Novel Coronavirus Disease 2019

(COVID – 19)

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1. INTRODUCTION

1.1 Background

On 31st December 2019, the World Health Organization (WHO) China Country Office was informed of cases of pneumonia of unknown etiology (unknown cause) detected in Wuhan City, Hubei Province of China. On 7th January 2020, Chinese authorities identified a new strain of Coronavirus as the causative agent for the disease. The virus has been renamed by WHO as SARS-CoV-2 and the disease caused by it as COVID-19. The disease since its first detection has affected all the provinces of China and 40 other countries (including Hong Kong, Macau and Taiwan). As per WHO (as of 26th February, 2020), there has been a total of 81109 confirmed cases of COVID-19 worldwide including 78191 confirmed cases and 2718 deaths reported from China. Besides China, 2918 confirmed cases and 44 deaths have been reported from 37 countries.

In India, as on 26th February, 2020, three travel related cases (from Hubei province, China), were reported (all from Kerala). All these cases were clinically stable during the period of hospitalization and discharged as per the discharge policy.

1.2. Risk Assessment

The risk for spread has been assessed by World Health Organization and currently (as on 26th February, 2020) it is very high for China and high at regional and global levels. WHO on 30th January, 2020 declared the current novel coronavirus outbreak as a Public Health Emergency of International Concern (PHEIC). According to WHO, "all countries should be prepared for containment, including active surveillance, early detection, isolation and case management, contact tracing and prevention of onward spread of SARS-CoV-2 infection.

Clusters have appeared in many countries including USA, France, Germany and local transmission in Hong Kong, Singapore, Republic of Korea, Iran and Italy.

1.3. 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). Nosocomial transmission has been described as an important driver in the epidemiology of SARS and MERS and has also documented in COVID-19.

Current estimates of the incubation period of COVID range from 2-14 days, and these estimates will be refined as more data become available. Most common symptoms include fever, fatigue, dry cough and breathing difficulty. Upper respiratory tract symptoms like sore throat, rhinorrhoea, and gastrointestinal symptoms like diarrhoea and nausea/ vomiting are seen in about 20% of cases.

Due to paucity of scientific literature based on community based studies, the available data on host factors is skewed towards cases requiring hospitalization. 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 Current Scenario: "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 China, Honk Kong, Indonesia, Japan, Malaysia, Republic of Korea, Singapore, Thailand and Vietnam through 21 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 of 15 laboratories 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 and
- Establishing surge capacities for isolating all suspect / confirmed cases for medical care.
- 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 under a mitigation plan.

4. OBJECTIVES

The objective of cluster containment is to stop transmission, 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 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.

5.2. Cluster Containment Strategy

The cluster containment strategy would be to contain the disease with in 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 and Republic of Korea and also in countries that reported small clusters such as Germany, France, Singapore and Italy. Since COVID-19 is an airborne infection and 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) will be activated. The co-ordination with health and non-health sectors will be managed by NCMC, 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 daily co-ordination meetings between the centre and the concerned State 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 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.

6.3. 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 advice the State. The State will deploy its State RRT and District RRT.

6.4. Identify geographically-defined Containment zone and Buffer zone

6.4.1. 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.
(iii) Geographical distribution of cases and contacts around the epicenter.
(iv) Administrative boundaries within urban cities /town/ rural area.

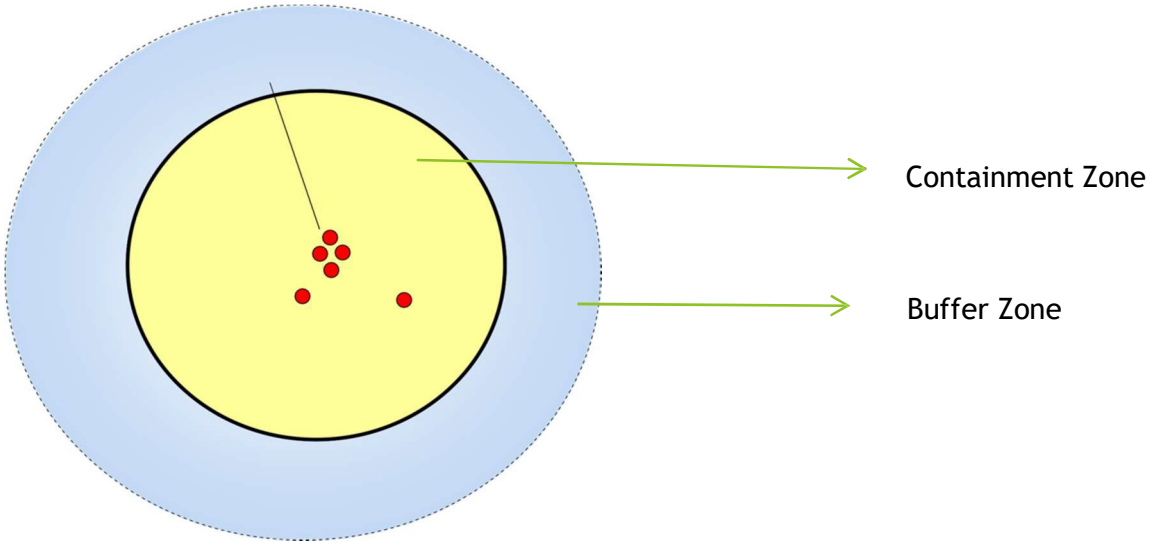
The RRT will do listing of cases, contacts and their mapping. This will help in deciding the perimeter for action. The decision of the geographic limit and extent of perimeter control will be that of the State Government. However, likely scenarios and possible characteristics of the containment and buffer zone are given in Table-1.

Table 1: Scenarios for determining containment and buffer zones

S. No.	Scenario	Containment zone characteristics
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 in different parts administrative districts of a city	Administrative boundary of city/ town and congruent population in the peri-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.



The Central RRT will help the State/ District administration in mapping the Containment Zone.

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.

6.4.2. 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. The activities of buffer zone are listed under paragraph 7.2.

6.4.3. Perimeter

Perimeter of the containment zone will be decided by the District administration based on criteria defined in Para 6.4.1. Clear entry and exit points will be established. The perimeter controls that need to be applied is in para 7.3.

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 bufferzones

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 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.

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.

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 enhanced 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.

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

iv. No. of positive samples

8.2 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.

9. 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 2 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.

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

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 knapsack sprayers) (Refer Annexure-2 for details)

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. 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.

Checklist for Triage

Sl. No.	Action Point		
1	Receiving the patient	a.	Assess visually
		b.	If coughing or sneezing offer a mask
		c.	Keep a distance of 2 meters
2	Taking brief history of the patient	a.	Presenting illness
		b.	Any history of travel
		c.	Any history of association with the person who is suspect / travelled abroad
3	Assessing the symptoms		
4	If person is symptomatic and suspect	a.	Send immediately to COVID ward
		b.	Collect the sample at designated area
		c.	Do not hand over any documents to the patient
		d	Put the case sheet in the plastic folder & send to the COVID ward with the hospital staff
5	If person is not symptomatic and non a suspect		Ask to come again. Advise home quarantine for 3 weeks and immediate visit to hospital if flu like symptoms develop
6	Documentation/ equipment	a.	Write the case sheet and send with the hosp. staff in a plastic folder
		b.	Do not permit patient to handle case sheet
		c.	In between 2 cases, decontaminate the equipment like BP, steth, torch, thermometer with alcohol swab and discard the swab in the yellow bin
7	Protection (PPE)	a.	Wear the mask all the time
			(i) Do not hang the mask around the neck between the cases
			(ii) Change the mask every 6 hours or when wet
		b.	In between 2 cases do an alcohol hand rub for 20-30 sec.
		c.	Wash hands frequently with soap and water for 40-60 seconds
		d	Avoid touching face specially nose, mouth and eyes
8	Other cautions	a.	Don't remove the mask and once removed do not wear the same again
		b.	Dispose the mask in the yellow bucket available at the end of the shift
		c.	Don't eat or drink at desk or anywhere near COVID ward
		d.	If one need to eat or drink go to the dedicated area, keeping the replacement at the desk, don't leave the desk unattended
		e.	Remove the mask and dispose in yellow bin
		f.	Perform a hand wash with soap and water for 40-60 seconds
		g	Mobile phones must be disinfected with alcohol swabs before leaving the premises and discard swabs in the yellow bins

