ABSTRACT

The COVID-19 pandemic in world affected all strata of population. It started on 31 December 2019 in Wuhan province of China and since then it has been spreading all over the globe rapidly. Today there are nearly 7.8 million cases of COVID-19 all over the globe. India with its second largest population in the world, with approximately 1.2 billion, has 22% of its population below poverty line and illiteracy at large. Kashmir, a Union Territory of India with a population of 7 million, has been equally hit by the Severe Acute Respiratory Syndrome-Corona Virus-(SARS-CoV) pandemic. In such a limited-resource setting, working under constraints leads to generation of innovations which are the support system of community medicine/public health management.

The COVID-19 pandemic in world affected all strata of population. It started on December 31 2019 in Wuhan province of China with a pneumonia of unknown aetiology and since then it has been spreading all over the globe rapidly.1 Today there are around 7.8 million cases of COVID-19 and 431,541 deaths all over the globe.

India with its second largest population in the world, with approximately 1.2 billion, has 22% of its population below poverty line.2 Kashmir, a Union Territory of India with a population of 7 million, has been equally hit by the COVID-19 pandemic. There had been number of guidelines released from various organisations like WHO, Centre for Disease Control and finally National Centre for Disease Control, Delhi. The guidelines issued have helped to develop resources to train healthcare workers (HCWs), helped doctors to understand the case definitions and make apt referral for testing, sensitise the HCWs about a rapidly evolving disease COVID-19. Because of these efforts, disaster preparedness was done swiftly and the health department was ready to tackle any kind of human biosecurity emergency in their respective areas to some extent.

There were some major issues that public health personnel are facing in the field, these include:

1. Scare among HCWs with regard to a novel COVID-19 wherein the exact aetiology is unknown and case definitions evolving quickly lead to a hesitancy and reluctance to work.

2. The major chunk of personnel in healthcare department are not public health professionals and therefore compromising the foresightedness regarding the trend of epidemic and genuineness of surveillance, as its being observed that ground teams lack information with regard to case definitions and actions to be taken accordingly due to evolving guidelines being issued from time to time.

3. Travellers arriving from outside the geographical area demands a rapid response to enforce home quarantine which was compromised due to lack of knowledge about the disease and people concealing their travel history.

4. The disease evolved its case definition and the tracking of asymptomatic carriers was one major challenge that the healthcare systems faced.

5. Timely updation of knowledge of HCWs in times of disaster was one of the prime challenges that the healthcare systems faced.

6. As the disease spread progressed and mortality increased all over the globe, social stigmas were created in the society which needed to be addressed timely.

7. Due to lockdown and social isolation, both at the individual and at population levels mental health got compromised and was an imminent disaster that demanded urgent mitigation.

8. Lack of public health professional on ground leading to mismatch of technical issues and therefore complications arising out of simple healthcare issues.

9. The person arriving from outside needed to be quarantined, the selection of
quarantine to be followed—facility or home-based needed streamlining.
10. The main aim of the lockdown was surging capacities in a target-oriented approach with respect to time.

WHAT WE DID
Since I was supervising the Surveillance as well as rapid response teams (RRT) we implemented certain strategic policy changes and innovative practices; including activities that reshaped the modus operandi for conducting surveillance. Examples include:

1. Leading from the front as a community medicine/public health specialist and instilling confidence in surveillance and RRTs by following the surveillance and rapid response protocols while investigating travellers returned from outside Kashmir. Using documents like rationale approach of use of personal protective equipment (PPE) among HCWs, we addressed the demand of PPE among allied HCWs not coming in contact with COVID-19 cases.

2. Since India reported its first case 30 January 2020 in Kerala and since then there were reports of cases gradually from other states. We noticed a mismatch of case definition issued to us with regard to actual situation in country. We, therefore, used to put all travellers on surveillance who returned to Kashmir from outside Kashmir division in last 14 days. They were line listed and put on follow-up for coming 28 days telephonically as well as every other day visits. Since we were anticipating that the suspects will rise in numbers drastically due to immigration, we made small groups for multiple teams and suggested them to use their phones for tracking and tracing of travellers and suspects. The ground healthcare intelligence network used to search people, get them in touch with the RRT leader who used to screen them telephonically and then visit the person if required as per assessment according to case definitions. Its significant to mention at that time the RRT didn’t have any kind of PPE available to them.

