

Coronavirus Disease 2019 Planning and Response A Tale of Two Health Workforce Estimator Tools

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ISSUE

We describe the development of two estimator tools designed to inform health workforce planning for COVID-19.

METHODS

We estimated supply and demand for intensivists, critical care nurses, hospitalists, respiratory therapists, and pharmacists, using Institute for Health Metrics and Evaluation (IHME) projections for COVID-19 hospital care and National Plan and Provider Enumeration System, Provider Enrollment Chain and Ownership System, American Hospital Association, and Bureau of Labor Statistics Occupation Employment Statistics for workforce supply. We estimated contact tracing workforce needs using Johns Hopkins University COVID-19 case counts and workload parameters based on expert advice.

FINDINGS

The State Hospital Workforce Deficit Estimator estimated the sufficiency of state hospital-based clinicians to meet projected COVID-19 demand. The Contact Tracing Workforce Estimator calculated the workforce needed based on the 14-day COVID-19 caseload at county, state, and the national level, allowing users to adjust workload parameters to reflect local contexts.

DISCUSSION

The 2 estimators illustrate the value of integrating health workforce data and analysis with pandemic response planning at the local, state, and national levels. The many unknowns associated with COVID-19 required tools to be flexible, allowing users to change assumptions on number of contacts and work capacity. The availability of healthcare and public health service needs, staffing models, and health workforce were a challenge for both estimators and persisted well into the course of COVID-19. Together, these tools highlight the need to invest in health workforce data and data infrastructure as part of future emergency preparedness planning.

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