Personal Protective Equipment (PPE) Donning

Sl. No.	Action Point		
1	Gown	a.	Hold the folded gown between the two plams after wahsing the hands
		b.	Open the upper fold
		c.	Put both the hands into the sleves slowly directing the hands above the head
		d.	Tie the upper strings at the back of the neck
		e.	Tie the lower strings at the waist
2	Mask	a.	Cover nose and mouth
		b.	Tie the upper strings at the top of the head
		c.	Tie the lower strings at the back of the neck
		d.	Fix the metallic strip securely over the bridge of the nose
		f.	ensure that the mask fully covers the nose, mouth and is streched gently over the chin
		g.	Mask to fit snugly over the face
		h.	Change mask if it becomes moist or damaged
		i.	Do not hang the mask around the neck and put it on when patient comes. Always the mask should be in place
		j.	Remove the mask after 6 hours or when wet
3	Eye shied	a.	Slip the eye shield over the head on to the eyes
		b.	Fit the goggles on the nose bridge
		c.	Do not put the goggles on the head
4	Glove	a.	Perform hand hygiene with the alcohol sanitizer
		b.	Select appropriate sized gloves
		c.	Open the package by using flaps surrounding
		d.	First, glove your dominant hand (right hand mostly)
		e.	Pick the glove with your non dominant hand by grasping the inside of the cuff, slide it on to your dominant hand. Do not touch anything with gloved hand
		f.	With your gloved hand slip under the cuff of the other glove to glove non dominant hand
		g.	Tuck the cuffs of the gown securely under each glove
		h.	Adjust the gloves carefully make sure you don't touch your skin or other objects

NEVER RE-USE DISPOSABLE PPE

PUT ON BEFORE CONTACT AND REMOVE AFTER COMPLETING TASK OR LEAVING PATIENT CARE AREA

ALWAYS HANDWASH WITH SOAP AND WATER FOR 40-60 SECONDS BEFORE AND AFTER PPE

Personal Protective Equipment (PPE) Doffing

The goal doffing is to avoid contamination of self or the environment with the contaminated equipment. So performed from clean to dirty area.

Sl. No.	Action Point		
1	Glove	a.	Grasp the outside edge near the wrist
		b.	Peel the glove away from the hand turning the glove inside out
		c.	Hold this in the oppsite gloved hand
		d.	Now slide and ungloved finger under the wrist of the remaining glove, then peal it off from inside, creating a bag for both the used gloves
		e.	Discard in designated receptacle
2	Goggles	a.	Goto the back part of the goggle and remove
		b.	Put it into the red bag
3	Gown	a.	Unfasten ties
		b.	Peel the gown from neck and shoulder
		c.	Turn the contaminated side (the outside) towards the inside
		d.	Fold or roll the gown into a bundle so as to put the inside all over
		e.	Discard in designated receptacle
4	Mask	a.	First untie the bottom then the top tie
		b.	Holding the tie lift the mask away from the face
		c.	Discard in designated receptacle

NEVER RE-USE DISPOSABLE PPE

PUT ON BEFORE CONTACT AND REMOVE AFTER COMPLETING TASK OR LEAVING PATIENT CARE AREA

ALWAYS HANDWASH WITH SOAP AND WATER FOR 40-60 SECONDS BEFORE AND AFTER PPE

Critical Points of Personal Protective Equipment (PPE)	
1	Handwash with soap and water for 40-60 seconds before donning PPE
2	Keep hands away from face and don't touch PPE
3	Avoid touching areas in patients room
4	Remove PPE inside the room and perform hand hygiene immediately
5	**CLEAN AREAS**
5.1	Inside of the glove
5.2	Front part of the glove
5.3	Back of the gown and ties
5.4	Straps of mask
6	**Contaminated areas**
6.1	Outside of the gloves
6.2	front of the gown
6.3	gown sleeves
6.4	front of the mask
7	**Order of donning (wearing PPE)**
7.1	Handwash
7.2	Gown
7.3	Mask
7.4	Goggle
7.5	Gloves
8	**Order of doffing (removing PPE)**
8.1	Gloves
8.2	Gown
8.3	Goggle
8.4	Mask
8.5	Perform hand hygiene

Check-list for Housekeeping	
Sl. No.	**Action Point**
1	Follow hand hygiene of through washing with soap and water for 40-60 seconds
2	Wear PPE - Gown, Mask, Goggles and Gloves
3	**BED Making**
3.1	Take out the linen on the bed by folding it outside in and put it in the stainless steel bin
3.2	If the linen is soiled, dip the linen in hypochlorite solution for an hour and then autoclave
4	**CLEANING**
4.1	Clean all the high touch surfaces (door nobs, raillings, surface of tables) with hypocholrite sulface with the gauze pad dipped in 1% Hypochlorite solution / 0.5 % chlorine solution. This is to be done twice during the shift once at the beginning and another at the middle of the shift except for the individual isolation rooms where symptomatic patients stay. In the symptomatic patient's room cleaning will be done only once a day with complete PPE on. The PPE shall be disposed per room per cleaning
4.2	Dispose the used gauze pad into the yellow bin
4.3	Clean all low touch surface (TV screen) with clean gauze piece
4.4	Never broom
4.5	Clean with wet mop
5	**Disinfectant**
5.1	Use the three bucket trolly with hospital appropriate disinfectant (Hypochlorite solution and chlorine solution)
5.2	Follow the principle of clean to dirty, unidirectional moping
5.3	If sunlight available open the windows. Keep the room ventilated
6	After completing the room clean and disinfect the bath room in the same order and manner
7	After completing the bed making, cleaning and disinfection take out the PPE (Gloves, Gown, Goggles and Mask) in the door way near the patient care area and put gloves and goggles in RED bin and contaminated gown and mask in YELLOW bin

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.

For detailed description of Infection Prevention and Control (IPC) please see Annexure-1

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

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

11. PHARMACEUTICAL INTERVENTIONS

As of now there is no approved drug or vaccine for treatment of COVID-19.

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 available on the website of the Ministry provides detail guidance on home quarantine.

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. 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.

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 taxies.

As a 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.

13. MATERIAL LOGISTICS

13.1. Personal Protective Equipment

The type of personal protective equipment for different categories of:

S. No.	Name of the item	Category of personnel
1	PPE Kit, N 95, 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.

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 with in 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.

13.4 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.

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 prepared and kept ready 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.

Points for Airport Passengers

1. Call 104 for any enquiries regarding Novel Corona Virus. Experts are here to help.
2. Use mask only if you have respiratory symptoms or if you are attending a sick person.
3. Avoid areas with crowd.
4. Maintain cough etiquette. You look cool flexing your elbow.
5. Wash your hands frequently with soap and water (40-60 sec.) or Alcohol based hand rub (20-30 sec.)
6. Do not spit in public places.
7. Always carry disposable tissues while going out. They do not cost much.
8. Avoid over the counter drugs. Don’t be a Google doctor.
9. Contact your health care provider if you need attention and share your travel history.

