

## The Chronic Effects of COVID-19 Hospitalizations: Learning How Patients Can Get “Back to Normal”

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As our understanding of SARS-CoV-2 has progressed, researchers, clinicians, and patients have learned that recovery from COVID-19 can last well beyond the acute phase of the illness. As we see fewer fatal cases and more survivors, studies that characterize the postacute sequelae of COVID-19 (PASC) are increasingly important for understanding how to help patients return to their normal lives, especially after hospitalization. Critical to investigating this is knowing patients' burden of symptoms and disabilities prior to infection. In this issue, a study by Iwashyna et al<sup>1</sup> helps us understand patients' lives after COVID compared to their lives before COVID.

The study analyzed patients with SARS-CoV-2 infection admitted during the third wave of the pandemic to assess for new cardiopulmonary symptoms, new disability, and financial toxicity of hospitalization 1 month after discharge.<sup>1</sup> Many patients had new cardiopulmonary symptoms and oxygen use, and a much larger number had new limitations in activities of daily living (ADLs) or instrumental activities of daily living (iADLs). The majority were discharged home without home care services, and new limitations in ADLs or iADLs were common in these cases. Most patients reported not having returned to their cardiopulmonary or functional baseline; however, new cough, shortness of breath, or oxygen use usually did not explain their new disabilities. Financial toxicity was also common, reflecting the effects of COVID-19 on both employment and family finances.

These results complement those of Chopra et al,<sup>2</sup> who examined 60-day outcomes for patients hospitalized during the first wave of the pandemic. At 2 months from discharge, many patients had ongoing cough, shortness of breath, oxygen use, and disability, but at lower rates. This likely reflects continuing recovery during the extra 30 days, but other potential explanations deserve consideration. One possibility is improving survival over the course of the pandemic. Many patients who may have passed away earlier in the pandemic now survive to return home, albeit with a heavy burden of symptomatology. This raises the possibility that symptoms among survivors may continue to increase as survival of COVID-19 improves. However, it should be noted that neither study is representative of the national patterns of hospitalization by race or ethnicity.<sup>3</sup> Iwashyna et al<sup>1</sup> underrepresented Black patients, while Chopra et al<sup>2</sup> underrepresented Hispanic patients. Given what we know about outcomes for these pop-

ulations and their underrepresentation in PASC literature, the impact of COVID-19 for them is likely underestimated. As data from 3, 6, or 12 months become available, we may also see the effect sizes described in this early literature become even larger.

Consistent with the findings of Chopra et al,<sup>2</sup> financial toxicity after COVID-19 hospitalization was high. The longer-term financial burden of COVID-19 will likely exceed what is described here, particularly for Black and Hispanic patients, who experienced a disproportionate drain on their savings. These populations are also more likely to be negatively impacted by the COVID economy<sup>4</sup> and thus may suffer a “double hit” financially if hospitalized.

Iwashyna et al<sup>1</sup> underscore the urgent need for progress in understanding COVID “long-haulers”<sup>5</sup> and helping patients with physical and financial recovery. Whether the spectacular innovations identified by the medical community in COVID-19 prevention and treatment of acute illness can be found for long COVID remains to be seen. The fact that so many patients studied by Iwashyna et al did not receive home care services and experienced financial toxicity shows the importance of broader implementation of systems and services to support survivors of COVID-19 hospitalization. Developers of this support must emphasize the importance of physical and cardiopulmonary rehabilitation as well as financial relief, particularly for minorities. For our patients and their families, this may be the best strategy to get “back to normal.”

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