New Research

**Basic Science / Virology / Pre-clinical**


   Findings: Here, we show that SARS-CoV-2 causes respiratory disease in infected rhesus macaques, with disease lasting 8-16 days. Pulmonary infiltrates, a hallmark of human disease, were visible in lung radiographs. High viral loads were detected in swabs from the nose and throat of all animals as well as in bronchoalveolar lavages; in one animal we observed prolonged rectal shedding. Taken together, the rhesus macaque recapitulates moderate disease observed in the majority of human cases. The establishment of the rhesus macaque as a model of COVID-19 will increase our understanding of the pathogenesis of this disease and will aid development and testing of medical countermeasures.


   Findings: Here we describe multiple monoclonal antibodies targeting SARS-CoV-2 S identified from memory B cells of an individual who was infected with SARS-CoV in 2003. One antibody, named S309, potently neutralizes SARS-CoV-2 and SARS-CoV pseudoviruses as well as authentic SARS-CoV-2 by engaging the S receptor-binding domain. Using cryo-electron microscopy and binding assays, we show that S309 recognizes a glycan-containing epitope that is conserved within the sarbecovirus subgenus, without competing with receptor attachment. Antibody cocktails including S309 along with other antibodies identified here further enhanced SARS-CoV-2 neutralization and may limit the emergence of neutralization-escape mutants. These results pave the way for using S309- and S309-containing antibody cocktails for prophylaxis in individuals at high risk of exposure or as a post-exposure therapy to limit or treat severe disease.

**Clinical Syndrome**

Findings: We identified 118 studies and used a hierarchical study selection process to identify unique cohorts. We performed a meta-analysis of 47 studies including 10,890 unique patients. Pooled prevalence estimates of GI symptoms was diarrhea 7.7% (95% CI 7.2-8.2), nausea/vomiting 7.8% (95% CI 7.1-8.5), abdominal pain 2.7% (95% CI 2.0-3.4). Most studies reported on hospitalized patients. The pooled prevalence of elevated liver abnormalities was: AST 15.0% (13.6 to 16.5) and ALT 15.0% (13.6 to 16.4). When analyzed comparing data from China to studies from countries other than China, diarrhea, nausea/vomiting, liver abnormalities were more prevalent outside of China with diarrhea reported in 18.3% (16.6 to 20.1). Isolated GI symptoms were rarely reported. We also summarized the GI and liver adverse effects of the most commonly utilized medications for COVID19.


Findings: We first quantified the SARS-CoV-2 viral load in autopsy tissue samples obtained from 22 patients who had died from Covid-19. Seventeen patients (77%) had more than two coexisting conditions, and a greater number of coexisting conditions was associated with SARS-CoV-2 tropism for the kidneys, even in patients without a history of chronic kidney disease. The highest levels of SARS-CoV-2 copies per cell were detected in the respiratory tract, and lower levels were detected the kidneys, liver, heart, brain, and blood. These findings indicate a broad organotropism of SARS-CoV-2.


Findings: In this review, we aim to improve our understanding on the immune response and immunopathological changes in patients linked to detioriating clinical conditions such as, cytokine storm, acute respiratory distress syndrome, autopsy findings and changes in acute phase reactants and serum biochemistry in COVID-19. High viral-load during the first infection and repeated exposure to virus especially in healthcare workers can be an important factor for severity of disease. It should be noted that many aspects of severe patients are unique to COVID-19 and are rarely observed in other respiratory viral infections, such as severe lymphopenia and eosinopenia, extensive pneumonia and lung tissue damage, a cytokine storm leading to acute respiratory distress syndrome and multiorgan failure. Lymphopenia causes a defect in antiviral and immune regulatory immunity. At the same time, a cytokine storm starts with extensive activation of cytokine-secreting cells with innate and adaptive immune mechanisms both of with contribute to a poor prognosis. Elevated levels of acute phase reactants and lymphopenia are early predictors of high disease severity.

