

# **Containment Plan**

**Novel Coronavirus Disease 2019**

**(COVID 19)**

**Version 2 (updated 16.05.2020)**

**Ministry of Health & Family Welfare**  
**Government of India**

**1. INTRODUCTION**

**1.1. Background**

Coronaviruses are large group of viruses that cause illness in humans and animals. Rarely, animal coronaviruses can evolve and infect people and then spread between people such as has been seen with MERS and SARS. Although most human coronavirus infections are mild, the epidemics of the severe acute respiratory syndrome coronavirus (SARS-CoV) and Middle East respiratory syndrome coronavirus (MERS-CoV), have caused more than 10,000 cumulative cases in the past two decades, with mortality rates of 10% for SARS-CoV and 37% for MERS-CoV.

The outbreak of Novel coronavirus disease (COVID-19) was initially noticed in a seafood market in Wuhan city in Hubei Province of China in mid-December, 2019, has now spread to 214 countries/territories/areas worldwide.

**1.2. Risk Assessment**

WHO (under International Health Regulations) has declared this outbreak as a “Public Health Emergency of International Concern” (PHEIC) on 30th January 2020. WHO subsequently declared COVID-19 a pandemic on 11th March, 2020.

Most people infected with COVID-19 virus have mild disease and recover. Approximately 80% of laboratory confirmed patients have had mild disease, 15% require hospitalization and 5% cases are critical requiring ventilator management.

The overall case fatality ratio (CFR) is 6.9% globally, which is considerably lower than that was reported during SARS (15%) and MERS-CoV outbreaks (37%). The CFR varies by location and intensity of transmission. The mortality is high among elderly, particularly those with co-morbid conditions like coronary artery disease, diabetes, hypertension, chronic respiratory diseases etc.

**1.3. Global Scenario**

As on 14th May, 2020, COVID-19 confirmed cases are being reported from 214 countries/territories/areas. A total of 42,48,389 laboratory confirmed cases and 2,92,046 deaths have been reported from globally. Focus of outbreak that was initially China, has now shifted to European region and United States of America.

Maximum number of cases is currently being reported from USA, Russia, Spain, UK, Italy, Germany, Brazil, Turkey and France.

#### **1.4. Indian Scenario**

As on 14th May, 2020, a total of 51401 active cases, 27919 cured/ discharged and 2649 deaths have been reported so far.

#### **1.5. Epidemiology**

Coronaviruses belong to a large family of viruses, some causing illness in people and others that circulate among animals, including camels, cats, bats etc. Rarely, animal corona viruses may evolve and infect people and then spread between people as witnessed during the outbreak of Severe Acute Respiratory Syndrome (SARS, 2003) and Middle East Respiratory Syndrome (MERS, 2014). The etiologic agent responsible for current outbreak of SARS-CoV-2 is a novel coronavirus is closely related to SARS-Coronavirus.

In humans, the transmission of SARS-CoV-2 can occur via respiratory secretions (directly through droplets from coughing or sneezing, or indirectly through contaminated objects or surfaces as well as close contacts). Current estimates of the incubation period of COVID range from 2-14 days. Common symptoms include fever, fatigue, dry cough and breathing difficulty. Upper respiratory tract symptoms like sore throat, rhinorrhoea, and gastrointestinal symptoms like diarrhea and nausea/ vomiting are also reported.

As per analysis of the biggest cohort reported by Chinese CDC, about 81% of the cases are mild, 14% require hospitalization and 5% require ventilator and critical care management. The deaths reported are mainly among elderly population particularly those with co-morbidities.

At the time of writing this document, many of the crucial epidemiological information particularly source of infection, mode of transmission, period of infectivity, etc. are still under investigation.

## **2. STRATEGIC APPROACH**

India would be following a scenario based approach for the following possible scenarios:

- i. Travel related case reported in India
- ii. Local transmission of COVID-19
- iii. Community Transmission of COVID-19 disease
- iv. India becomes endemic for COVID-19

## **2.1. Strategic Approach for when “only travel related cases reported from India”**

- (i) Inter-ministerial coordination (Group of Ministers, Committee of Secretaries) and Centre-State Co-ordination been established.
- (ii) Early Detection through Points of Entry (PoE) screening of passengers coming from affected countries through 30 designated airports, 12 major ports, 65 minor ports and 8 land crossings.
- (iii) Surveillance and contact tracing through Integrated Disease Surveillance Programme (IDSP) for tracking travellers in the community who have travelled from affected countries and to detect clustering, if any, of acute respiratory illness.
- (iv) Early diagnosis through a network laboratory of ICMR which are testing samples of suspect cases.
- (v) Buffer stock of personal protective equipment maintained.
- (vi) Risk communication for creating awareness among public to follow preventive public health measures.

