

# CONFRONTING COVID-19 PANDEMIC - PAKISTAN'S EXPERIENCE WITH LABORATORY DETECTION

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## Abstract

COVID-19 pandemic has affected all countries and has threatened not only the health systems but overall governance structure of countries across the globe. Countries with weak public health systems remained at risk of substantial morbidity and mortality due to COVID-19. In Pakistan, due to diversity in provincial public health preparedness capacities SARS-CoV-2 data collection and response was fragmented during the early phase of the pandemic. To overcome this, the National Command Operation Center (NCOC) was established in March 2020 and has been now merged with NIH. As of 7th February 2023, 1.6 million people have been infected with COVID-19, with over 30 thousand deaths reported across the country. NIH delivered awareness lectures on national media, point of entry, hospitals, and public institutes, and conducted vaccination campaigns, rapid response, surveillance, and diagnostics facilities at point of entry. NIH provided leadership for enhancing the COVID-19 testing capacities after acquiring SARS-CoV-2 detection capability in Feb 2020. NIH-mandated training on bio risk management, SARS-CoV-2 diagnostics, and laboratory assessment for a number of provincial public and private laboratories. Besides developing national guidelines for testing and strategies for molecular and antigen-based testing, the institute also leads genomic surveillance for SARS-CoV-2 covering all waves of SARS-CoV-2 pandemic which has subsequently revealed early detection of variants of concerns (VOCs). The NIH has submitted 3360 SARS-CoV-2 sequences to the GISAID database and organized an external quality assessment (EQA) of molecular detection of SARS-CoV-2 by distributing an EQA panel to public and private laboratories.

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