalization Among Patients with COVID-19 — Metropolitan Atlanta, Georgia, March–April 2020.** Killerby ME, Link-Gelles R, Haight SC, et al. *MMWR Morb Mortal Wkly Rep*. ePub: 17 June 2020. DOI:

<http://dx.doi.org/10.15585/mmwr.mm6925e1>

[https://www.cdc.gov/mmwr/volumes/69/wr/mm6925e1.htm?s\\_cid=mm6925e1\\_w](https://www.cdc.gov/mmwr/volumes/69/wr/mm6925e1.htm?s_cid=mm6925e1_w)

Findings: This investigation found that age  $\geq 65$  years, black race, and having diabetes mellitus were independently associated with hospitalization. Compared with nonhospitalized patients (311), hospitalized patients (220) were older (median age = 61 years) and more frequently male (52%) and black (79%). Among the underlying conditions included in the multivariable analysis, diabetes mellitus was most strongly associated with hospitalization. The reported association between black race and hospitalization, which remained even after controlling for diagnosed underlying conditions, suggests that underlying conditions alone might not account for the higher rate of hospitalization among black persons. Other factors that might explain higher rates of hospitalization include health care access, other social determinants of health, or the possibility of bias.

**12. Clinical and immunological assessment of asymptomatic SARS-CoV-2 infections.** Long, Q., Tang, X., Shi, Q. et al. *Nat Med* (2020). <https://doi.org/10.1038/s41591-020-0965-6>

<https://www.nature.com/articles/s41591-020-0965-6>

Findings: The clinical features and immune responses of asymptomatic individuals infected with SARS-CoV-2 have not been well described. Of the 178 laboratory-confirmed patients, 37 who never developed any symptoms throughout the disease course were included in this study. We

observed that IgG levels and neutralizing antibodies in a high proportion of individuals who recovered from SARS-CoV-2 infection start to decrease within 2–3 months after infection. Additional longitudinal serological studies profiling more symptomatic and asymptomatic individuals are urgently needed to determine the duration of antibody-mediated immunity.

13. **Challenges of “Return to Work” in an Ongoing Pandemic.** Barnes M, Sax PE. *NEJM* 2020 Jun 18 DOI: 10.1056/NEJMSr2019953 <https://www.nejm.org/doi/full/10.1056/NEJMSr2019953>  
Findings: As economic and political pressure has built to relax “shelter in place” public health orders for control of Covid-19, industry, professional service firms, retail and service establishments, and educational institutions seek to establish norms that protect workers, customers, clients, students, and visitors. A public health order represents a minimum disease-prevention standard, adherence to which is not elective, but may not satisfy all legal requirements with respect to the personal safety of workers and others.<sup>1</sup> The “general duty” clause of the Occupational Safety and Health Act requires all employers to take reasonable steps to reduce risk to employees,<sup>2</sup> and establishments have common-law obligations to ensure that their premises that are open to the public are maintained in a safe condition without concealed, reasonably avoidable hazards.<sup>3</sup> Responsible conduct of a business or facility in a pandemic represents opportunities for private entities to contribute to public health by implementing traditional and innovative disease-control measures, such as contact tracing with the use of mobile applications (“apps”) on personal devices.
14. **Cumulative incidence and diagnosis of SARS-CoV-2 infection in New York.** Rosenberg ES. *Annals of Epidemiology* (2020), doi: <https://doi.org/10.1016/j.annepidem.2020.06.004>. <https://www.sciencedirect.com/science/article/pii/S1047279720302015>  
Findings: Based on 1,887 of 15,101 reactive results (12.5%), estimated cumulative incidence through March 29 was 14.0%, corresponding to 2,139,300 infection-experienced adults. Cumulative incidence was highest in NYC 22.7% and higher among Hispanic/Latino (29.2%), non-Hispanic black/African American (20.2%), and non-Hispanic Asian (12.4%) than non-Hispanic white adults (8.1%). From the largest US serosurvey to date, we estimated > 2 million adult New York residents were infected through late March, with substantial disparities, although cumulative incidence remained below herd immunity thresholds.
15. **Characteristics Associated with Out-of-Hospital Cardiac Arrests and Resuscitations During the Novel Coronavirus Disease 2019 Pandemic in New York City.** Lai PH, Lancet EA, Weiden MD, et al. *JAMA Cardiol.* June 19, 2020. doi:10.1001/jamacardio.2020.2488 <https://jamanetwork.com/journals/jamacardiology/fullarticle/2767649?resultClick=1>  
Findings: In this population-based cross-sectional study of 5325 patients with out-of-hospital cardiac arrests, the number undergoing resuscitation was 3-fold higher during the 2020 COVID-19 period compared with during the comparison period in 2019. Patients with out-of-hospital cardiac arrest during 2020 were older, less likely to be white, and more likely to have specific comorbidities and substantial reductions in return and sustained return of spontaneous circulation.