## **2. 2. Local transmission of COVID-2019 disease**

The strategy will remain the same as explained in para 2.1 as above. In addition, cluster containment strategy will be initiated with:

- Active surveillance in containment zone with contact tracing within and outside the containment zone.
- Expanding laboratory capacity for testing all suspect samples, close contacts, ILI and SARI
- Establishing surge capacities for isolating all suspect / confirmed cases for clinical management.
- Implementing social distancing measures.
- Intensive risk communication.

## **3. SCOPE OF THIS DOCUMENT**

In alignment with strategic approach, this document provides action that needs to be taken for containing a cluster. The actions for control of large outbreaks will be dealt separately.

#### **4. OBJECTIVES**

The objective of cluster containment is to break cycle of transmission and decrease the morbidity and mortality due to COVID-19.

#### **5. CLUSTER CONTAINMENT**

##### **5.1. Definition of Cluster**

A cluster is defined as 'an unusual aggregation of health events that are grouped together in time and space and that are reported to a health agency' (Source CDC). Clusters of human cases are formed when there is local transmission. The local transmission is defined as a laboratory confirmed case of COVID-19:

- (i) Who has not travelled from an area reporting confirmed cases of COVID-19 or
- (ii) Who had no exposure to a person travelling from COVID-19 affected area
- (iii) The cases are epidemiologically linked

As a working definition, less than 15 cases in an area can be treated as a cluster.

There could be single or multiple foci of local transmission.

##### **5.2. Cluster Containment Strategy**

The cluster containment strategy would be to contain the disease within a defined geographic area by early detection, breaking the chain of transmission and thus preventing its spread to new areas. This would include geographic quarantine, social distancing measures, enhanced active surveillance, testing all suspected cases, isolation of cases, home quarantine of contacts, social mobilization to follow preventive public health measures.

##### **5.3. Evidence base for cluster containment**

Large scale measures to contain COVID-19 have been tried in China, Republic of Korea, Germany, France, Singapore and Italy. Since there is efficient human to human transmission, success of containment operations cannot be guaranteed. Interventions to limit morbidity, mortality and social disruption associated with SARS in 2003 demonstrated that it was possible then to mobilize complex public health operation to contain SARS outbreak. Mathematical modeling studies suggest containment might be possible.

##### **5.4. Factors affecting cluster containment**

A number of variables determine the success of the containment operations. These are:

- (i) Size of the cluster.
- (ii) How efficiently the virus is transmitting in Indian population.

- (iii) Time since first case/ cluster of cases originated. Detection, laboratory confirmation and reporting of first few cases must happen quickly.
- (iv) Active case finding and laboratory diagnosis.
- (v) Isolation of cases and quarantine of contacts.
- (vi) Geographical characteristics of the area (e.g. accessibility, natural boundaries)
- (vii) Population density and their movement (including migrant population).
- (viii) Resources that can be mobilized swiftly by the State Government/ Central Government.
- (ix) Ability to ensure basic infrastructure and essential services.

### **5.5. Assumptions**

- (i) The virus is not circulating in Indian Population.
- (ii) Even if there is a global pandemic, there is large part of the country which remains unaffected and large population which remains susceptible.

## **6. ACTION PLAN FOR CLUSTER CONTAINMENT**

### **6.1. Institutional mechanisms and Inter-Sectoral Co-ordination**

At the National Level, the National Crisis Management Committee (NCMC)/ Committee of Secretaries (CoS) will be activated. The co-ordination with health and non-health sectors will be managed by NCMC/ Cos, on issues, flagged by Ministry of Health. Ministry of Health and Family Welfare will activate its Crisis Management Plan.

The Concerned State will activate State Crisis Management Committee or the State Disaster Management Authority, as the case may be to manage the clusters of COVID-19.

There will be regular co-ordination meetings between the centre and the affected States through video conference.

The State should review the existing legal instruments to implement the containment plan. Some of the Acts/ Rules for consideration could be

- (i) Disaster Management Act (2005)
- (ii) Epidemic Act (1897)
- (iii) Cr.PC and
- (iv) State Specific Public Health Acts.

### **6.2. Trigger for Action**

The trigger could be IDSP identifying a cluster of Influenza like Illness (ILI) or Severe Acute Respiratory syndrome (SARI), which may or may not have epidemiological linkage to a travel related case.

It could also be through other informal reporting mechanisms (media/ civil society/ hospitals both government and private sector) etc. The State will ensure early diagnosis through the ICMR/VRDL (Virus Research and Diagnostic Laboratory) Network. A positive case will trigger a series of actions for containment of the cluster.

### **6.3. Deployment of Rapid Response Teams (RRT)**

State will deploy its state RRT and district RRT teams to undertake mapping of cases and contacts so as to delineate the containment and buffer zones. Emergency Medical Relief (EMR) division, Ministry of Health and Family Welfare may deploy the Central Rapid Response Team (RRT) to support and advice the State.

