

संचालनालय स्वास्थ्य सेवार्ये
चर्तुथ तल, सतपुडा भवन भोपाल
मध्यप्रदेश

अति महत्वपूर्ण

क्र./आई.डी.एस.पी./2020/516

भोपाल, दिनांक 21/04/2020

प्रति,

समस्त संभागीय आयुक्त
मध्यप्रदेश

विषय:—कोविड 19 पॉजीटिव प्रकरणों के प्रबंधन में क्लीनिकल प्रोटोकॉल की समीक्षा/निर्धारित करने के संबंध में विशेषज्ञ समिति का गठन करने बावत्।

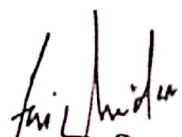
उपरोक्त विषयांतर्गत लेख है कि प्रदेश में कोविड-19 के संभावित एवं पॉजिटिव पाए गए प्रकरणों के प्रबंधन के संबंध में क्लीनिकल मैनेजमेन्ट गाइडलाइन्स जारी की गई हैं इस तारतम्य में शासन द्वारा दिनांक 17.03.2020, दिनांक 27.03.2020, दिनांक 04.04.2020 को दिशा निर्देश जारी किए गये हैं भारत सरकार द्वारा भी दिनांक 30.03.2020 को New Guidelines on Clinical Management of COVID 19 जारी की गई है एवं साथ ही दिनांक 07.04.2020 को भी भारत सरकार द्वारा Guidance document on appropriate management of suspect/confirm cases of Covid-19 जारी की गई है। जिला स्तर पर उपरोक्त दिशा निर्देशों का पालन सुनिश्चित करने हेतु संभागीय स्तर पर समिति का गठन निम्नानुसार किया जावे :-

- क्षेत्रीय स्वास्थ्य संचालक – संयोजक (शहडोल, चंबल एवं नर्मदापुरम में मुख्य चिकित्सा एवं स्वास्थ्य अधिकारी समिति के संयोजक होंगे)
- अधिष्ठाता शासकीय चिकित्सा महाविद्यालय – सदस्य
- विभागाध्यक्ष मेडिसीन विभाग/ नामांकित फेकल्टी, शासकीय चिकित्सा महाविद्यालय— सदस्य
- विभागाध्यक्ष निश्चेतना विज्ञान विभाग/नामांकित फेकल्टी, शासकीय चिकित्सा महाविद्यालय – सदस्य
- पलमूनोलॉजिस्ट विशेषज्ञ (निजी/शासकीय)/नामांकित फेकल्टी – सदस्य
- अध्यक्ष आई.एम.ए./नर्सिंग होम्स एसोसियेशन – सदस्य
- संभागायुक्त द्वारा नामांकित अन्य सदस्य

उक्त समिति के द्वारा संभाग के अधीन संस्थाओं में भर्ती कोविड 19 प्रकरणों के प्रबंधन हेतु प्रचलित प्रोटोकॉल का अध्ययन एवं समीक्षा की जायेगी तथा मरीज की रिकवरी के आधार पर आवश्यकता होने पर क्लीनिकल प्रोटोकॉल के संबंध में उपरोक्त संस्थाओं में पदस्थ चिकित्सक को मार्गदर्शन प्रदान किया जायेगा। साथ ही समिति द्वारा कोविड 19 के प्रकरणों के रेफर होने के कारणों की भी समीक्षा की जावेगी।

उक्त समिति द्वारा संभाग के अधीन जिलों में कोविड 19 पॉजीटिव प्रकरणों की 10 प्रतिशत मृत्यु प्रकरणों का ऑडिट भी किया जायेगा। समिति नियमित रूप से अद्योहस्ताक्षरकर्ता को अपना प्रतिवेदन संभागायुक्त के माध्यम से प्रस्तुत करेगी।

संलग्न-दिशा निर्देशों की प्रति।


(फैजल अहमद किदवाई)

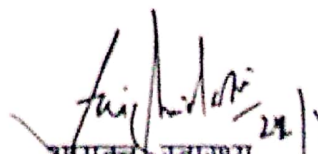
आयुक्त, स्वास्थ्य
संचालनालय स्वास्थ्य सेवायें
मध्यप्रदेश