- 16. Disparities in Coronavirus 2019 Reported Incidence, Knowledge, and Behavior Among US Adults.** Alsan M, Stantcheva S, Yang D, et al. *JAMA Netw Open*. 2020;3(6):e2012403. doi:10.1001/jamanetworkopen.2020.12403  
<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2767261?resultClick=3>  
Findings: In this survey study of 5,198 US adults, there were gaps in reported incidence of COVID-19 and knowledge regarding its spread and symptoms and social distancing behavior. More effort is needed to increase accurate information and encourage appropriate behaviors among minority communities, men, and younger people.
- 17. SARS-CoV-2 Positivity Rate for Latinos in the Baltimore-Washington, DC Region.** Martinez DA, Hinson JS, Klein EY, et al. *JAMA*. June 18, 2020. doi:10.1001/jama.2020.11374  
<https://jamanetwork.com/journals/jama/fullarticle/2767632>  
Findings: The black community has been disproportionately affected by the COVID-19 pandemic in the US. Emerging data highlight sharp increases in cases within the Latino community. We analyzed temporal trends in positivity rates for SARS-CoV-2 in the Baltimore-Washington, DC region by race/ethnicity.
- 18. The end of social confinement and COVID-19 re-emergence risk.** López, L., Rodó, X. *Nat Hum Behav* (2020). <https://doi.org/10.1038/s41562-020-0908>  
<https://www.nature.com/articles/s41562-020-0908-8>  
Findings: Our results suggest that lockdowns should remain in place for at least 60 days to prevent epidemic growth, as well as a potentially larger second wave of SARS-CoV-2 cases occurring within months. The best-case scenario should also gradually incorporate workers in a daily proportion at most 50% higher than during the confinement period. We show that decaying immunity and particularly awareness and behaviour have 99% significant effects on both the current wave of infection and on preventing COVID-19 re-emergence. Social distancing and individual non-pharmaceutical interventions could potentially remove the need for lockdowns.
- 19. Potential Indirect Effects of the COVID-19 Pandemic on Use of Emergency Departments for Acute Life-Threatening Conditions — United States, January–May 2020.** Lange SJ, Ritchey MD, Goodman AB, et al. *MMWR Morb Mortal Wkly Rep*. 22 June 2020. DOI: <http://dx.doi.org/10.15585/mmwr.mm6925e2>  
<https://www.cdc.gov/mmwr/volumes/69/wr/mm6925e2.htm>  
Findings: In the 10 weeks following declaration of the COVID-19 national emergency, ED visits declined 23% for heart attack, 20% for stroke, and 10% for hyperglycemic crisis. Persons experiencing chest pain, loss of motor function, altered mental status, or other life-threatening issues should seek immediate emergency care, regardless of the pandemic. Communication from public health and health care professionals should reinforce the importance of timely care for acute health conditions and assure the public that EDs are implementing infection prevention and control guidelines to ensure the safety of patients and health care personnel.



20. **A model for treating COVID-19-related guilt, shame, and moral injury.** Haller M, Norman SB, Davis BC, Capone C, Browne K, Allard CB. *Psychol Trauma*. 2020 Jun 18. doi: 10.1037/tra0000742. <https://psycnet.apa.org/fulltext/2020-43452-001.pdf>  
Findings: During the unprecedented COVID-19 pandemic, people around the world have faced a myriad of heart-rending and ethically difficult scenarios (e.g., not being able to tend to a sick or dying loved one) that may lead to subsequent guilt, shame, or moral injury. Trauma-informed guilt reduction therapy is a brief intervention that helps clients accurately appraise their role in a stressful event (such as those experienced during the COVID-19 pandemic) and find positive ways to express important values going forward. Future studies of trauma-informed guilt reduction therapy with those affected by COVID-19 will be helpful for clarifying its effectiveness with this population.

### Healthcare Delivery & Healthcare Workers

21. **Proactive Identification of Palliative Care Needs among Patients with COVID-19 in the ICU.** Schoenherr L, Cook A, Peck S. *J Pain Symptom Manage*. 2020 Jun 13. pii: S0885-3924(20)30440-1. doi: 10.1016/j.jpainsymman.2020.06.008. [https://www.jpmsjournal.com/article/S0885-3924\(20\)30440-1/fulltext](https://www.jpmsjournal.com/article/S0885-3924(20)30440-1/fulltext)  
Findings: Here we describe a novel system to proactively identify and meet the PC needs of all patients with COVID-19 being cared for in our hospital's ICUs. Patients were screened through a combination of chart review and brief provider interview, and PC consultations were provided via telemedicine for those with unmet needs identified. In the first six weeks of operation, our pilot program of proactive screening and outreach resulted in PC consultation for 12 of the 29 (41%) adult patients admitted to the ICU with COVID-19 at our institution. Consultations were most commonly for patient and family support as well as for goals of care and advance care planning, consistent with identified PC needs within this unique patient population.
22. **Paved with Good Intentions: Hospital Visitation Restrictions in the Age of Coronavirus Disease 2019.** Andrist E, Clarke RG, Harding M. *Pediatr Crit Care Med*. 2020 Jun 12. doi: 10.1097/PCC.0000000000002506. [https://journals.lww.com/pccmjournal/Abstract/9000/Paved\\_With\\_Good\\_Intentions\\_Hospital\\_Visitation.98017.aspx](https://journals.lww.com/pccmjournal/Abstract/9000/Paved_With_Good_Intentions_Hospital_Visitation.98017.aspx)  
Findings: Severely restricted visitation policies undermine our ability to provide humane, family-centered care, particularly during critical illness and at the end of life. The enforcement of these policies consequently increases the risk of moral distress and injury for providers. We argue that hospital visitation restrictions can be implemented in ways that are nonmaleficent, but this requires unwavering acknowledgment of the value of social and familial support during illness and death. We advocate that visitation restriction policies be implemented by independent, medically knowledgeable decision-making bodies, with the informed participation of patients and their families.
23. **Flattening the emotional distress curve: A behavioral health pandemic response strategy for COVID-19.** Kaslow NJ, Friis-Healy EA, Cattie JE, et al. *Am Psychol*. 2020 Jun 15. doi: 10.1037/amp0000694. <https://psycnet.apa.org/fulltext/2020-42795-001.pdf>

Findings: This article proposes a framework for managing the behavioral health impacts of the COVID-19 global pandemic. It includes six phases of a behavioral health pandemic response strategy: preplanning, response readiness, response mobilization, intervention, continuation, and amelioration. The ways behavioral health specialists can capitalize on their competence in the leadership, prevention, education, service, research, and advocacy domains within each behavioral health pandemic response phase are articulated. Behavioral health expertise can help ensure a more comprehensive, effective pandemic response that facilitates the flattening of the curve of disease spread, along with the corresponding emotional distress curve. A case illustration, the Caring Communities (CC) initiative, is offered as an exemplar of action steps in the leadership, prevention, education, service, research, and advocacy domains that behavioral health professionals can take within each of the behavioral health pandemic response phases. Key CC action steps include providing support groups, offering virtual wellness breaks, participating in educational outreach, creating and disseminating wellness guides, launching and leading a virtual behavioral health clinic for health care staff, participating in behavioral health research and program evaluation, and engaging in advocacy initiatives aimed at improving behavioral health care and addressing and reducing health disparities. Finally, recommendations for optimizing behavioral health contributions to future pandemic responses are proffered.