### **6.4. Identify geographically-defined Containment zone and Buffer zone**

#### **6.4.1. Containment zone**

The containment zone will be defined based on: Containment Zones are delineated based on:

- i. Mapping of cases and contacts
- ii. Geographical dispersion of cases and contacts
- iii. Area having well demarcated perimeter
- iv. Enforceability of perimeter control

The RRT will do listing of cases, contacts and their mapping. This area should therefore be appropriately defined by the district administration/local urban bodies with technical inputs at local level. For effective containment, it is advisable to err on the side of caution.

Activities to be undertaken in the Containment zone includes:

- i. Active search for cases through physical house to house surveillance by Special Teams formed for the purpose
- ii. Testing of all cases as per sampling guidelines
- iii. Contact tracing
- iv. Identification of local community volunteers to help in surveillance, contact tracing and risk communication
- v. Extensive inter-personal and community based communication

- vi. Strict enforcement of social distancing
- vii. Advocacy on hand hygiene, respiratory hygiene, environmental sanitation and wearing of masks / face-covers
- viii. Clinical management of all confirmed cases

#### **6.4.2. Perimeter**

Once the Containment Zone is delineated the perimeter will be defined and there would be strict perimeter control with:

- i. Establishment of clear entry and exit points,
- ii. No movement to be allowed except for medical emergencies and essential goods and services,
- iii. No unchecked influx of population to be allowed and
- iv. People transiting to be recorded and followed through IDSP.

#### **6.4.2. Buffer zone**

A Buffer Zone has to be delineated around each containment zone. It shall be appropriately defined by the district administration/local urban bodies with technical inputs at local level. Buffer zone will be primarily the area wherein additional & focused attention is needed so as to ensure that infection does not spread to adjoining areas. For effective containment, it is of paramount importance that the buffer zone needs to be a large area.

The activities under the Buffer Zone include:

- i. Enhanced passive surveillance for ILI and SARI cases in the buffer zone through the existing Integrated Disease Surveillance Programme.
- ii. Create community awareness on preventive measures such as personal hygiene, hand hygiene and respiratory etiquettes.
- iii. Use of face cover, social distancing through enhanced IEC activities.
- iv. To ensure social distancing by:
  - a. Cancelling all mass gathering events, meetings in public or private places.
  - b. Avoiding public places

- c. Closure of schools, colleges and work places

## **7. SURVEILLANCE**

### **7.1. Surveillance in containment zone**

#### **7.1.1. Contact listing**

The RRTs will list the contacts of the suspect /laboratory confirmed case of COVID-19. The District Surveillance Officer (in whose jurisdiction, the laboratory confirmed case/ suspect case falls) along with the RRT will map the contacts to determine the potential spread of the disease. If the residential address of the contact is beyond that district, the district IDSP will inform the concerned District IDSP/State IDSP.

#### **7.1.2. Mapping of the containment and buffer zones**

The containment and buffer zones will be mapped to identify the health facilities (both government and private) and health workforce available (primary healthcare workers, Anganwadi workers and doctors in PHCs/CHCs/District hospitals).

#### **7.1.3. Active Surveillance**

The residential areas will be divided into sectors for the ASHAs/Anganwadi workers/ANMs each covering 100 households (50 households in difficult areas). Additional workforce would be mobilized from neighboring districts (except buffer zone) to cover all the households in the containment zone. Additional workforce if required will be listed from the covidwarriors.gov.in. This website provides access to list of volunteers trained for surveillance (ASHAs, Anganwadi workers, NSS, NCC, IRCS, NYKV). This workforce will have supervisory officers (PHC/CHC/Ayush doctors) in the ratio of 1:5.

The field workers will be performing active house to house surveillance daily in the containment zone from 8:00 AM to 2:00 PM. They will line list the family members and those having symptoms. The field worker will provide a mask to the suspect case and to the care giver identified by the family. The patient will be isolated at home till such time he/she is examined by the supervisory officer. They will also follow up contacts identified by the RRTs within the sector allocated to them.

All ILI/SARI cases reported in the last 14 days by the IDSP in the containment zone will be tracked and reviewed to identify any missed case of COVID-19 in the community.

Any case falling within the case definition will be conveyed to the supervisory officer who in turn will visit the house of the concerned, confirm that diagnosis as per case definition and will make arrangements to shift the suspect case to the designated treatment facility. The supervisory

officer will collect data from the health workers under him/ her, collate and provide the daily and cumulative data to the control room by 4.00 P.M. daily.