Findings: We retrospectively investigated the 25-hydroxyvitamin D (25(OH)D) concentrations in plasma obtained from a cohort of patients from Switzerland. In this cohort, significantly lower levels were found in PCR-positive for SARS-CoV-2 patients compared with negative patients; this was also confirmed by stratifying patients according to age >70 years. On the basis of this preliminary observation, vitamin D supplementation might be a useful measure to reduce the risk of infection. Randomized controlled trials and large population studies should be conducted to evaluate these recommendations and to confirm our preliminary observation.


Findings: Accumulating evidence shows that microbial co-infection increases the risk of disease severity in humans. In this retrospective study, 257 laboratory-confirmed COVID-19 patients in Jiangsu Province were enrolled from January 22 to February 2, 2020. They were re-confirmed by real-time RT-PCR and tested for 39 respiratory pathogens. In total, 24 respiratory pathogens were found among the patients, and 242 (94.2 %) patients were co-infected with one or more pathogens. Bacterial co-infections were dominant in all COVID-19 patients, *Streptococcus pneumoniae* was the most common, followed by *Klebsiella pneumoniae* and *Haemophilus influenzae*. The highest and lowest rates of co-infections were found in patients aged 15-44 and below 15, respectively. Most co-infections occurred within 1-4 days of onset of COVID-19 disease. In addition, the proportion of viral co-infections, fungal co-infections and bacterial-fungal co-infections were the highest severe COVID-19 cases.


Findings: In a retrospective review of medical records from Tongji Hospital of Hua Zhong University of Science and Technology 108 patients of COVID-19 were admitted. Eight cases were readmission patients because the RT-PCR result of SARS-CoV-2 was positive after discharge. On the second admission, patients had no symptoms and their chest CT was almost normal. Data from laboratory tests showed that all eight patients had normal white blood cell count, lymphocyte count. The inflammatory factors like procalcitonin and interleukin 6 were normal. These patients could be a source of infection, or become chronic virus carriers.


Findings: COVID-19 predominantly involves the lungs, causing DAD and leading to acute respiratory insufficiency. Death may be caused by the thrombosis observed in segmental and subsegmental pulmonary arterial vessels despite the use of prophylactic anticoagulation. Studies are needed to further understand the thrombotic complications of COVID-19, together with the roles for strict thrombosis prophylaxis, laboratory, and imaging studies and early
anticoagulant therapy for suspected pulmonary arterial thrombosis or thromboembolism.


Findings: If infection with SARS-CoV-2 follows a similar course to that with SARS-CoV or MERS-CoV, most patients should recover without experiencing mental illness. SARS-CoV-2 might cause delirium in a significant proportion of patients in the acute stage. Clinicians should be aware of the possibility of depression, anxiety, fatigue, post-traumatic stress disorder, and rarer neuropsychiatric syndromes in the longer term.

**Diagnostics & Screening**

11. **Performance of the rapid Nucleic Acid Amplification by Abbott ID NOW COVID-19 in nasopharyngeal swabs transported in viral media and dry nasal swabs, in a New York City academic institution.** Atreyee Basu, Tatyana Zinger, Kenneth Inglima, et al. PREPRINT [https://www.biorxiv.org/content/10.1101/2020.05.11.089896v1](https://www.biorxiv.org/content/10.1101/2020.05.11.089896v1)

Findings: The need to identify the COVID-19 positive cases quickly and accurately has propelled the release of a variety of assays intended to meet the urgent demand. Our laboratory (New York University) currently uses two real time RT-PCR platforms, the Roche Cobas SARS-CoV2 and the Cepheid Xpert Xpress SARS-CoV-2. Both platforms demonstrate comparable performance; however the run times for each assay are 3.5 hours and 45 minutes, respectively. We sought to evaluate the recently released Abbott ID NOW COVID-19 assay which is capable of producing positive results in as little as 5 minutes. Abbot ID NOW COVID-19 missed a third of the samples detected positive by Cepheid Xpert Xpress when using NP swabs in VTM and over 48% when using dry nasal swabs.


