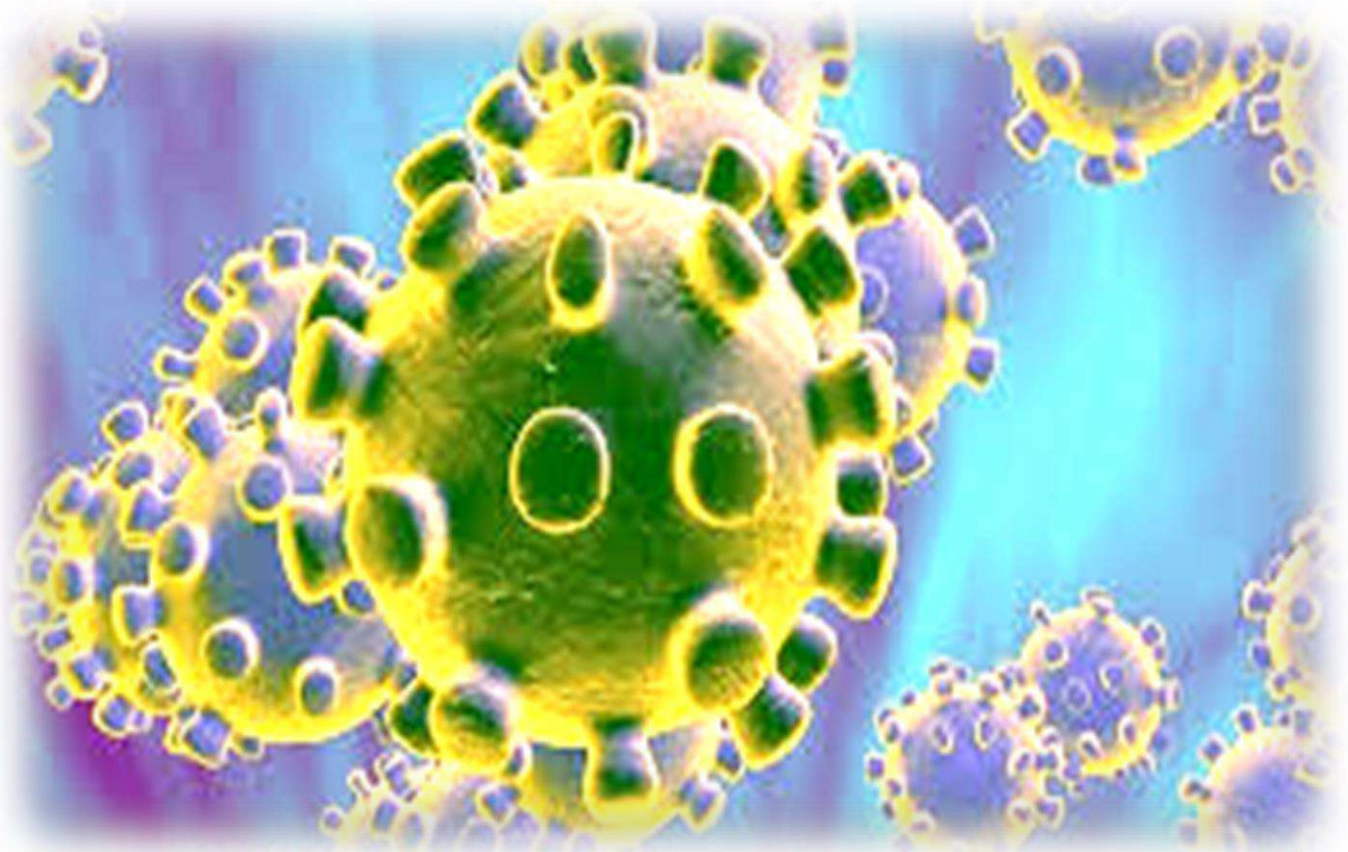




**MEDICAL TEACHING INSTITUTE
HAYATABAD MEDICAL COMPLEX**

COVID-19 MANAGEMENT POLICY



Preface

COVID 19 outbreak has been declared a pandemic by WHO with more than 118000 cases reported worldwide accounting for deaths in excess of 4000. As the infection spreads over different parts of Pakistan, we should be prepared for its onslaught in Khyber Pakhtunkhwa province and as ever Hayatabad Medical Complex desires to be in the forefront, leading the fight against this common enemy that the world intends to defeat. Whilst the alarm bells have rung loud and clear it is definitely not a cause to despair nor should it deter anyone from their professional and civic responsibilities. Countries like China have already demonstrated that the disease can be controlled and every effort should be made to detect, protect and treat the patients infected with the virus.

MTI HMC has mobilised all its resources to prepare for the disease. The administration and clinical team have designed and approved a detailed plan with different levels of escalation to effectively manage the threat at hand. The plan which is being shared with you is in no way exhaustive and may change as the situation demands. Remember our response has to be coherent. We expect all doctors, nurses, paramedics, auxiliary staff and members of administration to act as members of a team - TEAM HMC. Given the global shortage of resources such as PPEs and Diagnostic kits etc we have to rely on our own capacity building and ensure timely utility of the stock at hand for the intended purpose. No one can define a time frame for the pandemic to end and as such we should be prepared for a long haul, which signifies even further the need for a patient but proactive approach. We can understand the growing anxiety and demand for masks and body suites by all the hospital staff - and while we have made arrangements for these to be sufficiently available to the right staff at the right time, especially those who will be in contact with COVID patients - please note that their hasty and injudicious use may leave us wondering when the actual need arises. We expect all members of TEAM HMC to observe utmost care, make frequent use of hygiene supplements such as hand washing facilities and sanitizers, use the PPEs provided and co-operate with their colleagues and administration whilst imparting their professional duties in the best interest of not just patients with COVID infections but others as well.

The Health ministry, Health directorate and Board of Governors MTI HMC have already assured the administration of its all-out support in the emergent situation.

We hope and are sure that together we will tackle all challenges in this current global scenario and the health care providers by way of saving precious lives, will eventually win the accolades they deserve, from all segments of the society.

Special acknowledgment and commendation are due to Muhammad Ilyas (*CA, APFA*) for organizing and drafting the detailed policy.

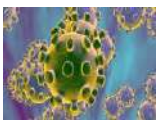
Professor Shehzad Akbar Khan

Medical Director
Medical Teaching Institute
Hayatabad Medical Complex

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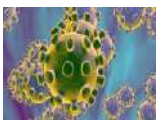
COVID-19 MANAGEMENT PLAN

List of Abbreviations Used

Abbreviation	Full Form
AP	Associate Professor
CCT	Corona Combat Team
CRADC	Corona Registration Advice & Data Centre
CSOPD	Corona Screening OPD
DRAP	Drug Regulatory Authority Pakistan
HD	Hospital Director
HR	Human Resource
MD	Medical Director
IT	Information Technology
OPD	Outdoor Patient Department
PPE	Personal Protective Equipment
RMO	Resident Medical Officer
USS	Ultra Sound Scan
WHO	World Health Organization



COVID-19 MANAGEMENT PLAN



1. PLANNING

Given the general dynamics of any pandemic, MTI-HMC from the very outset of declaration of COVID emergency set out with a series of measures to combat the impending threat.

Following is the plan & sequence of activities that transpired over the course of time in sequential order.

a. Steering of COVID Crisis (Command & Control)

Medical Director of MTI-HMC shall assume the lead role in Planning, Organizing and Coordinating all efforts made in purview of COVID Crisis. **Office of MD** and **Conference Room** in main administration block of MTI-HMC has been designated as COVID secretariat.

Dean, HD and ND (prospectively identified as replacements for MD in the said order) shall work in association with MD in managing day to day activities relating to the COVID pandemic. Focal persons have been identified for various administrative and clinical functions. Fortnightly sessions involving all the aforementioned officials shall be held to discuss, evaluate and revise the strategy to fight COVID pandemic.

b. COVID Surveillance Committee

The committee is constituted and notified on February 05, 2020 having the following members.

i.	Professor M. Usman Khattak	Chairman
ii.	HOD Pathology	Member
iii.	Director Nursing	Member
iv.	Senior Pharmacist	Member
v.	RMO	Member

The committee is tasked with devising and upgrading response measures related to COVID 19 management in light of the locally evolving dynamics.

c. Clinical Guidelines Committee

The committee has the following composition.

i.	Professor Noor Wazir	Chairman
ii.	Associate Professor Said Amin	Member
iii.	Associate Professor Fawad Rahim	Member

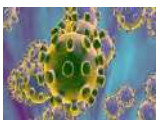
Framing guidelines relating to COVID management & its constant review / up gradation is the domain of the committee. Following are some of the essential areas regular needing consideration.

- i. General Management of COVID 19 Patients
- ii. Admission Pathway
- iii. Oxygen Therapy
- iv. Hypotension Management
- v. Ventilator Therapy
- vi. Managing suspected / positive healthcare workers

d. CORONA Combat Team

A weekly rota shall be prepared for frontline health care workers involved in management of COVID patients. These shall be broadly classified into one of the following domains.

- i. **OPD & Isolation Team:** **Professor Usman Khattak** is the focal person entrusted with devising a comprehensive timetable of doctors including faculty



COVID-19 MANAGEMENT PLAN

and trainees who are designated duties over six hourly shifts in CSOPD and Isolation areas.

Nursing Director Mr. Awal Khan would cater for duties assignment to Nursing and Paramedics staff.

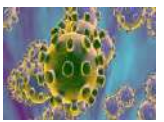
- ii. **COVID ICU Team: Professor Noor Wazir** shall be In-Charge of COVID ICU, assisted by AP Raza Ullah and AP Asif. A team of Medical Specialists (AP,s of various medical wards) shall be at the disposal of the above for due inculcation in the duty rota.

e. **Post Disaster Recovery**

As the threat posed by the COVID pandemic scales down, MTI-HMC intends to implement its post disaster recovery plan returning to the new normal in a phased manner. **Medical Director and Director Planning** shall assume the responsibility for leading efforts in this direction.

