

Survey highlights how clinical labs' quick response to COVID-19 helped reduce hospitalizations and save lives

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A new survey from the Association for Diagnostics & Laboratory Medicine (formerly AACC) has found that clinical labs' robust, rapid

response to the COVID-19 pandemic helped to contain the virus and save lives. However, the challenges labs faced with insufficient supplies and staffing shortages have only intensified since 2020. The percentage of laboratory professionals reporting staffing issues rose steadily from 35.4% in May 2020 to 87.5% in January 2022—raising questions about whether labs would have the necessary resources to respond to a similar public health emergency today.

"Globally, it is critical we increase the visibility of the laboratory to [health care professionals](#), national and international government agencies, and patients to solve staffing shortages and maintain supply chain continuity in order to ensure successful health care options in the future," wrote study authors Drs. Caitlin R. Ondracek, Jonathan R. Genzen, Christina M. Lockwood, Saswati Das, Stacy E.F. Melanson and Phillip Kang.

Leaders from 191 laboratories responded to 8 surveys between May 2020 and December 2022. Respondents represented 133 labs in the U.S. and 58 from other countries. They worked for a range of institutions, including government/public health laboratories, reference labs, research labs, independent laboratories, and hospital laboratories.

In May 2020—just two months after the national shutdown—more than 70% of [respondents](#) were offering COVID-19 diagnostic testing in their laboratories. This increased steadily to 100% in January 2022 and dropped slightly to 98% by December 2022.

Throughout the [pandemic](#), most reported a turnaround time (the period between receiving specimens and generating results) of just 1 to 12 hours or 12 to 24 hours. There was a slight increase in turnaround time, to 24 to 48 hours, in August and September 2020.

"Despite the evolving pandemic, the turnaround time provided by the

laboratory allowed for rapid triage of patients and a reduction in hospital transmission rates," the authors wrote.

Still, supply and staffing shortages loom large. In most of the surveys, 55% to 65% of laboratories reported being unable to obtain supplies. Obtaining reagents and test kits was most problematic.

As for staffing challenges: After peaking at 87.5% in January 2022, they remained high throughout the remainder of the survey period, affecting 78.6% of labs in December 2022.

The percentage of laboratories' total testing capacity dedicated to COVID-19 was most frequently 20% or less in 2020. However, by January 2022, more respondents were dedicating greater than 40% of their testing capacity to COVID-19. This shifted back to 0-20% in December 2022.

On average, 82.3% of labs sent their results to their state throughout the pandemic. Less frequently, results were sent to federal or local agencies. Most respondents—between 74.3% and 83.3% throughout the survey period—reported that their laboratory was using U.S. Food and Drug Administration Emergency Use Authorized test kits.

When asked to share their lessons learned during the pandemic, respondents emphasized the need for industry partnerships, standardized educational guidelines, and a sustainable pipeline of medical laboratory scientists.

"Despite the shortages, the resiliency of the laboratory staff during the pandemic was remarkable. While many other professionals were working remotely, the [laboratory](#) staff did not have that option. Instead, the staff were adaptable and flexible, and many cross-trained to help with coverage," the authors stated.

More information: Caitlin R Ondracek et al, Robust Response of the Clinical Laboratory to the COVID-19 Pandemic despite Significant Challenges, *The Journal of Applied Laboratory Medicine* (2023). [DOI: 10.1093/jalm/jfad049](https://doi.org/10.1093/jalm/jfad049)

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