Guidelines for Home Quarantine

- Place the contact in a well-ventilated single room.Limit the number of care takers; ideally assign one person who is in a good health without risk conditions.
- Household members should stay in a different room or, if that is not possible, maintain a distance of at least one metre from the ill person.
- The caregiver should wear a medical mask fitted tightly to the face when in the same room and especially during movement
- Masks should not be touched or handled during use. If the mask gets wet or dirty with secretions, it must be changed immediately. Discard the mask after 6 hrs use and perform hand hygiene after removal of the mask
- Hand hygiene- Perform hand hygienebefore and after each and every activity at home
- Use disposable paper towels if available or else use dedicated cloth towel and replace them when wet. Wash thoroughly all the reusable items with household detergent
- Follow respiratory hygiene - covering the mouth and nose during coughing or sneezing using medical masks, cloth masks, tissues or flexed elbow, followed by hand hygiene.
- Use disposable gloves to provide oral or respiratory care and when handling body fluids, stool, urine and waste.
- Persons with symptoms should remain at home until their symptoms are resolved based on either clinical and/or laboratory findings
- Clean and disinfect frequently touched surfaces such as bedside tables, bedframes and other furniture, bathroom and toilet surfaces at least once daily with regular household disinfectant containing a diluted hypochlorite solution (1-part bleach to 99 parts water).
- The contacts should be advised to monitor their health for 14 days from the last day ofpossible contact
- If a household member develops symptoms of acute respiratory infection, including fever, cough, sore throat and difficult breathing, visit the hospital immediately
- **Avoid public transportation to the health care facility.** Call 108 ambulances.Stand or sit as far away from others as possible (at least 1 m), when in transit and when in the health care facility.

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.

14.2.3 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. 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) 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.

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.

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.

Annexure-1

Infection Prevention and Control guidelines

(COVID – 19)

General Introduction:

Infection Prevention and Control (IPC) is a basic requirement for outbreak preparedness and a critical element of readiness

IPC should be an ongoing activity undertaken/supported by the national programme and by the IPC focal point/team/committee, the health care facility senior management officials and all staff at the facility level.

Infection Prevention and Control is:

- Ascientific approach withpractical solutions designed to prevent harm, causedbyinfections, to patients and health care workers
- Grounded in principles of infectious disease, epidemiology, social science and health system strengthening,androoted in patient safety and health servicequality

Objectives of IPC:

- To develop a cross- sectional, multidisciplinary initiative for Prevention and Control of infections associated with Healthcare
- Provide support to help prevent spread of infectious diseases through evidence- based infection control measures in health care settings
- Provide support for infection control preparedness and response to public health emergencies of potential international concern
- To reduce transmission of health care associatedinfections
- To enhance the safety of staff, patients andvisitors
- To lower or reduce the risk of the hospital (health care facility) itself amplifying theoutbreak

The benefits of IPC are:

1. Protecting yourself
2. Protecting the patient
3. Protecting your family and community

The roles of IPC team/ committee are:

- Knowledge: have an understanding of the IPCstrategiesneeded for outbreaks/epidemics, etc
- Assessment, preparedness andreadiness
- Policy and SOPs development
- Participate in response andrecovery
- Participate in surveillance &monitoring
- Patient management
- Infrastructure
- Education

The Key actions to implement IPC are:

- Engage trained **staff with authority and technical expertise** to implement IPCactivities, prioritizing based on risk assessment and local care-seekingpatterns
- Record, report, and investigate all cases of **healthcare-associated infections**
- Disseminate **IPC guidance** for home and community care providers
- Implement **triage**, early **detection**, and **infectious-source controls**,

  administrative controls and engineering controls; implement **visual alerts**(educational material in appropriate language) for family members andpatients to inform triage personnel of respiratory symptoms and to practicerespiratory etiquette

- Support **access to water and sanitation for health** (WASH) services in publicplaces and community spaces most at risk
- Monitor **IPC and WASH implementation** in healthcare facilities andpublic spaces
- Provide prioritized tailored **support to health facilities** based on IPC risk assessment and local care-seeking patterns, including for supplies, humanresources, training

Equipment and Chemicals list for IPC:

GENERAL MATERIAL	MEDICAL EQUIPMENT	CHEMICALS	OTHER INFRASTRUCTURE
BMW Bins- 4 colored	BP apparatus	Bleaching Powder/Hypochlorite	Tables
Plastic folders	IR Thermometer		Chairs
Tissue paper	Pulse oxymeter		Storage cabinets
Masks	Stethoscope		Amirah
Gloves	Disposable Medicine tray		Wash basin
Gowns	Gloves		Curtains
Caps	Gown		Cots
Alcohol Rub	Masks		ICU Space
Cotton	Goggles		Ambulance
Liquid Soaps	Head Caps		Stretchers
Bath soaps			Wheel chairs
Patient dress/gown			
3 chambered buckets			
Gum Boots			
Industrial grade gloves			
Mops- colored			
Slippers			
Steel bin with lid			
Bed Sheets			

Usage of materials:

Personal Protective Equipment (PPE) – Donning & Doffing

PPE Includes

1. Gown
2. Mask
3. Eye shied
4. Glove
5. Hood Cap
6. Shoe Cover

Usage

Risk Assessment for Blood or Body Fluid** Exposure	Hand & Cough Hygiene	Gloves	Gown &Apron	Procedure Mask	Eye Protection
No Direct or Indirect Contact with blood or body fluids	YES	NO	NO	NO	NO
Indirect Contact with blood or body fluids through contaminated equipment or environment	YES	YES	YES	NO	NO
Direct Contact with rash, non-intact skin or excessive skin scales with no risk of splashing	YES	YES	YES	NO	NO
Direct Contact with blood or body fluids with low risk of splashing	YES	YES	YES	NO	NO
Direct or Indirect Contact with blood or body fluids with high risk of splash, spray, cough or sneeze	YES	YES	YES	YES	YES

Setting	Target Personnel	Activity	Type of PPE
Patient room	HCW HK Visitors	Direct care to patient Aerosol Generating Procedures (AGP)- Nebulisation Intubation, Bronchoscopy, Entering room of COVID -19 patient Entering room of COVID -19 patient	Mask Gown Gloves Eye protection N 95 Mask Gown Gloves Eye protection Mask Gown Heavy duty Gloves Eye protection Boots or closed shoes Mask Gown Gloves
Other areas of patient transit	All staff including HCW	Any activity that does not involve contact with COVID patient	No PPE required
Triage	HCW	Preliminary screening not involving direct contact	Maintain special distance of 1 m .No PPE required
	Patients with resp symptoms	Any	Maintain special distance of 1 m .No PPE required. Provide medical mask if tolerated by patient
	Patients without resp symptoms	Any	No PPE required
Administrative area	All staff including HCW	Tasks that don't involve contact with COVID patients	No PPE required
Consultation rooms	HCW HCW	Physical examination of patients with resp symptoms Physical examination of patients without resp symptoms	Mask Gown Gloves Eye protection PCRA for PPE
	Patients with resp symptoms	Any	Medical mask if tolerated
	Patients without resp symptoms	Any	No PPE required

Setting	Target Personnel	Activity	Type of PPE
	HK	After and in between patients with resp symptoms	Mask Gown Heavy duty gloves Eye protection if required Boots or closed shoes
Waiting room	Patients with resp symptoms	Any	Medical mask if tolerated Shift to isolation rrom
	Patients without resp symptoms	Any	No PPE required
Ambulance	HCW	Transporting patient	Mask Gown Gloves Eye protection
	Driver	Only Driving and separate compartment Assisting with loading and unloading No direct contact with patients but no physical separation	No PPE required Maintain special distance of 1 m Mask Gown Gloves Eye protectionn Mask
	Patient with suspected COVID-19	Transport to referral health care	Mask if tolerated
	HK	After and in between transport of patients of COVID -19	Mask Gown Heavy duty gloves Eye protection if required Boots or closed shoes
	Staff	Staff entering Isolation area but not providing direct assistance	Maintain distance of 1 m Mask gloves
Temporary isolation	Staff	Staff entering Isolation area but not providing direct assistance	Maintain distance of 1 m Mask gloves