24. **Implementation of Continuous Glucose Monitoring in the Hospital: Emergent Considerations for Remote Glucose Monitoring During the COVID-19 Pandemic.** Galindo RJ, Aleppo G, Klonoff DC, et al. *J Diabetes Sci Technol.* 2020 Jun 14:1932296820932903. doi: 10.1177/1932296820932903.

<https://journals.sagepub.com/doi/abs/10.1177/1932296820932903>

Findings: In this commentary, we analyze the answers to six questions about what is needed to bring CGM into the hospital as a reliable, safe, and effective tool. The evidence to date indicates that CGM offers promise as an effective tool for monitoring hospitalized patients. During the current coronavirus disease 2019 crisis, we hope to provide guidance to healthcare professionals, who are seeking to reduce exposure to SARS-Cov-2, as well as preserve invaluable personal protective equipment. In this commentary, we address who, what, where, when, why, and how CGM can be adopted for inpatient use.

25. **Equitable Care for Critically Ill Patients from Culturally Diverse Communities in the COVID-19 Pandemic.** Gibbon LM, GrayBuck KE, Mehta A, et al. *J Palliat Med.* 2020 Jun 12. doi: 10.1089/jpm.2020.0347. <https://www.liebertpub.com/doi/10.1089/jpm.2020.0347>

Findings: Patients from culturally diverse communities face disproportionate health challenges that are magnified by the COVID-19 pandemic. Hospital visitation restrictions impede equitable care by inadvertently silencing patient and family narratives, values, and priorities, to the particular detriment of those who are already under-represented. As our institution's COVID-19 response plan does not address this inequity, we developed additional interventions for families from culturally diverse backgrounds.



26. **COVID-19 infections and deaths among Connecticut nursing home residents: facility correlates.** Li Y, Temkin-Greener H, Gao S, Cai X. *J Am Geriatr Soc.* 2020 Jun 18. doi: 10.1111/jgs.16689. <https://onlinelibrary.wiley.com/doi/10.1111/jgs.16689>  
Findings: Nursing homes with higher RN staffing and quality ratings have the potential to better control the spread of the novel coronavirus and reduce deaths. Nursing homes caring predominantly for Medicaid or racial and ethnic minority residents tend to have more confirmed cases.

### Prognosis

27. **High mortality rate in cancer patients with symptoms of COVID-19 with or without detectable SARS-COV-2 on RT-PCR.** Assaad S, Avrillon V, Fournier ML, et al. *Eur J Cancer.* 2020 Jun 7:S0959-8049(20)30314-2. doi: 10.1016/j.ejca.2020.05.028. [https://www.ejca.com/article/S0959-8049\(20\)30314-2/abstract](https://www.ejca.com/article/S0959-8049(20)30314-2/abstract)  
Findings: Fifty-five of the 302 (18.2%) patients with suspected COVID-19 had detectable SARS-COV-2 with RT-PCR in nasopharyngeal samples. RT-PCR-positive patients were older, had more frequently haematological malignancies, respiratory symptoms and suspected COVID-19 pneumonia of computed tomography (CT) scan. However, respectively, 38% and 20% of SARS-COV-2 RT-PCR-negative patients presented similar respiratory symptoms and CT scan images. The 30-day death rate of cancer patients with or without documented SARS-COV-2 infection is poor, but the majority of deaths occur in RT-PCR-negative patients.
28. **Cardiac Troponin I is an Independent Predictor for Mortality in Hospitalized Patients with Coronavirus Disease 2019.** Nie SF, Yu M, Xie T, et al. *Circulation.* 2020 Jun 15. doi: 10.1161/CIRCULATIONAHA.120.048789. <https://www.ahajournals.org/doi/10.1161/CIRCULATIONAHA.120.048789>  
Findings: Although respiratory symptoms are the primary clinical manifestations of COVID-19, a portion of patients will experience severe cardiovascular injury. cTnI is the most important biomarker of cardiac injury. Our results indicated that the serum cTnI concentration was significantly higher in non-surviving patients with severe SARS-CoV-2 infection than in discharged patients. And the further multivariable logistic regression identified increased cTnI concentration as an independent predictor of mortality in patients with COVID-19.
29. **Association of Angiotensin-Converting Enzyme Inhibitor or Angiotensin Receptor Blocker Use with COVID-19 Diagnosis and Mortality.** Fosbøl EL, Butt JH, Østergaard L, et al. *JAMA.* 2020 Jun 19. doi: 10.1001/jama.2020.11301. <https://jamanetwork.com/journals/jama/fullarticle/2767669>  
Findings: Prior use of ACEI/ARBs was not significantly associated with COVID-19 diagnosis among patients with hypertension or with mortality or severe disease among patients diagnosed as having COVID-19. These findings do not support discontinuation of ACEI/ARB medications that are clinically indicated in the context of the COVID-19 pandemic.