Highlights of the recovery plan are as under:

- i. Resumption of elective patient care services in different stages dictated by different resource availability including healthcare personnel, inpatient and outpatient premises, diagnostic and therapeutic modalities and availability of funds.
- ii. Outpatient services shall be resumed with appointments only
- iii. Defined slots will be reserved for peads speciality given due weightage to patients seeking appointments on telephone as well as walk in candidates.
- iv. Time frames approved by respective departments shall be adhered in case of lab tests, radiological investigation and operations/ procedure list.
- v. All health care personnel will have an assessment of their anti-body titres and COVID status (determined by PCR test) where indicated.



2. IMPLEMENTATION SCHEME

Realizing that the number of patients with varying severity of illness will swell with the passage of time, the institution has devised an escalation plan spread over three phases based on surge capacity. These are outlined as under:

2.1.PLAN A

THREAT LEVEL : 1

Maximum THIRTY inpatients with suspected or confirmed COVID 19 infection.

TRIAGE

TRIAGE facilities mandated at the main entrance. Providers shall include specially trained nurses and paramedical staff under the supervision of a trained doctor. Patients shall be evaluated on the basis of their presenting symptoms and broadly classified into one of the following groups:

- i. Those with a reasonable suspicion index of Corona virus infection will be given a BLUE CARD and directed to special CORONA screening OPDs where they will be assessed by the CCT and investigated to the desired level.
- ii. Those with un-related complaints will be given a GREEN CARD and referred for routine consultation to the regular OPD.

CORONA SCREENING OPD (CSOPD)

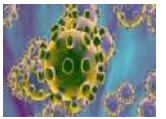
- i. Tented consultation facility near the main entrance
- ii. Members of CCT and auxiliary staff to man the facility.
- iii. Full PPE (N95 mask, goggles/face shields, gloves, alcohol based hand sanitizers/soap & water)
- iv. Patients referred from the TRIAGE area, or those suspected to be suffering from COVID-19 in the routine OPDs and wards will be sent for assessment to this facility.
- v. Patients will be assessed on the basis of pre-determined criteria emphasising on presence of respiratory symptoms, travel history and contact with a diagnosed case of COVID 19. They will then be directed to one of the following sections
 - a. SECTION B for patients without a Hx of travel or contact
 - b. SECTION A for patients with a positive Hx of travel or contact
- vi. Phlebotomy and other services available
- vii. For throat swabs they will be directed to the designated isolation room where throat swabs will be collected for testing by trained individuals.
- viii. Only patients fulfilling the desired 'Admission criteria' shall be referred for admission to designated areas.

ROUTINE OPD

- i. Outpatient consultation will be offered to all patients but elective admissions restricted to very urgent cases only.
- ii. Masks to be donned at all times, Facilities for hand washing and sanitization.

CORONA REGISTRATION ADVISE & DATA CENTER (CRADC)

- i. Special container parked near the front car park
- ii. HMIS facility (Connected to the hospital IT network)
- iii. All suspected and confirmed cases to be part of the data base record
- iv. Routine OPD charges to apply
- v. Masks to be provided to all suspected patients



ISOLATION AREA

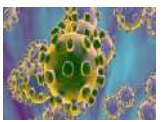
The following SOPs shall be followed:

- i. Only patients who fulfil the admission criteria will be entertained for admission
- ii. Dedicated wheel chairs and stretchers shall be used for transportation of suspected /diagnosed cases.
- iii. Specialised staff (Members of Corona Combat team)
- iv. Twelve (12) beds (individual rooms) with HDU level facilities i.e. medical gases and monitoring etc.
- v. Four (4) beds (2/room) with ICU level facilities i.e. ventilated beds.
- vi. Fourteen (14) beds with oxygen cylinders.
- vii. Designated room with all facilities for throat swab collection.
- viii. Crash trolley equipped with defibrillator, emergency medicines and resuscitation equipment.
- ix. Mobile X-ray
- x. Mobile USS
- xi. Phlebotomy facilities
- xii. Mini pharmacy / Refrigerator (medical grade)
- xiii. PPE

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COVID-19 MANAGEMENT PLAN



2.2. PLAN B

THREAT LEVEL: 2

Number of inpatients suspected or diagnosed with COVID 19 infection exceeding THIRTY and up to EIGHTY.

Time required for implementation: 12-24 hours.

TRIAGE

Triage facilities to be doubled at the gates. Referrals shall be made to CSOPD and further designated extensions of the aforesaid facility.

CORONA SCREENING OPD

Routine OPD to be utilized as an extension of CSOPD. Sorting criteria, Admission criteria as described in plan A above shall be followed.

ROUTINE OPD

Routine consultations to stop all together in the OPD. Patients with non respiratory symptoms to be referred to respective clinical units for management advice.

CORONA REGISTRATION ADVICE & DATA CENTER (CRADC)

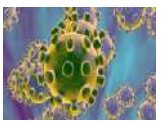
Facilities to be extended to regular OPD (re-designated as extension of CSOPD) counters as well.

ISOLATION

Serial no.	Designation	Area	Nature & No. of Beds
1	Isolation 1A & 1B	Private rooms 1 st floor	HDU 10, Vent 6, Cylinder 14
2	Isolation 2	Medical A & C ward	HDU 15, Cylinder 10
3	Isolation 3	Orthopaedic A & B ward	HDU 20, Cylinder 5

CORONA COMBAT TEAM

To be reconstituted with involvement of surgical and allied and Basic Sciences specialties as the situation demands.



2.3.MODIFIED PLAN B





THREAT LEVEL: 2

Given the increasing number of patients in the community and the growing realization that social distancing needs strict enforcement at all levels, MTI-HMC has decided to switch to Plan B with some alterations. This has further been necessitated by the fact that this institution has to cater for additional services such as chemotherapy & management of Thalassemia patients which has to be provided on an urgent regular basis in a separate environment. Adversaries of weather have to be taken to consideration as well. The facilities therefore need to be adjusted whereby proper zoning shall be ensured as follows.

TRIAGE

Triage facilities shall continue as such at the main gates which shall be the sole entry point for all patients and staff presenting to the hospital unless designated otherwise such as in case of Thalassemia & Oncology patients.

Division of Patients in Triage shall be as follows:

-  a. Red A: Respiratory symptom along with any epidemiological risk factor.
-  b. Red B: Respiratory symptom BUT NO epidemiological risk factor.
-  c. Yellow: Non Respiratory symptoms with epidemiological risk factors.
-  d. Green: Other emergencies with No Epidemiological risk factor & NO respiratory symptom.

CORONA SCREENING OPD

Main OPD shall serve as the site for CSOPD and shall be divided into:

- a. Red zone
On the basis of symptoms and epidemiological risk factors as discussed above, Red Zone shall be further divided into:
 - i. Red A zone
 - ii. Red B zone
 - iii. Swab Collection Room
- b. Yellow zone
Yellow area shall have representation from different specialities(Medicine, Gynae, Peads, Orthopaedics and Surgery) where patients shall be screened and managed based on their clinical presentation.

ROUTINE EMERGENCIES

Accident & Emergency Department shall serve as Green ZONE for emergency patients having no suspicion of COVID 19 infection.

OTHER EMERGENCIES /URGENT OPD CASES

Other emergencies / Urgent OPD cases related to the specialties of Cardiology, Oncology and Thalassemia shall continue working in their designated departments.

CORONA REGISTRATION ADVICE & DATA CENTER (CRADC)

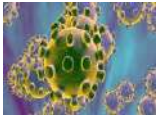
Facilities to be extended to the dedicated registration desk setup outside the CSOPD.

ISOLATION / ICU

Serial no.	Designation	Area	Nature & No. of Beds
1	Isolation 1A & 1B	Private rooms 1 st floor	HDU 10, Vent 6, Cylinder 14
2	Isolation 2	Medical A & C ward	HDU 15, Cylinder 10
3	Isolation 3	Orthopaedic A & B ward	HDU 20, Cylinder 5
4	COVID ICU	CCU / ICU	Vent 12

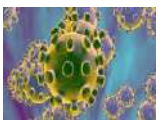


COVID-19 MANAGEMENT PLAN



CORONA COMBAT TEAM

To be reconstituted with involvement of surgical and allied and Basic Sciences specialties as the situation demands



2.4. PLAN C

THREAT LEVEL 3

Number of inpatients suspected or diagnosed with COVID 19 infection exceeding EIGHTY.
Time required for implementation: 48 - 72 hours

TRIAGE

Triage facilities shall continue as such at the main gates which shall be the sole entry point for all patients and staff presenting to the hospital.

Division of Patients in Triage shall be as follows:

- e. Red A: Respiratory symptom along with any epidemiological risk factor.
f. Red B: Respiratory symptom BUT NO epidemiological risk factor.
g. Yellow: Non Respiratory symptoms with epidemiological risk factors.
h. Green: Other emergencies with No Epidemiological risk factor & NO respiratory symptom.

CORONA SCREENING OPD

Main OPD shall serve as the site for CSOPD and shall be divided into:

- c. Red zone
On the basis of symptoms and epidemiological risk factors as discussed above, Red Zone shall be further divided into:
iv. Red A zone
v. Red B zone
vi. Swab Collection Room
d. Yellow zone
Yellow area shall have representation from different specialities(Medicine, Gynae, Peads, Orthopaedics and Surgery) where patients shall be screened and managed based on their clinical presentation.

ROUTINE EMERGENCIES

Accident & Emergency Department shall serve as Green ZONE for emergency patients having no suspicion of COVID 19 infection.

OTHER EMERGENCIES /URGENT OPD CASES

Other emergencies / Urgent OPD cases related to the specialties of Cardiology, Oncology and Thalassemia shall continue working in their designated departments.

