

Research Article

Effective Public Health Measures Assist Ladakh in Containment of COVID-19

Jugal Kishore¹, Suneet Kaur², Mahesh Waghmare³, SK Jain⁴, Himanshu Chauhan⁵, SK Singh⁶

¹Director Professor and Head of Community Medicine, VMMC Safdarjung, New Delhi, India.

^{2,3}Deputy Director, ⁶Director, National Center for Disease Control, DGHS, MoHFW, New Delhi, India.

⁴Adl. Director and Head Epidemiology, NCDC, DGHS, MoHFW, Delhi, India.

⁵Joint Director & Officer Incharge (IDSP), NCDC, DGHS, MoHFW, Delhi, India.

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Corresponding Author:

Mahesh Waghmare, National Center for Disease Control, DGHS, MoHFW, New Delhi, India.

E-mail Id:

drmahesh108@gmail.com

Orcid Id:

<https://orcid.org/0000-0003-2872-1320>

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A B S T R A C T

India has reported more than 90,000 cases and 3029 deaths of COVID-19 from 33 States/ UTs as on 18.05.2020. Central and State governments are taking various public health measures to contain the spread of disease. Central team was deputed to Ladakh to assist the newly created UT to firm up their response against COVID-19 as pilgrims were set to return from Iran from where more than 3000 cases had been reported by early March. The present article gives insight into how streamlining public health preparedness at the beginning of an outbreak can help contain it efficiently.

Keywords: COVID-19, Public Health Measures, Containment, Surveillance

Introduction

India reported its first case of COVID-19 on 30 January 2020.¹ Since then, 96,169 confirmed cases and 3029 deaths have been reported from 33 States/ UTs as on 18.05.2020.² India is closely reviewing and taking various public health measures to contain the impact of this novel disease like restricting entry and containing the spread of the disease by effectively testing the suspects, treating cases and tracking the contacts and putting them under surveillance to prevent the spread of the disease in community. Highest level of support is being provided by Centre to the States/ UTs to effectively implement the Government of India's strategies to face the threat at war footing level.

Many Indians from Ladakh visit Iran every year during January to March for pilgrimage. Iran had reported more than 3000 cases of COVID-19 by 6 March 2020.³ Around 200

pilgrims have returned to Ladakh from Iran and many more were expected to come. After returning back, they have the ritual of meeting their fellows to give religious preaching. In this context a Central team comprising of Public Health Experts and Microbiologist was deputed to Ladakh to assess the preparedness of UT and assist in effective management of COVID-19 threat from 6 March 2020 to 10 March 2020.

Methodology

The team conducted following activities:

- Visit to Leh airport to assess screening of passengers for COVID-19
- The team conducted key informant interviews of health officials including IDSP of UT
- Visit to SNM Hospital Leh, District Hospital Kargil, Army Hospital, Leh. Isolation wards in Leh, Kargil and Army Hospital to assess their preparedness in management

of suspects and confirmed cases.

- Reviewed case information sheets of confirmed cases.
- Training of Doctors and paramedical staff on Infection Prevention and Control Guidelines, SOP of surveillance and transport of samples related to COVID-19
- Addressing local panchayat sarpanch and block development offices and religion leaders
- Meeting with Executive Council for community involvement
- Meeting with local leaders in chuchot Gongma village

Observations

The SNM Hospital in Leh is having a bed strength of 150 is the only health institution, fully equipped with modern sophisticated machineries and equipment's, specialists, doctors, nursing and other Para medical staff. The hospital is linked with the AIIMS and other reputed health institutions of the country through the Tele- medicine system, which enables the doctors to consult the super specialists for treatment of patients. However, laboratory was headed by Pathologist and no facilities for virus diagnosis.

The screening of passengers at Leh airport started on 31 January 2020. Those who were found symptomatic were then transferred to designated health facility. This is how the Ladakh's first COVID case was detected. A pilgrim who was resident of chuchot Gongma village returned from Iran and was found symptomatic at the Ladakh airport. He was promptly shifted to designated health facility for isolation, where his sample was taken and sent for laboratory confirmation which later turned out to be positive on 7 March 2020.

There was a lag in sample collection and report received by the health authorities as the samples were sent from Ladakh and Kargil by courier to Delhi for testing, wherein crucial 5-6 days were wasted between sample being collected and results received. The Central team streamlined the process and the sample transport time was reduced to one day. Ladakh has set a precedent in COVID testing by conducting 14,843 per million tests (4067 tests) till 17 May 2020⁴ with positivity rate of 1.05% (43 cases) as compared to Pan India where 1771 tests per million (2302792 tests) have been conducted till 18 May with positivity rate of 4.17%.⁵

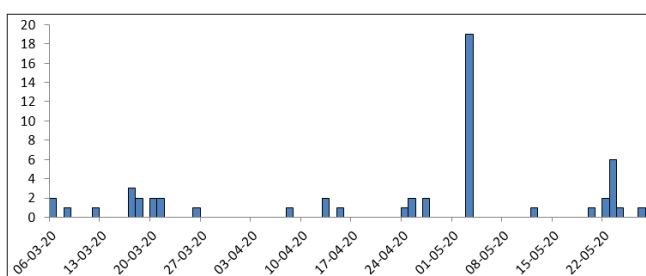


Figure 1. Day wise distribution of cases in Ladakh

As on 27th May 2020, 54 people are so far affected in Ladakh by covid-19. Only 1 patient has died due to coronavirus in Ladakh.

A visit to Kargil district was made where inspection of isolation facility and district hospital was made by the team. Onsite instructions were made to improve the infrastructure, hygiene and sanitation of the hospitals. A meeting with all Sarpanch and Panchayat mukhiya, councillors and religious leaders was organized where presentation on COVID transmission, myths and belief systems, dos and don't were discussed. Their questions were addressed.