30. **Thrombocytopenia is independently associated with poor outcome in patients hospitalized for COVID-19.** Maquet J, Lafaurie M, Sommet A, et al. *Br J Haematol.* 2020 Jun 17. doi: 10.1111/bjh.16950. <https://onlinelibrary.wiley.com/doi/abs/10.1111/bjh.16950>  
Findings: Thrombocytopenia (defined by platelet count <150 x 10<sup>9</sup> /L) has been observed in up to 36% of patients with SARS-CoV-2, the virus responsible for Coronavirus disease 2019. In this setting, thrombocytopenia is usually mild, caused by platelet activation and consumption. In a recent paper published in the British Journal of Haematology, Jiang et al. conducted a meta-analysis of 31 studies involving 7613 participants and found a significant association between thrombocytopenia and severe COVID-19 hospitalized patients or poor outcome in this setting. However, other clinical, biological and radiological factors strongly impact COVID-19 outcome. Whether thrombocytopenia is independently associated to poor outcome in this population is unknown. This study was aimed at addressing this question.
31. **Identification and validation of a novel clinical signature to predict the prognosis in confirmed COVID-19 patients.** Wu S, Du Z, Shen S, et al. *Clin Infect Dis.* 2020 Jun 18:ciaa793. doi: 10.1093/cid/ciaa793. <https://academic.oup.com/cid/advance-article/doi/10.1093/cid/ciaa793/5859562>  
Findings: The signature of COVID-19 was combined with five indicators, namely neutrophil count, lymphocyte count, procalcitonin, older age, and C-reactive protein. This signature presents a novel predictor and prognostic biomarker for closely monitoring patients and providing timely treatment for those who are severely or critically ill.
32. **Cardiac Injury Is Associated With Severe Outcome and Death in Patients With Coronavirus Disease 2019 (COVID-19) Infection: A Systematic Review and Meta-Analysis of Observational Studies.** Parohan M, Yaghoubi S, Seraji A, et al. *Eur Heart J Acute Cardiovasc Care.* 2020 Jun 21;2048872620937165. doi: 10.1177/2048872620937165. <https://journals.sagepub.com/doi/full/10.1177/2048872620937165>  
Findings: In total, 22 studies with 3684 COVID-19 infected patients (severe cases=1095 and death cases=365) were included in this study. Higher serum levels of lactate dehydrogenase (weighted mean difference (WMD) =108.86 U/L, 95% confidence interval (CI)=75.93-141.79, p<0.001) and creatine kinase-MB (WMD=2.60 U/L, 95% CI=1.32-3.88, p<0.001) were associated with a significant increase in the severity of COVID-19 infection. Furthermore, higher serum levels of lactate dehydrogenase (WMD=213.44 U/L, 95% CI=129.97-296.92, p<0.001), cardiac troponin I (WMD=26.35 pg/mL, 95% CI=14.54-38.15, p<0.001), creatine kinase (WMD=48.10 U/L, 95% CI=0.27-95.94, p = 0.049) and myoglobin (WMD=159.77 ng/mL, 95% CI=99.54-220.01, p<0.001) were associated with a significant increase in the mortality of COVID-19 infection. Cardiac injury, as assessed by serum analysis (lactate dehydrogenase, cardiac troponin I, creatine kinase (-MB) and myoglobin), was associated with severe outcome and death from COVID-19 infection.

### Survivorship & Rehabilitation

33. **PM&R and Pulmonary Rehabilitation for COVID-19.** Wang TJ, Chau B, Lui M, et al. *Am J Phys Med Rehabil.* 2020 Jun 11. doi: 10.1097/PHM.0000000000001505.

[https://journals.lww.com/ajpmr/Abstract/9000/PM\\_R\\_and\\_Pulmonary\\_Rehabilitation\\_for\\_COVID\\_19.97964.aspx](https://journals.lww.com/ajpmr/Abstract/9000/PM_R_and_Pulmonary_Rehabilitation_for_COVID_19.97964.aspx)

Findings: The purpose of pulmonary rehabilitation in COVID-19 patients is to improve symptoms of dyspnea, relieve anxiety, reduce complications, minimize disability, preserve function and improve quality of life. Pulmonary rehabilitation during the acute management of COVID-19 should be considered when possible and safe and may include nutrition, airway, posture, clearance technique, oxygen supplementation, breathing exercises, stretching, manual therapy, and physical activity. Given the possibility of long-term disability, outpatient post-hospitalization pulmonary rehabilitation may be considered in all patients hospitalized with COVID-19.

**34. Recommendations for Hospital-Based Physical Therapists Managing Patients with COVID-19.**

Felten-Barentsz KM, van Oorsouw R, Klooster E, et al. *Phys Ther*. 2020 Jun 18:pzaa114. doi: 10.1093/ptj/pzaa114. <https://academic.oup.com/ptj/advance-article/doi/10.1093/ptj/pzaa114/5859492>

Findings: The recommendations include safety recommendations, treatment recommendations, discharge recommendations, and staffing recommendations. Treatment recommendations address 2 phases of hospitalization: when patients are critically ill and admitted to the ICU, and when patients are severely ill and admitted to the COVID ward. Physical therapist management for patients hospitalized with COVID-19 comprises elements of respiratory support and active mobilization. Respiratory support includes breathing control, thoracic expansion exercises, airway clearance techniques, and respiratory muscle strength training. Recommendations toward active mobilization include bed mobility activities, active range-of-motion exercises, active (-assisted) limb exercises, activities-of-daily-living training, transfer training, cycle ergometer, pre-gait exercises, and ambulation.

### Therapeutics

**35. Prone Positioning in Awake, Nonintubated Patients with COVID-19 Hypoxemic Respiratory Failure.** Thompson AE, Ranard BL, Wei Y, et al. *JAMA Intern Med*. June 17, 2020.

doi:10.1001/jamainternmed.2020.3030

<https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2767575?resultClick=1>

Findings: In this small single-center cohort study, we found that the use of the prone position for awake, spontaneously breathing patients with COVID-19 severe hypoxemic respiratory failure was associated with improved oxygenation. In addition, patients with a Spo<sub>2</sub> of 95% or greater after 1 hour of the prone position was associated with a lower rate of intubation.