Findings: 961 HCW were included in the analysis, of which 225 (23%) had positive test results. The existing testing criteria consisting of any combination of one or more of three symptoms (fever, shortness of breath, dry cough) was 93% sensitive and 9% specific (AUC = 0.63, 95% CI: 0.59 - 0.67). The derived testing criteria consisting of any combination of one or more of two symptoms (fever, loss of taste or smell) was 89% sensitive and 48% specific (AUC = 0.75, 95% CI: 0.71 - 0.78). The hybrid testing criteria consisting of any combination of one or more of four symptoms (fever, shortness of breath, dry cough, loss of taste or smell) was 98% sensitive and 8% specific (AUC = 0.77, 95% CI: 0.73 - 0.80). An evidence based approach to COVID-19 testing which at least includes fever and loss of taste or smell should be utilized when determining which HCW should be tested.

13. **Variation in False-Negative Rate of Reverse Transcriptase Polymerase Chain Reaction–Based SARS-CoV-2 Tests by Time since Exposure.** Kucirka LM et al. *Ann Intern Med* 2020 May 13. doi:
Findings: Over the 4 days of infection before the typical time of symptom onset, the probability of a false-negative result in an infected person decreases from 100% (95% CI, 100% to 100%) on day 1 to 67% (CI, 27% to 94%) on day 4. On the day of symptom onset, the median false-negative rate was 38% (CI, 18% to 65%). This decreased to 20% (CI, 12% to 30%) on day 8 (3 days after symptom onset) then began to increase again, from 21% (CI, 13% to 31%) on day 9 to 66% (CI, 54% to 77%) on day 21.

Findings: Chest CT offers the great sensitivity for detecting COVID-19, especially in a region with severe epidemic situation. However, the specificity is low. In the context of emergency disease control, chest CT provides a fast, convenient, and effective method to early recognize suspicious cases and might contribute to confine epidemic.

Findings: Self-collection of nasal and throat swabs offers a reliable alternative to health worker collection for the diagnosis of SARS-CoV-2 and other respiratory viruses and provides patients with easier access to testing, reduces exposure of the community and health workers to those being tested and reduces requirement for PPE.

Epidemiology & Public Health

Findings: We used estimates of seasonality, immunity, and cross-immunity for betacoronaviruses OC43 and HKU1 from time series data from the USA to inform a model of SARS-CoV-2 transmission. We projected that recurrent wintertime outbreaks of SARS-CoV-2 will probably occur after the initial, most severe pandemic wave. Absent other interventions, a key metric for the success of social distancing is whether critical care capacities are exceeded. To avoid this, prolonged or intermittent social distancing may be necessary into 2022. Additional interventions, including expanded critical care capacity and an effective therapeutic, would improve the success of intermittent distancing and hasten the acquisition of herd immunity. Even in the event of apparent elimination, SARS-CoV-2 surveillance should be maintained since a resurgence in contagion could be possible as late as 2024.

Findings: In this community seroprevalence study in Los Angeles County, the prevalence of antibodies to SARS-CoV-2 was 4.65%. The estimate implies that approximately 367,000 adults had SARS-CoV-2 antibodies, which is substantially greater than the 8,430 cumulative number of confirmed infections in the county on April 10. Therefore, fatality rates based on confirmed cases may be higher than rates based on number of infections.


Findings: During March 11–May 2, 2020, a total of 32,107 deaths were reported to DOHMH; of these deaths, 24,172 were found to be in excess of the seasonal expected baseline. Included in the 24,172 deaths were 13,831 (57%) laboratory-confirmed COVID-19–associated deaths and 5,048 (21%) probable COVID-19–associated deaths, leaving 5,293 (22%) excess deaths that were not identified as either laboratory-confirmed or probable COVID-19–associated deaths. The percentages of these excess deaths that occurred in persons infected with SARS-CoV-2 or resulted from indirect impacts of the pandemic are unknown and require further investigation.


