JACC: CASE REPORTS VOL. 2, NO. 5, 2020
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GUEST EDITOR'S PAGE

# Anticipating the "Second Wave" of Health Care Strain in the COVID-19 Pandemic

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Responding is one of the vital aspects of public health, as is anticipating. A large-scale public health emergency can easily overwhelm the existing venues and mechanisms that provide medical care, a situation that is currently unfolding with the coronavirus disease-2019 (COVID-19) pandemic in many countries, including the United States. The current dire state of affairs is at least partially reflective of the lack of preparedness and proper anticipation as it related to the outbreak of COVID-19 in Wuhan, China. The anticipation failure for the "first wave" will be analyzed in years to come, so that similar mistakes do not happen in the future. The current response in hardly hit, mostly metropolitan areas of the country includes mobilization and augmentation of the existing health care resources as well as social distancing; both strategies are aimed at optimizing medical care capacity. In addition, health care facilities have reorganized their care models by canceling nonurgent visits, elective procedures, and surgeries, and have encouraged patients to come to the hospital or emergency room only if it is absolutely necessary. Some areas report a decrease in non-COVID-19 related urgent visits during the pandemic. These strategies certainly help dealing with the "first wave," but do not eliminate the need of anticipation for the potential "second wave" of health care strain once the COVID-19 case load flattens or starts to decrease. "Second wave" here does not refer to the possible cyclic or seasonal nature of COVID-19 infection itself, but rather to the byproducts of the initial wave. One should anticipate 3 important components of the "second wave" in the weeks and months to come: a rebound in medical needs, intermediate-term COVID-19 infection consequences, and health care provider burnout.

Health care facilities in densely populated metropolitan areas normally handle a high volume of nonurgent and elective visits and commonly serve populations with high burden of comorbidities. Postponement of these visits as well as elective procedures and surgeries will likely result in a rebound effect: patients with ignored medical needs presenting to hospitals and offices with exacerbated conditions and decompensated states. Telemedicine has been promoted as a possible solution for this problem, but unfortunately, it has significant shortcomings. First, it does not replace effective patient-physician interaction, including proper physical examination. Second, it may provide false reassurance without proper testing or laboratory assessment. Finally, many patients, unfortunately mostly in underserved communities, may not be able to use telemedicine due to unfamiliarity with the technology or other barriers.

The emerging clinical data suggests that a percentage of COVID-19 patients experience respiratory failure and some may have cardiac involvement. Patients that require endotracheal intubation have unfavorable prognosis, and the survivors among those typically experience prolonged mechanical ventilation time. Importantly, the intermediate and long-term consequences of COVID-19 infection, especially in patients with moderate to severe disease, are largely unknown. One could speculate that the recovered patients will need close clinical follow-up

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The author attests they are in compliance with human studies committees and animal welfare regulations of the authors' institutions and Food and Drug Administration guidelines, including patient consent where appropriate. For more information, visit the *JACC: Case Reports* author instructions page.

ISSN 2666-0849 https://doi.org/10.1016/j.jaccas.2020.04.005

JACC: CASE REPORTS, VOL. 2, NO. 5, 2020
MAY 2020:845-6

to detect and manage adverse respiratory and cardiac consequences of the infection.

Health care workers face enormous challenges during the pandemic. They work in a stressful environment in a situation when the increased need for acute care is exacerbated by an unacceptable lack of protective equipment, unreliable guidance on infection prevention strategies, and widespread lack of testing. In addition, emerging reports indicate providers contracting the virus and even dying from COVID-19 infection. In a country where providers experienced high rates of burnout even in the pre-COVID era, the intermediate-term consequences can become devastating.

Anticipation creates a window of opportunity to respond to health care challenges. Public health officials are busy dealing with the immediate consequences of COVID-19 infection, but they should be aware: the "second wave" that can put another significant strain on the health care system is coming!

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