Personal Protective Equipment (PPE) Donning

Sequence Order of Donning the PPE

1. Shoe Cover
2. Gown
3. Eye shied
4. Head Cap
5. Mask
6. Glove

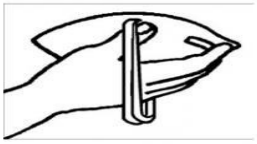
Method of Donning the PPE

1. **GOWN**
   - Fully cover torso from neck to knees, arms to end of wrists, and wrap around the back
   - Fasten in back of neck and waist

2. **FACE MASK**
   - Secure ties or elastic bands at middle of head and neck
   - Fit flexible band to nose bridge
   - Fit snug to face and below chin

- Fit-check mask

Directions for Using Your N-95 Mask



1. Cup the respirator in your hand, with the nosepiece at your fingertips, allowing the headbands to hang freely below your hand.

2. Position the respirator under your chin with the nosepiece up. Pull the top strap over your head resting it high at the top back of your head. Pull the bottom strap over your head and position it around the neck below the ears.

3. Place your fingertips from both hands at the top of the metal nosepiece. Using two hands, mold the nose area to the shape of your nose by pushing inward while moving your fingertips down both sides of the nosepiece.

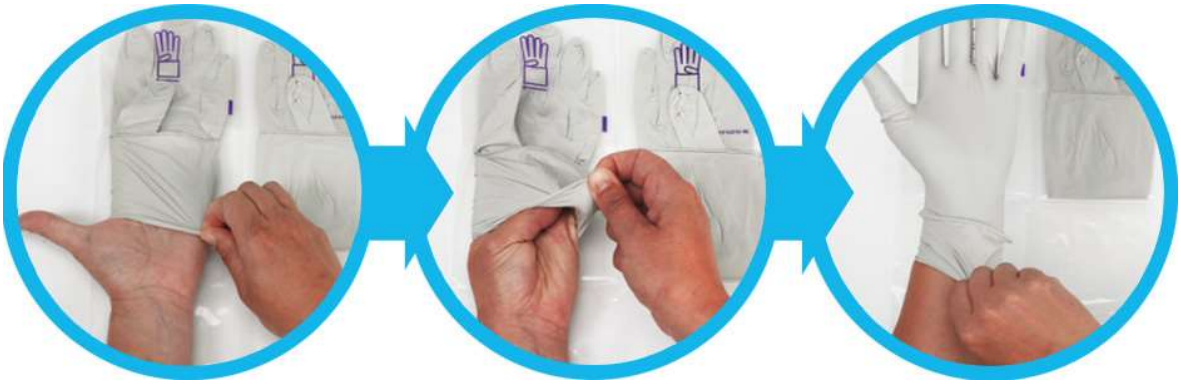
Pinching the nosepiece using one hand may result in improper fit and less effective respirator performance. Use two hands.

3. **GOGGLES OR FACE SHIELD**
    - Place over face and eyes and adjust to fit

GLOVES

- Perform hand hygiene with the alcohol sanitizer

- Select appropriate sized gloves
- Open the package by using flaps surrounding
- First, glove your dominant hand (right hand mostly)
- Pick the glove with your non dominant hand by grasping the inside of the cuff, slide it on to your dominant hand. Do not touch anything with gloved hand
- With your gloved hand slip under the cuff of the other glove to glove non dominant hand
- Tuck the cuffs of the gown securely under each glove
- Adjust the gloves carefully make sure you don't touch your skin or other objects



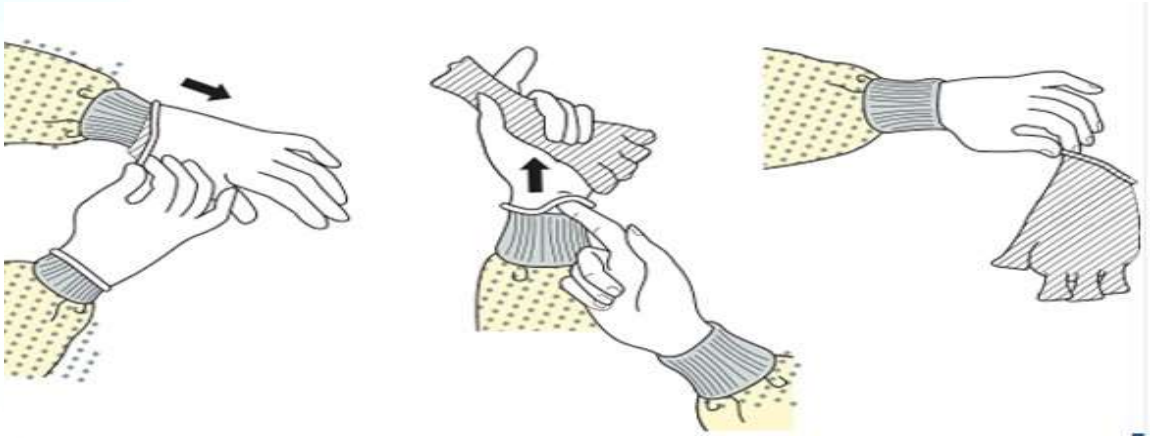
Personal Protective Equipment (PPE) Doffing

Sequence of Doffing of PPE

1. Glove
2. Goggles
3. Gown
4. Mask

Method of Doffing of PPE

1. **GLOVES**
    - Grasp the outside edge near the wrist
    - Peal the glove away from the hand turning the glove inside out
    - Hold this in the opposite gloved hand
    - Now slide and ungloved finger under the wrist of the remaining glove, then peal it off from inside, creating a bag for both the used gloves
    - Discard in designated receptacle



2. **Goggle or Face Shield**
    - Go to the back part of the goggle and remove
    - Put it into the red bag

3. **Gown**
    - Unfasten ties
    - Peal the gown from neck and shoulder
    - Turn the contaminated side (the outside) towards the inside
    - Fold or roll the gown into a bundle so as to put the inside all over
    - Discard in designated receptacle

4. **Mask**
    - First untie the bottom then the top tie
    - Holding the tie lift the mask away from the face
    - Discard in designated receptacle

NEVER RE-USE DISPOSABLE PPE

PUT ON BEFORE CONTACT AND REMOVE AFTER COMPLETING TASK OR LEAVING PATIENT CARE AREA

ALWAYS HANDWASH WITH SOAP AND WATER FOR 40-60 SECONDS BEFORE AND AFTER PPE

Cleaning & Disinfection

Cleaning- Cleaning with warm water and detergent is a process that removes visual dirt and contamination and in most cases is effective for decontaminating both equipment and the environment.

Disinfection- is a process that reduces the number of microorganisms to a level at which they do not present a risk to patients or clients.

The first step required to physically remove contamination by foreign material, e.g. dust, soil. It will also remove organic material, such as blood, secretions, excretions and microorganisms, to prepare a medical device for disinfection

Principles of Cleaning

The basic principles of cleaning and disinfecting apply to all patient care areas.

