



Ref No: AIMSRS/Admn/MS/

Date: 09 Mar 2020

HsOD

All Clinical Departments

AIMSR, Bathinda

SOP ON COVID-19 : AIMSRS HOSPITAL

1. AIMSRS hospital has established facilities for management of COVID-19 suspects/cases following facilities have been established:-

Ser	Description	Remarks
1	Flu corner	In front of Emergency department
2	Isolation ward	08 Bedded. With centralized oxygen/suction and ventilator.
3	Doctors Team	Team of Four doctor's one Medical specialist Dr. Gurmeet Singh and Consultant in Chest Dr. Avneet Garg. Details of team attached as Appendix 'A'.
4	Nursing Staff	Nursing Staff, staff of Seven with Ms. Ranveer Kaur as staff nurse Incharge . Appendix 'B'.
5	IEC Material	IE C material displayed at vantage points.

2. The protocol for management of COVID-19 cases has already been disseminated and attached on Appendix 'C'.

3. AIMSRS has already formed COVID -19 committee and duties of sample collection are responsibilities of ENT department. The call for sample collection will be sent to ENT Deptt, which will make duty roster of doctors for sample collection. Copy of Committee is attached as Appendix 'D'.

4. Following resources will be procured from Civil Surgeon Office through Medical Supdt office.

- (a) VTM Bottles with Nylon sticks
- (b) PPE Kits
- (c) Triple layer Masks
- (d) N95 masks.

5. In case patient (suspect or case) has fatal outcome, the mortal remains will be disposed off in plastic covers, as is being done now for H1N1 cases. The plastic bags will be provided by Mr. Prem Lal, Dy Manager Support Services, Adesh University.

for Adesh Institute of Medical Sciences & Research

Medical Supdt
AIMSR, Bathinda

Appendix 'A'

COVID-19 FLU COMES & ISOLATION WARD
CONSULTANT / DOCTORS/INCHARGE

S. No.	Name of the Member	Department	Designation in Covid-19
1.	Dr. Naranjan Singh	EMO Incharge	Incharge Flu corner and isolation ward
2.	Dr. Avneet Kumar	Assistant Prof, Chest & TB	Nodal officer & Consultant Incharge
3.	Dr. Gurmeet Singh	Physician., Medicine	Physician
4.	Dr. Kasturi Lal	EMO Emergency	Medical Officer
5.	Dr. Shivali	EMO Emergency	Medical Officer
6.	Dr. Ashwani	EMO Emergency	Medical Officer
7.	Mrs. Kulwinder Kaur	Nursing Sister, ENT	I/c Bio Medical waste
8.	Mrs. Dayana Joseph	DNS	I/c Infection Control

Appendix 'B'

COVID-19 FLU COMES & ISOLATION WARD
NURSING STAFF AND NON MEDICAL STAFF

S. No.	Name of the Member	Department
1.	Ranveer Kaur	Nursing Incharge Isolation ward
2.	Praveen Kaur	Staff Nurse
3.	Harpreet Kaur	Staff Nurse
4.	Harmandeep Singh	Staff Nurse
5.	Ramandeep Singh	Staff Nurse
6.	Anjaly Sharma	Staff Nurse
7.	Manjinder Kaur	Staff Nurse
8.	Ward Attendants By Name	Under Sure Security
9.	Housekeeping Staff By Name	Under Sure Security



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SOP : FLU CORNER AND ISOLATION WARD IN AIMSRS HOSPITAL

FLU CORNER

1. Flu Corner Keeping in view the safety of the hospital staff, other patients and their attendants, the Flu Corner in AIMSRS has been located at the entry point so that suspect cases don't move around in the hospital and it is better to attend the patients showing signs and symptoms suggestive of COVID-19 illness or referred from other health facilities, with suspicion of corona virus infection at entrance only at "Flu Corner".