**36. Prone Positioning of Non-Intubated Patients with COVID-19.** Damarla M, Zaeh S, Niedermeyer S, et al. *Am J Respir Crit Care Med*. 2020 Jun 17. doi: 10.1164/rccm.202004-1331LE.

<https://www.atsjournals.org/doi/pdf/10.1164/rccm.202004-1331LE>

Findings: In this case series, all patients experienced significant improvement in respiratory status during the initial prone positioning period. Five of the six patients on nasal cannula or room air, did not require escalation of respiratory care and eight of ten patients did not require invasive mechanical ventilation. The potential mechanism of benefit of prone positioning in

nonintubated patients is unlikely related solely to improved oxygenation, as past studies have not associated improved oxygenation with survival in ARDS. Homogenous lung aeration with prone positioning could result in reduced respiratory effort and lead to lower incidence of intubation.

37. **Monoclonal Antibodies for Prevention and Treatment of COVID-19.** Marovich M, Mascola JR, Cohen MS. *JAMA*. 2020 Jun 15. doi: 10.1001/jama.2020.10245.  
<https://jamanetwork.com/journals/jama/fullarticle/2767383>  
Findings: Neutralizing antibodies have an important role in the protection or recovery from many viral infections. Several monoclonal antibody products will enter clinical trials over the next few months and be assessed for their ability to limit or modify SARS-CoV-2 infection. In addition, a drug that reliably prevented progression of COVID-19 would greatly reduce the concerns and uncertainty associated with SARS-CoV-2 infection and give physicians a therapeutic tool they must have for their patients. Establishing the therapeutic or prophylactic efficacy of monoclonal antibodies would be a major advance in the control of the COVID-19 pandemic.
38. **Extracorporeal Membrane Oxygenation for Critically Ill Patients with COVID-19 Related Acute Respiratory Distress Syndrome: Worth the Effort?** Falcoz PE, Monnier A, Puyraveau M, et al. *Am J Respir Crit Care Med*. 2020 Jun 16. doi: 10.1164/rccm.202004-1370LE.  
<https://www.atsjournals.org/doi/10.1164/rccm.202004-1370LE>  
Findings: Although VV-ECMO is burdened with a high rate of life-threatening complications, it might be considered as a rescue therapy in refractory COVID-19 ARDS. In addition, an adequate higher level of therapeutic anticoagulation than usual should probably be considered. Considering the high frequency of severe adverse events, ECMO should probably remain a rescue therapy and therefore be undertaken only in ECMO-expert centers with adequate resources.
39. **GM-CSF blockade with mavrilimumab in severe COVID-19 pneumonia and systemic hyperinflammation: a single-centre, prospective cohort study.** De Luca G et al. *Lancet Rheumatology* 2020 Jun 16. DOI:[https://doi.org/10.1016/S2665-9913\(20\)30170-3](https://doi.org/10.1016/S2665-9913(20)30170-3)  
[https://www.thelancet.com/journals/lanrhe/article/PIIS2665-9913\(20\)30170-3/fulltext](https://www.thelancet.com/journals/lanrhe/article/PIIS2665-9913(20)30170-3/fulltext)  
Findings: Mavrilimumab treatment was associated with improved clinical outcomes compared with standard care in non-mechanically ventilated patients with severe COVID-19 pneumonia and systemic hyperinflammation. Treatment was well tolerated. Confirmation of efficacy requires controlled testing.
40. **Tocilizumab for treatment of patients with severe COVID-19: A retrospective cohort study.** Kewan T et al. *EClinicalMedicine* 2020 Jun 20.  
DOI:<https://doi.org/10.1016/j.eclinm.2020.100418>  
[https://www.thelancet.com/journals/eclinm/article/PIIS2589-5370\(20\)30162-0/fulltext](https://www.thelancet.com/journals/eclinm/article/PIIS2589-5370(20)30162-0/fulltext)  
Findings: In patients with severe COVID-19, tocilizumab was associated with significantly shorter duration of vasopressor support. Although not statistically significant, tocilizumab also resulted in shorter median time to clinical improvement and shorter duration of invasive

ventilation. These findings require validation from ongoing clinical trials of Tocilizumab in COVID-19 patients.