Findings: The apparent equivalence of deaths from COVID-19 and seasonal influenza does not match frontline clinical conditions, especially in some hot zones of the pandemic where ventilators have been in short supply and many hospitals have been stretched beyond their limits. The demand on hospital resources during the COVID-19 crisis has not occurred before in the US, even during the worst of influenza seasons. Yet public officials continue to draw comparisons between seasonal influenza and SARS-CoV-2 mortality, often in an attempt to minimize the effects of the unfolding pandemic.


Findings: Limited data are available on the clinical presentation and outcomes of coronavirus disease (COVID-19) patients in the United States hospitalized under normal-caseload or nonsurge conditions. We retrospectively studied 72 consecutive adult patients hospitalized with COVID-19 in 2 hospitals in the San Francisco Bay area, California, USA, during March 13-April 11, 2020. The death rate for all hospitalized COVID-19 patients was 8.3%, and median length of hospitalization was 7.5 days. In this study, death rates were lower than those reported from regions of the United States experiencing a high volume of COVID-19 patients.

Findings: Adoption of government-imposed social distancing measures reduced the daily growth rate by 5.4 percentage points after 1-5 days, 6.8 after 6-10 days, 8.2 after 11-15 days, and 9.1 after 16-20 days. Holding the amount of voluntary social distancing constant, these results imply 10 times greater spread by April 27 without SIPOs (10 million cases) and more than 35 times greater spread without any of the four measures (35 million). Our paper illustrates the potential danger of exponential spread in the absence of interventions, providing relevant information to strategies for restarting economic activity.


Findings: This cross-sectional study with a difference-in-differences design found an increase in estimated rates of COVID-19 cases per 10 000 residents in the border counties in Iowa compared with the border counties in Illinois following a stay-at-home order that was implemented in Illinois but not in Iowa.


Findings: Nearly twenty-two percent of US counties are disproportionately black and they accounted for 52% of COVID-19 diagnoses and 58% of COVID-19 deaths nationally. County-level comparisons can both inform COVID-19 responses and identify epidemic hot spots. Social conditions, structural racism, and other factors elevate risk for COVID-19 diagnoses and deaths in black communities.


Findings: We provide evidence of potential sociodemographic factors associated with a positive test, including deprivation, population density, ethnicity, and chronic kidney disease.

**Healthcare Delivery & Healthcare Workers**

Findings: Project ECHO is a telementoring education model that expands primary care clinicians’ ability to manage complex health conditions. An interdisciplinary expert faculty, an “all teach, all learn” approach, and a combination of didactic and case-based learning characterize ECHO programs.

Findings: 377 HCWs working in different provinces of China participated in the survey between February 1st and 5th. Results showed that one month after the outbreak, the prevalence of PTSS was 3.8% in HCWs. Female HCWs were more vulnerable to PTSS and HCWs with higher exposure level also significantly rated more hyper-arousal symptoms. There was a significant difference of sleep quality between participants with and without PTSS. In summary, targeted interventions on sleep contribute to the mental recovery during the outbreak of COVID-19.

Findings: We have obtained the data on 2,457 infected cases among health care workers in Wuhan, China. More than half of the infected individuals were nurses (52.06%), while 33.62% of infected cases were doctors and 14.33% of cases were medical staff. In particular, the case infection rate of nurses (2.22%) was remarkably higher than that of doctors (1.92%). Most infected cases among health care workers were female (72.28%). A majority of the infected health care workers (89.26%) came from general hospitals, followed by specialized hospitals (5.70%) and community hospitals (5.05%). The case infection rate of health care workers (2.10%) was dramatically higher than that of non-health care workers (0.43%). The case fatality rate of health care workers (0.69%) was significantly lower than that of non-health care workers (5.30%).