2. Staff at flu corner

- 1 Doctor
 - 1 Nursing staff
 - 1 Helper
 - 1 Security guard
- DUTY HOURS: 3 shifts in 24 hours

3. Facilities at Flu Corner

- (a) Hand washing
- (b) Sanitizer
- (c) Triple layered medical masks and N95 masks Personal Protective Equipment (PPE) for staff and doctors
- (d) A screening proforma
- (e) Hospital waste management facility
- (f) Health education

4. Patients Duty First of all, the patient and his/her attendant(s) will wash their hands at the Flu Corner and will use sanitizer before proceeding to avail health services. The hospital will provide three layered mask to the patients' attendants.

5. General precautions for Doctors and staff to take on first contact of patient:

- a) Take history of patient from **6 feet distance** on first encounter with patient
- b) Patient should be putting on mask
- c) Always Put on medical mask.
- d) Ask for any travel history since appearance of first symptom.
- e) Observe for specific symptoms of COVID-19 like cough, high grade fever, sneeze, body pain, weakness and difficulty in breathing.
- f) If suspected for COVID-19, shift patient to triage or isolation room immediately after giving him mask to wear for further assessment and treatment.

6. Initial Assessment The initial assessment of the patient will be done by nursing staff and the doctor with filling of appropriate proforma for screening. After the assessment, if the

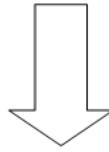
patient falls in the category of suspect, initial management should be initiated at the initial isolation site. A triple layered mask is given to the COVID-19 suspect patient at the Flu Corner.

7. Indications for hospital admission (Any ONE of the following):

- (a) Respiratory rate $>24/\text{min}$
- (b) Confusion/drowsiness
- (c) $\text{SpO}_2 <94\%$ on room air
- (d) Systolic BP <90 mmHg or diastolic BP <60 mmHg
- (e) Those at high risk:
 - i. Age >60 years
 - ii. Cardiovascular risk including hypertension
 - iii. Diabetes mellitus or other immunocompromised states
 - iv. Chronic pulmonary/hepatic/renal disease

PROTOCOL FOR COVID-19 SUSPECT PATIENTS

Entry Portal



Emergency Flu Corner

- Fill up the COVID-19 screening form
- If COVID-19 suspect, give triple layered mask to the patient and shift to a specific Isolation area designated for COVID-19 suspects adjacent to the Emergency

OPD Flu Corner

- Fill up the COVID-19 screening form
- If COVID-19 suspect, give triple layered mask to the patient
- Security guard will accompany the patient from OPD to a specific Isolation area designated for COVID-19 suspects adjacent to the Emergency



Isolation Room

1. CXR will be done in the X-ray room which should be in the vicinity of Emergency area where the technician should be wearing PPE kit.
2. Patient will be examined by EMO or resident concerned on Emergency duty wearing PPE kit.
3. If patient is COVID-19 suspect according to the case definition
↓
4. The Emergency attendant on duty (wearing PPE kit) will shift the patient to COVID-19 Isolation Ward (Blue area).
5. Security guard on Emergency duty (wearing triple layered mask) will accompany and ensure the clearance of passage to the COVID-19 Isolation Ward (blue area) by maintaining atleast 1 meter from the surroundings.

9. FLU CORNER COVID-19 SCREENING PERFORMA

CR. No. _____

Name _____

Age _____

Gender _____

Address _____

State _____

Contact No. _____

Exposure History:

H/o Travel (International/within India): Yes/No

If yes, details:

Close Contact with confirmed COVID-19: Yes/No

If yes, details:

Health Care Worker: Yes/No

Symptomatic: YES/NO

Symptoms (with date of onset and duration):

1. Fever Yes/No

2. Cough Yes/No

3. Breathlessness Yes/No

4. Sore throat Yes/No

5. Expectoration Yes/No

6. Diarrhea Yes/No

7. Body aches Yes/No

8. Haemoptysis Yes/No

9. Nasal discharge Yes/No

10. Chest pain Yes/No

Underlying Medical Condition(s):

1. COPD Yes/No

2. Asthma Yes/No

3. Diabetes Yes/No

4. Hypertension Yes/No

5. Chronic Renal Disease Yes/No

6. Malignancy Yes/No

7. Heart Disease Yes/No

8. On immunosuppressive drugs Yes/No

9. HIV/TB Yes/No

10. Pregnancy Yes/No

H/o Previous Hospitalization or treatment:

