

# Role of molecular diagnostic capacity in COVID-19 control - South Indian experience

**Raju Sivadoss**

Deputy Director, State Public Health Laboratory, Chennai, India

## **ABSTRACT**

**Summary:** The COVID-19 pandemic has resulted in an unprecedented global emergency and has claimed more than 6.45 million deaths by August 2022. COVID-19 has had a devastating impact on global health and economy. While antiviral agents against the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the virus causing COVID-19, are yet to become widely available, vaccines and public health interventions recommended by the World Health Organization (WHO) remain the most promising approach against the global catastrophe. Being a new virus strain encountered by the human host, Molecular Diagnostic Capacity has played a vital role for the early detection of symptomatic cases for immediate isolation, preventing the further spread of infection in the community and to provide essential medical care. Early detection of infections in elderly (>60yr) and individuals with co-morbidities (diabetes, hypertension, chronic lung or kidney disease, malignancy, obesity etc) have saved innumerable lives. The presentation describes the challenges faced by Tamil Nadu, a southernmost state of India and the innovations implemented to augment the RT-PCR Testing Capacity during the international lock down during the first wave of the current pandemic. The SARS-CoV-2 virus also undergoes a series of mutations to adapt itself into the human population that likely could alter the disease spectrum, presentation and dynamics in the coming years. Eclectic variants of SARS-CoV-2 are increasingly evolving globally throughout the pandemic and Genomic Surveillance is an important Public Health Tool to monitor the emergence of new variants in the community.