पृ. क्र./आई.डी.एस.पी./2020/517

भोपाल, दिनांक 21/04/2020

प्रतिलिपि :-

1. अपर मुख्य सचिव, मध्यप्रदेश शासन, लोक स्वास्थ्य एवं परिवार कल्याण विभाग, मध्यप्रदेश।
2. प्रमुख सचिव, मध्यप्रदेश शासन, लोक स्वास्थ्य एवं परिवार कल्याण विभाग, मध्यप्रदेश।
3. प्रमुख सचिव, मध्यप्रदेश शासन, चिकित्सा शिक्षा विभाग, मध्यप्रदेश।
4. प्रमुख सचिव, मध्यप्रदेश शासन, आयुष विभाग, मध्यप्रदेश।
5. डॉ. सुदाम पंडरीनाथ खांडे, संचालक लोक स्वास्थ्य एवं परिवार कल्याण विभाग मध्यप्रदेश की ओर लेख कर निर्देशित किया जाता है कि राज्य स्तर पर गठीत तकनीकी समिति द्वारा क्लीनिकल दस्तावेजों का परीक्षण कर संभागीय समितियों को आवश्यक मार्गदर्शन दिया जाये।
6. मिशन संचालक, एन.एच.एम., मध्यप्रदेश।
7. समस्त संभागीय क्षेत्रीय संचालक, स्वास्थ्य सेवायें, मध्यप्रदेश।
8. अधिष्ठाता, चिकित्सा महाविद्यालय, मध्यप्रदेश।
9. समस्त मुख्य चिकित्सा एवं स्वास्थ्य अधिकारी, मध्यप्रदेश।


आयुक्त, स्वास्थ्य
संचालनालय स्वास्थ्य सेवायें
मध्यप्रदेश

**संचालनाल स्वास्थ्य सेवायें
मध्यप्रदेश**

क्र./2020/अ.प्र./ 523

भोपाल दिनांक 04-04-2020

प्रति,

समस्त मुख्य चिकित्सा एवं स्वास्थ्य अधिकारी,
समस्त सिविल सर्जन सह मुख्य अस्पताल अधीक्षक,
समस्त निजी चिकित्सालय, मध्यप्रदेश।
अध्यक्ष, नर्सिंग होम एसोशियेशन, मध्यप्रदेश।
अध्यक्ष इंडियन मेडिकल एसोशियेशन, मध्यप्रदेश।

विषय— नोवल कोरोना वायरस (COVID-19) के संक्रमण से बचाव एवं रोकथाम हेतु संभावित रोगियों का वर्गीकरण (I) तथा उपचार (II) के संबंध में संशोधित दिशानिर्देश।

संदर्भ—1. संचालनालय स्वा. सेवायें से जारी पत्र क्र./आई.डी.एस.पी./20/507-508 दिनांक 27.03.2020

2. भारत सरकार से प्राप्त Guidelines of Clinical Management of (COVID-19)- दिनांक 30.03.2020

संदर्भित पत्र क्र. 01 द्वारा "Guidelines of Clinical Management of (COVID-19)" तथा कोरोना वायरस रोग (COVID-19) के संभावित रोगियों के वर्गीकरण (I) तथा उपचार (II) के संबंध में दिशा-निर्देश जारी किये गये हैं।

भारत सरकार द्वारा "Guidelines of Clinical Management of (COVID-19)" अद्यतन दिशानिर्देश दिनांक 30.03.2020 को जारी किये गये हैं। राज्य स्तरीय तकनीकी सलाहकार समिति द्वारा की गई अनुसंधान के आधार पर (COVID-19) नोवल कोरोना वायरस रोग (COVID-19) के संभावित रोगियों के वर्गीकरण (I) तथा उपचार (II) के संबंध में पूर्व में जारी निर्देशों में आंशिक संशोधन किया जा रहा है जो निम्नानुसार है :-

(I) वर्गीकरण—

कैटेगरी B - Moderate Cases

- पूर्व में लक्षण रहित कोरोना पॉजिटिव केस को होम आईसोलेशन के स्थान पर संशोधित निर्देशानुसार ऐसे रोगी को शासकीय चिकित्सा महाविद्यालय/चिह्नित स्वास्थ्य संस्थान के आईसोलेशन वार्ड में भर्ती कर लक्षणों के आधार पर उपचार करें।