Findings: Emergency department volume is down nearly 50% as the United States struggles with the Covid-19 epidemic. There is increasing evidence that patients with medical emergencies are avoiding the emergency department because of fear of contracting Covid-19, leading to increased morbidity and mortality. Here, the authors describe efforts taken in a community hospital to understand and combat this public health concern by using human-centered design. They show that addressing patient fears by dividing the emergency department into respiratory and non-respiratory pods and through targeted messaging can result in increased visits to the emergency room.

Findings: This study aimed to review and synthesize learning from previous literature focused on the impact on grief and bereavement during other infectious disease outbreaks. No research studies have focused on outcomes and support for bereaved people during a pandemic. Studies have tended to focus on survivors i.e. those who had the illness and recovered, recognizing that some of these individuals will also be bereaved people. Previous pandemics appear to cause multiple losses both directly related to death itself but also in terms of disruption to social norms, rituals and mourning practices. In view of the limited research, specific learning from the current COVID-19 crisis and the impact on the bereaved would be pertinent. Current focus should include innovative ways to promote connection and adapt rituals while maintaining respect.


Findings: At MD Anderson, the Division of Patient Experience has played an integral role in the institution's pandemic response from its inception. The team actively supported programs and processes in anticipation of the pandemic's effect on our patients and employees. We describe how the team continues to serve in the ever-dynamic environment as we approach the expected surge in COVID-19 cases among our patient population, our employees, and in our community.

Prognosis


Findings: In this study with a development cohort of 1590 patients and a validation cohort of 710 patients, a risk score was developed and validated to predict development of critical illness. We identified 10 independent predictors and developed a risk score (COVID-GRAM) that predicts development of critical illness. The risk score predictors included: chest radiography abnormality, age, hemoptysis, dyspnea, unconsciousness, number of comorbidities, cancer history, neutrophil-to-lymphocyte ratio, lactate dehydrogenase, and direct bilirubin.

Findings: We conducted a systematic review and meta-analysis of all published studies up to March 15, 2020 which reported COVID-19 clinical features and/or treatment outcomes. 45 studies reporting 4203 patients were included. Pooled rates of intensive care unit (ICU) admission, mortality and acute respiratory distress syndrome (ARDS) were 10.9%, 4.3% and 18.4%, respectively. On meta-regression, ICU admission was predicted by raised leukocyte count (p<0.0001), raised alanine aminotransferase (p=0.024), raised aspartate transaminase (p=0.0040), elevated lactate dehydrogenase (LDH) (p<0.0001) and increased procalcitonin (p<0.0001). ARDS was predicted by elevated LDH (p<0.0001), while mortality was predicted by raised leukocyte count (p=0.0005) and elevated LDH (p<0.0001). Treatment with lopinavir-ritonavir showed no significant benefit in mortality and ARDS rates. Corticosteroids were associated with a higher rate of ARDS (p=0.0003).


Findings: For patients aged 21-50 with COVID-19 presenting to the emergency department, a chest x-ray severity score was predictive of risk for hospital admission and intubation.


Results: Hypoalbuminemia was associated with the outcome of COVID-19. The potential therapeutic value of albumin infusion in COVID-19 should be further explored at the earliest.


Findings: Hematologic and immunologic impairment showed a significantly different profile between survivors and non-survivors in COVID-19 patients with different severity. The longitudinal variations of these biomarkers could serve to predict recovery or fatal outcome.


Findings: Diabetes in patients with COVID-19 is associated with a two-fold increase in mortality as well as severity of COVID-19, as compared to non-diabetics. Further studies on the pathogenic mechanisms and therapeutic implications need to be done.

Abstract: RAAS inhibitors do not increase the risk of COVID-19 requiring admission to hospital, including fatal cases and those admitted to intensive care units, and should not be discontinued to prevent a severe case of COVID-19.