CORONA REGISTRATION ADVICE & DATA CENTER (CRADC)

Facilities to be extended to the dedicated registration desk setup outside the CSOPD.

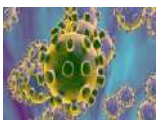
ISOLATION / ICU

The following distribution of beds forms part of plan C:

Table with 4 columns: Serial no., Designation, Area, Nature & No. of Beds. Rows include Isolation 1A, 1B, 2, 3, 4, and COVID ICU.



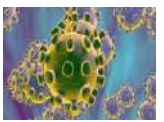
COVID-19 MANAGEMENT PLAN



2.5. ESCALATED PLAN C

Further escalation of facilities which will be strictly subject to UPGARDATION OF CENTRAL OXYGEN SUPPLY & AVAILABILITY OF TRAINED HR will be as follows.

Serial Number	Unit	Bed Capacity
i.	Cardiology	HDU 10, Cylinder 14
ii.	Gastroenterology	HDU 8, Cylinder 12
iii.	ENT A	Cylinder 12
iv.	Maxillofacial (Male)	HDU 6
v.	IKD (affiliate institute)	Up to 40 beds on 72 hours' notice



3. CLINICAL CASE MANAGEMENT

The clinical guideline committee under the chairmanship of **Prof. Noor Wazir** after reviewing national and international guidelines has recommended the following management policy to be adopted at the level of the institution.

- a. Triage at main gate MTI-HMC (Annexure 1)
- b. Screening Criteria & Admission Criteria (Annexure 2)
- c. Clinical Guidelines for Treatment Of COVID-19 MTI-HMC (Annexure 3)
- d. Oxygen Therapy Pathway (Annexure 4)
- e. Hypotension Pathway (Annexure 5)
- f. Management of Healthcare workers (Annexure 6)

4. CLINICAL AUDIT & REVIEW BOARD

The hospital has a clinical audit and review committee which is actively involved in identifying areas of clinical interest affecting patient care. Quality improvement is aimed to through well planned and scheduled audit activities. The committee reports to **Medical Director** through clinical executive board. The responsibilities and SOPs of the audit committee are detailed as under:

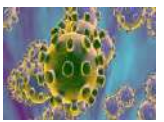
- i. Developing and implementing a systematic approach to clinical audit.
- ii. Planning and scheduling the clinical audit plan.
- iii. Selecting and allocating quality clinical indicators and audit topics to the relevant clinical units.
- iv. Yearly Clinical Audit Plan and ensure that it is robust, reflecting both national and local priorities, comprehensive and embedded across all clinical teams with the outcomes used to drive improvement and enhance the overall quality of clinical care.
- v. Encourage a multidisciplinary approach to clinical audit that tracks patient's journey delivering evidence based care.
- vi. Analyse and review clinical audit reports and disseminate these among medical staff to ensure best practices.
- vii. Report non-compliance with, or inadequate response to, Audit Reports to Medical Director.
- viii. Providing assurance to the Clinical Executive Board (CEB)/Governance Committees on the above points through the production of reports.
- ix. Providing assistance in conducting morbidity and mortality meetings in all clinical units of HMC on regular basis in order to improve patient outcomes.
- x. Report on morbidity and mortality in order to reduce mortality and other adverse treatment outcomes, improve quality of care and ensure accountability of health professionals.

In the current scenario of COVID pandemic, the committee is actively involved in data collection/ interpretation / implementation related to the following fields:

Audit Topic	Frequency of Data Collection	Review Frequency
Number of COVID suspected patient presenting to HMC on the basis of relevant symptoms and /or	Daily	Weekly



COVID-19 MANAGEMENT PLAN



epidemiological risk factors		
Proportion of Nasopharyngeal / throat swabs reported positive on PCR analysis	Daily	Weekly
Admission of patients based on severity of symptoms	Daily	Weekly
Outcomes of admitted patients. Recovered/ discharged Vs. dead	Daily	Weekly
Outcome of patients managed on invasive Vs. Non-invasive ventilation	Weekly	Monthly
Response of patients to convalescent plasma	Weekly	Monthly
Clinical and Bio Chemical response to tocilizumab (actemra)	Weekly	Monthly
Health care workers exposure and positivity. COVID Vs Non COVID area.	Monthly	Monthly
Adherence to clinical management guidelines for COVID patients	Monthly	6 Weekly
Anti -Bodies response in health care workers	Quarterly	Semi Annually

5. COMMUNICATION AND MEDIA MANAGEMENT

The hospital has a well-defined policy for ensuring effective communication internally as well as with external relevant stakeholders. The COVID secretariat under the MD is constantly updated on availability of beds and equipment, testing of suspected cases, outcomes of results etc.

The hospital staffs is kept abreast on updated official policies relating to admission/ discharge of patients, infection control measures, management pathway & guidelines through internal communication in the form of memorandum, notification or an office order which are circulated specially on the hospital website.

Clinical teams responsible for patient management over the course of a week receive a comprehensive briefing by the MD and relevant administrative and clinical team. All team members working in different clinical areas communicate regularly among themselves and the administrative personnel through dedicated watsaap groups which have been created to minimize unnecessary movement of personnel and hardware from potentially infected areas.

A designated MIS in HMC is used for reporting purposes including tests results.

All external communication such as interaction with the press and social media or different data collection agencies shall be routed through the office PRO (**Ms. Towheed**) after due approval by MD, HD or Dean. In most cases focal persons have been nominated to liaise with stakeholders. Any press gatherings shall be organized in COVID secretariat or main auditorium of the hospital.

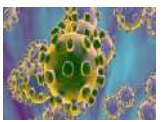
RMO and Manager IT shall collect all relevant data of COVID patients on daily basis and ensure its timely entry into IPMS and other resources identified by the health department or provincial government.

6. INFECTION CONTROL COMMITTEE AND INFECTION CONTROL MEASURE

MTI-HMC has an active INFECTION CONTROL COMMITTEE mandated with creating and maintaining an environment which minimizes the risk of infection to all patients, care givers and visitors



COVID-19 MANAGEMENT PLAN



by Policy making, consultation, education, immunization / vaccination, surveillance and research activities. The committee reports to **Clinical Executive Board**.

In the current scenario the committee has been tasked with proposing and implementing strict measures related to control of COVID spread. These include SOPs on the following subject matters.

- a. Limiting number of attendants in Hospital (1 patient 1 attendant policy)
- b. Regular use of sanitizer & disinfectants
- c. Regular fumigation of the premises
- d. Hand washing guidelines and facilities
- e. Judicious Use of PPEs by healthcare workers
- f. Donning and Doffing of PPEs
- g. Proper waste management
- h. Display of Public Awareness Messages
- i. Optimum use of Isolation and Quarantine facilities

7. SAFETY & SECURITY

MTI-HMC has a sophisticated system of safety and security of patients, attendants and healthcare workers manned by 136 security guards and 3 administrative positions supervising security along with 12 policemen deputed in MTI-HMC who work in close coordination with other Law enforcement agencies. The following have been identified as high risk areas in the current COVID scenario.

- a. CSOPD
- b. Swab Collection Point
- c. Isolation rooms and wards
- d. Bio Safety level ii Laboratory
- e. Plasmapheresis room
- f. Main gates
- g. Stores

The security plan encompasses deputation of security personnel, safe keeping of gates and live surveillance of premises by the help of CCTV cameras. Security plan for each month is prepared by **Senior Security Officer** and is approved by hospital director. There is a sound system of accident reporting in place.

The hospital disaster management plan (annexure 8) is duly approved and implemented.

8. HUMAN RESOURCE

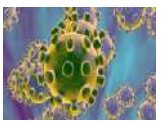
HMC intends to utilize all relevant healthcare workers and auxiliary, administrative and technical staff for the benefit of COVID management activities. As and when required resort shall be made to fresh hiring either through walk in interviews or formal advertisement. These personnel can be hired in locum/ contract or regular (institutional) capacity. The Provincial government and the Board of Governors MTI HMC-have already approved the aforementioned policy.

The Clinical privilege committee has issued very clear direction (annexure 9) to ensure involvement of all cadres of doctors in COVID management irrespective of their clinical specialities.

Following is the brief outline of healthcare resource actively involved in COVID activities over the course of a working week. Due replacements are offered at identified periods.



COVID-19 MANAGEMENT PLAN



Staff/ Cadre	Number
Specialist Doctors	46
TMOs/MOs	144
Nursing Staff	75
Paramedical Staff	60
Maintenance Staff	47
Administrative Staff	92

9. PUBLIC HEALTH LABORATORIES IN MTI-HMC

For testing of COVID 19 patient's laboratory in MTI-HMC started functioning on 6th April with an average capacity of almost 150 tests per 24 hours. Nasopharyngeal/ oral swabs are collected by the designated team in swab room or bed side and the information readily entered into IPMS Samples are never refused by lab and in case of excessive back log are sent to KMU. The output of results depends upon availability of reagents for the existing equipment. When the reagent supply is interrupted, the output reduces proportionately.

Till June 22, 2020 the number of tests conducted by MTI-HMC is 7283.

The lab of MTI-HMC is the first public health laboratory to start PCR in KP. Regular calibration of machines takes place on daily basis.

10. SUPPLY CHAIN MANAGEMENT

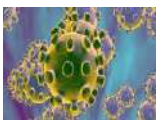
MTI-HMC has a dedicated procurement cell manned by experts. In the current pandemic emergency procurement is made as per provisions of KPPRA act and rules. Moreover, there is a constant supply of various essentials from the offices of DGHS and NDMA. Stores are operational 24/7 and provisions are made through proper indenting.

Following supplies have been procured by supply chain in view of COVID 19 emergency.