#### **7.1.4 Passive Surveillance**

All health facilities in the containment zone will be listed as a part of mapping exercise. All such facilities both in Government and private sector (including clinics) shall report clinically suspect cases of COVID-19 on real time basis (including 'Nil' reports) to the control room at the district level. The health facilities in the buffer

#### **7.1.5. Contact Tracing**

The contacts of the laboratory confirmed case/ suspect case of COVID-19 will be line-listed and tracked and kept under surveillance at home for 28 days (by the designated field worker). The Supervisory officer in whose jurisdiction, the laboratory confirmed case/ suspect case falls shall inform the Control Room about all the contacts and their residential addresses. The control room will in turn inform the supervisory officers of concerned sectors for surveillance of the contacts. If the residential address of the contact is beyond the allotted sector, the district IDSP will inform the concerned Supervisory officer/concerned District IDSP/State IDSP.

#### **7.2. Surveillance in Buffer zone**

The surveillance activities to be followed in the buffer zone are as follows:

- i. Review of ILI/SARI cases reported in the last 14 days by the District Health Officials to identify any missed case of COVID-19 in the community.
- ii. Enhanced passive surveillance for ILI and SARI cases in the buffer zone through the existing Integrated Disease Surveillance Programme.
- iii. In case of any identified case of ILI/SARI, sample should be collected and sent to the designated laboratories for testing COVID-19.

All health facilities in the buffer zone will be listed as a part of mapping exercise. All such facilities both in Government and private sector (including clinics) shall report clinically suspect cases of COVID-19 on real time basis (including 'nil' reports) to the control room at the district level. Measures such as personal hygiene, hand hygiene, social distancing to be enhanced through IEC activities in the buffer zone.

#### **7.3. Perimeter Control**

The perimeter control will ensure that there is no unchecked outward movement of population from the containment zone except for maintaining essential services (including medical emergencies) and government business continuity. It will also limit unchecked influx of population into the containment zone. The authorities at these entry points will be required to

inform the incoming travelers about precautions to be taken and will also provide such travelers with an information pamphlet and mask.

All vehicular movement, movement of public transport and personnel movement will be restricted. All roads including rural roads connecting the containment zone will be guarded by police.

The District administration will post signs and create awareness informing public about the perimeter control. Health workers posted at the exit point will perform screening (e.g. interview travelers, measure temperature, record the place and duration of intended visit and keep complete record of intended place of stay).

Details of all persons moving out of perimeter zone for essential/ emergency services will be recorded and they will be followed up through IDSP. All vehicles moving out of the perimeter control will be decontaminated with sodium hypochlorite (1%) solution.

## **8. LABORATORY SUPPORT**

### **8.1 Designated laboratories**

The identified VRDL network laboratory, nearest to the affected area, will be further strengthened to test samples. The other available govt. laboratories and private laboratories (BSL 2 following BSL 3 precautions) if required, shall also be engaged to test samples, after ensuring quality assurance by ICMR/VRDL network. If the number of samples exceeds its surge capacity, samples will be shipped to other nearby laboratories or to NCDC, Delhi or NIV, Pune or to other ICMR lab networks depending upon geographic proximity.

The list of laboratories identified for testing COVID is at

[https://www.icmr.gov.in/pdf/covid/labs/COVID\\_Testing\\_Labs\\_15052020.pdf](https://www.icmr.gov.in/pdf/covid/labs/COVID_Testing_Labs_15052020.pdf)

All test results should be available within 24 hours of sampling. ICMR along with the State Government will ensure that there are designated agencies for sample transportation to identified laboratories. The contact number of such courier agencies shall be a part of the micro-plan.

The guidelines for sample collection, packaging and transportation is available at

[https://www.mohfw.gov.in/pdf/5Sample%20collection\\_packaging%20%202019-nCoV.pdf](https://www.mohfw.gov.in/pdf/5Sample%20collection_packaging%20%202019-nCoV.pdf)

The designated laboratory will provide daily update (daily and cumulative) to District, State and Central Control Rooms on:

- i. No. of samples received
- ii. No. of samples tested

- iii. No. of samples under testing
- iv. No. of positive samples

## **8.2 Testing criteria**

The ICMR strategy for testing is given below:

1. All symptomatic individuals who have undertaken international travel in the last 14 days
2. All symptomatic contacts of laboratory confirmed cases
3. All symptomatic health care workers
4. All patients with Severe Acute Respiratory Illness (fever AND cough and/or shortness of breath)
5. Asymptomatic direct and high-risk contacts of a confirmed case should be tested once between day 5 and day 14 of coming in his/her contact

Details are available at:

[https://main.icmr.nic.in/sites/default/files/upload\\_documents/Strategey\\_for\\_COVID19\\_Test\\_v4\\_09042020.pdf](https://main.icmr.nic.in/sites/default/files/upload_documents/Strategey_for_COVID19_Test_v4_09042020.pdf)

The testing at the field level shall be taken up as per the criteria proposed by ICMR from time to time.