कार्यवाही— यदि जांच पॉजिटिव तथा रोगी लक्षण रहित है तथा रोगी को 72 घण्टों से अधिक की समयावधि में बुखार न आया हो/7 दिवस से अधिक समयावधि में लक्षण न आये हो/यथासंभव रोगी के पूर्व में COVID-19 की 2 जांचे निगेटिव आई हो। ऐसे रोगी को अपने घरों में होम आईसोलेशन में रखा जाये तथा इसके साथ रोगी की बुखार की निगरानी की जाये, पैरासिटामॉल तथा लक्षणों के आधार पर उपचार किया जाये, रोगी से अन्य व्यक्तियों का संपर्क निषेध तथा ड्रापलेट संक्रमण को रोक जाये एवं रोगी को खतरों के लक्षणों की समझाईस भी दी जाये।

(II) उपचार —

भारत सरकार, द्वारा जारी उपचार संबंधित संशोधित नोवल कोरोना वायरस (COVID-19) रोग के उपचार संबंधित दिशानिर्देश **GUIDELINES FOR CLINICAL MANAGEMENT PROTOCOL FOR COVID-19** जारी किये गये हैं। (Annexure B) इन दिशा-निर्देशों का तुलनात्मक विवरण (Annexure C) पर संलग्न पत्र के साथ प्रेषित किया जा रहा है। विस्तृत दिशानिर्देश भी पत्र के साथ संलग्न प्रेषित किये जा रहे हैं। इन दिशानिर्देशों का कड़ाई से पालन किया जाना सुनिश्चित करें।

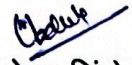
संलग्नः—

(Annexure A) - FLOWCHART

(Annexure B) - NEW GUIDELINES FOR CLINICAL MANAGEMENT PROTOCOL FOR COVID-19 (30-03-2020)

(Annexure C) - COMPARATIVE CHART OF OLD & NEW CLINICAL MANAGEMENT PROTOCOL FOR COVID-19

आयुक्त स्वास्थ्य द्वारा अनुमोदित



(डॉ. मोहन सिंह)
संचालक स्वास्थ्य सेवायें
संचालनालय स्वास्थ्य सेवायें
भोपाल म.प्र.