- Always be sure to clean patient care equipment between each patient use
- Where possible, dedicate cleaning supplies in higher risk areas

(e.g., isolation, delivery, and operating rooms)

- Cleaning supplies for isolation should be kept in and only used in the isolation area/room
- Always move from cleanest area to dirtiest area-
    - clean from high areas to low areas , outer to inner
    - clean isolation areas last

- Damp dusting and wet mopping is recommended to minimize dust
- Use a 3-bucket system for cleaning and disinfection
- Water for cleaning should be clean water
- Spraying of disinfectants is not recommended
- Increase frequency of cleaning by housekeeping in patient care areas
- Isolation areas should have their own cleaning supplies that are separate from clean patient care areas
- All waste from the isolation area is considered contaminated and should be disposed of following your facilities methods for contaminated waste
- Cleaners/housekeeping should ensure they are wearing the appropriate PPE when cleaning an isolation room or area
- Cleaning supplies for isolation should be kept in and only used in the isolation area/room

Chemicals to be used for disinfection of

A) Hands- any sanitizer containing at least 70- 80% alcohol
B) Equipment like BP apparatus, stethoscope, thermometer, plastic folders, frequent contact surfaces like TV buttons- Alcohol swab
C) Floors & Ambulances, frequent contact surfaces like door knobs etc- 1% hypochlorite solution

Steps for preparing 1% hypochlorite solution

a) From Bleaching powder- add 3 tea spoon of bleaching powder to 1 litre of water
b) Using Hypochlorite solution- to 1 portion of solution add 9 portions of water

Bio Medical Waste Management:

Bio Medical Waste means "any solid and/or liquid waste including its container and any intermediate product, which is generated during diagnosis, treatment or immunization of human beings or animals or research activities pertaining thereto or in the production or testing of biological or in health camps"

Segregation of the waste:

The segregation is done at the source of generation

Bio Medical Waste must not be segregated after combining at the source

Yellow bins	Red bins	Blue bins	Translucent/ white bins
Human anatomical wasteChemodrugsSoiled waste Expired or Discarded Medicines, soiled linen	Contaminated Plastic Waste, gloves and goggles	General waste	Waste sharps including Metals

At every shift the trained BMW management agency collects the waste from the respective patient area to the identified collection point in the hospital premises. The agency for BMW management will collect for the hospital from the collecting point for the final disposal.

Protocols of case management:

Suspect case

A. A patient with acute respiratory illness (fever and at least one sign/symptom of respiratory disease (e.g., cough, shortness of breath), **AND** with no other etiology that fully explains the clinical presentation **AND** a history of travel to or residence in a country/area or territory reporting local transmission (See situation report) of COVID-19 disease during the 14 days prior to symptom onset.

OR

B. A patient with any acute respiratory illness **AND** having been in contact with a confirmed or probable COVID19 case (see definition of contact) in the last 14 days prior to onset of symptoms;

OR

C. A patient with severe acute respiratory infection (fever and at least one sign/symptom of respiratory disease (e.g., cough, shortness breath) **AND** requiring hospitalization **AND** with no other etiology that fully explains the clinical presentation.

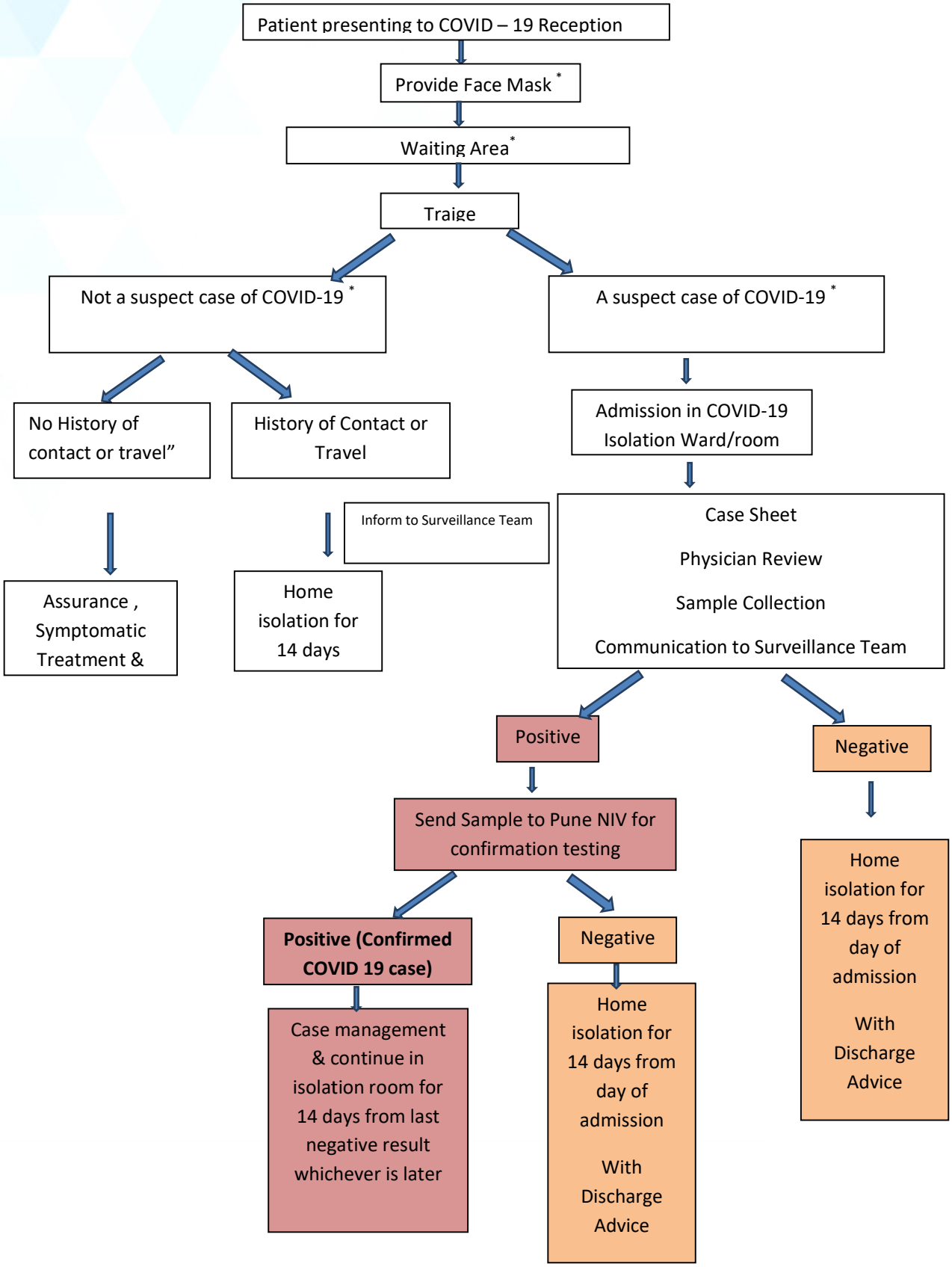
Probable case

A suspect case for whom testing for COVID-19 is inconclusive.