## **8.3. Tests approved for COVID Diagnosis**

RT-PCR is the standard test for laboratory diagnosis. In laboratories, wherever Cepheid Xpert Xpress SARS-CoV2 Cartridge Based Nucleic Acid Amplification Test (CBNAAT) has been made available, the advisory of ICMR at the following link will be followed: [https://main.icmr.nic.in/sites/default/files/upload\\_documents/Cepheid\\_Xpert\\_Xpress\\_SARS-CoV2\\_advisory\\_v2.pdf](https://main.icmr.nic.in/sites/default/files/upload_documents/Cepheid_Xpert_Xpress_SARS-CoV2_advisory_v2.pdf)

Laboratories following TrueNat as a screening test for detecting SARS-CoV2 will follow additional guidelines available at:

[https://main.icmr.nic.in/sites/default/files/upload\\_documents/Additional\\_guidance\\_on\\_TrueNat\\_based\\_COVID19\\_testing.pdf](https://main.icmr.nic.in/sites/default/files/upload_documents/Additional_guidance_on_TrueNat_based_COVID19_testing.pdf)

For testing persons in quarantine camps of migrant workers or those international passengers returning home, RT-PCR test based on pooled sampling will be used. The guideline for pooling of samples is available at:

<https://www.mohfw.gov.in/pdf/GuidelineforrtPCRbasedpooledsamplingFinal.pdf>

ICMR specimen referral form is available at:

[https://main.icmr.nic.in/sites/default/files/upload\\_documents/SRF\\_v9.pdf](https://main.icmr.nic.in/sites/default/files/upload_documents/SRF_v9.pdf)

Additional testing methodologies prescribed from time to time by government shall be adopted at the field level.

## **9. HOSPITAL CARE**

All suspect cases detected in the containment/buffer zones (till a diagnosis is made) and those tested positive will be hospitalized and kept in isolation in separate areas in designated facilities. Three tier facility has been developed for isolation of suspect/ confirmed COVID-19 cases.

These are Covid Care Centres (CCC) to keep pre-symptomatic/ very mild/ mild cases, Dedicated Covid Health Centres (DCHC) for those requiring Oxygen therapy and Dedicated Covid Hospitals for those requiring intensive care or ventilator management. The categorization of COVID health facilities and categorization of patients based on severity are available at:

<https://www.mohfw.gov.in/pdf/FinalGuidanceonMangaementofCovidcasesversion2.pdf>.

Some patients may progress to multi organ failure and hence critical care facility/ dialysis facility/ and Salvage therapy [Extra Corporeal Membrane Oxygenator(ECMO)] facility for managing the respiratory/renal complications/ multi-organ failure shall be required. If such facilities are not available in the containment zone, nearest tertiary care facility in Government / private sector needs to be identified, that becomes a part of the micro-plan.

Pre-symptomatic and very mild cases have an option of being in home isolation subject to fulfillment of availability of earmarked space for isolation at home. The guidelines for home isolation are available at:

<https://www.mohfw.gov.in/pdf/RevisedguidelinesforHomelsolationofverymildpresymptomaticCOVID19cases10May2020.pdf>.

### **9.1 Surge capacity**

Based on the risk assessment, if the situation so warrants (data suggested an exponential rise in the number of cases), the surge capacity of the identified hospitals shall be enhanced, private hospitals will be roped in and sites for temporary hospitals identified and their logistic requirements shall be worked out.

Related guidelines are available at:

<https://www.mohfw.gov.in/pdf/AdvisoryforHospitalsandMedicalInstitutions.pdf>

## **9.2 Pre-hospital care (ambulance facility)**

Ambulances need to be in place for transportation of suspect/confirmed cases. Such ambulances shall be manned by personnel adequately trained in infection prevention control, use of PPE and protocol that needs to be followed for disinfection of ambulances (by 1% sodium hypochlorite solution using knap sack sprayers).

The standard operating procedure for transporting Covid patient is at:

<https://www.mohfw.gov.in/pdf/StandardOperatingProcedureSOPfortransportingasuspectorconfirmedcaseofCOVID19.pdf>

## **9.3 Infection Prevention Control Practices**

Nosocomial infection in fellow patients and attending healthcare personnel are well documented in the current COVID-19 outbreak as well. There shall be strict adherence to Infection prevention control practices in all health facilities. Detailed guidelines on infection prevention control are available at:

<https://www.mohfw.gov.in/pdf//National%20Guidelines%20for%20IPC%20in%20HCF%20-%20final%281%29.pdf>

IPC committees would be formed (if not already in place) with the mandate to ensure that all healthcare personnel are well aware of IPC practices and suitable arrangements for requisite PPE and other logistic (hand sanitizer, soap, water etc.) are in place. The designated COVID treatment facility will ensure that all healthcare staff is trained in IPC (washing of hands, respiratory etiquettes, donning/doffing & proper disposal of PPEs and bio-medical waste management).

