Lessons from the field on COVID-19: a public health point of view

Rabbanie Tariq Wani

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. 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. 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 biosafety 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 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 foresightness 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 re-
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 gradu-
ally 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 antic-
pating 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 track-
ing and tracing of travellers and suspects. The ground
healthcare intelligence network used to search people,
give 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 sur-
veillance wherein data was only sent as number of peo-
l 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 help-
ful to trace history of travel of the existing population.
Health advocacy among religious leaders as well as
Bureaucracy was conducted to involve all stake holders.
6. The asymptomatic carriers with history of travel were
put on surveillance and online global positioning sys-
tem (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 atten-
dance set. In case, the candidate under surveillance left
the locked zone, an SMS alert used to inform the con-
cerned 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 rein-
forcement 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 pro-
cess 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 lock-
down 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 sanitiza-
tion staff that were already deputed at facility-based quaran-
tine 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 dis-
aster 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 partic-
ular 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 even 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.

**Funding**  The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

**Competing interests** None declared.

**Patient consent for publication** Not required.

**Provenance and peer review** Not commissioned; externally peer reviewed.

This article is made freely available for use in accordance with BMJ’s website terms and conditions for the duration of the covid-19 pandemic or until otherwise determined by BMJ. You may use, download and print the article for any lawful, non-commercial purpose (including text and data mining) provided that all copyright notices and trade marks are retained.

**ORCID iD** Rabbanie Tariq Wani http://orcid.org/0000-0002-7607-2671

**REFERENCES**

1. World Health Organization. WHO Situation report -1 on covid19 [Internet]. 2020. Available: https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200121-sitrep-1-2019-ncov.pdf?sfvrsn=20a99c10_4 [Accessed 16 Apr 2020].

2. Open Government Data (OGD) Platform India [Internet]. Available: https://data.gov.in/node/86152/download?token [Accessed 16 Apr 2020].