Serial No.	Name of Item	Qty.	Amount
1	Ambo Bag	100	183,000
2	Ventilators	15	43,350,000
3	Defibrillator	10	5,890,000
4	Basic Monitors	50	14,450,000
5	Cardiac Monitors with central station	16	7,344,000
6	Therapeutic Plasma Exchange set	100	1,600,000
7	Dis. Bed Sheet, Pillow Cover Elastic	2000 6	624,200
8	Adult Ventilator Bacteria HMC Catheter Mounts	Circuit Filter 9 9 9	8,550
9	Autoclave	1	695,000
10	Portable X-Ray Machine	1	1,390,000
11	Procalacitonin PCT	2	196,000
12	Pathology Equipment		1,507,740
13	30°C Freezer	1	975,000
14	NIV/ Bipap Mask	15	97,500



COVID-19 MANAGEMENT PLAN



15	MegaPurix® Automated Nucleic Acid Purification System	1	2,900,000
16	Bosphore Novel Corona Virus (2019-nCoV) Detection Kit	15	6,000,000
17	MegaPurix Viral Extraction Kit per Kit 48test	62.5	1,500,000
18	Filter Tips	60	60,000
19	Thermometer Infred Digital	3	81,000
20	BiPAP Machine Ventmed Technology	1	94,500
21	Plasma Apheresis System	1	5,000,000
22	Refrigerator Digital -20	1	100,000
23	Dis. Gown for Corona	1000	395,000
24	I.V Stand	50	80,000
25	Oxygen Re-Breathing Mask	500	209,500
26	NIV/BMC Ventilators Mask	10	65,000
27	Portable RO System	1	540,000
28	Toyo® SARS-CoV-2 1gM/1gG	40	50,000
29	Elecsys Anti Sars-CoV-2 Immunoassay	400	108,000
30	Dis. Bed Sheet with Pillow Cover, Elastic	31007	951,000
31	NIV Mask Bipap/Cpap	50	275,000
32	MIC PCR Reaction Tube	2	76,000
33	Elecsys Anti Sars-CoV-2 Immunoassay	200	54,000
34	Zip Shopper	50kg	27,500
35	Oxygen Re-Breathing Mask	500	152,500
36	Elecsys Anti Sars-CoV-2 Immunoassay	1000	270,000
37	MIC PCR Reaction Tube	2	76,000
TOTAL			97,375,990

11. WASTE MANAGEMENT

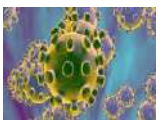
HMC has its own waste management plan for the safe disposal of hospital waste which has been implemented since Jan 2017. A double chambered incinerator with wet scrubber as per the EPA requirements is installed having loading capacity of 750 kgs and burning capacity of 150 kgs/hr. Trainings have been provided to the relevant staff from time to time. All the units/wards/departments are equipped with approved waste management system as under:

- a. Syringe cutters
- b. Protocols and SOPs for segregation at source
- c. The waste carrier trolleys are also provided for waste collection
- d. Color coded waste bins and waste bags for three types /categories of waste
- e. Yellow color for infectious waste
- f. RED color for sharps and glass waste
- g. BLUE color for municipal/ domestic waste

HMC produces approximately 2500 KGs of total waste per day in which the amount of infectious waste is around 400 KGs per day. All COVID related waste including PPEs are treated as infectious wastes and duly disposed.

12. AVAILABILITY OF RESOURCES

Indicated as part of supply chain management and planning above point number 10.



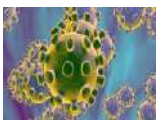
13. REFERRAL

Referrals in MTI-HMC are entertained from other tertiary care hospitals and from districts as well. A bed management policy is in place with the concerned focal persons duly notified and responsible for all admissions including COVID patients. Due communication is established with any healthcare facility that the patient has to be referred to and the team is also available to accept referrals from other hospitals.

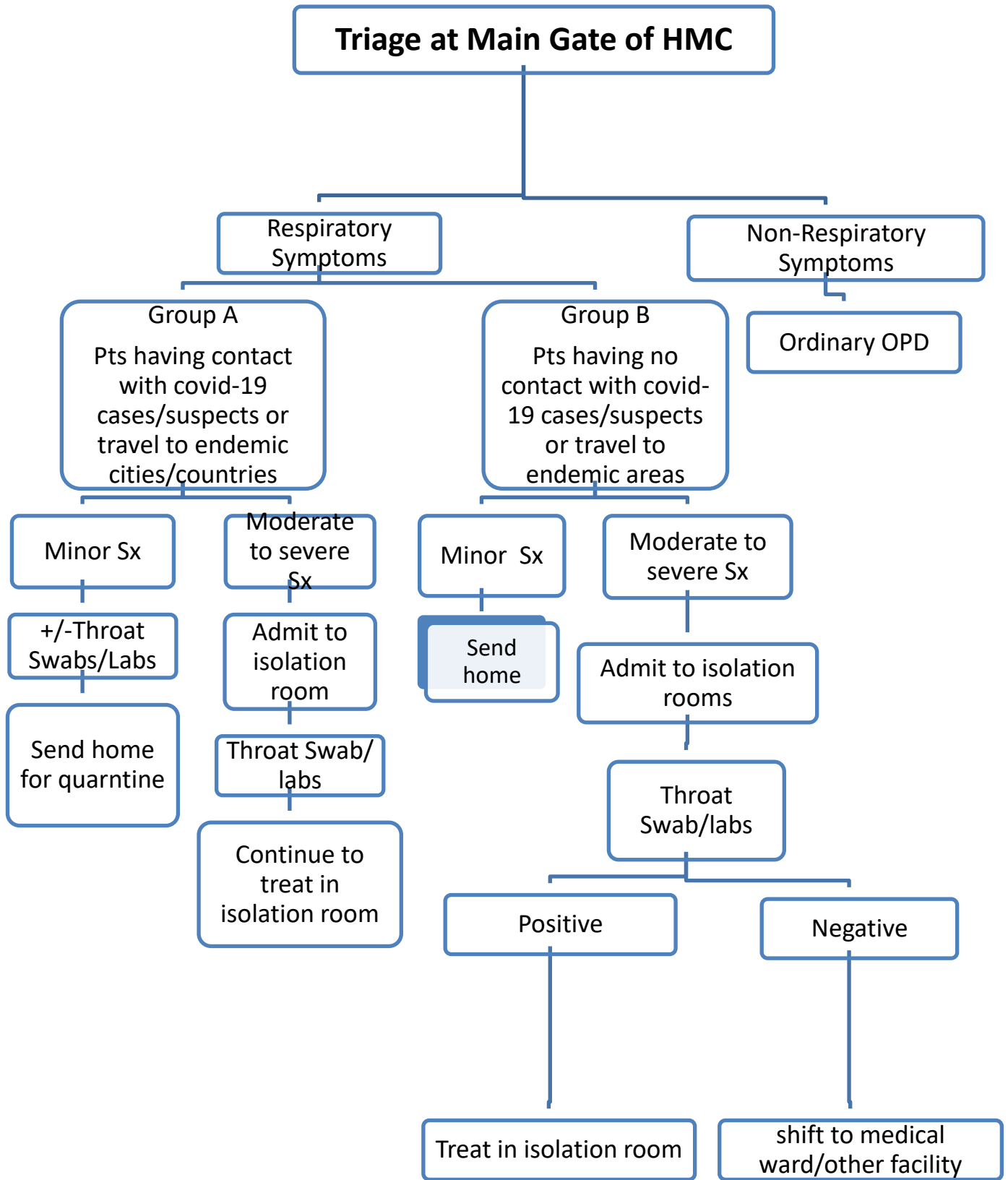
14. CLINICAL TRIALS

Being a tertiary care hospital MTI-HMC is committed to clinical research activities duly approved by ethical and research committee of the clinical executive board. Given the potential for active research MTI-HMC has undertaken the following research activities with due approval from ethical and research committee, DRAP, WHO, and the Health department where indicated.