41. **Use of Convalescent Plasma in Hospitalized Patients with Covid-19 - Case Series.** Hegerova L, Gooley T, Sweerus KA, et al. *Blood*. 2020 Jun 19:blood.2020006964. doi: 10.1182/blood.2020006964.  
<https://ashpublications.org/blood/article/doi/10.1182/blood.2020006964/461067/Use-of-Convalescent-Plasma-in-Hospitalized>  
Findings: Early indicators suggest transfusion of CP is safe in Covid-19. We report the early clinical experience of 20 hospitalized patients treated with CP compared to 20 matched controls with severe or life-threatening Covid-19 infection. (*Swedish Medical Center*)
42. **Red cell bound antibodies and transfusion requirements in hospitalized patients with COVID-19.** Berzuini A, Bianco C, Paccapelo C, et al. *Blood*. 2020 Jun 19:blood.2020006695. doi: 10.1182/blood.2020006695.  
<https://ashpublications.org/blood/article/doi/10.1182/blood.2020006695/461066/Red-cell-bound-antibodies-and-transfusion>  
Findings: During the first weeks of Coronavirus disease (COVID-19) outbreak, we noticed an increasing frequency of DAT positivity at our blood center. Therefore, we studied the samples of 113 consecutive patients with confirmed COVID-19, sent to our laboratory for pre transfusion testing and/or ABO and Rh typing over one week. All patients were hospitalized and on treatment with multiple drugs. None of them received COVID-19 convalescent plasma treatment.
43. **COVID-19 anticoagulation recommendations in children.** Loi M, Branchford B, Kim J, Self C, Nuss R. *Pediatr Blood Cancer*. 2020 Jun 18:e28485. doi: 10.1002/pbc.28485.  
<https://onlinelibrary.wiley.com/doi/10.1002/pbc.28485>  
Findings: We reviewed the published literature about hospitalized adults with COVID-19 and, based upon published literature about thrombosis during childhood, developed preliminary recommendations for the hemostatic evaluation, imaging, risk assessment for thrombosis, and anticoagulation for children hospitalized with COVID-19.
44. **Antithrombotic Therapies in COVID-19 Disease: A Systematic Review.** Maldonado E, Tao D, Mackey K. *J Gen Intern Med*. 2020 Jun 17:1-9. doi: 10.1007/s11606-020-05906-y.  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7299557/>  
Findings: New evidence on thromboembolism in COVID-19 does not warrant a change in current guidance on thromboprophylaxis among hospitalized patients. Prospective trials of antithrombotic treatment strategies among patients with COVID-19 are urgently needed.
45. **Update Alert: Should Clinicians Use Chloroquine or Hydroxychloroquine Alone or in Combination with Azithromycin for the Prophylaxis or Treatment of COVID-19? Living Practice Points from the American College of Physicians.** Qaseem A, Yost J, Etzeandia-Ikobaltzeta I, et al. *Ann Intern Med*. 2020 Jun 17. doi: 10.7326/M20-3862.  
<https://www.acpjournals.org/doi/10.7326/M20-3862>

Findings: We update the American College of Physicians' previous practice points about chloroquine or hydroxychloroquine alone or in combination with azithromycin for prophylaxis or treatment of coronavirus disease 2019 (COVID-19), using an updated evidence review conducted on 8 May 2020. The evidence update identified 6 new studies: 4 observational studies addressed use of hydroxychloroquine alone, 1 observational study focused on hydroxychloroquine alone and in combination with azithromycin, and 1 observational study assessed use of chloroquine alone (previously, no studies were available on the use of chloroquine alone). All new studies evaluated use of the pharmacologic interventions for treatment of COVID-19. The new evidence added support to previous conclusions but resulted in no conceptual changes to the practice points.

46. **Effectiveness and Safety of Glucocorticoids to Treat COVID-19: A Rapid Review and Meta-Analysis.** Lu S, Zhou Q, Huang L, et al. *Ann Transl Med.* 2020 May;8(10):627. doi: 10.21037/atm-20-3307. <http://atm.amegroups.com/article/view/43126/html>

Findings: Glucocorticoid therapy was found to reduce the duration of fever, but not mortality, duration of hospitalization or lung inflammation absorption. Long-term use of high-dose glucocorticoids increased the risk of adverse reactions such as coinfections, so routine use of systemic glucocorticoids for patients with COVID-19 cannot be recommended.

### Transmission / Infection Control

47. **Aerosolization during Common Ventilation Scenarios.** Xiao R, Workman AD, Puka E, Juang J, Naunheim MR, Song PC. *Otolaryngol Head Neck Surg.* 2020 Jun 16:194599820933595. doi: 10.1177/0194599820933595.

<https://journals.sagepub.com/doi/abs/10.1177/0194599820933595>

Findings: We sought to quantify differences in aerosol generation during common ventilation scenarios. We performed a series of 30-second ventilation experiments on porcine larynx-trachea-lung specimens. We used an optical particle sizer to quantify the number of 1- to 10- $\mu$ m particles observed per 30-second period. No significant aerosols were observed with ventilation of intubated specimens. Simulated coughing through a tracheostomy produced  $53.5 \pm 25.2$  PP30, significantly more than background and ventilation of an intubated specimen. These data suggest that undisturbed ventilation and thus intubation without stimulation or coughing may be safer than believed. Coughing increases aerosol production, particularly via tracheostomy.

48. **The assessment of transmission efficiency and latent infection period on asymptomatic carriers of SARS-CoV-2 infection.** Liu Z, Chu R, Gong L, Su B, Wu J. *Int J Infect Dis.* 2020 Jun 13:S1201-9712(20)30471-9. doi: 10.1016/j.ijid.2020.06.036.

<https://www.sciencedirect.com/science/article/pii/S1201971220304719>

Findings: Few studies aimed on the transmission efficiency of asymptomatic carriers of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection. A follow-up study was performed on 147 asymptomatic carriers in Anhui Province. Of 147 asymptomatic carriers, 50.0% were male, 50.3% cases were older than 40 years, and 43.8% were farmers, 68.7% cases were from north of Anhui Province. There were 16 asymptomatic carriers developed illness in



the following 14 days isolated observation, and diagnosed as confirmed cases. The possible latent infection period was evaluated ranged from one to five days before onset, and the median time was two days. The second attack rate of 16 confirmed cases whom transferred from asymptomatic carriers was 9.7% (23/236), while 131 asymptomatic carriers caused 2.6% (24/914) close contacts infection, there was a significant difference of second attack rate among two groups ( $P < 0.001$ ). Our study indicated that COVID-19 cases are contagious during the incubation period, and the close contact screening should be covered the incubation period. Furthermore, the transmission efficiency of asymptomatic carriers was lower than that of confirmed cases.

