

# Expansion of national laboratory capacity in the Federal Republic of Somalia throughout the COVID-19 pandemic

Sahra Mohamed<sup>1</sup>, Ayni Mohamed<sup>1</sup>, Hassan Abukar<sup>1</sup>, and Abdulrahman Sheikh<sup>2</sup>

<sup>1</sup>National Public Health Reference Laboratory

<sup>2</sup>National Public Health Reference Laboratory

May 29, 2023

## Abstract

Abstract Introduction Somalia faced significant COVID-19 exposure due to limited lab capacity for pathogen detection. The country's healthcare system is strained by poverty, conflict, malnutrition, and outbreaks. Urgent action was required to enhance COVID-19 detection, save lives, and support nationwide vaccination and healthcare efforts. Methods With WHO and other partners, the Ministry of Health formed the COVID-19 incident management committee to address infections. Testing was initiated at the National Public Health Laboratory, and through training and investment, expanded to 11 additional sites. Genomic surveillance was established to monitor circulating genotypes. A comprehensive data management system was implemented to track infections from patient to reporting, ensuring effective monitoring and response. Results The enhanced laboratory capacity identified 26,439 confirmed SARS-CoV-2 cases, resulting in 1,361 deaths and a case fatality rate (CFR) of 5.15%. A total of 344,002 suspected samples were tested within the country. Genomic surveillance was initiated in March, 2022, and the first results were reported in August, 2022. The e-SPAR tool assessment demonstrated a significant improvement in laboratory capacity, rising from 27% in 2018 to 56% in 2021, marking an overall improvement of 210%. Discussion Somalia has made notable strides in enhancing and expanding in-country molecular diagnostic capacity, enabling swift COVID-19 diagnosis. This capacity is being expanded to encompass other pathogens as part of an integrated disease surveillance program. The objective is to enhance response capabilities to emerging pathogen outbreaks. The implementation of a data management system has improved data monitoring and evaluation, serving as a crucial foundation for Labs

## Hosted file

Expansion of national laboratory capacity in the Federal Republic of Somalia throughout the COVID-19 pandemic is available at <https://authorea.com/users/623275/articles/646077-expansion-of-national-laboratory-capacity-in-the-federal-republic-of-somalia-throughout-the-covid-19-pandemic>