

Study suggests vulnerable populations—both clinical and sociodemographic—hit hardest by COVID-19

August 19 2020



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Data from the first COVID-19 patients treated at three large Massachusetts hospitals reveal important trends, including

disproportionate representation of vulnerable populations, high rates of disease-related complications, and the need for post-discharge, post-acute care and monitoring.

"Our medium follow-up revealed that many of these patients are very sick even after leaving the hospital," says senior author Jason H. Wasfy, MD, MPhil, director of Quality and Outcomes Research at the Massachusetts General Hospital (MGH) Heart Center. The study was published today in *EClinicalMedicine*.

For the study, the group created a detailed registry based on physician review of 247 patient charts for demographics, baseline characteristics, symptoms, home medications, laboratory data, electrocardiogram (EKG) data, imaging, and treatment.

Patients were included if they were admitted from March 7 through 30, 2020, with confirmed SARS-CoV-2 infection, to one of three Mass General Brigham (formerly Partners HealthCare) system's hospitals—MGH, Brigham and Women's Hospital (BWH), and Newton-Wellesley Hospital (NWH). These represent three of the largest hospitals in New England's largest integrated health care system. MGH and BWH are both academic medical centers, and Newton-Wellesley is a community hospital.

"I'm glad we got that mix because we need data from across different kinds of settings," says Wasfy, who is also an assistant professor of Medicine at Harvard Medical School (HMS).

Most of the study patients were initially treated with hydroxychloroquine (72 percent) and statins (76 percent, with 34 percent of those newly initiated), a practice that has since changed. "We don't use either of those treatments at our institutions anymore, which highlights the dynamic nature of COVID-19 [patient care](#)," says study lead author Cian

P. McCarthy, MD, investigator in the Division of Cardiology at MGH.

Another trend that stood out was the ethnic and socio-economic mix: 30 percent of patients were Hispanic, 21 percent were enrolled in Medicaid, and 12 percent were dual-enrolled Medicare/Medicaid. "This strongly suggests that there are some built-in disadvantages that fall on these populations' shoulders," says Wasfy. "They may have more [family members](#) living in one home, have greater difficulty accessing care, or other circumstances making them more likely to become infected and sick."

The study patients also showed a surprising range of symptoms and outcomes. More than 100 patients (42 percent) required intensive care during their stay. At the end of the data collection period, 213 patients (86.2 percent) were discharged alive, 2 patients (0.8 percent) were still in the hospital, and 32 patients (13 percent) had died. Among those discharged alive, 70 (32.9 percent) were discharged to a post-acute facility, 31 (14.6 percent) newly required supplemental oxygen, 19 (8.9 percent) newly required tube feeding, and 34 (16 percent) required new prescriptions for antipsychotics, benzodiazepines, methadone or opioids. About 10 percent of the study patients were re-admitted when followed for an average of 80 days after discharge.

"Our data demonstrates that the road to recovery extends far beyond the [hospital](#) and we must ensure we are supporting our patients physical and emotional needs after discharge," says McCarthy.

More information: Cian P. McCarthy et al, Early clinical and sociodemographic experience with patients hospitalized with COVID-19 at a large American healthcare system, *EClinicalMedicine* (2020). [DOI: 10.1016/j.eclinm.2020.100504](https://doi.org/10.1016/j.eclinm.2020.100504)

Provided by Massachusetts General Hospital

Citation: Study suggests vulnerable populations—both clinical and sociodemographic—hit hardest by COVID-19 (2020, August 19) retrieved 11 May 2024 from <https://medicalxpress.com/news/2020-08-vulnerable-populationsboth-clinical-sociodemographichit-hardest.html>

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