

# Letters

## Editor's Note

### The Risks of Prescribing Hydroxychloroquine for Treatment of COVID-19—First, Do No Harm

On March 21, 2020, President Donald Trump tweeted that hydroxychloroquine and azithromycin have “a real chance to be one of the biggest game changers in the history of medicine.”<sup>1</sup> The president later said of hydroxychloroquine, “What do you have to lose? I’ll say it again: What do you have to lose? Take it.”<sup>2</sup>

Although the president acknowledged that physicians should be involved in the decision to use these medications, the message to patients with coronavirus disease 2019 (COVID-19), and people worried about becoming infected, was clear. Within days, a man in Arizona died after ingesting a chloroquine-containing aquarium product that did not require a prescription.<sup>3</sup> Federal regulators facilitated use of prescription hydroxychloroquine and chloroquine by immediately issuing an Emergency Use Authorization.

One way of quantifying the influence of these high-profile statements is to examine internet search behaviors. In this issue of *JAMA Internal Medicine*, Liu and colleagues<sup>4</sup> examined internet searches for purchasing chloroquine or hydroxychloroquine online. From March 16 to 29, 2020, searches increased 442% and 1389% for chloroquine and hydroxychloroquine, respectively, compared with the preceding 6 weeks.

Although testing of hydroxychloroquine for treatment of COVID-19 is underway, available data do not support its widespread use. The study<sup>5</sup> referenced by President Trump may have methodologic flaws. A small randomized trial suggesting benefit was unblinded, and some patients received concomitant steroids or antivirals.<sup>6</sup> Nevertheless, some physicians have begun prescribing hydroxychloroquine widely, which prompted at least 12 states to pass emergency prescribing restrictions.

The potential harms are substantial. Hydroxychloroquine is QT prolonging, which poses a risk of sudden cardiac death in certain populations. People with autoimmune conditions, disproportionately women and people of color, could face disease flares owing to medication shortages.<sup>7</sup> The burden may fall hardest on the most vulnerable; low-income patients worldwide could be the first to lose access to hydroxychloroquine therapy.

Given the toll of COVID-19, the pressure to *do something* is enormous and understandable. But that must not prompt

clinicians to jettison the tenets of evidence-based medicine and the admonition to *do no harm*. As health care providers, we should inform patients about the evidence behind experimental therapies, work to enroll patients in randomized clinical trials, and consider the needs of patients without COVID-19 who may be effected by drug shortages. It is vital that we do not give in to nonevidence-based calls to embrace unproven therapies. Although we may be tempted to bypass enduring principles in this time of uncertainty and fear, the best way to protect patients is to stay grounded in evidence and to fight misinformation.

Colette DeJong, MD  
Robert M. Wachter, MD

**Author Affiliations:** Department of Medicine, University of California, San Francisco.

**Published Online:** April 29, 2020. doi:10.1001/jamainternmed.2020.1853

**Corresponding Author:** Robert M. Wachter, MD, Department of Medicine, University of California, San Francisco, 533 Parnassus Ave, San Francisco, CA 94143 (robert.wachter@ucsf.edu).

**Conflict of Interest Disclosures:** None reported.

1. @realDonaldTrump. HYDROXYCHLOROQUINE & AZITHROMYCIN, taken together, have a real chance to be one of the biggest game changers in the history of medicine. The FDA has moved mountains - Thank You! Hopefully they will BOTH (H works better with A, International Journal of Antimicrobial Agents)... March 21, 2020. Accessed April 17, 2020. <https://twitter.com/realdonaldtrump/status/1241367239900778501?lang=en>
2. The White House. Remarks by President Trump, Vice President Pence, and members of the Coronavirus Task Force in press briefing. April 5, 2020. Accessed April 21, 2020. <https://www.whitehouse.gov/briefings-statements/remarks-president-trump-vice-president-pence-members-coronavirus-task-force-press-briefing-19/>
3. Vigdor N. Man fatally poisons himself while self-medicating for coronavirus, doctor says. *New York Times*. March 24, 2020. Accessed April 17, 2020. <https://www.nytimes.com/2020/03/24/us/chloroquine-poisoning-coronavirus.html>.
4. Liu M, Caputi TL, Drezde M, Kesselheim AS, Ayers JW. Internet searches for unproven COVID-19 therapies in the United States. *JAMA Intern Med*. Published online April 29, 2020. doi:10.1001/jamainternmed.2020.1764
5. International Society of Antimicrobial Chemotherapy. Statement on IJAA paper. April 3, 2020. Accessed April 10, 2020. <http://www.isac.world/news-and-publications/official-isac-statement>
6. Chen Z, Hu J, Zhang Z, et al. Efficacy of hydroxychloroquine in patients with COVID-19: results of a randomized clinical trial. Preprint. Posted online April 10, 2020. medRxiv. doi:10.1101/2020.03.22.20040758
7. Marsh T. Live updates: which drugs are in shortage because of COVID-19? GoodRx website. Accessed April 13, 2020. <https://www.goodrx.com/blog/covid-19-drug-shortages-updates/>.