1. Convalescent Plasma
2. Tocilizumab Trial
3. Solidarity Trial

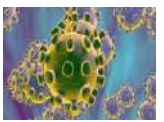


ANNEXURE 1: TRIAGE AT MAIN GATE





COVID-19 MANAGEMENT PLAN

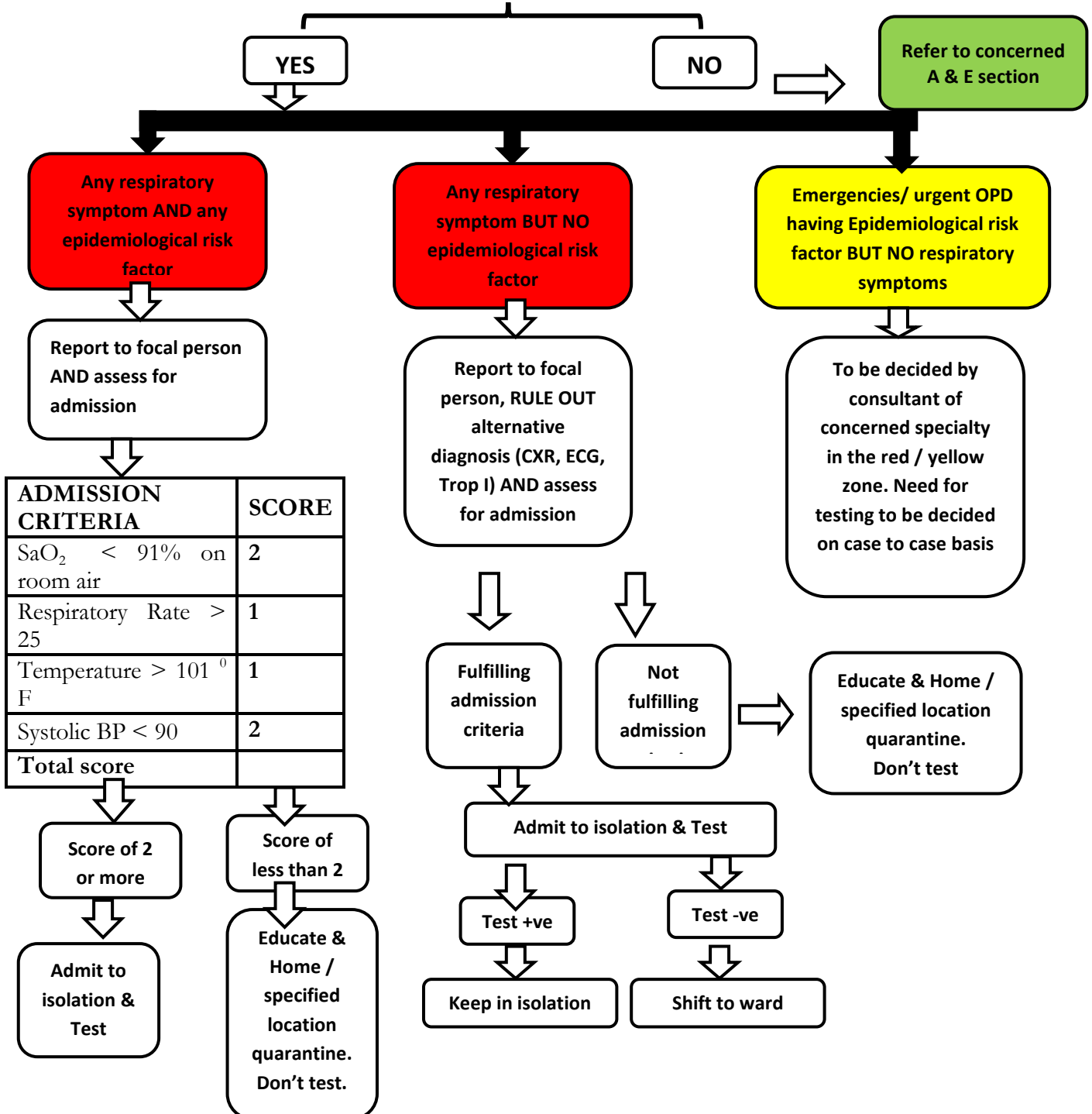


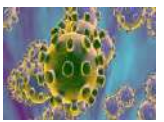
ANNEXURE 2: SCREENING CRITERIA & ADMISSION CRITERIA

Name: _____ S/D/W of _____ Age: ____ Gender: ____ MR # _____

Date: _____ Address : _____

Does the patient have ANY ONE of the following? Mark appropriately		
Epidemiological risk factors	Travel to or from the affected / high risk regions	
	Close physical contact with COVID-19 positive patient	
Symptoms	Fever	
	Cough	
	Sore throat	
	Runny Nose	
	Breathing difficulty	





ANNEXURE 3: CLINICAL GUIDELINES FOR TREATMENT OF COVID – 19

DEFINITIONS

Mild to moderate disease

Patients with uncomplicated upper respiratory tract viral infection, may have non-specific symptoms such as fever, fatigue, cough (with or without sputum production), anorexia, malaise, muscle pain, sore throat, dyspnea, nasal congestion, or headache. The patient with above symptoms shall have SpO₂ ≥ 94 % on room air, BP > 90 mmHg systolic and respiratory rate < 25 breaths /min.

Severe pneumonia (severe disease)

Patient with fever or suspected respiratory infection, plus one of: respiratory rate > 30 breaths/min; severe respiratory distress; or SpO₂ ≤ 93% on room air.

Acute respiratory distress syndrome (ARDS)

Patient shall have all features of Severe pneumonia as described above plus bilateral basal opacities which cannot be explained on heart failure / volume overload either clinically (No raised JVP, No edema) or echocardiographically within seven days of onset of respiratory symptoms.

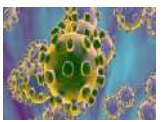
Multi-organ failure

Multi-organ failure will be defined as any two out of the following: SBP < 90 mmHg off vasopressors, altered mental status, PaO₂ < 60 mmHg, lactate level > 2 mmol/L, oliguria, evidence of coagulopathy, thrombocytopenia, deranged LFTs.

Septic shock

Persistent hypotension despite volume resuscitation, requiring vasopressors to maintain Mean arterial pressure* (MAP) ≥ 65 mmHg and serum lactate level > 2 mmol/L.

**To calculate a mean arterial pressure, double the diastolic blood pressure and add the sum to the systolic blood pressure. Then divide by 3. [MAP = { (2 x DBP) + SBP } ÷ 3]*



IMMEDIATE IMPLEMENTATION OF APPROPRIATE INFECTION PREVENTION AND CONTROL (IPC) MEASURES

- Suspect patients should be given a mask and directed to separate area. Keep at least 1 m distance between suspected patients.
- Standard precautions should always be applied in all areas of health care facilities. Standard precautions include hand hygiene and the use of personal protective equipment (PPE) when in indirect and direct contact with patients’ blood, body fluids, secretions (including respiratory secretions) and non-intact skin.
- Standard precautions also include prevention of needle-stick or sharps injury; safe waste management; cleaning and disinfection of equipment; and cleaning of the environment.
- In addition to standard precautions, health care workers should do a point-of-care risk assessment at every patient contact to determine whether additional precautions (e.g. droplet, contact, and/or airborne) are required.

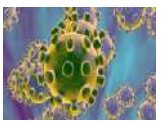
Instructions for patients	Give suspect patient a medical mask and direct patient to separate area; an isolation room if available. Keep at least 1 m distance between suspected patients and other patients. Instruct all patients to cover nose and mouth during coughing or sneezing with tissue or flexed elbow and perform hand hygiene after contact with respiratory secretions.
Apply droplet precautions	Droplet precautions prevent large droplet transmission of respiratory viruses. Use a medical mask if working within 1 m of the patient. When providing care in close contact with a patient with respiratory symptoms (e.g. coughing or sneezing), use eye protection (face mask & goggles), because sprays of secretions may occur. Limit patient movement within the institution and ensure that patients wear medical masks when outside their rooms.
Apply contact precautions	Contact precautions prevent direct or indirect transmission from contact with contaminated surfaces or equipment (i.e. contact with contaminated oxygen tubing/interfaces). Use PPE (medical mask, eye protection, gloves and gown) when entering room and remove PPE when leaving and practice hand hygiene following PPE removal. If possible, use either disposable or dedicated equipment (e.g. stethoscopes, blood pressure cuffs, pulse oximeters and thermometers). If equipment needs to be shared among patients, clean and disinfect between each patient use. Ensure that health care workers refrain from touching their eyes, nose and mouth with potentially contaminated gloved or ungloved hands. Avoid contaminating environmental surfaces that are not directly related to patient care (e.g. door handles and light switches). Avoid medically unnecessary movement of patients or transport. Perform hand hygiene.
Apply airborne precautions when performing an aerosol-generating procedure	Ensure that health care workers performing aerosol-generating procedures (e.g. open suctioning of respiratory tract, intubation, bronchoscopy, cardiopulmonary resuscitation) use the appropriate PPE, including gloves, long-sleeved gowns, eye protection, and fit-tested particulate respirators (N95 or equivalent, or higher level of protection). Whenever possible, use adequately ventilated single rooms when performing aerosol-generating procedures. Avoid the presence of unnecessary individuals in the room.

TRANSPORTING & ALLOCATION OF ROOMS FOR COVID-19 PATIENTS

- Patients must NOT be transported to other departments unless absolutely necessary (e.g. for emergent, life-saving procedures or ICU)
- In the event of transfer, do the following:
 - Inform the receiving department over the phone with details of isolation precautions required
 - The patient must wear a surgical mask during transfer
 - Post appropriate isolation signs outside the patient’s room



COVID-19 MANAGEMENT PLAN



- Healthcare staff do not need to wear PPE while transporting patients
 - Once transferred, the patient should be moved directly to the intended room/procedure room etc.- **patients must NOT be seated in the waiting area**
-
- Single rooms must be allocated while patients are under investigation for COVID-19
 - Patients with confirmed COVID-19 may be cohorted i.e. placed in the same room depending upon resources.

INVESTIGATIONS

- Baseline investigations (FBC, LFT, RFT, RBS, PT/APTT, Serum lactate, serum Procalcitonin, Trop I, D-dimer, serum ferritin, CXR & ECG)
- Collect specimens from the upper respiratory tract (URT; nasopharyngeal and oropharyngeal) for COVID – 19 RT- PCR.
- If there is strong clinical suspicion for COVID-19 but the first PCR is negative, continue isolation precautions and repeat nasopharyngeal PCR in 3 days.

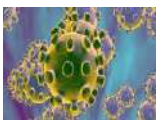
MANAGEMENT: MILD & MODERATE DISEASE

The case shall be reported to focal person for COVID – 19. The patient shall be sent home with appropriate instructions for home isolation. He should be offered Paracetamol / Cough syrup / plenty of oral fluids and, if clinically indicated, simple antibiotic like Co-Amoxiclav ± Azithromycin.

MANAGEMENT: SEVERE PNEUMONIA

- **Fever:** Paracetamol shall be used. Avoid NSAIDs. (If someone is already on aspirin / NSAIDs for compelling indications, they shall continue and to be discussed with the consultant).
- **Oxygen therapy*:** Start oxygen therapy with nasal cannula / oxygen mask to a target SpO₂ of 94 %.
- **Wheeze:** Use Salbutamol inhaler via spacer as far as possible. Use nebulizer* where spacer is not possible / feasible.
- **Antibiotics:** All severe pneumonia patient shall be started on Meropenem and Vancomycin for 48 hours. The decision to continue these antibiotics has to be reviewed on the availability of procalcitonin level after 48 hours.
- **Concomitant medications:** To continue with ACE inhibitors / ARBs / antiplatelet / anticoagulant, the decision has to be individualized.
- The decision to give **Oseltamivir** will be individualized.
- Start tablet **Chloroquine Phosphate** 500 mg BD for 10 days **OR** tablet **Hydroxychloroquine** 200 mg one tablet TDS for 10 days. Do check baseline QT interval and history of epilepsy / G6PD deficiency.
- The use of **Methylprednisolone** will be decided on case to case basis.

