



## **ABSTRACT**

COVID-19 – Health and Family Welfare Department – Cluster containment measures to stop transmission, morbidity and mortality to be taken up to ensure no further spread of COVID 19 – Implementation of the Micro-Plan – Orders – Issued.

### **HEALTH AND FAMILY WELFARE (P1) DEPARTMENT**

**G.O.(Ms).No. 175**

**Dated: 05.04.2020  
Vihari, Panguni – 23  
Thiruvalluvar Aandu – 2051.**

1. G.O.(Ms) No. 164 Health and Family Welfare (P1) Department, dated 31.03.2020.
2. Government letter No.1714/P1/2020, Health and Family Welfare (P1) Department, dated 31.03.2020.
3. Government letter No.1714/P1/2020, Health and Family Welfare (P1) Department, Dated 01.04.2020.
4. G.O.(Ms).No.166, Health and Family Welfare (P1) Department, Dated: 02.04.2020.

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### **ORDER:**

In the Government order first read above, comprehensive instructions / guidelines to be followed in respect of COVID 19 patients, including setting up of screening centers, quarantine facilities, isolation facility, specimen collection procedures, Clinical Management, Disinfection procedure and Discharge policy to be followed by Government health facilities / private hospitals / testing labs and all stake holders have been communicated.

2. In the reference second read above, all the District Collectors & Commissioner Corporation of Chennai were instructed to constitute inter department teams to monitor the Delhi conference travelers, track them, monitor them and bring their area of residence under containment measures as per the containment plan protocols.

3. In the reference third read above, all the District Collectors & Commissioner Corporation of Chennai have been instructed to speed up the activities and trace the balance left out Delhi conference travelers and take up all containment measures following strict cordoning of those areas through vigilant monitoring and also by ensuring the reach of essential services to those quarantine persons.

4. In the Government order fourth read above, guidelines for the clinical treatment of affected persons, family members, their contacts and the containment measures to be taken up in those areas have been issued.

5. In the light of large number of Delhi conference travelers being reported as COVID 19 positive, the Government have issued the cluster containment measures

to be taken up, to ensure that no further spread of COVID19 from those areas happen, to stop transmission, morbidity and mortality.

6. After careful examination, the Government hereby directs the Heads of department of Health and Family Welfare Department and all the District Collectors / Commissioner of Chennai Corporation to strictly follow the activities on the implementation of the Micro-Plan annexed to this Government orders to ensure no further spread of COVID-19.

**(BY ORDER OF THE GOVERNOR)**

**BEELA RAJESH  
SECRETARY TO GOVERNMENT**

**To**

All Secretaries to Government, Secretariat, Chennai 6000 009.

All District Collectors/ Commissioner, Corporation of Chennai.

The Director of Public Health and Preventive Medicine, Chennai – 600 006.

The Director of Medical Education, Chennai – 600 010.

The Director of Medical and Rural Health Services, Chennai – 600 006.

The Mission Director, National Health Mission, Chennai – 600 006.

The Managing Director, Tamil Nadu Medical Services Corporation Limited,  
Chennai -8.

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**//FORWARDED BY ORDER//**

 5/4/2020

**SECTION OFFICER**

## ANNEXURE

G.O (Ms) No.175, Health and Family Welfare (P1) Department, Dated: 05.04.2020

### **CLUSTER CONTAINMENT**

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 or other known exposure to an infected person, There could be single or multiple foci of local transmission. There may or may not be an epidemiological link to a travel related case.

### **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.

### **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 Govt.
- (ix) Ability to ensure basic infrastructure and essential services.

## ACTION PLAN FOR CLUSTER CONTAINMENT

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

The Concerned districts shall activate district crisis Management Committee to manage the clusters of COVID-19. There will be daily co-ordination meetings between departments through video conference.

### **Trigger for Action**

The trigger could be the 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 (government / 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.

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

Emergency Medical Relief (EMR) division, Ministry of Health and Family Welfare will deploy the Central Rapid Response Team (RRT) to support and advise the State. The State will deploy its State RRT and District RRT.

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

### **Containment zone**

The containment zone will be defined based on:

- (i) The index case / cluster, which will be the designated epicenter
- (ii) The listing and mapping of contacts.
- (ii) Geographical distribution of cases and contacts around the epicenter.
- (iii) Administrative boundaries within urban cities / town/ rural area.

The RRT will do listing of cases, contacts and their mapping. This will help in deciding the peri meter for action. The decision of the geographic limit and extent of perimeter control will be that of the State Government. However, likely scenarios and possible characteristics of the containment and buffer zone are :

### **Scenarios for determining containment and buffer zones**

1. A small cluster in closed environment such as residential schools, military barracks, hostels or a hospital.
  - Containment zone will be determined by the mapping of the persons in such institution including cases and contacts. A buffer zone of additional 5 Km radius\*will be identified.
2. Single cluster in a residential colony
  - Administrative boundary of the residential colony and a buffer zone of additional 5 Km radius.\*
3. Multiple clusters in communities(residential colony, schools, offices, hospitals etc.) with in an administrative jurisdiction
  - Administrative boundary of the urban district and a buffer zone of neighboring urban districts.
4. Multiple clusters spatially separated indifferent parts administrative districts of a city
  - Administrative boundary of city / town and congruent population in the per urban areas as the buffer zone.
5. Cluster in a rural setting
  - 3 Km radius of containment zone and additional 7 Kms radius of buffer zone.
  - The perimeter of the containment zone will be determined by the continuous real time risk assessment.
  - The decision to follow a containment protocol will be based on the risk assessment and feasibility of perimeter control.