Temperature (using Infrared Digital Forehead Thermometer):

Comments or Action taken:

10 Movement of patient to minimize contact with others

1. At receiving area patient will be received by hospital staff and security guard after wearing medical mask.
2. Observation of symptoms will be done by medical/ nursing staff to decide further category of patient at 6 feet distance.
3. If patient is suspected for COVID -19 will be shifted to emergency Flu corner with three layer mask along with hospital staff and security guard.
4. Screening will be done by medical staff after donning PPE (Personal protection equipments)
5. If suspected for COVID -19 will be decided to shift to isolation ward with security guard

Entry to hospital

Patient received at Flu corner by hospital staff + Security guard after wearing medical mask

Initial observation of patient by medical staff from 6 ft distance

If suspected shift to emergency flu corner

If not suspected shift to general OPD or home

If suspected during examination ask patient to wear triple layer mask

If need hospitalization, shift to isolation ward along with hospital attendant wearing PPE kit and security guard wearing triple layer mask maintaining at least 1m distance and avoiding contact of suspect to any other person on the way to isolation.

If hospitalization is not needed give health education regarding home quarantine and send to home after giving triple layer mask

ISOLATION WARD

11 . Staff and duty roster of Isolation ward Considering 4 patients in suspect area and 1 in Paediatric suspect area as one unit (cumulative total of 5 patients) Tentative staffing pattern per unit of Isolation ward per shift:

2 doctors

3 staff nurses

2 ward attendants

2 safai sewaks

Tentative Duty roster: 3 shifts in 24 hours

12 . Equipment In Covid-19 Isolation Ward

- a. PPE for Doctors/Nursing & Para-medical staff*
- b. N95 masks*
- c. Oxygen supply with Flow Meter*
- d. Ventilators*
- e. ET tubes*
- f. Ventilatory circuits with HME filters*
- g. NIV masks*
- h. Laryngoscopes*
- i. Video laryngoscope**
- j. Multipara monitors*
- k. Defibrillators**
- l. Infusion pumps*
- m. IV stands*
- n. ECG machine**
- o. Portable X-ray machine*
- p. Portable ECHO/USG machine**
- q. ABG analyzer*
- r. Crash cart*
- s. Separate stethoscope and BP apparatus for each patient*
- t. Glucometer*

* Must

** Desirable

13 Visitors to the isolation facility is restricted or disallowed. For unavoidable entries, they will use purchased PPE kits according and will be instructed on its proper use and in hand hygiene practices prior to entry into the isolation area.

14. Waiting area for attendants of patients A designated waiting area for attendants which shall adequately cleaned and disinfected with 1% Sodium Hypochlorite three times in a day

15. Dietary Services Patient in the isolation will be provided food in disposable packed boxes and in addition should be provided with disposable glasses, plates, napkins, water bottles etc. Disposable plates, left over food, paper napkins, thermocol/cardboard foodbox used by patients shall be considered contaminated and disposed as yellow category waste and plastic water bottles as red category waste

16. When to treat cases as Critical

- a. ARDS
 - b. Sepsis and septic shock
 - c. MODS
 - d. Systolic BP <90 mm Hg or diastolic BP <60 mm Hg
 - e. Drowsiness, confusion
- Managed as **ICU care**

17. Infection Prevention control (IPC) for Health Care Workers(HCW)

Source control.

- a. Clinical triage Station will have mask, All HCW will follow hand hygiene and respiratory etiquettes.
- b. Efforts be made to minimize the waiting time at triage station.
- c. All individuals, including family members, visitors and health care workers (HCWs) should apply standard, contact and droplet precaution
- d. minimum distance between two patients/ Attendants in waiting area to be 1meter.
- e. IPC strategies to prevent or limit infection transmission in health-care settings include the following:
 - (i) Hand hygiene
 - (ii) Respiratory hygiene
 - (iii) Personal protective equipment (PPE)
 - (iv) Bio Medical waste management
 - (v) Laundry management
 - (vi) Sample collection, storage and transportation
 - (vii) Monitor health of HCWs providing care to cases of COVID 19
 - (viii) Guidelines for Pre- Hospital Care
 - (ix) Hospital Disinfection (Environmental)