Figure 2. Administrative officers and Central team with local leaders in Kargil

The team visited chuchot Gongma village on 10 March 2020. The two COVID-19 cases and one suspect who later died belong to chuchot Gongma Village. The Central Team along with Divisional Commissioner, DC Leh visited village Chuchot Gongma and met the Councilor of the Village, Sarpanch, family of the deceased and few other villagers. The village has been contained since the death of suspect case on 8 March 2020. There was lot of apprehension and scare among the villagers regarding the spread of disease in their village and restriction of their movement. The Central team allayed their fears, counseled them and apprised them about how to protect themselves from the disease, precautions to be taken and ensuring strict home quarantine by the contacts of the cases. The Central team also informed them that the suspect case who died has tested negative. The administration also gave them assurance that all their necessities will be taken care.



Divisional Commissioner Ladakh Saugat Siswas Interacting with people in Chuchot Gongma village.



Figure 3. Containment measures in Chushot Gongma Village

Public Health Actions

- Streamlining of passenger screening at airport
- Training of Doctors and paramedical staff on COVID-19 and Infection Prevention and Control Guidelines
- Community engagement in reporting of suspect cases through involvement of Gram Panchayats, local religious leaders, executive councilors.
- Streamlining of sample transport from Ladakh to NCDC Delhi
- Closure of schools to contain the spread of COVID-19
- Advised to prevent mass gathering
- Containment of the village chuchot Gongma

Recommendation

Airport: A self-reporting form may be given to passengers in flight and bring them in smaller lots to the arrival to decongest. Designate facilitators for illiterate passengers

Ambulance: SNM Hospital Leh to earmark one ambulance for shifting COVID-19 suspect case and the driver, staff identified for that ambulance shall be trained on PPE and disinfection. District Hospital Kargil to ensure disinfection of ambulance as per the guidelines.

Advisory: The administration should issue an advisory to the community not to hold mass gatherings and involvement of religious leaders to stop religious gatherings. Similarly, advisory should be issued by the Executive Council for closure of schools and colleges. Such advisory should be reviewed from time to time. A policy should be made for the migratory labourers for their safety and occupational health.

Travel & Tourism: Advisory should be issued to all the travel agencies and hotels for preventive measures required for COVID from each tourist and drivers. Advisory to hotels to report all the guests arriving from COVID-19 affected countries to the Control Room established in Leh and Kargil and maintain their log.

IEC: Generation of awareness among community on prevention from COVID and their involvement in home quarantine of contacts of suspect, self-reporting and reporting by gram panchayats about suspect case and those with travel history to Iran and other COVID affected countries.

PPE: Ensure adequate PPE stock in the UT for the staff doing screening of passengers, handling suspect/confirmed cases of COVID-19. UT Health department can request Centre for PPE and packaging material for samples. UT administration can explore the possibility of manufacturing local cotton mask and sanitizers for general public.

IPC & BMW management: Ensure Infection Prevention and Control guidelines and biomedical waste management guidelines are followed at all the hospitals in Leh and Kargil. Form Hospital Infection Control Committees in all the hospitals and ensure regular meetings of the Committee with maintenance of log.

Capacity building: Training of the staff in Infection Prevention and Control, biomedical waste management and management of COVID-19 cases through training and re-trainings.

Surveillance: UT to ensure daily reporting of surveillance on the portal. The contact tracing of confirmed cases shall be done as per the guidelines. Ensure home quarantine of contacts of confirmed cases and those who have returned from Iran for 28 days and maintain their log of active surveillance. Isolate and test the symptomatic contacts as per the SOPs.

Screening carried out at the airport by Health staff of the commercial flights and of the Airforce and Army flights should be shared with the total number on daily basis to the UT authority so that it can be reflected at the national level.

Active surveillance in chuchot Gongma village to identify and put under surveillance those with travel history to COVID-19 countries and contacts of confirmed cases and ensure their home quarantine and identification of suspects and their testing and isolation as per guidelines.

Laboratory Services: UT to identify Referral Lab under IDSP SRL lab network on urgent basis. Microbiologist and other lab technicians should be made available to strengthen the diagnostic facility.

Human Resources: The vacancies of Epidemiologist and Microbiologist at the UT Surveillance Unit needs to be filled to carry out the surveillance activities in the UT esp. in view of COVID-19 crisis and future preparedness for epidemics and pandemics.

Achievement

- Additional buses were provided at airport to decongest

the screening counters

- Health alerts have been displayed at Airport
- IEC material has been prepared in English, Hindi and local languages and distributed to all the Block Medical Officers for further display and distribution
- Streamlining of sample transport from Leh to Delhi and reduction of time of sample transport from 4 days to one day
- Streamlining of isolation facility at SNM Hospital and identification and placement of 4 separate ventilator beds and 2 portable ventilators exclusive for COVID-19 cases
- Advisory for closure of schools
- Advisory to all hotels for displaying and provision of preventive measures for Covid-19
- Facilitated involvement of local leaders and community involvement in implementation of home quarantine and withholding mass gatherings and taking precautions
- Allaying of misconceptions and fear of public and professionals

Best Practices: Robust testing, prompt tracking of contacts and ensuring their testing and quarantine, early implementation of Containment Plan, effective lockdown implementation with the active involvement of community have helped the UT in effectively tackling the COVID-19 situation in the UT Ladakh. Proactive Hon'ble Lt Governor, Local executive Council chairman and administration played a significant role in coordinating various activities. Everyday Media addressing to make the people aware of the activities and guidelines of the state and central government was effective tool.

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Conflicts of Interest: None

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