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## Are There Enough Experienced Physicians to Treat Patients Hospitalized With COVID?

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# Are There Enough Experienced Physicians to Treat Patients Hospitalized With COVID?

## Abstract

In this national study of 438,895 physicians, 45% provided care to hospitalized patients and 7% provided critical care. At the high estimate of patients requiring hospitalization at the projected peak of the pandemic, 18 states and Washington, DC would have patient to physician ratios greater than 15:1 (a level associated with poor outcomes among hospitalized patients). There was considerable geographic variation in the availability of physicians: 41% of hospital service areas did not have a physician with critical care experience.

## Keywords

physicians, covid, covid-19, hospital staffing, critical care, coronavirus, pandemic

## Disciplines

Critical Care | Health Services Administration | Health Services Research | Virus Diseases

## Comments

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# Research BRIEF

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## ARE THERE ENOUGH EXPERIENCED PHYSICIANS TO TREAT PATIENTS HOSPITALIZED WITH COVID?

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### KEY FINDINGS

In this national study of 438,895 physicians, 45% provided care to hospitalized patients and 7% provided critical care. At the high estimate of patients requiring hospitalization at the projected peak of the pandemic, 18 states and Washington, DC would have patient to physician ratios greater than 15:1 (a level associated with poor outcomes among hospitalized patients). There was considerable geographic variation in the availability of physicians: 41% of hospital service areas did not have a physician with critical care experience.

### THE QUESTION

With the third wave of COVID threatening the U.S., hospitals are anticipating another surge of patients. During the earlier waves, hospitals and health systems increased physician staffing by deploying available physicians to attend on the inpatient wards. However, little is known about the experience of physicians with treating hospitalized patients, including those who require critical care. In fact, over the past decade hospital care became increasingly concentrated among physicians who practice there exclusively (i.e., hospitalists). How many US physicians have recent experience treating hospitalized patients, and how well does physician supply match regional projections of need during future COVID peaks?

Using 2017 Medicare data, Ryskina and colleagues measured the number of physicians who billed Medicare for services provided to hospitalized patients, the number of physicians who provided critical care, and the number of physicians regardless of experience. The authors completed two separate analyses. In one, they measured the number of physicians with relevant experience per 100,000 residents in the 3,360 hospital

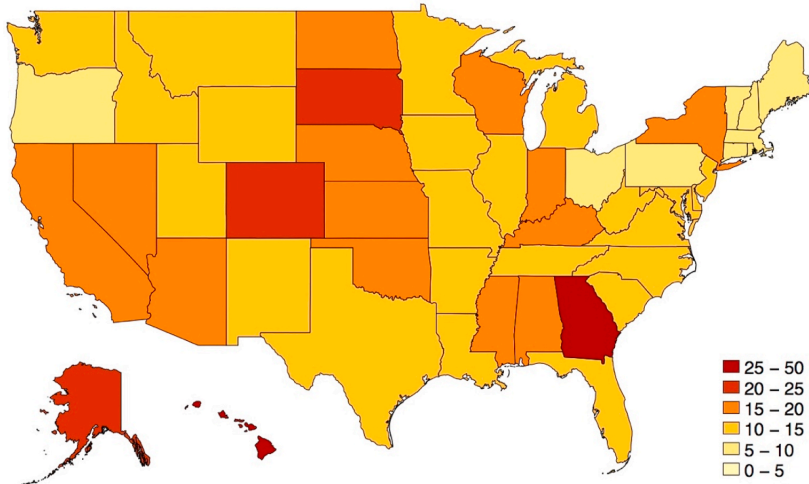
service areas in the U.S. The authors considered critical care experience, minimum visit volume, as well as risk factors for severe COVID (e.g., age greater than 65). In another, they calculated patient volume per physician at the peak of the pandemic for each state and Washington, DC using projections from the Institute of Health Metrics and Evaluation model. The estimates accounted for other factors that affect the ratios, such as transmission rates among health care workers and reduction in hospitalizations for non-COVID causes.

### THE FINDINGS

Fewer than half of physicians in the study billed Medicare for hospital visits in 2017. One in five physicians billed for 50 or fewer hospital visits in a year. Of the physicians with recent experience treating hospitalized patients, one in ten was over 65 years of age.