• Inconclusive being the result of the test reported by the laboratory

Confirmed case

A person with laboratory confirmation of COVID-19 infection, irrespective of clinical signs and symptoms


Patient presenting to COVID – 19 Reception
Provide Face Mask *
Waiting Area *
Traige
Not a suspect case of COVID-19 *
A suspect case of COVID-19 *
No History of contact or travel"
History of Contact or Travel
Admission in COVID-19 Isolation Ward/room
Inform to Surveillance Team
Case Sheet
Physician Review
Sample Collection
Communication to Surveillance Team
Assurance , Symptomatic Treatment &
Home isolation for 14 days
Positive
Negative
Send Sample to Pune NIV for confirmation testing
Positive (Confirmed COVID 19 case)
Negative
Case management & continue in isolation room for 14 days from last negative result whichever is later
Home isolation for 14 days from day of admission
With Discharge Advice
Home isolation for 14 days from day of admission
With Discharge Advice

Annexure -2

Ambulance Transfer

When a suspect case of Coronavirus/ respiratory tract infection patient has to be transported, the following precautions should be taken by ambulance personnel accompanying the patient:

On arrival to the healthcare facility from where the patient is to be transferred

A. Decontaminate hands (alcohol gel/rub)

B. Don Personal Protective Equipment (PPE)

A patient requiring Aerosol Generating Precaution: N95 mask with respirator, gloves, long sleeved fluid repellent gown and goggles (Annexure donning PPE)

C. Inform the hospital of the admission/transfer of a potentially infectious person

Before leaving the house/healthcare facility

- Request patient to wear a surgical mask (if tolerated) and advise on Respiratory Hygiene and Cough Etiquette
- A patient with suspected or confirmed CoV should not travel with other patients

In ambulance

- Remove gloves, decontaminate hands and put on new gloves before touching the patient and before a clean or aseptic procedure, if required. Wearing gloves does not replace hand hygiene.
- Use single use or single patient use medical equipment where possible
- Use disposable linen if available

Arrival to the referral hospital

- Before the patient leaves the ambulance ensure arrangements are in place for receipt of the patient
- Transfer patient to the care of hospital staff
- After transfer of patient remove PPE
- Perform hand hygiene

Before ambulance is used again

- **Cleaning and disinfecting** (PPE as outlined above should be worn while cleaning)

  Surfaces (stretcher, chair, door handles etc) should be cleaned with a freshly prepared 1% hypochlorite solution or equivalent

- **Laundry**

  Place reusable blankets in a bag, then put into a laundry bag and send for laundering clearly labelling it so that person in the laundry wears appropriate PPE before handling or autoclaves it before opening.

- **Medical equipment**

  Follow manufacturer's instructions for cleaning/disinfecting reusable equipment (see guidelines)

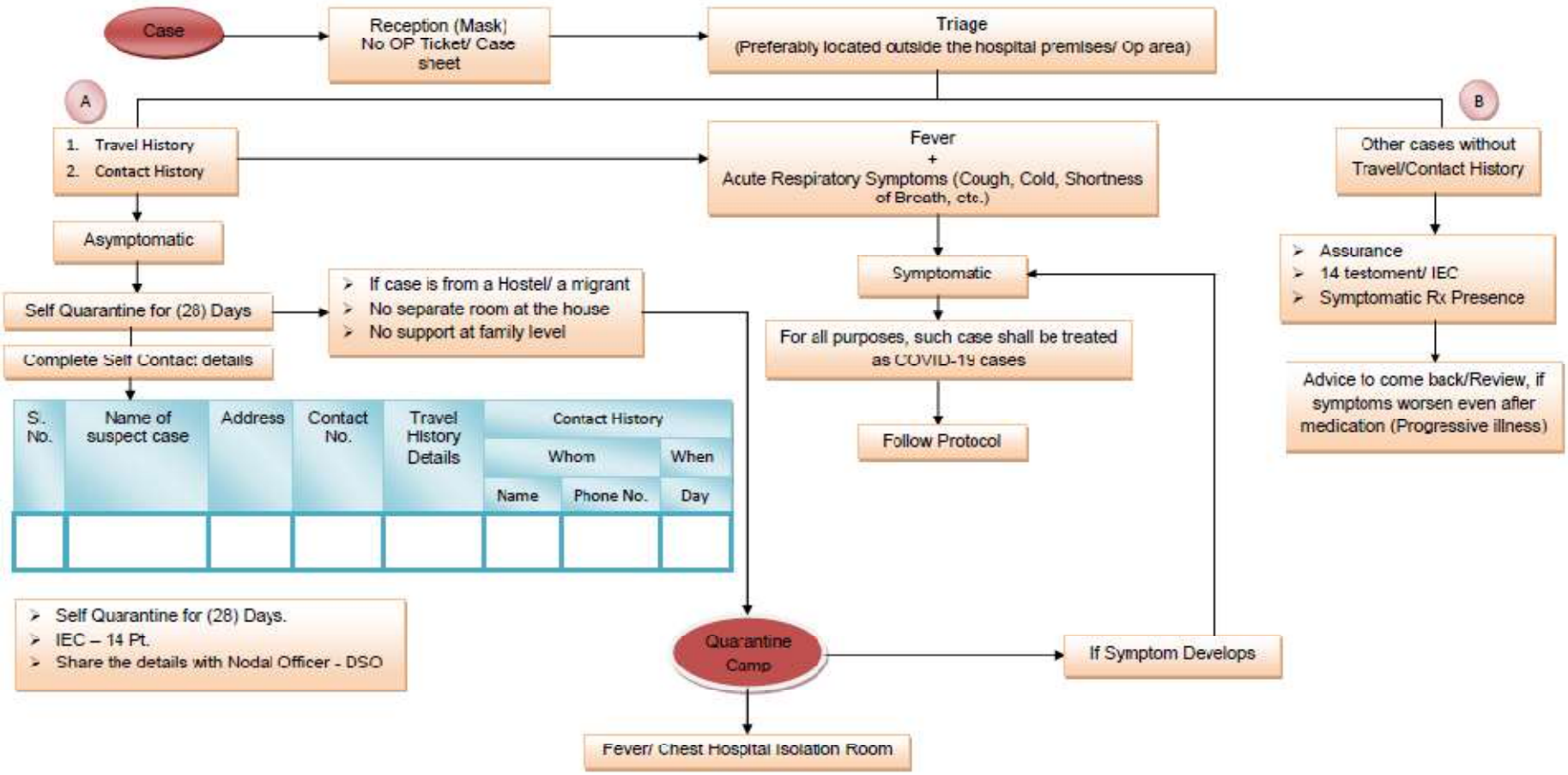
- **Management of waste**

  All masks and any waste contaminated with blood or body fluid (including respiratory secretions) should be disposed of as infectious waste in yellow bag