Healthcare workers will be provided guidance on preventive measures and management of risk to accidental exposure or other-wise to COVID. Advisory for managing Health care workers exposed to COVID is available at:

<https://www.mohfw.gov.in/pdf/AdvisoryformanagingHealthcareworkersworkinginCOVIDandNonCOVIDareasofthehospital.pdf>

At all times health care workers in COVID treatment facilities and Non-covid treatment facility/ areas will use personal protection gears following the below mentioned guidelines:

<https://www.mohfw.gov.in/pdf/GuidelinesonrationaluseofPersonalProtectiveEquipment.pdf>

Additional guidelines for Non- Covid areas are available at:

<https://www.mohfw.gov.in/pdf/UpdatedAdditionalguidelinesonrationaluseofPersonalProtectiveEquipmentsettingapproachforHealthfunctionariesworkinginnonCOVID19areas.pdf>

Environmental cleaning should be done twice daily and will consist of damp dusting and floor mopping with sodium hypochlorite solution of frequently touched surfaces. Detailed guidelines are available at:

<https://www.mohfw.gov.in/pdf//National%20Guidelines%20for%20IPC%20in%20HCF%20-%20final%281%29.pdf>

The bio medical waste will be managed in accordance with Bio-medical waste management rules. Guidelines for handling, treatment and disposal of waste generated during treatment/diagnosis/quarantine of COVID-19 Patients is at:

<https://www.mohfw.gov.in/pdf/63948609501585568987wastesguidelines.pdf>

## **10. CLINICAL MANAGEMENT**

### **10.1. Clinical Management**

The hospitalized cases may require symptomatic treatment for fever. Paracetamol is the drug of choice. Suspect cases with co-morbid conditions, if any, will require appropriate management of co-morbid conditions.

For patients with severe acute respiratory illness (SARI), having respiratory distress may require, pulse oxymetry, oxygen therapy, non-invasive and invasive ventilator therapy.

The clinical management protocol to be followed is available at:

<https://www.mohfw.gov.in/pdf/RevisedNationalClinicalManagementGuidelineforCOVID1931032020.pdf>

### **10.2. Discharge Policy**

Discharge policy for suspected cases of COVID-19 tested negative will be based on the clinical assessment of the treating physician. For those tested positive for COVID-19, their discharge from hospital will be governed by the discharge policy available at:

<https://www.mohfw.gov.in/pdf/ReviseddischargePolicyforCOVID19.pdf>

### **10.3. Dead body management**

The dead body of a COVID case does not spread infection. The healthcare worker however handling the body immediately after death is at risk in case there is exposure to bodily fluids and shall be protected.

Detailed guidelines of dead body management as available at:

[https://www.mohfw.gov.in/pdf/1584423700568\\_COVID19GuidelinesonDeadbodymanagement.pdf](https://www.mohfw.gov.in/pdf/1584423700568_COVID19GuidelinesonDeadbodymanagement.pdf)

shall be followed.

## **11. PHARMACEUTICAL INTERVENTIONS**

As of now there is no approved drug or vaccine for treatment of COVID-19. Chemoprophylaxis with Hydroxychloroquine is recommended for healthcare workers and high risk contacts. Advisory on use of Hydroxychloroquine is available at:

<https://www.mohfw.gov.in/pdf/AdvisoryontheuseofHydroxychloroquinasprophylaxisforSARSCoV2infection.pdf>

## **12. NON-PHARMACEUTICAL INTERVENTIONS**

In the absence of proven drug or vaccine, non-pharmaceutical interventions will be the main stay for containment of COVID-19 cluster.

### **12.1. Preventive public health measures**

There will be social mobilization among the population in containment and buffer zone for adoption of community-wide practice of frequent washing of hands and respiratory etiquettes in schools, colleges, work places and homes. The community will also be encouraged to self-monitor their health and report to the visiting ASHA/Anganwadi worker or to nearest health facility.

### **12.2. Quarantine and isolation**

Quarantine and Isolation are important mainstay of cluster containment. These measures help by breaking the chain of transmission in the community.

#### **12.2.1. Quarantine**

Quarantine refers to separation of individuals who are not yet ill but have been exposed to COVID-19 and therefore have a potential to become ill. There will be voluntary home quarantine of contacts of suspect /confirmed cases. The guideline on home quarantine is available at:

<https://www.mohfw.gov.in/pdf/Guidelinesforhomequarantine.pdf>

#### **12.2.2. Isolation**

Isolation refers to separation of individuals who are ill and suspected or confirmed of COVID-19. There are various modalities of isolating a patient. Ideally, patients can be isolated in individual isolation rooms or negative pressure rooms with 12 or more air-changes per hour.

