

COVID LABORATORY SURVEILLANCE

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Introduction

- Kerala was the first state in India to report the first Covid positive case on January 30th, 2020
- Diagnostic facility for Covid 19 at that time was available only at NIV Pune
- Initial 72 samples were tested at NIV Pune
- Even before the first case was detected the State had published SOP for sample collection and transportation related to Covid 19
- With the reporting of initial 3 cases and contact tracing the need for testing began to increase exponentially

Lab Network

- By February 3rd 2020, testing facility was made available at NIV Alappuzha, Kerala Unit
- The state Govt have taken continues effort to arrange testing facilities in all districts of Kerala
- In March 2020 ICMR approved 6 RTPCR laboratories in Kerala which included 3 Medical colleges, SPHCL, RGCB and IUCBR
- The effort continued and we could setup 28 RTPCR Labs in the state.

- VRDL labs, Public health labs, Inter university labs, SCTIMST, RGCB, MMC, IISER etc
- Testing strategies and methods based on ICMR guidelines and advisories
- Nuclear amplification based test – RTPCR, CBNAAT, TRUENAT, RT LAMP etc and Rapid antigen test were put in place.
- Along with routine samples epidemiological studies were also carried out by sentinel surveillance samples, augmented samples and antibody surveillance

Public Private Partnership

- Private labs which conform to the ICMR guidelines were given permission for Covid testing
- NABL accreditation - mandatory for PCR based tests
- Developed a vast network of labs – 3020 labs (99 RTPCR labs, 31 CBNAAT, 86 Truenat, 2804 Ag labs)
- Antigen testing labs should have tie up with RTPCR testing lab
- Rate for each category of test fixed by the Government
- Quality control mechanism – fixed no. of samples to NIV Alappuzha

State level Covid Lab management team

- To facilitate ICMR approval of private labs
- Dedicated e mail ID given in the Govt advisory for submitting applications
- Sree Chithra institute is the mentor institution for obtaining ICMR approval
- Lab management team verifies the application with the ICMR checklist and forward the application to Sree Chithra Institute

- Antigen approval given from the State, if it meets all the requirements and there is a tie up with RTPCR lab
- Online trainings were given for testing, reporting and data dissemination
- Private lab should use only the test kits and reagents approved by ICMR and available in the ICMR website
- Private lab violations – initial warning to rectify, final cancellation of registration by approving authority

Sample Data Management

- Initially data flow from districts and labs – managed by sharing Google sheets
- Data collection regarding Interstate and international travel history was a tedious process
- By May 2020, Govt developed an online portal – Healthmon portal for real time management of data
- Access given to designated persons in the district and state level
- An API established for transfer of data between state and ICMR
- Reduced the double burden of data entry in the State and ICMR portal

- By October 2020, a modified and upgraded version of State portal came into effect – the present LDMS portal- much more user friendly, speedy and easy to analyse data. (For sample data entry and lab data entry)
- Internal login at the lab user end to approve the test results after verification
- The designated district health authority and state authority were given data access
- Apart from basic details other statistics regarding vaccination, travel history, contact details are available in the portal
- Another key feature of LDMS portal- result access to the general public- provided with a QR code

State level daily compilation and reporting of Covid data

- Done by State Reporting unit at State PH Lab (till March 2022). Currently by IDSP
- Downloading 1pm to 1pm data from LDMS portal, verification with the district summary received
- Data includes no of samples tested, new positives, cumulative, last 24 hours etc
- Reporting of daily Covid data to the Govt
- Compilation of weekly Covid data

Material supply management and coordination

- Initially test kits and reagents supplied by ICMR
- State PH Lab maintained and updated the stock position of reagents and which was monitored by NDMA
- After a few months state started the procurement through KMSCL
- Viral Transport medium production and supply from State PH Lab – Developed a system for supply of VTM to all the 14 districts
- More than 24 Lakhs no. of regular VTM and 5.4 lakhs of modified VTM produced and supplied saving lakhs of money(till it was freely available in the open market by 2021 and procured by KMSCL)
- Equipment support mainly through KMSCL
- Mobilized PCR machines from various Central institute and departments

HR support for Lab

- State PH Lab coordinated and collected the requirements from all the RTPCR labs and submitted proposal to State NHM for additional HR
- NHM provided research officers, lab technicians, lab assistants, cleaning staffs and Data entry operators
- District collectorates provided volunteers for data entry purpose

Thank you