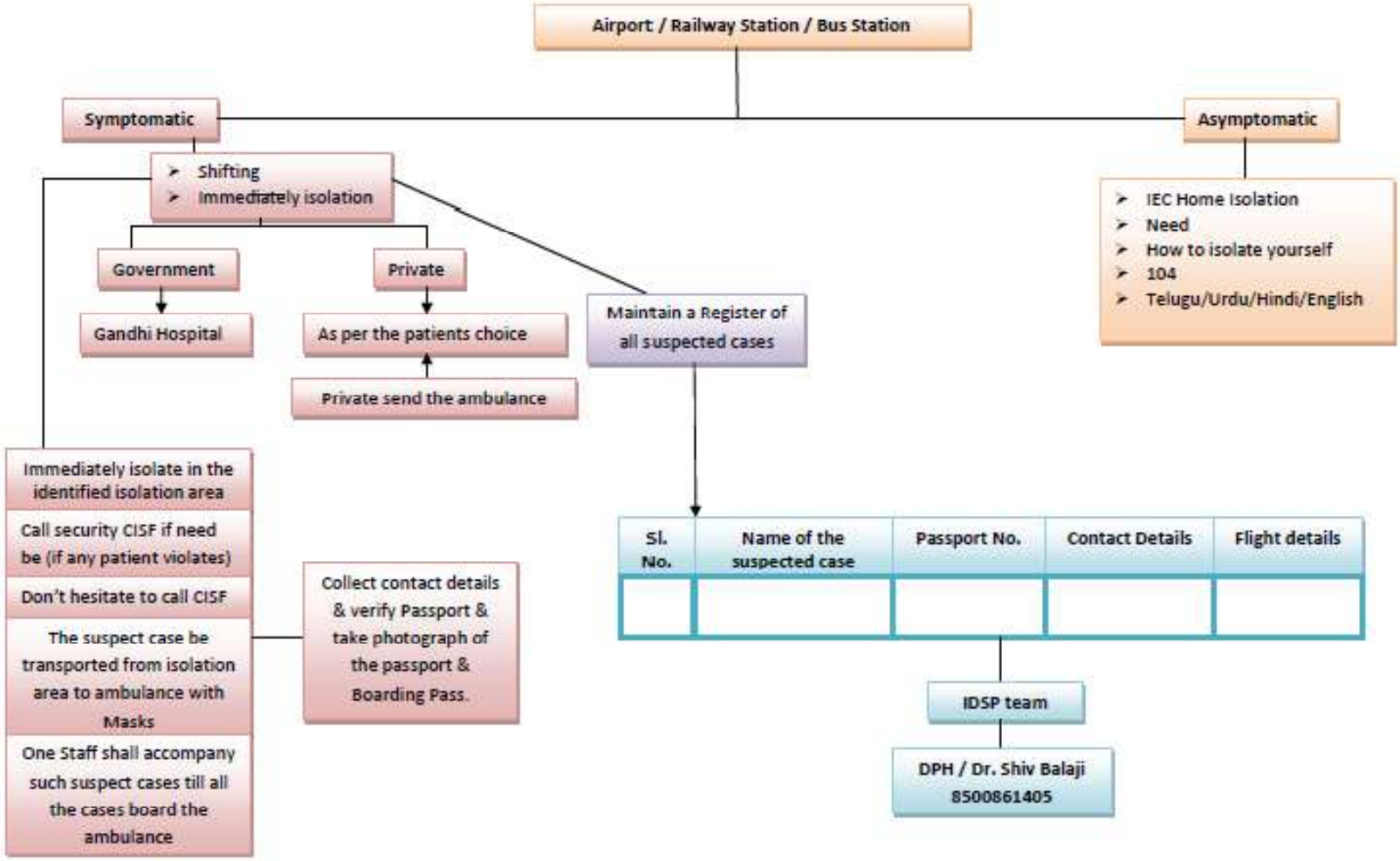
- **Management of sharps** – per Standard Precautions
- **Management of spillages of blood and body fluids** – per Standard Precautions

In the ambulance, if the driver's chamber is not separate, driver should also use PPE

