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County Workforce Deficit Estimator

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ISSUE

As the third wave of COVID-19 was tapering off in the United States, we obtained new data that enabled us to revise our state-level hospital workforce estimator to provide county-level estimates of workforce need related to COVID-19 outbreaks.

METHODS

We estimated demand for intensivists using newly available county-level projections for COVID-19 infection rates and hospitalizations provided by Premier, Inc. County-level intensivist supply estimates were provided by IQVIA. We modeled whether counties were likely to require *contingency* or *crisis* level staffing in the next 30-days to meet projected COVID-19 demand. Intensivist supply served as a proxy for the larger workforce required to staff hospitals and ICUs, such as nurses, respiratory therapists, and hospitalists as county level estimates for these other professions were less reliable.

FINDINGS

The County Workforce Deficit Estimator showed that even during non-peak COVID-19 periods at the start of 2021, approximately 5-7% of counties were at risk for contingency or crisis level staffing. As the fourth wave has begun to take hold, the number of counties in contingency or crisis level staffing doubled to 14% as of August 26, 2021, with counties in the south facing the greatest COVID-19 related staffing challenges. It is important to note that the estimates provided by the tool could be undercounts as the model used to estimate county level trends needs time to adjust to changing trends in transmission rates and hospitalization rates associated with the Delta variant.

DISCUSSION

Estimating workforce need at the county level is very challenging due to limited publicly available data. The COVID-19 public health emergency has led organizations like Premier, Inc and IQVIA to make proprietary data available in unprecedented ways which has expanded our workforce analysis capabilities. It has also fostered increased collaboration with other partners, such as NACCHO, to help ensure findings are widely disseminated to key stakeholders.

The National Plan and Provider Enumeration System (NPPES) could be a helpful resource but is currently insufficient for adequately tracking the health workforce. However, with more systematic requirements in place for providers to update and maintain records, it could become a highly valuable database for informing workforce supply and distribution in the United States both during public health emergencies as well as for identifying ongoing workforce supply and distribution challenges in less turbulent times.

Key Words: health workforce, COVID-19, pandemic preparedness