Standard precautions

1. Hand Hygiene

- (a) Health care personnel must wash hands with soap and water for 40 seconds and with alcohol rub for 20 seconds.
- (b) Hand hygiene should be maintained before entering into patient's area and after leaving the area.
- (c) Hand hygiene is necessary to maintained before and after each procedure.
- (d) Hand hygiene must be maintained before and after using bathroom.
- (e) Hand hygiene should be maintained before and after taking meals, after sneezing, blowing, coughing and touching the surfaces in active area.
- (f) The hand sanitizers should be put outside elevators, at the entry and exit of isolation ward, OPD'S and screening areas. Hand washing technique :

Mask etiquettes:

- (a) Mask should be worn carefully to cover mouth and nose and avoid gap between
- (b) face and mask
- (c) While in use avoid touching mask from anterior outer surface.
- (d) After disposal of mask wash hands thoroughly with soap and water.

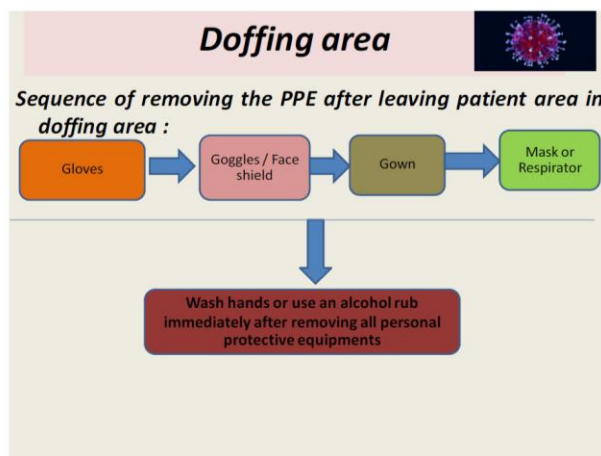
18. Donning and Doffing of PPE

Donning of PPE

- (a) Remove home clothes and wear clean hospital scrubs.
- (b) Wash hands with soap and water or alcohol rub
- (c) Wear shoe cover first provided in PPE kit.
- (d) **Wash hands** and Wear first pair of gloves. The gloves can be sterile or non sterile and should be fit in hands i.e. the size of glove should be smaller than comfortable size.
- (e) Wear disposable non permeable gown provided in PPE kit
- (f) Wear N95 mask or respirator , Cup mask in hand Place the lower strip of mask below the neck passing below ears and upper strip should be at above of neck above the ears. Tight at the bridge of nose and check snug and fit mask below chin and face Check for minimal air leakage from sides of mask.
- (g) Wear goggles/ eye pieces and adjust according to size. Open the ports at upper sides to prevent fogging on glasses of goggles. The upper end of N95 mask should be covered by goggles/eye pieces.
- (h) Wear 2nd pair of gloves. Outer gloves should be larger than first wearing pair of gloves and cover the sleeves of gown with gloves at wrists.

Doffing of PPE

Sequence of removing PPE in doffing area



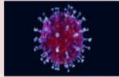
Techniques of removing PPE:

1. Gloves



2. Removing goggles or face shield







**Doffing area –
Goggles or Face shield**



Remove goggles or face shield from back by lifting head band or ear pieces. Don't touch outer contaminated surface of goggles

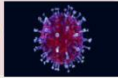
Discard items in waste container and wash hands immediately with soap and water

Sanitize hands with alcohol rub

3. Removing gown

Doffing area - Gown



Unfasten gown ties without making any contact of sleeves with body


Pull away gown from neck and shoulder from touching inside of gown only

Fold or roll into bundle and discard in waste container

Wash hands with soap and water and alcohol rub

Never touch outer surface of gown to prevent contamination of hands

2 Step two



4. Doffing Mask

Doffing area – Mask





DO NOT TOUCH
(Front or outer surface of mask)



3M recommends you practice this removal procedure until you are proficient and comfortable with the procedure and before actual use of the respirator for the first time.