**Oxygen therapy and nebulization are aerosol generating procedures*



MANAGEMENT: ACUTE RESPIRATORY DISTRESS SYNDROME

- **Recognize** severe hypoxemic respiratory failure when a patient with respiratory distress is failing standard oxygen therapy, and prepare to provide advanced oxygen/ventilatory support.
- The **decision to intubate and ventilate** will be individualized on case to case basis, depending upon the co-morbidities, patient age, prior functional status and availability of resources.
- **Mechanical ventilation** will be considered if SpO₂ remains < 92% in spite of 10 – 15 L/min supplemental oxygen via rebreather mask.
- Implement mechanical ventilation using **lower tidal volumes** (4–8 mL/kg predicted body weight, PBW) and **lower inspiratory pressures** (plateau pressure < 30 cmH₂O). In adult patients with severe ARDS, **prone ventilation** for 12–16 hours per day is recommended.
- Use a conservative **fluid management** strategy for ARDS patients without tissue hypoperfusion.
- The use of **Lopinivir / Ritonavir & Tocilizumab** will be decided on case to case basis.

MANAGEMENT: SEPTIC SHOCK

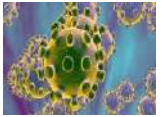
- Septic shock will be **defined as** inability to maintain mean arterial pressure (MAP) ≥ 65 mmHg AND a raised lactate (≥ 2 mmol/L) in absence of hypovolemia. To calculate a mean arterial pressure, double the diastolic blood pressure and add the sum to the systolic blood pressure. Then divide by 3. [MAP = { (2 x DBP) + SBP } ÷ 3]
- In resuscitation for septic shock in adults, give at **250–500 mL crystalloid fluid** (normal saline or ringer lactate) as rapid bolus in first 15–30 minutes and reassess for signs of fluid overload after each bolus.
- Fluid resuscitation may lead to **volume overload**, including respiratory failure, particularly with ARDS. If there is no response to fluid loading or signs of volume overload appear (e.g. jugular venous distension, crackles on lung auscultation, pulmonary edema on imaging), then reduce or discontinue fluid administration. This step is particularly important in patients with hypoxemic respiratory failure.
- In adults, administer **vasopressors** when shock persists during or after fluid resuscitation. The initial blood pressure target is MAP ≥ 65 mmHg in adults and improvement of markers of perfusion (e.g. improving mental status, improvement in urine output).
- **Norepinephrine** is considered first-line in adult patients; **epinephrine or vasopressin** can be added to achieve the MAP target. Because of the risk of tachyarrhythmia, reserve **dopamine** for selected patients with low risk of tachyarrhythmia or those with bradycardia.

MANAGEMENT: PREVENTION OF COMPLICATIONS

- To reduce the incidence of **venous thromboembolism**, use pharmacological prophylaxis (low molecular-weight heparin [preferred if available] or heparin 5000 units subcutaneously twice daily) in adolescents and adults without contraindications. For those with contraindications, use mechanical prophylaxis (intermittent pneumatic compression devices).
- Turn patient every 2 hours to prevent **pressure sores**.
- Give early **enteral nutrition** (within 24–48 hours of admission)



COVID-19 MANAGEMENT PLAN



- Administer histamine-2 receptor blockers or proton-pump inhibitors in patients with risk factors for **GI bleeding** (mechanical ventilation for ≥ 48 hours, coagulopathy, renal replacement therapy, liver disease, multiple comorbidities, and multi-organ failure)

MANAGEMENT: CORTICOSTEROIDS

- **Do not** routinely give systemic corticosteroids for treatment of viral pneumonia.

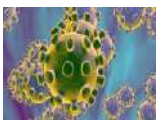
DECISION ON END OF LIFE CARE

- These decisions shall be individualized on case to case basis, keeping in view the advice of hospital ethical committee on recommendations of multidisciplinary team taking care of these patients.

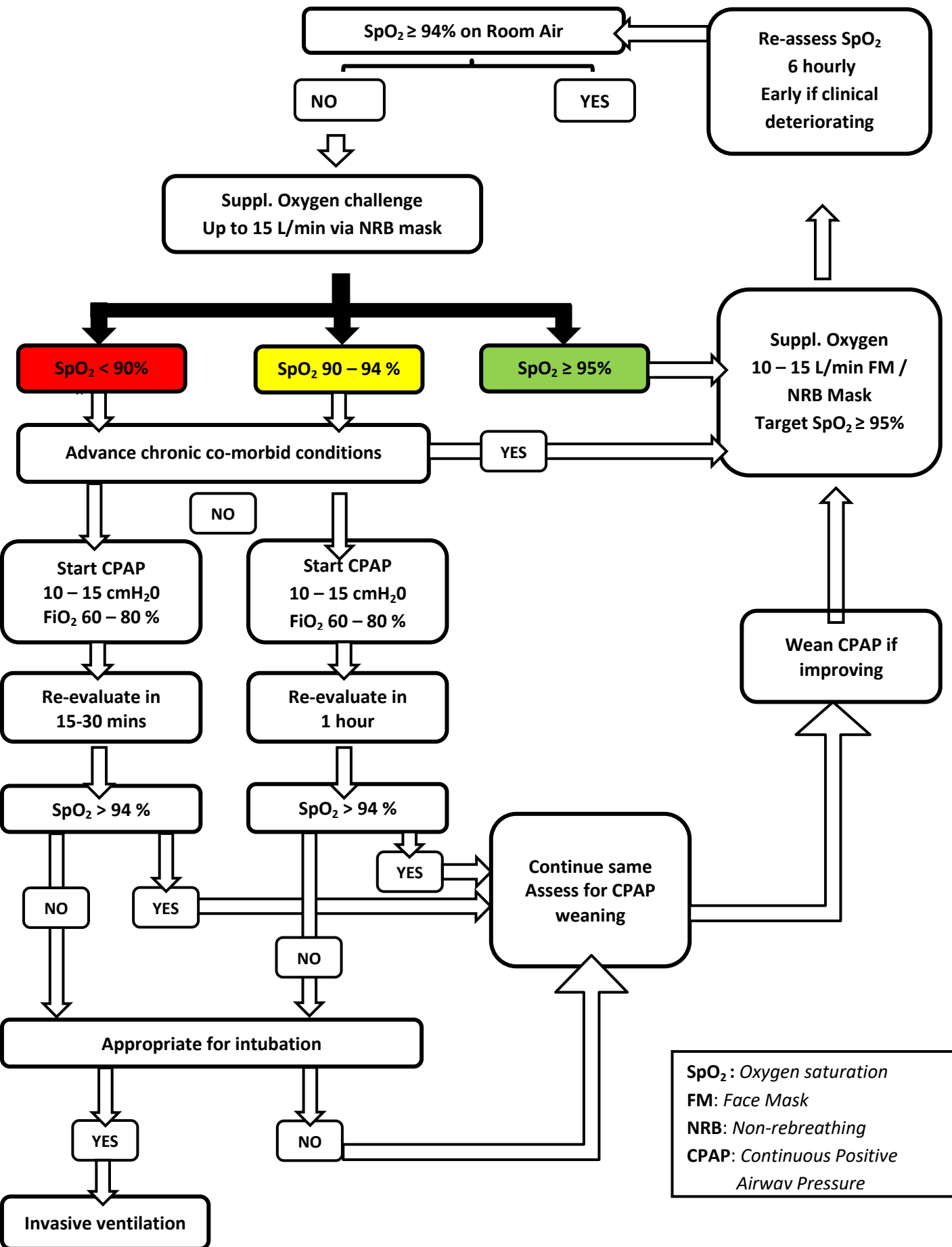
DISCHARGE CRITERIA

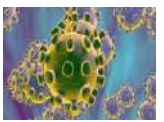
The patient may be discharged if he/she meets the following criteria:

- At least 3 days (72 hours) have passed since recovery defined as resolution of fever without the use of fever-reducing medications **AND**
- Improvement in respiratory symptoms (e.g., cough, shortness of breath); **AND**
- At least 7 days have passed since symptoms first appeared.