If the epidemiological assessment process is to take time (>12-24 hrs), then a containment zone of 3 Kms and a buffer zone of 7 Kms will be decided which may be subsequently revised, if required, based on epidemiologic investigation. Except for rural settings.

**Buffer zone**

Buffer zone is an area around the containment zone, where new cases are most likely to appear. There will not be any perimeter control for the buffer zone.

**Perimeter**

Perimeter of the containment zone will be decided by the District administration based on scenario defined above. Clear entry and exit points will be established. The perimeter controls that need to be applied is defined below.

**SURVEILLANCE****Surveillance in containment zone****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.

**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 Health Care Workers, Anganwadi Workers and Doctors in PHCs / CHCs / District hospitals).

**Active Surveillance**

The residential areas will be divided into sectors for the ASHAs/ Anganwadi workers/ ANMs each covering 50 households (30 households in difficult areas). Additional workforce would be mobilized from neighboring districts (except buffer zone) to cover all the households in the containment zone. This workforce will have supervisory officers (PHC/CHC doctors) in the ratio of 1:4. 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.

**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.

## 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.

## 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 enhanced IEC activities in the buffer zone.

## 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.

## LABORATORY SUPPORT

### 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.

All test results should be available within 12 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 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
- Page | 10
- iv. No. of positive samples

### Testing criteria

All suspect cases conforming to the case definition will be tested. The testing of suspect cases in the containment and buffer zones will continue till 14 days from the date, the last confirmed case is declared negative by laboratory test.

## HOSPITAL CARE

All suspect cases detected in the containment/buffer zones (till a diagnosis is made), will be hospitalized and kept in isolation in a designated facility till such time they are tested negative. Persons testing positive for COVID-19 will remain to be hospitalized till such time<sup>2</sup> of their samples are tested negative as per MoHFW's discharge policy. About 15% of the patients are likely to develop pneumonia, 5 % of whom requires ventilator management. Hence dedicated Intensive care beds need to be identified earmarked. Some among them 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.

### 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 will be enhanced, private hospitals will be roped in and sites for temporary hospitals identified and it's logistic requirements shall be worked out.

## **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 knapsack sprayers).

## **Infection Prevention Control Practices**

No social 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. 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 hospitals will ensure that all healthcare staff is trained in washing of hands, respiratory etiquettes, donning/doffing & proper disposal of PPEs and bio-medical waste management.

At all times doctors, nurses and para-medics working in the clinical areas will wear three layered surgical mask and gloves. The medical personnel working in isolation and critical care facilities will wear full complement of PPE (including N95 masks).

The support staff engaged in cleaning and disinfection will also wear full complement of PPE. Environmental cleaning should be done twice daily and consist of damp dusting and floor mopping with Lysol or other phenolic disinfectants and cleaning of surfaces with sodium hypochlorite solution. Detailed guidelines available on MoHFW's website may be followed.

## **CLINICAL MANAGEMENT**

### **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. Detailed guidelines available on MoHFW's website and updated from time to time, may be followed.

### **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 consecutive two samples tested negative and the patient is free from symptoms.

## **MATERIAL LOGISTICS**

### **Personal Protective Equipment**

The type of personal protective equipment for different categories of:

1. PPE Kit, N95, Mask, Gloves, Goggles, cap and shoe cover )



- Doctors and nurses attending to patients in isolation, ICU/critical care facilities of hospitals in the containment zone.
  - Para-medical staff in the back cabin of ambulance.
  - Auxillary/ support staff involved in disinfection vehicles/ambulances and surface cleaning of hospital floors and other surfaces
2. N-95 Mask and gloves
    - Supervisory doctors verifying a suspect case
    - Persons collecting samples.
    - Doctors/nurses attending patients in primary health care facilities
  3. Triple Layer ,Surgical mask
    - To be used by Field workers doing surveillance work
    - Staff providing essential services.
    - Suspect cases and care giver / by stander of the suspect case
    - Security staff.
    - Ambulance drivers
    - Residents permitted to go out for essential services .

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. A containment of a cluster, lasting a month or two in a population of 100,000 may require 20,00,000 triple layer masks; 2,00,000 gloves; 100,000 N-95 masks and about 50,000 PPE Kits. The foregoing number is to illustrate that State need to have a rate contract and assured supply for these items.

### **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.

### **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.

### **Bio-medical waste management**

A large quantity of bio-medical waste is expected to be generated from containment zone. Arrangement would also be required for such bio-medical waste (discarded PPEs etc.), preferably by utilizing the bio-medical waste management services at the designated hospital.

## **RISK COMMUNICATION**

### **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 prepared and kept ready for targeted roll out in the containment and buffer zones.

## **Communication channels**

### **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.

### **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.

### **Dedicated helpline**

A dedicated helpline number will be provided at the Control room (district headquarter) and 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.

### **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.

## **INFORMATION MANAGEMENT**

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

A control room (if not already in place) shall be set up at State and District headquarters. 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

### **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.

### **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.

### **CAPACITY BUILDING**

#### **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 biomedical waste management
5. Clinical care of suspect and confirmed cases including ventilator management, critical care management
6. Risk communication to general community

#### **Target trainee population**

Various sections of healthcare workforce (including specialist doctors, medical officers, nurses, ANMs, Block Extension Educators, MHWs, ASHAs) and workforce from non-health sector (security personnel, Anganwadi Workers, support staff etc.). Trainings will be tailored to requirements of each of these sections. The training will be conducted by the RRT a day prior to containment operations are initiated.

#### **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.

### **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.

#### **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.

### **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.

**BEELA RAJESH  
SECRETARY TO GOVERNMENT**

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 5/4/2020  
**SECTION OFFICER**