Annals of Internal Medicine

SPECIAL ARTICLE

COVID-19: Evaluation and Care of Patients With Persistent Symptoms Following Acute SARS-CoV-2 Infection

As of 8 June 2021, the Centers for Disease Control and Prevention (CDC) reported that more than 140 million Americans were fully vaccinated—corresponding to about 42% of the total population, 50% of the population older than 12 years, 53% older than 18 years, and 75% older than 75 years (1). Infection rates and COVID-19–related hospitalizations and deaths are dropping in the United States, and life is beginning to regain some semblance of prepandemic normalcy for many across the nation. Yet it is important to note that this is not the case in other parts of the world. The global community must recognize that the pandemic won't be over until it is over everywhere. It is also important to acknowledge that life has not returned to normal for many who lost loved ones to COVID-19 or for those who recovered from acute SARS-CoV-2 infection but have persistently poor health.

Knowledge about COVID-19 emerges rapidly, and we have witnessed great progress since *Annals of Internal Medicine* and the American College of Physicians hosted our first COVID-19 forum in October 2020. That initial forum described the science, the approval process, development of clinical indications, and the policy environment of vaccines that were in initial phase 3 trials (2). Subsequent forums addressed promoting vaccine acceptance (3), vaccine allocation and distribution (4), and common clinical questions about the 3 vaccines that have received emergency use authorization from the U.S. Food and Drug Administration (5). If you missed the first 4 programs, you can view them on Annals.org. The fifth program, held on 9 June 2021, focused on the evaluation and management of persons who continue to have symptoms despite recovering from acute COVID-19. Panelists included Dr. Lori Newman, National Institutes of Health (NIH); Dr. John T. Brooks, CDC; and Dr. Aluko Hope, Medical Director of the Long COVID-19 Program, Oregon Health & Science University. Readers can view the program in the Video (available at Annals.org) that accompanies this article.

Dr. Newman summarized highlights of the NIH's December 2020 workshop on post–COVID-19 recovery (6) and the NIH's more recent efforts on this topic (7). She highlighted the important contributions of "citizen scientists" in identifying and helping to study the brewing public health problem of persistently poor health after acute COVID-19. She estimated that even if this condition occurred in only 10% of infected persons, it could afflict more than 17 million people globally. Dr. Brooks discussed how the CDC is developing interim clinical guidance on the diagnosis, evaluation, and management of persistent symptoms after acute COVID-19. He noted that the guidance has had to rely on limited evidence to date and is certain to evolve as new data emerge. He also emphasized the importance of clinical experience in guiding patient care while we await more definitive evidence. Dr. Hope, director of one of the first post–COVID-19 clinics in New York City and now the director of a post–COVID-19 program in Oregon, shared his insights from this type of clinical experience. He discussed the broad spectrum of symptoms that people are experiencing and the need for careful epidemiologic studies of the condition and its risk factors. Because of the breadth and variability of clinical presentation, Dr. Hope emphasized the need for a team-based, multidisciplinary approach to care. He believes that post–COVID-19 programs must work in collaboration with—not in place of—patients' primary care physicians.

Just as the prevention and care of acute SARS-CoV-2 infection continue to evolve as new data emerge, so will the prevention and care of ongoing symptoms after acute infection. The panelists agreed on the following 3 issues. First, the absence of objective findings or positive results on laboratory or imaging studies must not negate patients' symptoms. Second, the medical community must learn from its experience with other postviral conditions, such as myalgic encephalomyelitis/chronic fatigue syndrome, and avoid clinical approaches that have greater potential for harm than for healing. Finally, coordinated, multidisciplinary efforts are essential both for clinical care and for research to better understand the pathophysiology, epidemiology, and effective management of persistent symptoms after SARS-CoV-2 infection.

Christine Laine, MD, MPH
Editor in Chief, *Annals of Internal Medicine*

Deborah Cotton, MD, MPH
Deputy Editor, *Annals of Internal Medicine*

Disclosures: Disclosure forms can be viewed at www.acponline.org/authors/icmje/ConflictOfInterestForms.do?msNum=M21-2342.

Corresponding Author: Christine Laine, MD, MPH, Editor in Chief, *Annals of Internal Medicine*, 190 N. Independence Mall West, Philadelphia, PA 19106; e-mail, claine@acponline.org.

See also:

Web-Only
Video: COVID-19 Forum V
CME/MOC activity

This article was published at Annals.org on 11 June 2021.

Ann Intern Med. doi:10.7326/M21-2342

References

1. **Centers for Disease Control and Prevention.** COVID Data Tracker. Accessed at https://covid.cdc.gov/covid-data-tracker/#datatracker-home on 8 June 2021.
2. **Laine C, Cotton D, Moyer DV.** COVID-19 vaccine: what physicians need to know. Ann Intern Med. 2020;173:830. [PMID: 33074704] doi:10.7326/M20-6841
3. **Laine C, Cotton D, Moyer DV.** COVID-19 vaccine: promoting vaccine acceptance. Ann Intern Med. 2021;174:252-3. [PMID: 33347321] doi:10.7326/M20-8008
4. **Laine C, Cotton D, Moyer DV.** COVID-19 vaccine distribution and allocation: what physicians need to know. Ann Intern Med. 2021; 174:413-4. [PMID: 33492990]. doi:10.7326/M21-0331
5. **Laine C, Cotton D, Moyer DV.** COVID-19 vaccine: practical clinical considerations. Ann Intern Med. 2021;174:694. [PMID: 33769829] doi:10.7326/M21-1260
6. **Lerner AM, Robinson DA, Yang L, et al.** Toward understanding COVID-19 recovery: National Institutes of Health workshop on postacute COVID-19. Ann Intern Med. 2021. [PMID: 33780290] doi:10.7326/M21-1043
7. RECOVER website. Accessed at https://recovercovid.org on 10 June 2021.