19 SPECIMEN COLLECTION, PACKAGING AND SHIPMENT

 Specimen Collection, Packaging and Transport Guidelines for 2019 novel Coronavirus (2019-nCoV)			
Requirements for Clinical Samples Collection, Packaging and Transport			
<p>1. Sample vials and Virus Transport Medium (VTM)</p> 	<p>2. Adsorbent material (cotton, tissue paper), paraffin, seizer, cello tape</p> 	<p>3. A leak-proof secondary container (e.g., ziplock pouch, cryobox, 50 mL centrifuge tube, plastic container)</p> 	
<p>4. Hard-frozen Gel Packs</p> 	<p>5. A suitable outer container (e.g., thermocol box, ice-box, hard-board box) (minimum dimensions: 10 x 10 x 10 cm)</p> 		
Procedure for Specimen Packaging and Transport			
<p>1. Use PPE while handling specimen</p> 	<p>2. Seal the neck of the sample vials using parafilm</p> 	<p>3. Cover the sample vials using absorbent material</p> 	<p>4. Arrange primary container (vial) in secondary container</p> 
<p>5. Placing the centrifuge tube inside a zip-lock pouch</p> 	<p>6. Placing the zip-lock pouch inside a sturdy plastic container and seal the neck of the container</p> 	<p>Note: Sample vials can also be placed inside a zip-lock pouch, covered in absorbent material and secured by heat-sealing or rubber bands. Then, the zip-lock pouch should be placed inside another plastic pouch and secured</p>	<p>7. Using a thermocol box as an outer container and placing the secondary container within it, surrounded by hard-frozen gel packs</p> 
<p>7. Using a hard card-board box as an outer container and placing the secondary container and the gel packs</p> 	<p>8. Placing the completed Specimen Referral Form (available on www.niv.co.in) and request letter inside a leak-proof, zip-lock pouch</p> 	<p>9. Securing the zip-lock pouch with the Specimen Referral Form on the outer container</p> 	<p>10. Attaching the labels:</p> <ul style="list-style-type: none"> • Senders' address, contact number; Consignee's address/contact number; • Biological substance-Category B; • 'UN 3373'; Orientation label, Handle with care 

20 Environmental Infection Control Environmental cleaning is the part of standard precautions to control infection in all areas of health care facility. The following equipments are needed for maintaining cleanliness in health care facilities:

Equipments

- (a) Three buckets of different colors
- (b) Two extra buckets
- (c) Two floor mopping clothes
- (d) Detergent
- (e) Phenyl
- (f) 5% sodium hypochlorite solution
- (g) Alcohol (isopropyl 70% or ethyl alcohol 70%)

PPE Personal preventive equipments wear by person during cleaning and disinfection of health care facilities:

- (a) Wear disposable gloves after that wear heavy duty gloves
- (b) Triple layer mask/Medical mask
- (c) Gown
- (d) Heavy duty shoes
- (e) Face shield

Cleaning agents and solutions for disinfection

The solutions for cleaning the floor and surfaces should be prepared fresh every time. The recommended time period for leaving agents on surface is 10 minutes.

The preparation of solutions methods of use:

Sr. no.	Name of cleaning agent	Use
1.	<ul style="list-style-type: none"> • Bucket one -10L water + 50 gm surf • Bucket two – Plain tap water • Bucket three- 10L water + 100 ml phenyl 	<ul style="list-style-type: none"> • Use solution with surf for first mopping of floor • Clean floor with plain water of second bucket • Third mopping of floor should be done with third bucket solution
2.	<ul style="list-style-type: none"> • Bucket four and five - 9L water + 1L Sodium hypo chlorite = 0.5 % solution 	<ul style="list-style-type: none"> • To do final mopping of floor with 0.5 % sodium hypochlorite solution • To clean three bucket mopping trolley and mopping cloth with 0.5% sodium hypochlorite solution
3.	1% Sodium hypochlorite	To clean the frequently touched surfaces e.g. tables etc.
4.	Alcohol rub	To clean surfaces where bleach use is not possible e.g. metals