49. **High-flow nasal cannula for acute hypoxemic respiratory failure in patients with COVID-19: systematic reviews of effectiveness and its risks of aerosolization, dispersion, and infection transmission.** Agarwal A, Basmaji J, Muttalib F, et al. *Can J Anaesth*. 2020 Jun 15:1-32. doi: 10.1007/s12630-020-01740-2. <https://link.springer.com/article/10.1007/s12630-020-01740-2>  
Findings: High-flow nasal cannula may reduce the need for invasive ventilation and escalation of therapy compared with COT in COVID-19 patients with acute hypoxemic respiratory failure. This benefit must be balanced against the unknown risk of airborne transmission.
  
50. **Use of N95, Surgical, and Cloth Masks to Prevent COVID-19 in Health Care and Community Settings: Living Practice Points from the American College of Physicians (Version 1).** Qaseem A, Etcheandia-Ikobaltzeta I, et al. *Ann Intern Med*. 2020 Jun 18. doi: 10.7326/M20-3234. <https://www.acpjournals.org/doi/10.7326/M20-3234>  
Findings: SARS-CoV-2 spreads among persons in close proximity through droplets, although evidence is still emerging regarding potential airborne transmission. Reducing transmission of SARS-CoV-2 infection in health care and community settings is a major priority, especially in the absence of an effective vaccine or treatment. The use of respiratory PPE may decrease the risk for respiratory infection, although controversy exists around the appropriate types of masks and the situations in which they should be used in community and health care settings for the prevention of SARS-CoV-2 infection. The following practice points are intended for clinicians, patients, and the public. Data on SARS-CoV-2 are limited. These practice points are based on the best available evidence on the effectiveness of N95 respirators, surgical masks, and cloth masks in reducing transmission of infection with SARS-CoV-1, MERS-CoV, and influenza-like or other respiratory viruses in community and health care settings. Evidence about reuse or extended use of N95 respirators in health care settings was also considered.
  
51. **A Framework for Sustainable Contact Tracing and Exposure Investigation for Large Health Systems.** Breeher L, Boon A, Hainy C, et al. *Mayo Clin Proc*. 2020 Jun 16:S0025-6196(20)30481-X. doi: 10.1016/j.mayocp.2020.05.008. [https://www.mayoclinicproceedings.org/article/S0025-6196\(20\)30481-X/fulltext](https://www.mayoclinicproceedings.org/article/S0025-6196(20)30481-X/fulltext)  
Findings: We present a framework for feasible, scalable COVID-19 contact tracing in a large multistate health system in the United States employing approximately 69,000 health care personnel. The framework is shared with sufficient details to allow adoption or adaptation by other health systems. Continuous enhancement, optimization, and evaluation of the framework are ongoing.

52. **Persistence of Severe Acute Respiratory Syndrome Coronavirus 2 in Aerosol Suspensions.** Fears AC, Klimstra WB, Duprex P, et al. *Emerg Infect Dis.* 2020 Jun 22;26(9). doi: 10.3201/eid2609.201806. [https://wwwnc.cdc.gov/eid/article/26/9/20-1806\\_article](https://wwwnc.cdc.gov/eid/article/26/9/20-1806_article)  
Findings: We aerosolized severe acute respiratory syndrome coronavirus 2 and determined that its dynamic aerosol efficiency surpassed those of severe acute respiratory syndrome coronavirus and Middle East respiratory syndrome. Although we performed experiment only once across several laboratories, our findings suggest retained infectivity and virion integrity for up to 16 hours in respirable-sized aerosols.

### Women & Children

53. **Preventing COVID-19 Transmission on Labor and Delivery: A Decision Analysis.** Savitsky LM, Albright CM. *Am J Perinatol.* 2020 Jun 16. doi: 10.1055/s-0040-1713647. <https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1713647>  
Findings: Our objective was to evaluate the impact of two strategies on transmission of COVID-19 to health care workers L&D. Universal COVID-19 screening is generally the preferred option. However, in locations with high COVID-19 prevalence or where the local societal cost of one HCW being unavailable is the highest such as in rural areas, universal PPE may be cost-effective and preferred.
54. **Severe Coronavirus Infections in Pregnancy: A Systematic Review.** Galang RR, Chang K, Strid P, et al. *Obstet Gynecol.* 2020 Jun 16. doi: 10.1097/AOG.0000000000004011. [https://journals.lww.com/greenjournal/Abstract/9000/Severe\\_Coronavirus\\_Infections\\_in\\_Pregnancy\\_A.97313.aspx](https://journals.lww.com/greenjournal/Abstract/9000/Severe_Coronavirus_Infections_in_Pregnancy_A.97313.aspx)  
Findings: Understanding whether pregnant women may be at risk for adverse maternal and neonatal outcomes from severe coronavirus infections is imperative. Data from case reports of SARS-CoV, MERS-CoV, and SAR-CoV-2 infections during pregnancy are limited, but they may guide early public health actions and clinical decision-making for COVID-19 until more rigorous and systematically collected data are available. The capture of critical data is needed to better define how this infection affects pregnant women and neonates.
55. **Novel Coronavirus Infection (COVID-19) in Children Younger Than One Year: A Systematic Review of Symptoms, Management and Outcomes.** Raba AA, Abobaker A, Elgenaidi IS, Daoud A. *Acta Paediatr.* 2020 Jun 17. doi: 10.1111/apa.15422. <https://onlinelibrary.wiley.com/doi/abs/10.1111/apa.15422>  
Findings: Our search identified 77 peer-reviewed papers and 18 papers covering 160 infants were reviewed. One paper was from Vietnam and the other 17 were from China: eight were cross-sectional studies, eight were case reports, one was a case series and one was a prospective cohort study. The most common clinical symptoms were fever (54%) and cough (33%). Most infants were treated symptomatically, with frequent use of various empirical medications. Infants and neonates tended to have more severe COVID-19 disease than older children: 11 (7%) were admitted to intensive care and one infant died. The mortality rate was

0.006%, with favourable outcomes in most cases. Infants and neonates were more vulnerable to more severe COVID-19 disease than older children, but morbidity and mortality were low.