In resource constrained settings, all positive COVID-19 cases can be cohorted in a ward with good ventilation (Covid Care Centre, Dedicated Covid Health Centre). Similarly, all suspect cases should also be cohorted in a separate ward. However, under no circumstances these cases should be mixed up. A minimum distance of 1 meter needs to be maintained between adjacent beds. All such patients need to wear a triple layer surgical mask at all times.

Pre-symptomatic cases/ very mild/ mild cases can opt for home isolation provided they follow the guidelines available at:

<https://www.mohfw.gov.in/pdf/RevisedguidelinesforHomeIsolationofverymildpresymptomaticCOVID19cases10May2020.pdf>

### **12.3 Social distancing measures**

For the cluster containment, social distancing measures are key interventions to rapidly curtail the community transmission of COVID-19 by limiting interaction between infected persons and susceptible hosts. The following measures would be taken:

#### **12.3.1 Closure of schools, colleges and work places**

Administrative orders will be issued to close schools, colleges and work places in containment and buffer zones. Intensive risk communication campaign will be followed to encourage all persons to stay indoors for an initial period of 28 days, to be extended based on the risk assessment. Based on the risk assessment and indication of successful containment operations, an approach of staggered work and market hours may be put into practice.

#### **12.3.2 Cancellation of mass gatherings**

All mass gathering events and meetings in public or private places, in the containment and buffer zones shall be cancelled/banned till such time, the area is declared to be free of COVID-19 or the outbreak has increased to such scales to warrant mitigation measures instead of containment.

#### **12.3.3. Advisory to avoid public places**

The public in the containment and buffer zones will be advised to avoid public places and only if necessary for attending to essential services. The administration will ensure supply of enough triple layer masks to the households in the containment and buffer zones.

#### **12.3.4. Cancellation of public transport (bus/rail)**

There will be prohibition for persons entering the containment zone and on persons exiting the containment zone. To facilitate this, if there are major bus transit hubs or railway stations in the containment zone, the same would be made dysfunctional temporarily. Additionally, irrespective of fact that there is a rail/road transit hub, the perimeter control will take care of prohibiting people exiting the containment zone including those using private vehicles and taxis.

As significant inconvenience is caused to the public by adopting these measures in the containment zone, State government would proactively engage the community and work with them to make them understand the benefits of such measures.

Advisory on social distancing is at

<https://www.mohfw.gov.in/pdf/SocialDistancingAdvisorybyMOHFW.pdf>

## **13. MATERIAL LOGISTICS**

### **13.1. Personal Protective Equipment**

Personal protective equipments are a scarce resource and needs to be used rationally. Guidelines for rational use of PPEs using a setting approach is at:

<https://www.mohfw.gov.in/pdf/GuidelinesonrationaluseofPersonalProtectiveEquipment.pdf>

Additional guidelines for Non- Covid areas are available at:

<https://www.mohfw.gov.in/pdf/UpdatedAdditionalguidelinesonrationaluseofPersonalProtectiveEquipmentssettingapproachforHealthfunctionariesworkinginnonCOVID19areas.pdf>

The State Government has to ensure adequate stock of personal protective equipment. The quantity required for a containment operation will depend upon the size & extent of the cluster and the time required containing it.

### **13.2. Transportation**

A large number of vehicles will be required for mobilizing the surveillance and supervisory teams. The vehicles will be pooled from Government departments. The shortfall, if any, will be met by hiring of vehicles.

### **13.3. Stay arrangements for the field staff**

The field staff brought in for the surveillance activities and that for providing perimeter control need to be accommodated within the containment zone. Facilities such as schools, community buildings etc. will be identified for sheltering. Catering arrangement will need to be made at these locations.

## **14. RISK COMMUNICATION**

### **14.1 Risk communication material**

Risk communication materials comprising of

- (i) posters and pamphlets;

- (ii) audio only material;
- (iii) AV films

prepared by PIB/MoHFW will be provided to the States for targeted roll out in the containment and buffer zones.

## **14.2 Communication channels**

### **14.2.1 Interpersonal communication**

During house to house surveillance, ASHAs/ other community health workers will interact with the community

- (i) for reporting symptomatic cases
- (ii) contact tracing
- (iii) information on preventive public health measures.

### **14.2.2 Mass communication**

Awareness will be created among the community through miking, distribution of pamphlets, mass SMS and social media. Also use of radio and television (using local channels) will ensure penetration of health messages in the target community.

### **14.2.3 Dedicated helpline**

A dedicated helpline number will be established at Central, State and District level. Its number will be widely circulated for providing general population with information on risks of COVID-19 transmission, the preventive measures required and the need for prompt reporting to health facilities, availability of essential services and administrative orders on perimeter control.