3. In order, to address the concerns of genuineness of surveillance wherein data was only sent as number of people screened from the area/zone/block, we begun asking for line listing of all the candidates/travellers/suspects and randomly verified their details areas wise which helped in confirming the authenticity of data.

4. In a disease like COVID-19, where even HCWs were reluctant to work initially, temporary strategies were devised which included rapid response via telephones and depending on the response of the candidate, timely intervention by police was sought for cooperation by the suspected candidate.

5. Travellers who tried to hide their history of travel were traced using Health Intelligence data from Immigration offices, further the cell phone location also were helpful to trace history of travel of the existing population. Health advocacy among religious leaders as well as Bureaucracy was conducted to involve all stakeholders.

6. The asymptomatic carriers with history of travel were put on surveillance and online global positioning system (GPS) tracking was enabled using apps which had a system to mark their attendance and violations assigned as cell phone being switched off/GPS kept off and no marking of attendance as per the frequency of attendance set. In case, the candidate under surveillance left the locked zone, an SMS alert was used to inform the concerned RRT team leader as well zonal medical officer of the concerned area for reinforcement per se or via police.

7. Since the response to COVID-19 was evolving rapidly, timely redressal and information flow was required to HCWs, for that video conferencing was used, creation of earmarked WhatsApp groups for decision-making support system/incident command system, and re-dressing of health issues was required, wherein hands on training and education was imparted to HCWs and ground staff.

8. COVID-19 brought with it certain stigmas that made life tougher for travellers returning to their native place. Health education and awareness generation was used to address such issues in the preliminary phase and reinforcement by law enforcing agencies later.

9. Due to the social isolation created as a result of the lockdown, the vulnerable populations are landing up in mental agony, to address that we created a business process outsourcing and teamed-up with psychologists and psychiatrists to address distress calls for tele-counselling of the concerned.

10. Health advocacy was conducted at bureaucracy, health administration levels and work was done to prove the importance of public health issues that non-public health/community medicine specialists/doctors were facing. Supportive Supervision in terms of correction of implementation of containment plan and strategy was rectified swiftly. Health advocacy for emergent lockdown and issues thereof. All the above steps facilitated the demand for more public health expertise.

11. Standard operating procedures (SOPs) were formed for inmates, management, medical personnel and sanitation staff that were already deputed at facility-based quarantine in order to reduce the chances of cross-infection.

12. Conversion of a stadium/hostels into a facility-based quarantine/field hospitals for capacity building and disaster preparedness.

WHAT WE ACHIEVED
The healthcare was able to meet its goal of reshaping the plan of implementing public health measures and increasing public access to more relevant information and genuine services:

▶ The scare among HCWs were reduced and they became more realistic by the trainings/meetings conducted from time to time.

▶ No suspect/case was missed in the concerned area even after completion of 28 days of surveillance in the particular area.

▶ Robustness of surveillance increased and HCWs attitude changed and felt motivated for conducting surveillance.

▶ The chain of events unfolded like people started self-reporting as they realised the response team were professional as well as swift in their action. The health intelligence network also helped in confidence building measures among public which in turn escalated self-reporting and thus facilitating surveillance and home quarantine SOPs for every asymptomatic carriers.
Innovations like geofencing, tracking, biometric attendance and inactivity violations traced on network systems helped to identify the violators of quarantine facilities and not following the health advisories. The contact tracing was done via GPS inorder to trace down people who had met the positive cases retrospectively as per incubation period.

Swift and timely sensitisation of HCWs using video conference and minimal face to face meetings while maintaining social distancing in a limited-resource setting.

Events of law and order issues related to stigma were reduced with timely intervention and raising awareness.

Mental health redressal was ongoing and its results will be available as the pandemic is over.

Supportive supervision leading to timely corrections of modus operandi of containment as well as intensive surveillance and thus improvising on public health measures and human resource hiring and expanding the network.

Prevention of cross infection by strict adherence to SOPs issued for facility-based quarantine.

Surging capacity helped in being ready for disaster preparedness.

An improvised incident command system/ response driven mechanism to deal with new situations/demands. Additionally, the district’s collaboration with community organisations, such as the health department, universities and redistribution of administrative areas, have expanded the network of tracing, tracking, testing and quarantine/isolation services in terms of COVID-19 pandemic.

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