Therapeutics


Findings: In this study of patients with COVID-19 and hypoxemic respiratory failure managed outside the ICU, 63% were able to tolerate PP for more than 3 hours. However, oxygenation increased during PP in only 25% and was not sustained in half of those after resupination. These results are consistent with findings from previous small studies of PP in nonintubated patients. A trial of PP may be a mechanism to select patients who will do well or it may be useful in a subset.


Findings: We identified eight studies with a total of 32 participants. Most studies assessed the risks of the intervention; reporting two adverse events (potentially grade 3 or 4), one of which was a serious adverse event. We are very uncertain whether convalescent plasma is effective for people admitted to hospital with COVID-19 as studies reported results inconsistently, making it difficult to compare results and to draw conclusions. There are 47 ongoing studies evaluating convalescent plasma, of which 22 are RCTs, and one trial evaluating hyperimmune immunoglobulin. We will update this review as a living systematic review, based on monthly searches in the above mentioned databases and registries.


Findings: Our data suggest that remdesivir can benefit patients with SARS-CoV-2 pneumonia hospitalised outside ICU where clinical outcome was better and adverse events are less frequently observed. Ongoing randomised controlled trials will clarify its real efficacy and safety, who to treat, and when.
Findings: Corticosteroids may reduce mortality for patients with COVID-19 and ARDS. For patients with severe COVID-19 but without ARDS, evidence regarding benefit from different bodies of evidence is inconsistent and of very low quality.


Findings: SARS-CoV-2 inoculated cats can spread COVID-19 to uninoculated co-housed cats and may be asymptomatic. A better understanding of the role cats may play in the transmission of SARS-CoV-2 to humans is needed.

Findings: The overall prevalence of PI caused by PPE among medical staff was 30.03%. The prevalence of male was more than that of female (42.25% vs 26.36%). The categories were mainly stages 1 and 2, and the common anatomical locations were nose bridge, cheeks, ears, and forehead. Comprehensive preventive interventions should be taken.

Findings: In the context of a rapidly evolving pandemic, multiple organizations have released guidelines stating that all organs from potential deceased donors with SARS-CoV-2 infection should be deferred, including from otherwise medically eligible donors found to have mild or asymptomatic SARS-CoV-2 discovered on routine donor screening. We critically examine the available data on the risk of transmission of SARS-CoV-2 through organ transplantation. Data provide little evidence to suggest the presence of intact transmissible SARS-CoV in organs that can potentially be transplanted, specifically liver and heart. Other considerations including ethical, financial, societal, and logistical concerns are also addressed. We conclude that, for
selected patients with high waitlist mortality, transplant programs should consider accepting heart or liver transplants from deceased donors with SARS-CoV-2 infection.

Findings: The overall seroprevalence of SARS-CoV-2 in healthcare workers of a tertiary hospital in Germany is low (1.6%). The data indicate that the local hygiene standard might be effective.

Findings: We found low- to very low-certainty evidence that covering more parts of the body leads to better protection but usually comes at the cost of more difficult donning or doffing and less user comfort. More breathable types of PPE may lead to similar contamination but may have greater user satisfaction. Modifications to PPE design, such as tabs to grab, may decrease the risk of contamination. For donning and doffing procedures, following CDC doffing guidance, a one-step glove and gown removal, double-gloving, spoken instructions during doffing, and using glove disinfection may reduce contamination and increase compliance. Face-to-face training in PPE use may reduce errors more than folder-based training. We need simulation studies with more participants to find out which combinations of PPE and which doffing procedure protects best. The use of PPE of HCW exposed to highly infectious diseases should be registered and the HCW should be prospectively followed for their risk of infection.

Findings: The median duration of viral shedding until negative detection of SARS-CoV-2 RNA was 17 days. Multivariable Logistic regression analysis indicated that high temperature at admission, time from symptom onset to admission and hospital length of stay were risk factors for prolonged duration of viral shedding.