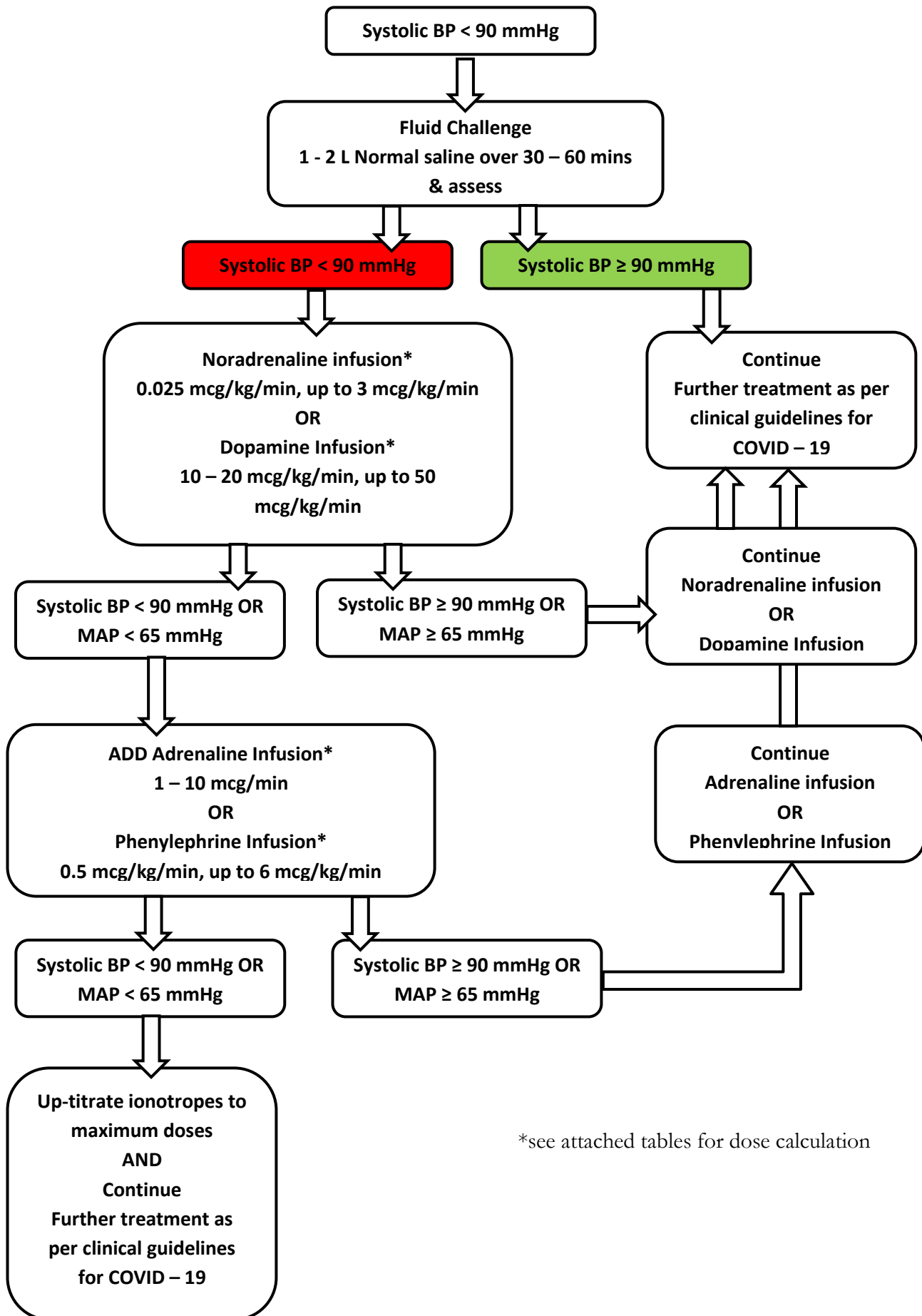


ANNEXURE 4: OXYGEN THERAPY PATHWAY FOR CORONA PATIENTS





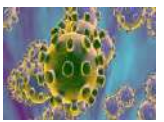
ANNEXURE 5: HYPOTENSION PATHWAY



*see attached tables for dose calculation



COVID-19 MANAGEMENT PLAN



Inj. Adrenaline (1 ml ampoule containing 1 mg adrenaline)				
Add 3 amp in 47 ml normal saline to achieve a concentration of 60 mcg/ml				
Infuse via INFUSION PUMP using 50 ml syringe				
Dose	1 mcg/min	2 mcg/min	5 mcg/ min	10 mcg/min
Infusion rate	1 ml/hour	2 ml/hr	5 ml/hr	10 ml/hr

Inj. Adrenaline (1 ml ampoule containing 1 mg adrenaline)				
Add 1 amp in 100 ml normal saline to achieve a concentration of 10 mcg/ml				
Infuse via 100 ml INFUSION CHAMBER (60 small drops = 1 ml = 10 mcg)				
Dose	1 mcg/min	2 mcg/min	5 mcg/ min	10 mcg/min
Infusion rate	6 drops/min	12 drops/min	30 drops/min	60 drops/min

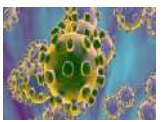
Inj. Dopamine (5 ml ampoule containing 200 mg dopamine)				
Add 1 amp in 45 ml normal saline to achieve a concentration of 4 mg/ml (4000 mcg/ml)				
Infuse via INFUSION PUMP using 50 ml syringe				
Dose	10 mcg/Kg/min	20 mcg/Kg/min	30 mcg/Kg/min	50 mcg/kg/min
40 KG	6 ml / hr	12 ml/hr	18 ml/hr	30 ml/hr
50 KG	7.5 ml/hr	15 ml/hr	22.5 ml/hr	37.5 ml/hr
60 KG	9 ml/hr	18 ml/hr	27 ml/hr	45 ml/hr
70 KG	10.5 ml/hr	21 ml/hr	31.5 ml/hr	52.5 ml/hr
80 KG	12 ml/hr	24 ml/hr	36ml/hr	60 ml/hr
90 KG	13.5 ml/hr	27 ml/hr	40.5 ml/hr	67.5 ml/hr
100 KG	15 ml/hr	30 ml/hr	45 ml/hr	75 ml/hr

Inj. Dopamine (5 ml ampoule containing 200 mg dopamine)				
Add 1 amp in 95 ml normal saline to achieve a concentration of 2 mg/ml (2000 mcg/ml)				
Infuse via DIAL FLOW (1 ml = 2 mg)				
Dose	10 mcg/Kg/min	20 mcg/Kg/min	30 mcg/Kg/min	50 mcg/kg/min
40 KG	12 ml/hr	24 ml/hr	36ml/hr	60 ml/hr
50 KG	15 ml/hr	30 ml/hr	45 ml/hr	75 ml/hr
60 KG	18 ml/hr	36 ml/hr	54 ml/hr	90 ml/hr
70 KG	21 ml/hr	42 ml/hr	63 ml/hr	105 ml/hr
80 KG	24 ml/hr	48 ml/hr	72 ml/hr	120 ml/hr
90 KG	27 ml/hr	54 ml/hr	81 ml/hr	135 ml/hr
100 KG	30 ml/hr	60 ml/hr	90 ml/hr	150 ml/hr

Inj. Phenylephrine (1ml ampoule containing 10 mg phenylephrine)				
Add 1 amp in 99 ml normal saline to achieve a concentration of 0.1 mg/ml				
Infuse via DIAL FLOW (1 ml = 0.1 mg)				
Dose	0.5 mcg/Kg/min	1 mcg/Kg/min	3 mcg/Kg/min	6 mcg/kg/min
40 KG	12 ml/hr	24 ml/hr	72 ml/hr	144 ml/hr
50 KG	15 ml/hr	30 ml/hr	90 ml/hr	180 ml/hr
60 KG	18 ml/hr	36 ml/hr	108 ml/hr	216 ml/hr



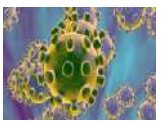
COVID-19 MANAGEMENT PLAN



70 KG	21 ml/hr	42 ml/hr	126 ml/hr	252 ml/hr
80 KG	24 ml/hr	48 ml/hr	144 ml/hr	288 ml/hr
90 KG	27 ml/hr	54 ml/hr	162 ml/hr	324 ml/hr
100 KG	30 ml/hr	60 ml/hr	180 ml/hr	360 ml/hr

Inj. Norepinephrine (Norpine) (4 ml ampoule containing 4 mg norepinephrine base / 8 mg norepinephrine acid tartrate)				
Add 1 amp in 46 ml normal saline to achieve a concentration of 0.08 mg / ml				
Infuse via INFUSION PUMP using 50 ml syringe				
Doses are based on Norepinephrine base concentration				
Dose	<i>0.025 mcg/Kg/min</i>	<i>0.05 mcg/Kg/min</i>	<i>0.1 mcg/Kg/min</i>	<i>0.3 mcg/kg/min</i>
40 KG	0.75 ml/hr	1.5 ml/hr	3 ml/hr	9 ml/hr
50 KG	0.9 ml/hr	1.8 ml/hr	3.6 ml/hr	11.2 ml/hr
60 KG	1.1 ml/hr	2.2 ml/hr	4.4 ml/hr	13.5 ml/hr
70 KG	1.3 ml/hr	2.6 ml/hr	5.2 ml/hr	15.8 ml/hr
80 KG	1.5 ml/hr	3 ml/hr	6 ml/hr	18 ml/hr
90 KG	1.7 ml/hr	3.4 ml/hr	6.8 ml/hr	20.3 ml/hr
100 KG	1.9 ml/hr	3.8 ml/hr	7.6 ml/hr	22.5 ml/hr

Inj. Norepinephrine (Norpine) (4 ml ampoule containing 4 mg norepinephrine base / 8 mg norepinephrine acid tartrate)				
Add 1 amp in 96 ml normal saline to achieve a concentration of 0.04 mg / ml				
Infuse via 100 ml INFUSION CHAMBER (60 small drops = 1 ml = 0.04 mg)				
Doses are based on Norepinephrine base concentration				
Dose	<i>0.025 mcg/Kg/min</i>	<i>0.05 mcg/Kg/min</i>	<i>0.1 mcg/Kg/min</i>	<i>0.3 mcg/kg/min</i>
40 KG	1.5 drops/min	3 drops/min	6 drops/min	18 drops/min
50 KG	2 drops/min	4 drops/min	8 drops/min	24 drops/min
60 KG	2.5 drops/min	5 drops/min	10 drops/min	30 drops/min
70 KG	3 drops/min	6 drops/min	12 drops/min	36 drops/min
80 KG	3 drops/min	6 drops/min	12 drops/min	36 drops/min
90 KG	3.5 drops/min	7 drops/min	14 drops/min	42 drops/min
100 KG	4 drops/min	8 drops/min	16 drops/min	48 drops/min



ANNEXURE 6: MANAGEMENT OF HEALTHCARE WORKERS EXPOSED TO COVID – 19

INTRODUCTION

Healthcare facilities should identify and trace all healthcare workers (HCW) who had *protected* (proper use of PPE) or *unprotected* (without wearing PPE or PPE used improperly) exposure to patients with suspected or confirmed COVID-19.

The decision to permit a healthcare worker to resume his/her duties after an exposure to COVID-19 should be individualized; infection control team will be ultimately responsible for taking that decision.

The following are general guidelines but management will depend on the infection control team risk assessment.