21. Precautions for Cases/Suspects in Isolation Ward

- (a) Patient should wear N95 mask and is to be placed in a well-ventilated room
- (b) The movement of the patient should be limited and minimized at common/ shared places.
- (c) Ensure that shared spaces (e.g. bathroom) are well ventilated (keep windows open).
- (d) Household members should stay in a different room or, if that is not possible, maintain a distance of at least 1 m.
- (e) Use dedicated linen and eating utensils and don't mix with those of others.
- (f) These items should be cleaned with soap and water after use and may be re-used instead of being discarded.
- (g) Daily clean and disinfect surfaces that are frequently touched in the room where the patient is being cared for with regular household disinfectant containing 0.1% sodium hypochlorite.
- (h) Clean and disinfect bathroom and toilet surfaces after every use. Regular household soap or detergent should be used first for cleaning, and then, after rinsing, regular household disinfectant containing 0.1% sodium hypochlorite should be applied.
- (i) Place contaminated linen into a laundry bag. Do not shake soiled laundry and avoid contaminated materials coming into contact with skin and clothes.
- (j) Limit the number of visitors.

22. Disposal and Handling of Dead Body Standard Precautions to be followed by health care workers while handling dead bodies of COVID-19. Standard infection prevention control practices should be followed at all times. These include:

- (a) Hand hygiene
- (b) Use of personal protective equipment (e.g., water resistant apron, gloves, masks, eyewear).
- (c) Safe handling of sharps.
- (d) Disinfect bag housing dead body; instruments and devices used on the patient.
- (e) Disinfect linen. Clean and disinfect environmental surfaces.

Removal of the body from the isolation room or area

1. The health worker attending to the dead body should perform hand hygiene, ensure proper use of PPE (water resistant apron, goggles, N95 mask, gloves).
2. **All tubes, drains and catheters on the dead body should be removed.**
3. Any puncture holes or wounds (resulting from removal of catheter, drains, tubes, or otherwise) should be disinfected with 1% hypochlorite and dressed with impermeable material.
4. Apply caution while handling sharps such as intravenous catheters and other sharp devices. They should be disposed into a sharps container.
5. **Plug Oral, nasal orifices of the dead body to prevent leakage of body fluids.**
6. If the family of the patient wishes to view the body at the time of removal from the isolation room or area, they may be allowed to do so with the application of Standard Precautions.

7. Place the dead body in leak-proof plastic body bag. The exterior of the body bag can be decontaminated with 1% hypochlorite. The body bag can be wrapped with a mortuary sheet or sheet provided by the family members.
8. The body will be either handed over to the relatives or taken to mortuary.
9. All used/ soiled linen should be handled with standard precautions, put in biohazard bag and the outer surface of the bag disinfected with hypochlorite solution.
10. Used equipment should be autoclaved or decontaminated with disinfectant solutions in accordance with established infection prevention control practices.
11. All medical waste must be handled and disposed of in accordance with Biomedical waste management rules.
12. The health staff who handled the body will remove personal protective equipment and will perform hand hygiene.
13. Provide counseling to the family members and respect their sentiments.

Environmental cleaning and sanitation

All surfaces of the isolation area (floors, bed, railings, side tables, IV stand, etc.) should be wiped with 1% Sodium Hypochlorite solution; allow a contact time of 30 minutes, and then allowed to air dry.

Embalming

Embalming of dead body should not be allowed.

Handling of dead body in mortuary

1. Mortuary staff handling COVID-19 dead body should observe standard precautions.
2. Dead bodies should be stored in cold chambers maintained at approximately 4°C.
3. The mortuary must be kept clean. Environmental surfaces, instruments and transport trolleys should be properly disinfected with 1% Hypochlorite solution.
4. After removing the body, the chamber door, handles and floor should be cleaned with sodium hypochlorite 1% solution.

Transportation of dead body

1. The body, secured in a body bag, exterior of which is decontaminated poses no additional risk to the staff transporting the dead body.
2. The personnel handling the body may follow standard precautions (surgical mask, gloves).
3. The vehicle, after the transfer of the body to cremation/ burial staff, will be decontaminated with 1% Sodium Hypochlorite.