56. **SARS-CoV-2 Infections in Children - Multi-Center Surveillance, United States, January-March 2020.** Rha B, Lively JY, Englund JA, et al. *J Pediatric Infect Dis Soc.* 2020 Jun 18:piaa075. doi: 10.1093/jpids/piaa075. <https://academic.oup.com/jpids/advance-article/doi/10.1093/jpids/piaa075/5859277?searchresult=1>

Findings: Previous reports of COVID-19 among US children have been based on health jurisdiction reporting. We performed SARS-CoV-2 testing on children enrolled in active, prospective, multi-center surveillance during January-March, 2020. Among 3187 children, only 4 (0.1%) SARS-CoV-2-positive cases were identified March 20-31 despite evidence of rising community circulation.

57. **Maternal Mortality Among Women with COVID-19 Admitted to the Intensive Care Unit.** Blitz MJ, Rochelson B, Minkoff H, et al. *Am J Obstet Gynecol.* 2020 Jun 15:S0002-9378(20)30636-0. doi: 10.1016/j.ajog.2020.06.020.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7294262/pdf/main.pdf>

Findings: There is limited data on critically ill pregnant women hospitalized with COVID-19. Although maternal mortality has been reported, the frequency with which this devastating outcome occurs is unknown. The objective of this study was to determine the rate of maternal death among pregnant and postpartum women with COVID-19 admitted to ICU in a large integrated health system in the New York metropolitan area. We describe patient demographics, baseline comorbidities, clinical presentation, hospital course, and maternal outcomes.

58. **Characteristics, Cardiac involvement, and Outcomes of Multisystem Inflammatory Disease of Childhood (MIS-C) Associated with SARS-CoV-2 Infection.** Capone CA, Subramony A, Sweberg T, et al. *J Pediatr.* 2020 Jun 14:S0022-3476(20)30746-0. doi: 10.1016/j.jpeds.2020.06.044.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7293762/>

Findings: We report on the presentation and course of 33 children with multisystem inflammatory syndrome in children (MIS-C) and confirmed SARS-CoV-2 infection. Hemodynamic instability and cardiac dysfunction were prominent findings, with most patients exhibiting rapid resolution following anti-inflammatory therapy.

59. **The rise of adverse childhood experiences during the COVID-19 pandemic.** Bryant DJ, Oo M, Damian, AJ. *Psychol Trauma* Jun 18, 2020 <https://doi.org/10.1037/tra0000711>

<https://psycnet.apa.org/fulltext/2020-43450-001.pdf>

Findings: Given the likely increase in adverse childhood experiences (ACEs) during the coronavirus pandemic, it is vital that we assess for these experiences more intentionally and more broadly when this pandemic concludes. Assessing for ACEs is standard practice in some places already but must become a standard practice in all pediatric care so we can mitigate the impact of these ACEs for a generation of children.

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## GUIDELINES & CONSENSUS STATEMENTS

### **Best practice statements and recommendations for caring for critically ill patients with COVID-19.**

Dugar SP, Vallabhajosyula S. *Ann Intern Med.* 2020 Jun 16;172(12):JC62. doi: 10.7326/ACPJ202006160-062. <https://www.acpjournals.org/doi/pdf/10.7326/ACPJ202006160-062>

### **Safe Reintroduction of Cardiovascular Services during the COVID-19 Pandemic: from the North American Society Leadership.**

*J Am Coll Cardiol* 2020;75:3177-3183. DOI: 10.1016/j.jacc.2020.04.063  
[https://www.onlinejacc.org/content/75/25/3177?\\_ga=2.36183075.2002122105.1592860265-606781830.1592860265](https://www.onlinejacc.org/content/75/25/3177?_ga=2.36183075.2002122105.1592860265-606781830.1592860265)

### **Tracheostomy care and decannulation during the COVID-19 pandemic. A multidisciplinary clinical practice guideline.**

Rovira A, Dawson D, Walker A, et al. *Eur Arch Otorhinolaryngol.* 2020 Jun 17:1-9.  
doi: 10.1007/s00405-020-06126-0. <https://link.springer.com/article/10.1007/s00405-020-06126-0>

### **Infectious Diseases Society of America Guidelines on the Diagnosis of COVID-19.**

Hanson KE, Caliendo AM, Arias CA, et al. *Clin Infect Dis.* 2020 Jun 16:ciaa760. doi: 10.1093/cid/ciaa760.  
<https://academic.oup.com/cid/advance-article/doi/10.1093/cid/ciaa760/5858938>

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## FDA / CDC / NIH / WHO Updates

CDC: [Interim U.S. Guidance for Risk Assessment and Work Restrictions for Healthcare Personnel with Potential Exposure to COVID-19](#), updated 6-17-20

[FDA Warns of Newly Discovered Potential Drug Interaction That May Reduce Effectiveness of a COVID-19 Treatment Authorized for Emergency Use](#)

[FDA advises consumers not to use hand sanitizer products manufactured by Eskbiochem SA de CV in Mexico](#)

WHO: [Hydroxychloroquine arm of Solidarity Trial stops.](#)

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## Commentary

### **[COVID-19 and the other pandemic: populations made vulnerable by systemic inequity.](#)**

Gray DM 2nd1,2, Anyane-Yeboah A3, Balzora S, et al. *Nat Rev Gastroenterol Hepatol.* 2020 Jun 15. doi: 10.1038/s41575-020-0330-8.

**[Historic Shift in Americans' Happiness amid Pandemic.](#)** *COVID Response Tracking Study.* NORC at the University of Chicago

**[COVID-19 Safety Grades for Businesses—A Possible Mitigation Tool.](#)** Rafferty M, Nihtianova S, Amirian ES. *JAMA Health Forum.* June 22, 2020.

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