If only physicians with experience treating hospitalized patients are utilized, the median patient volumes across all states are 10 to 13 patients per physician. Eighteen states and Washington, DC would have patient

**Figure 1. Projected Patient Volume per Physician at the Peak of the Pandemic: Medical and Surgical Specialties**



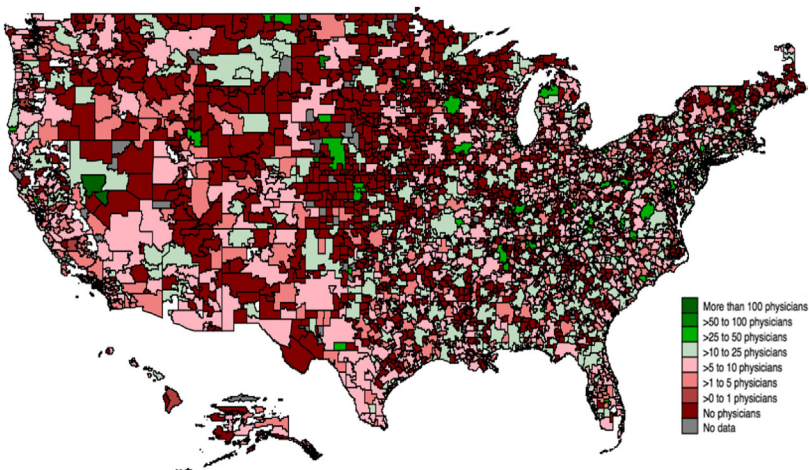
Source: [Healthcare](#), 2020.

to physician ratios above 15:1 at the projected peak of the pandemic (Figure 1). If all physicians were deployed regardless of experience, each provider would need to treat a median of 5 to 6 patients, with only one state – Georgia – exceeding 15 patients per provider. There was considerable geographic variation in the availability of physicians: 41% of hospital service areas did not have a physician with critical care experience (Figure 2).

## THE IMPLICATIONS

These studies identify potential shortages in physicians with recent experience treating hospitalized or critically ill patients, especially in the areas of the country currently facing a resurgence of COVID. Patient to physician ratios greater than 15:1 have been associated with poor outcomes in prior studies. Ensuring sufficient physician supply may require widening the net to include all available physicians regardless of experience. Thus, health systems should consider implementing training strategies to prepare physicians in advance of deployment. States should develop strategies to address regional shortages, particularly in critical care, such as telemedicine consultation and additional resources for inter-hospital transfers.

**Figure 2. Physicians who Billed for Critical Care per 100,000 Hospital Service Area Residents**



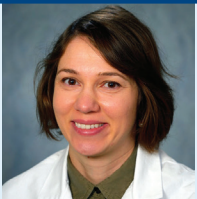
Source: [JGIM](#)

## THE STUDY

The authors used the Medicare Provider Utilization and Payment Data to identify physicians in medical and surgical specialties who billed Medicare for acute hospital visits and critical care visits in 2017 (the most recent data available). Physicians in specialties unlikely to be deployed as the primary physician for hospitalized patients during the pandemic were excluded: dermatology, nuclear medicine, psychiatry, ophthalmology, pathology and radiology. Physicians trained in emergency medicine who are likely to be needed in the emergency department were also excluded. One limitation of the study was that it did not consider trainees (e.g., residents) and advanced practitioners (e.g., nurse practitioners) who provide direct patient care to hospitalized patients.

K.L. Ryskina, A. Bhatla, R.M. Werner. US Physicians with Recent Experience Managing Hospitalized Older Adults: An Observational Study. *Journal of General Internal Medicine* – published online September 19, 2020.

A. Bhatla, K.L. Ryskina. Hospital and ICU Patient Volume Per Physician at Peak of COVID Pandemic: State-level Estimates. *Healthcare* – published online October 22, 2020.



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[Kira L. Ryskina, MD, MSHP](#) is an Assistant Professor of Medicine in the Division of General Internal Medicine at the University of Pennsylvania. Her research aims to elucidate non-clinical factors that systematically influence physician practice of high-value care for older adults with multiple chronic conditions. Her recent work explores the role of physician specialization in the outcomes, costs, and care experience of patients receiving post-acute care in nursing homes. Dr. Ryskina completed clinical training in internal medicine and primary care at New York Presbyterian – Weill Cornell. She treats hospitalized patients at the Penn Presbyterian Medical Center in Philadelphia.