The COVID-19 Pandemic and the JAMA Network

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Journal editors sit at the crossroads of new ideas and findings, deciding which are worth refining and making public in their journals and which are best saved for another time and place. The global arrival of coronavirus disease 2019 (COVID-19) has brought an increase in manuscript submissions describing and evaluating the spread of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection and its morbidity and mortality, distilling what seems like years of science and policy into several months. JAMA Network editors were quickly reeducated in principles of epidemiology and public health related to epidemics and pandemics: containment, mitigation, quarantine, case-fatality, transmission coefficients, contact tracing, and whether the then-novel coronavirus was or was not like pandemic influenza. With arrival of the pandemic to the US questions multiplied, about supply chains, rationing, asymptomatic spread, transmission via droplets vs aerosolization, “flattening the curve,” telehealth, markers and duration of immunity, health inequities, and clinical concerns of pathophysiology and prospects for treatment and prevention. Since the publication of JAMA’s first article responding to the emergence of the novel coronavirus in Hubei province, China, by Fauci and colleagues in January 2020,1 the JAMA Network journals have received more than 49 000 submissions, a 98% increase over submissions in 2019, and so far have published 777 articles related to COVID-19—including 236 research investigations, 28 reviews, and 395 opinion articles—all free access to the world.

In addition, JAMA has interviewed clinicians, public health authorities, and policy experts about the rapidly evolving pandemic on live interviews broadcast onto JAMA’s social media channels and published on JAMA Network websites. During this time JAMA Network editors have worked diligently and expeditiously to evaluate, peer review, and guide revisions for manuscripts most likely to inform clinicians, change practice, and improve public health. The work contributed to and is in part fueled by the news cycle as the editors work with investigators and public health authorities to stand up an evidence and policy base for patients, clinicians, families, communities, and governments confronting this new infection.

In 13 Viewpoints in this issue,2–14 JAMA Network editors reflect on the clinical, public health, operational, and workforce issues related to COVID-19 in each of their specialties. Questions and concerns they identify in their clinical communities include the following:

- Benefits and harms of treatments and identifying mortality risk markers beyond age and comorbidities
- Cardiovascular consequences of COVID-19 infection, including risks to those with comorbid hypertension and risks for myocardial injury
- Risk for direct central nervous system invasion and COVID-19 encephalitis and for long-term neuropsychiatric manifestations in a post–COVID-19 syndrome
- Risks related to SARS-CoV-2 infection for patients with compromised immunity, such as those receiving treatment for cancer
- Challenges unique to patients with acute kidney injury and chronic kidney disease
- Risks of viral transmission from aerosol-generating procedures, including most minimally invasive surgeries, and the need for eye protection as well as personal protective equipment as part of universal precautions
- The prevalence and pathophysiology of skin findings in patients with COVID-19, determining if they are primary or secondary cutaneous manifestations of infection, and how best to manage them
- The prevalence and significance of eye findings in patients with COVID-19 and the risk of transmission and infection through ocular surfaces
- The role of anticoagulation for managing the endotheliopathy and coagulopathy characteristic of the infection in some patients
- Developmental effects on children of the loss of family routines, finances, older loved ones, school and education, and social-based activities and milestone events
- Effects of the pandemic, mitigation efforts, and economic downturn on the mental health of patients and frontline clinicians
- Seasonality of transmission as the pandemic enters its third season
- How to implement reliable seroprevalence surveys to document progression of the pandemic and effects of public health measures
- Effects of the pandemic on access to care and the rise of telehealth
- Consequences of COVID-19 for clinical capabilities, such as workforce availability in several specialties, delays in performing procedures and operations, and implications for medical education and resident recruitment.

Additional important questions that require careful observation and research include

- Randomized evaluations of treatment: what is effective and safe, and what timing of which drug will reduce morbidity and mortality? Will a combination of therapies be more effective than any single drug?
- Randomized evaluations of preventive interventions, including convalescent plasma, monoclonal antibodies, and vaccines. Which are effective and safe enough to prevent COVID-19 at a population level?
• How can COVID-19 vaccines and therapeutics be distributed and paid for in ways that are fair and equitable?
• Is immunity complete or partial, permanent or temporary, what is its mechanism, and how best is it measured? Can the virus mutate around host defenses?
• How important are preadolescent children to the spread of infection to older family members and adult communities, and what are the implications for parent, caregiver, and teacher personal risk and disease transmission?
• Is SARS-CoV-2 like influenza (continually circulating without or with seasonality), measles (transmissible but containable beneath threshold limits), or smallpox and polio (eradicable, or nearly so)?
• Has the pandemic fundamentally altered the way health care is financed and delivered? By shining a spotlight on health inequities, can the pandemic motivate changes in health care finance, organization, and delivery to reduce those inequities?

Three other critical trends deserve mention. First, the public’s health is threatened by sophisticated campaigns churn-disinformation into social media and other platforms as part of what the World Health Organization is calling an infodemic.15 Careful, deliberative science is at a disadvantage in today’s instantly networked information economy, validating the classic saying (misattributed to Mark Twain) that “lies travel half-way around the world while the truth is still putting on its shoes.” As a matter of health and potentially national security, health agencies, public health authorities, elected leaders, news organizations, and editors and publishers all need to find strategies to counter the disinformation.15-17 The health of the global population depends on this effort.

Second, the pandemic has exposed vulnerabilities in public and private health systems, with the costs to health and lives borne by the least fortunate. In years of opinion pieces and editorials, JAMA has laid out the terms of the debate and policy options moving forward for providing access to quality health care.18-22 With the right leadership the US could seize this historic opportunity, stepping once more into the breach to guarantee access through some form of health insurance to everyone.

Third, the national US pandemic response has been halting and fragmented. Just as airport security has not and would never be ceded to individual states, health security for the country cannot come from states acting alone without coordination to manage regional infectious disease outbreaks. A restored and strengthened US Centers for Disease Control and Prevention—better funded and structurally protected from political influence—could provide the public health leadership necessary to manage future similar outbreaks and protect the US population.23

No single event since the end of the Cold War has so affected the lives of virtually every person living in every country of the world. It has been a great privilege to be editors at this time in history. JAMA and the JAMA Network family of journals will continue to evaluate and publish the most helpful research, reviews, and opinion pieces to inform the global response to the COVID-19 pandemic.

ARTICLE INFORMATION
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REFERENCES