A. ASYMPTOMATIC HEALTHCARE WORKERS WITH PROTECTED EXPOSURE OR UNPROTECTED LOW-RISK EXPOSURE (MORE THAN 1.5 METERS OF THE PATIENT):

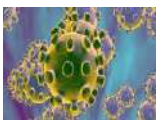
1. Testing healthcare workers for COVID-19 is not recommended.
2. Healthcare workers can continue their duties.
3. Healthcare workers shall be assessed daily for up to 14 days post exposure for the development of symptoms.
4. If the HCW develops suggestive symptoms, he shall be managed as given in group C (see below).
5. Healthcare worker should delay travel until cleared by infection control team.

B. HEALTHCARE WORKERS WHO HAD UNPROTECTED HIGH-RISK EXPOSURE (WITHIN 1.5 METERS OF THE PATIENTS)

1. Healthcare workers shall stop performing their duties immediately.
2. Health care worker shall quarantine at home or any other facility as appropriate and they shall observe themselves for any of the following symptoms: Fever, cough, shortness of breath and sore throat.
3. Testing (Nasopharyngeal & Oropharyngeal swabs) for COVID-19 is required (preferably at least 48 hours or more after the exposure) if they develop any one of the above symptoms during the subsequent 14 days of quarantine period.
4. No routine testing is required in this category if none of the above symptoms is there in the quarantine period of 14 days.
5. Healthcare workers shall not resume their duties until cleared by infection control team.
6. Healthcare workers should remain quarantined until cleared by infection control team.
7. Healthcare workers who test positive shall remain in isolation (home / hospital) until cleared by infection control team as per criteria mentioned in group C.
8. Health care workers who are symptomatic but their first swab is negative shall continue quarantine and have repeat testing at least 48 hours after the first test.
9. Healthcare workers who had unprotected high-risk exposure and remained asymptomatic shall resume their duty if they remain asymptomatic till the end of 14 days observation period.
10. Healthcare workers who are symptomatic but have 2 negative PCRs at least 48 hours apart will be dealt on case by case basis.
11. Healthcare workers who are symptomatic and have positive PCR for COVID – 19 shall end their isolation if:



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- a) At least 3 days (72 hours) have passed since recovery defined as resolution of fever without the use of fever-reducing medications

AND

- b) Improvement in respiratory symptoms (e.g., cough, shortness of breath); **AND**
- c) At least 7 days have passed since symptoms first appeared.

C. HEALTH CARE WORKERS WHO DEVELOP SUGGESTIVE SYMPTOMS OF COVID – 19 REGARDLESS OF TYPE OF EXPOSURE

1. Healthcare workers shall stop performing their duties immediately.
2. Testing (Nasopharyngeal & Oropharyngeal swabs) for COVID-19 is required.
3. Healthcare workers shall not resume their duties until cleared by infection control team.
4. Healthcare workers should remain quarantined until cleared by infection control team.
5. Healthcare workers who test positive shall remain in isolation (home / hospital) until cleared by infection control team as per criteria below.
6. Health care workers who test negative shall continue quarantine and have repeat testing at least 48 hours after the first test.
7. Healthcare workers who are symptomatic but have 2 negative PCRs at least 48 hours apart will dealt on case by case basis.
8. Healthcare workers with suggestive symptoms with positive PCR shall resume their duty if:
 - a) At least 3 days (72 hours) have passed since recovery defined as resolution of fever without the use of fever-reducing medications

AND

- b) Improvement in respiratory symptoms (e.g., cough, shortness of breath); **AND**
- c) At least 7 days have passed since symptoms first appeared.

D. COMMUNITY OR TRAVEL-ASSOCIATED EXPOSURES

Health care worker with potential exposures to confirmed case of COVID-19 in community settings should have their exposure risk assessed. They shall be managed according to the risk category mentioned above (A, B, C) they fall in.

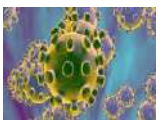
RETURN TO WORK PRACTICES AND WORK RESTRICTIONS

After returning to work, HCW should:

1. Wear a facemask at all times while in the healthcare facility until all symptoms are completely resolved or until 14 days after illness onset, whichever is longer.
2. Be restricted from contact with severely immune-compromised patients until 14 days after illness onset.
3. Adhere to hand hygiene, respiratory hygiene, and cough etiquette (e.g., cover nose and mouth when coughing or sneezing, dispose of tissues in waste bins).
4. Self-monitor for symptoms, and seek re-evaluation if respiratory symptoms recur or worsen.



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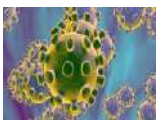
ANNEXURE 7: DISASTER RECOVERY PLAN

1. Facility Manager (FM) is the focal person for Disaster Recovery Management. Whenever there is a disaster FM shall evaluate the incident and decide whether the incident is a disaster or not. If the incident qualifies for a disaster, FM shall announce disaster and shall inform the respective stakeholders immediately.
2. Four (04) areas are designated and marked as assembly areas. In case of a disaster, employees, patients and visitors shall try to reach the nearest assembly area.

Serial Number	Unit Name/ Area	Floor	Nearest Assembly Area
1.	Oncology ward & OPD Peads Cardiology Peads A Complaint Office IBP Private rooms Plant Room	Ground Floor	Assembly Area 3 (Near PICO Gate)
2.	CRC Building Eye OPD Gynea OPD Dental OPD Peads OPD Skin OPD Psychiatry Ward EPI Section	Ground floor	Assembly area 4 (CRC Lawn)
3.	Physiotherapy A & E	Ground Floor	Assembly Area 2 (Gate 2) (Main gate)
4.	Medical A Medical C Orthopaedic A Orthopaedic B	Ground Floor	Assembly Area 1 (South Side Of Main OPD)
5.	Main OPD	Ground Floor	1. Assembly Area 1 (South Side Of Main OPD) 2. Assembly Area 2 (Gate 2)
6.	Peads B N.ICU Orthopaedic OT CCU Eye OT	Ground Floor	Assembly Area 2
7.	Ent A Ent B Medical B Ent OPD	1st Floor	Assembly Area 1 (South Side Of Main OPD)
8.	Gynea A Gynea B Pathology Department Anaesthesia Department Labour Rooms A & B	First Floor	Assembly Area 2 (Gate 2) Via Main Reception



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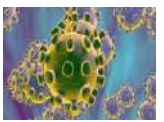
	A 1 Pharmacy Skin Ward Medical ICU		
9.	CSSD Microbiology Private Rooms Isolation Rooms Auditorium	1st Floor	Assembly Area 3 (Near PICO Gate)
10.	Gynea C Labour Room Gynea A Ward Thalassemia Unit Surgical ICU OT Complex C1 Pharmacy	2 nd Floor	Assembly Area 2 (Gate 2) Via Main Reception
11.	Dental & Maxillofacial Ward Surgical C Ward	2 nd Floor	Assembly Area 3 (Near PICO Gate)
12.	Surgical A Surgical B Endocrinology Neurosurgery	2 nd Floor	Assembly Area 1 (South Side Of Main OPD) or Assembly area 2 (Main Gate)

3. Evacuation Plan:

- i. When the disaster or fire emergency is declared, **LEAVE AT ONCE**.
 - ii. If possible, avoid using corridors that are full of smoke or has less visibility.
 - iii. Close doors behind you and Proceed into the fire exit.
 - iv. **DO NOT** try to manhandle the fire. Instead, try moving to a safer location.
 - v. **DO NOT USE ELEVATORS**. They will stop if power fails, causing occupants to become trapped.
 - vi. Approach the nearest assembly area.
 - vii. Do not leave the assembly area until all clear has been given.
 - viii. If you become trapped in your office or laboratory and cannot reach the fire exit, keep the door closed and seal off any cracks. Use the phone to call for help.
 - ix. **DO NOT** touch any electrical wire with bare hands.
 - x. If caught in smoke or heat, stay low where the air is better. Take short breaths through your nose until you reach the fire exit.
4. Adjacent stair cases shall be used in case of disaster while the stair cases shall be kept obstruction free at all the times. These stair cases are marked with proper directions towards the assembly area.
 5. The Senior Security Officer shall ensure that proper communication has been made to various stakeholders by wireless sets with security personnel.



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6. Following emergency numbers shall be made visible in common areas.

Name	Focal Person	Phone Number
Quick Response team	QRF 1	03335308111
	QRF 2	03335347222
	QRF 3	03335316444
Police Station	Police on Duty	9217333
Fire Brigade	Rescue 1122 Department	9217135 and 1122

7. Fire / Disaster response Team: There are two focal person trained on disaster management in each unit, one to evacuate people and the other to use fire extinguisher.
8. Trainings shall be provided in every unit twice a year and results shall be documented. Each HoD shall nominate two persons from each unit for training.
9. Drills shall take place in each unit twice a year.
10. In case disaster occurs, finance and audit team shall make estimate of the loss after the disaster and shall submit a report to Hospital Director.
11. Each year FM shall review the plan and update it plan accordingly.
12. Addressing the risk in high risk areas:
 - a. Work shall be properly planned as majority of such risk mostly result from mental or procedural errors or carelessness.
 - b. Work areas shall be uncluttered and cleaned frequently. Unneeded materials shall be put back in storage promptly. Aisles, doors, and access to emergency equipment shall be kept unobstructed at all times.
 - c. Proper clothing and personal protective equipment shall be used.
 - d. In case of emergency:
 - i. Know what to do. You tend to do under stress what you have practiced or pre-planned.
 - ii. Know where things are: The nearest fire extinguisher, fire alarm box, exit(s), telephone, emergency shower/eyewash, and first aid kit, etc.
 - iii. Be aware that emergencies are rarely "clean" and will often involve more than one type of problem. For example, an explosion may generate medical, fire, and contamination emergencies simultaneously.
 - e. Evacuate:
 - i. The immediate area of the problem.
 - ii. The space within which the problem has occurred.
 - iii. The building within which the problem area is located.