### **14.2.4 Media Management**

At the Central level, only Secretary (H) or representative nominated by her shall address the media. There will be regular press briefings/ press releases to keep media updated on the developments and avoid stigmatization of affected communities. Every effort shall be made to address and dispel any misinformation circulating in media incl. social media.

At the State level, only Principal Secretary (H), his/her nominee will speak to the media.

## **15. INFORMATION MANAGEMENT**

### **15.1 Control room at State & District Headquarters**

A control room (if not already in place) shall be set up at State and District headquarters, managed by designated officers. This shall be manned by State and District Surveillance Officer

(respectively) under which data managers (deployed from IDSP/ NHM) responsible for collecting, collating and analyzing data from field and health facilities. Daily situation reports will be put up.

The state will provide aggregate data on daily basis on the following (for the day and cumulative):

- i. Total number of suspect cases
- ii. Total number of confirmed cases
- iii. Total number of critical cases on ventilator
- iv. Total number of deaths
- v. Total number of contacts under surveillance

### **15.2 Control room in the containment zone**

A control room shall be set up inside the containment zone to facilitate collection, collation and dissemination of data from various field units to District and State control rooms. This shall be manned by an epidemiologist under which data managers (deployed from IDSP/ NHM) will be responsible for collecting, collating and analyzing data from field and health facilities.

This control room will provide daily input to the District control room for preparation of daily situation report.

### **15.3 Alerting the neighboring districts/States**

The control room at State Government will alert all neighboring districts. There shall be enhanced surveillance in all such districts for detection of clustering of symptomatic illness. Awareness will be created in the community for them to report symptomatic cases/contacts.

Also suitable provisions shall be created for enhancing horizontal communication between adjacent districts, especially for contact tracing exercise and follow up of persons exiting the containment zone.

## **16. CAPACITY BUILDING**

### **16.1 Training content**

Trainings will be designed to suit requirement of each and every section of healthcare worker involved in the containment operations. These trainings for different target groups shall cover:

1. Field surveillance, contact tracing, data management and reporting
2. Surveillance at designated exit points from the containment zone
3. Sampling, packaging and shipment of specimen

4. Hospital infection prevention and control including use of appropriate PPEs and bio-medical waste management
5. Clinical care of suspect and confirmed cases including ventilator management, critical care management
6. Risk communication to general community

## **16.2 Target trainee population**

Various sections of healthcare workforce (including specialist doctors, medical officers, nurses, ANMs, Block Extension Educators, MHWs, ASHAs), workforce from non-health sector (security personnel, Anganwadi Workers, support staff etc.), volunteers for COVID and other essential services (NSS/NCC/NYK/IRCS/Home Guard/Civil Defence). Trainings will be tailored to requirements of each of these sections.

Online training will be made available in IGoT platform of DOPT. The trained resource will be made available at [www.covidwarriors.gov.in](http://www.covidwarriors.gov.in).

An orientation training will be conducted by the RRT a day prior to containment operations are initiated.

## **16.3 Replication of training in other districts**

The State Govt. will ensure that unaffected districts are also trained along the same lines so as to strengthen the core capacities of their RRTs, doctors, nurses, support staff and non-health field formations. These trainings should be accompanied with functional training exercises like mock-drills.

An SOP for Mock- drill is at <https://www.mohfw.gov.in/pdf/MockDrill.pdf>

## **17. FINANCING OF CONTAINMENT OPERATIONS**

The fund requirement would be estimated taking into account the inputs in the micro-plan and funds will be made available to the district collector from NHM flexi-fund.

### **17.1 Scaling down of operations**

The operations will be scaled down if no secondary laboratory confirmed COVID-19 case is reported from the containment and buffer zones for at-least 4 weeks after the last confirmed test has been isolated and all his contacts have been followed up for 28 days. The containment operation shall be deemed to be over 28 days from the discharge of last confirmed case (following negative tests as per discharge policy) from the designated health facility i.e. when the follow up of hospital contacts will be complete.

The closing of the surveillance for the clusters could be independent of one another provided there is no geographic continuity between clusters. However, the surveillance will continue for ILI/SARI.

However, if the containment plan is not able to contain the outbreak and large numbers of cases start appearing, then a decision will need to be taken by State administration to abandon the containment plan and start on mitigation activities.

#### **18. IMPLEMENTATION OF THE MICRO-PLAN**

Based on the above activities, the State/ District will prepare an event specific micro-plan and implement the containment operations.

#### **19. FOLLOWING UP OF ADDITIONAL GUIDELINES ISSUED FROM TIME TO TIME**

As the situation is still evolving, based on additional evidence, and the spread of cases, additional guidelines are issued by the government from time to time. Those applicable in terms of management efforts in the identified clusters shall be taken into account and implemented accordingly.

The additional instructions, if any, are made available on MoHFW website from time to time.