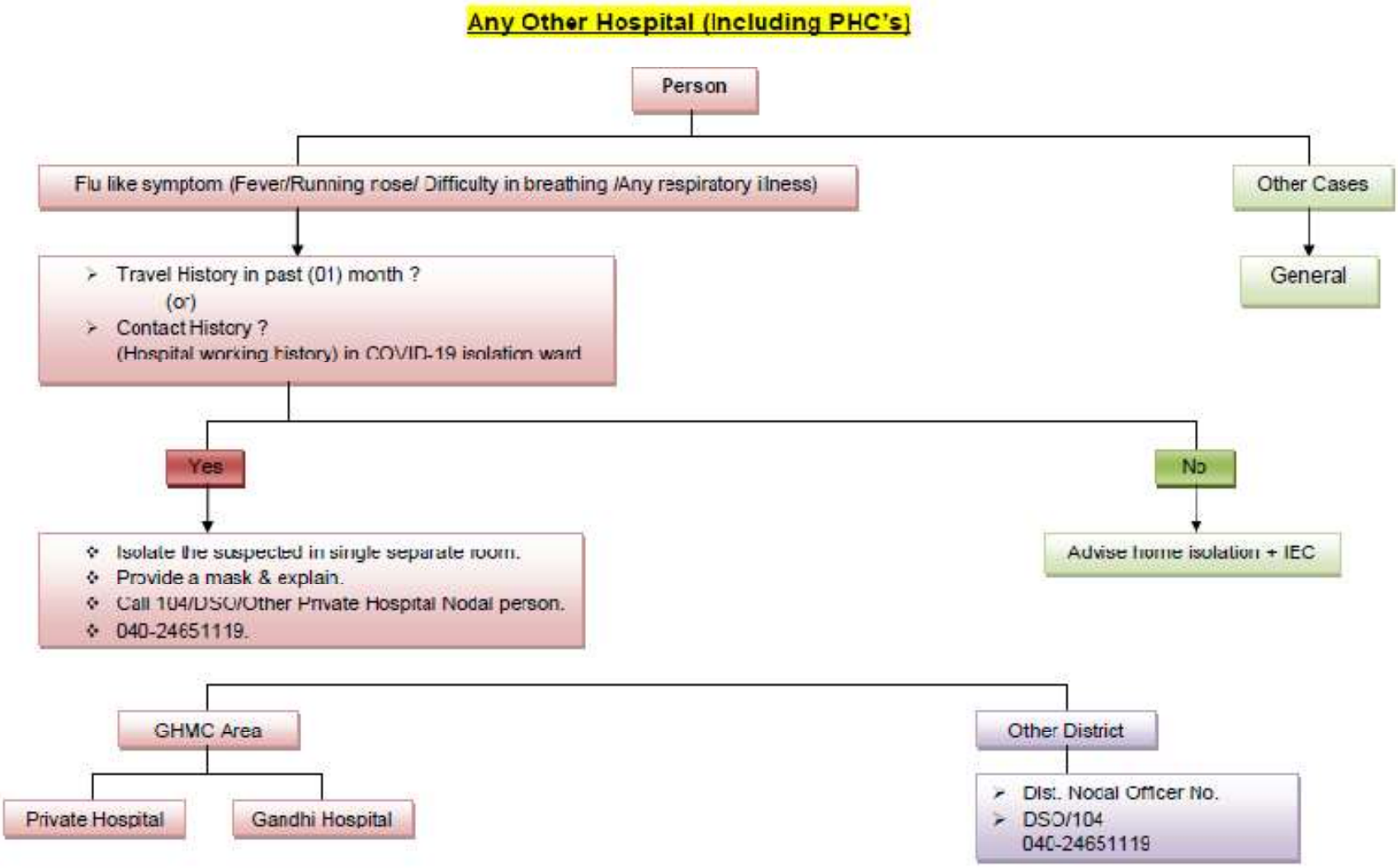
Annexure-3 - Triage



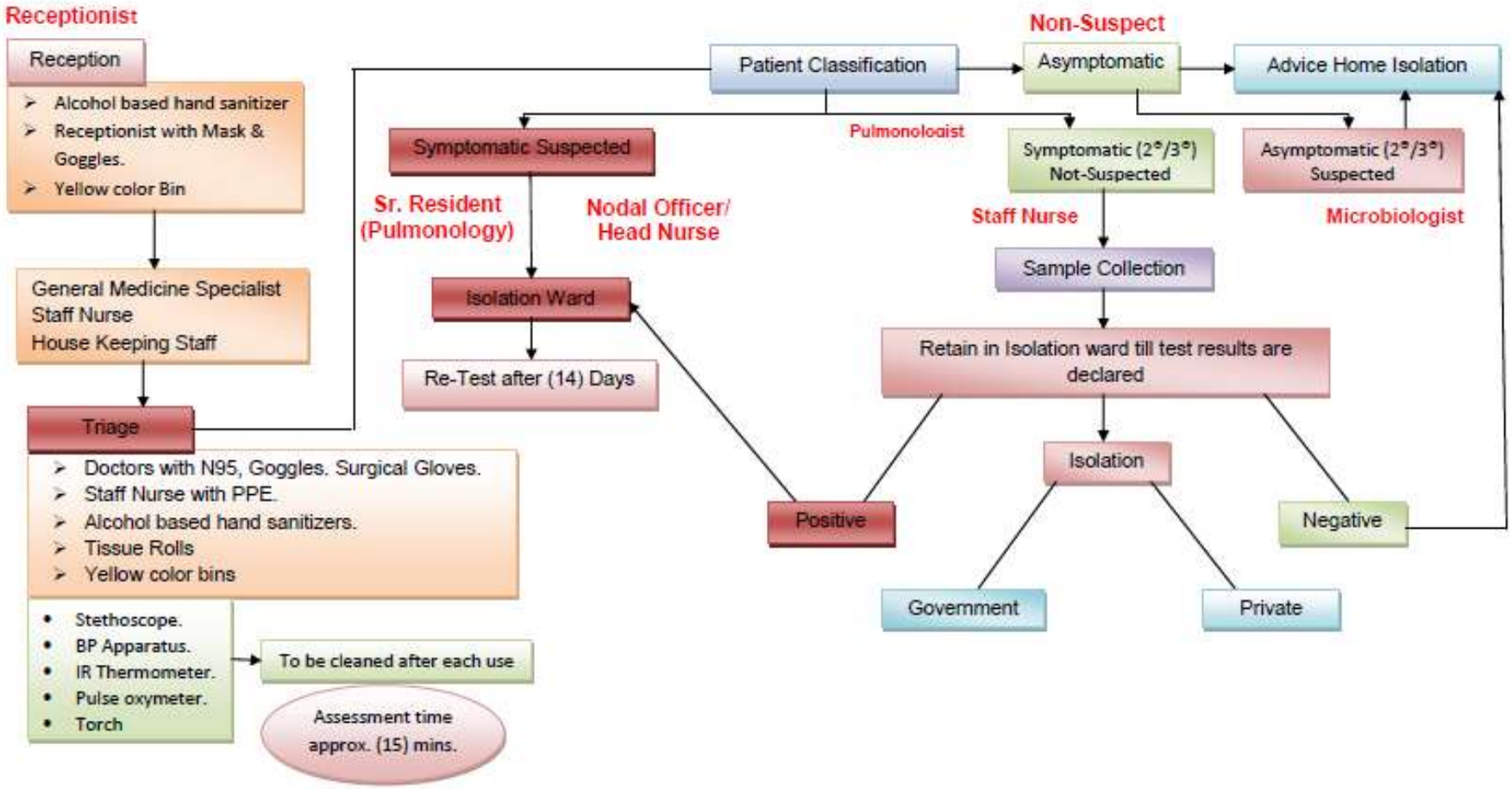
Annexure-4 – Screening at Airport



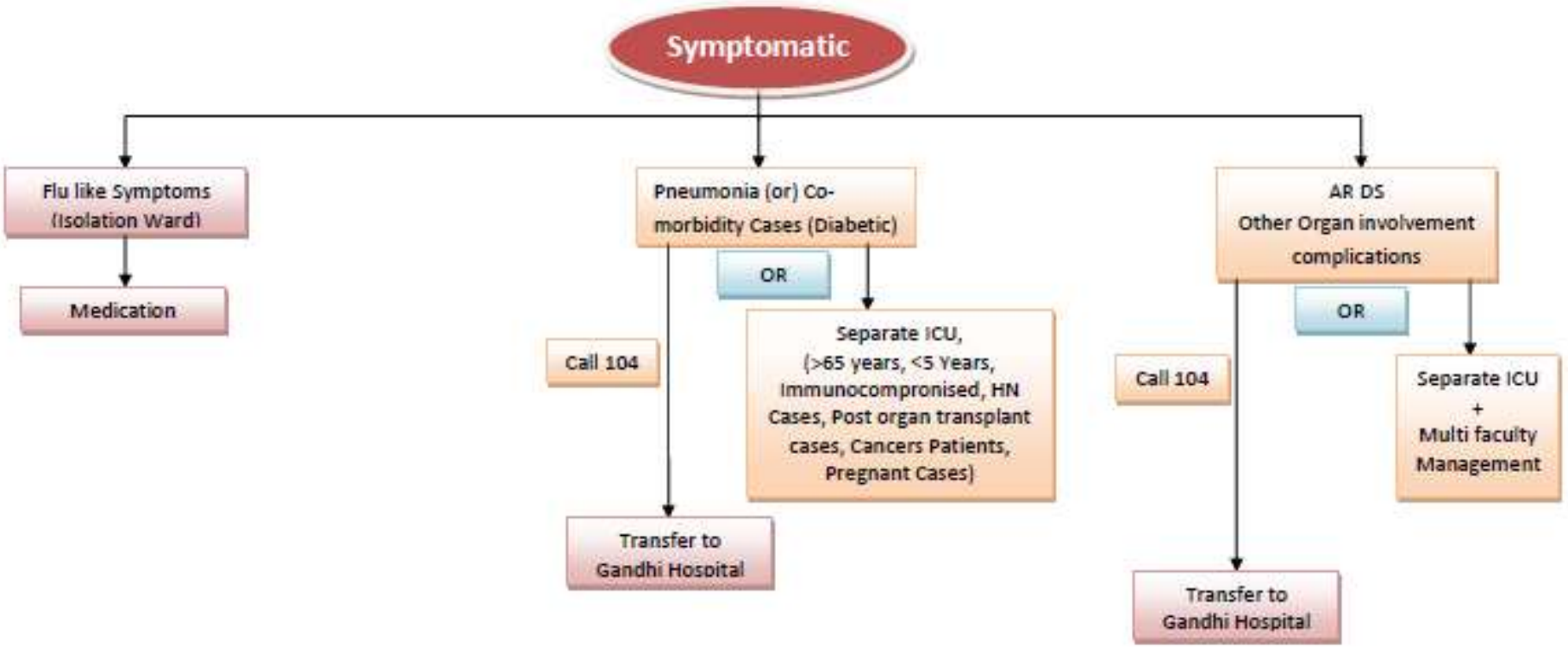
Annexure-5 – Screening at Other Hospitals



Annexure-6 – Protocols at Hospitals



Annexure-7 – Case Management



Annexure – 8

DOs & DON'Ts

RECEPTION RECEPTIONIST

CHECK-LIST PPE KIT

Items on the Desk:

Mask

Alcohol based Hand Sanitizer

DO's

- Issue mask to every single patient approaching you
- Advise Patient to wear it before speaking establishing any communication
- Register the patient with his name, age, address, phone number and travel or contact history
- Direct the patient towards Triage area
- If the patient is brought as referral case by IDSP, let him register in reception and then send the patient to COVID isolation ward
- Always wear fresh mask

DON'Ts

Touch any article brought by patient

- Wear same mask beyond 4 hours
- Wear a soiled mask
- Talk to a patient standing within 1 meter distance
- Touch your face, eyes, nose or mouth without washing hands
- Leave the spot without alternative staff

HOUSE-KEEPING PPE KIT

CHECK-LIST

(Gloves, Gown, Footwear, Mask Goggles)

Three bucket trolley

Clean mop

Hypochlorite Solution

Gauze

BMW Disposal Bins

DO's

- Change to PPE kit before entering treatment area
- Wash hands before and after every procedure
- Compulsorily remove PPE before coming out from isolation ward
- Keep every area ventilated and open windows to allow sunlight
- Bath before leaving the premises

Keep the premises clean by regularly mopping

DON'Ts

- Attend to any work without PPE
- Leave dirt / used material unattended
- Touch used / soiled clothes with bare hands
- Use same PPE in multiple isolation wards
- Enter isolation ward without PPE
- Leave used mops / clothes without cleaning
- Use mobile phones while at duty
- Never Broom
- Be partial with surfaces while cleaning

Triage

Can be as prepared. No changes