Women & Children

Findings: There is currently no direct evidence to support intrauterine vertical transmission of SARS-CoV-2. Additional RT-PCR tests on amniotic fluid, placenta, and cord blood are needed to ascertain the possibility of intrauterine vertical transmission. For pregnant women infected during their first and second trimesters, further studies focusing on long-term outcomes are needed.

Findings: In the past month we found a 30-fold increased incidence of Kawasaki-like disease. Children diagnosed after the SARS-CoV-2 epidemic began showed evidence of immune response to the virus, were older, had a higher rate of cardiac involvement, and features of MAS. The SARS-CoV-2 epidemic was associated with high incidence of a severe form of Kawasaki disease.


Findings: This case demonstrates, for the first time, SARS-CoV-2 invasion of the placenta, highlighting the potential for severe morbidity among pregnant women with Covid-19.


Findings: The ongoing outbreak of KD in the Paris might be related to SARS-CoV2, and shows an unusually high proportion of children with gastrointestinal involvement, KDSS and African ancestry.


Findings: Our case represents a probable case of in utero SARSCoV-2 infection in a liveborn (via cesarean section) neonate. Congenital infection is supported by the following findings: the neonate was not in contact with vaginal secretions; the membranes were intact before birth; and there was no skin-to-skin contact with the mother before collection of the first neonatal nasopharyngeal swab.

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**GUIDELINES & CONSENSUS STATEMENTS**


https://zenodo.org/record/3827461#.XsQVvS-ZPUp


FDA / CDC / NIH/ WHO Updates

CDC - Multisystem Inflammatory Syndrome in Children (MIS-C) Associated with Coronavirus Disease 2019 (COVID-19)

CDC - CDC Activities and Initiatives Supporting the COVID-19 Response and the President’s Plan for Opening America Up Again

FDA Informs Public About Possible Accuracy Concerns with Abbott ID NOW Point-of-Care Test

FDA - Certain Filtering Facepiece Respirators from China May Not Provide Adequate Respiratory Protection - Letter to Health Care Providers

FDA - Coronavirus (COVID-19) Update: FDA Authorizes First Standalone At-Home Sample Collection Kit That Can Be Used With Certain Authorized Tests

NIH - Investigational ChAdOx1 nCoV-19 vaccine protects monkeys against COVID-19 pneumonia

WHO - Multisystem inflammatory syndrome in children and adolescents with COVID-19

WHO - Cleaning and disinfection of environmental surfaces in the context of COVID-19

WHO - Case Report Form for suspected cases of Multisystem inflammatory syndrome (MIS) in children and adolescents temporally related to COVID-19

WHO - Laboratory biosafety guidance related to coronavirus disease (COVID-19)

WHO - “Solidarity” clinical trial for COVID-19 treatments
Commentary

US primary health care can be cheaper and more equal. Here's how - Amy Compton-Phillips

The New Normal: Key Considerations for Effective Serious Illness Communication over Video or Telephone during the Coronavirus Disease 2019 (COVID-19) Pandemic

An Ethical Framework for Allocating Scarce Inpatient Medications for COVID-19 in the US
https://jamanetwork.com/journals/jama/fullarticle/2766294

A Beacon for Dark Times: Palliative Care Support during the Coronavirus Pandemic

Preventing a Parallel Pandemic - A National Strategy to Protect Clinicians’ Well-Being

CIDRAP Viewpoint: Part 2 - Effective COVID-19 Crisis Communication

School Reopening - the Pandemic Issue that is not Getting its Due
https://jamanetwork.com/journals/jamapediatrics/fullarticle/2766113

UN Policy Brief: COVID-19 and the Need for Action on Mental Health

If you would like to receive a customized COVID-19 Topic Alert related to your specialty or area of interest, would like a literature search conducted, or have difficulty accessing any of the above articles please contact us at librarian@providence.org

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