क्रं. / 2020 / अ.प्र. / 524

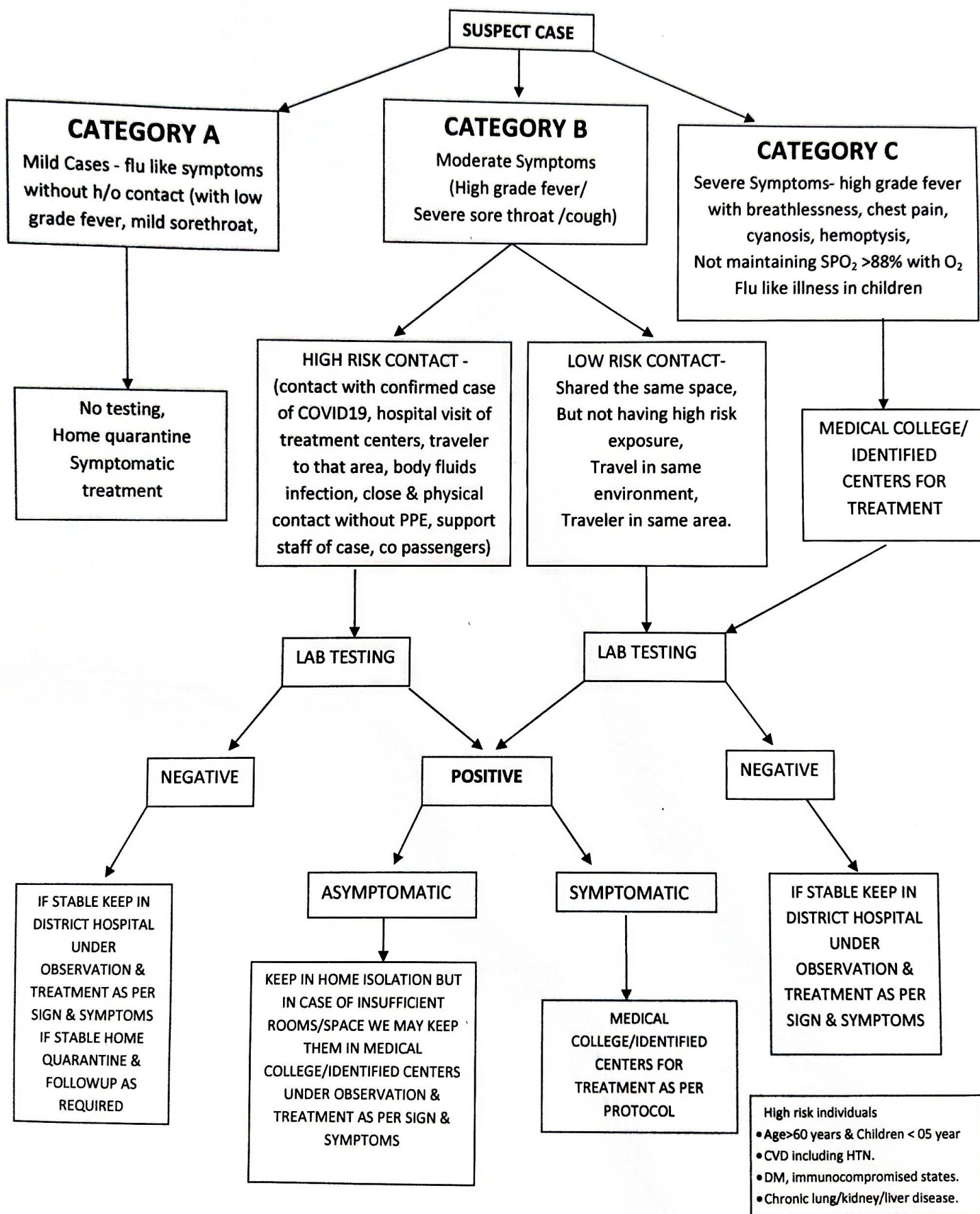
प्रतिलिपि (समस्त अनुलग्नक सहित)–

भोपाल दिनांक 04-04-2020

1. प्रमुख सचिव म.प्र. शासन चिकित्सा शिक्षा विभाग मंत्रालय।
2. प्रमुख सचिव म.प्र. शासन लोक स्वास्थ्य एवं परिवार कल्याण विभाग मंत्रालय।
3. वि.क.सह. आयुक्त स्वास्थ्य, म.प्र.।
4. आयुक्त चिकित्सा शिक्षा, म.प्र.।
5. मिशन संचालक, राष्ट्रीय स्वास्थ्य मिशन म.प्र.।
6. संचालक चिकित्सा शिक्षा म.प्र.।
7. समस्त क्षेत्रीय संचालक, स्वास्थ्य सेवायें म.प्र.।
8. समस्त जिला कलेक्टर म.प्र.।
9. समस्त अधिष्ठाता, शासकीय महाविद्यालय, मध्यप्रदेश।
10. श्री राकेश मुंशी, प्रभारी (COVID-19) कंट्रोल रूम, संचालनालय स्वास्थ्य सेवायें मध्यप्रदेश।
11. समस्त मुख्य चिकित्सा एवं स्वास्थ्य अधिकारी, मध्यप्रदेश


संचालक स्वास्थ्य सेवायें
संचालनालय स्वास्थ्य सेवायें
भोपाल म.प्र.

FLOWCHART FOR COVID-19 CASE MANAGEMENT IN HEALTH FACILITIES





**Government of India
Ministry of Health & Family Welfare
Directorate General of Health Services
(EMR Division)**

Guidelines on Clinical Management of COVID – 19

This document is intended for clinicians taking care of hospitalised adult and paediatric patients of COVID – 19. It is not meant to replace clinical judgment or specialist consultation but rather to strengthen clinical management of these patients and provide to up-to-date guidance. Best practices for COVID - 19 including IPC and optimized supportive care for severely ill patients as considered essential. This document aims to provide clinicians with updated interim guidance on timely, effective, and safe supportive management of patients with COVID - 19, particularly those with severe acute respiratory illness and critically ill.

30th March 2020

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1. Case definition

When to suspect

- All symptomatic individuals who have undertaken international travel in the last 14 days
or
- All symptomatic contacts of laboratory confirmed cases
or
- All symptomatic healthcare personnel (HCP)
or
- All hospitalized patients with severe acute respiratory illness (SARI) (fever AND cough and/or shortness of breath)
or
- Asymptomatic direct and high risk contacts of a confirmed case (should be tested once between day 5 and day 14 after contact)

Symptomatic refers to fever/cough/shortness of breath.

Direct and high-risk contacts include those who live in the same household with a confirmed case and HCP who examined a confirmed case.

Confirmed case

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

2. Clinical features

COVID-19 may present with mild, moderate, or severe illness; the latter includes severe pneumonia, ARDS, sepsis and septic shock. Early recognition of suspected patients allows for timely initiation of IPC (see Table 1). Early identification of those with severe manifestations (see Table 1) allows for immediate optimized supportive care treatments and safe, rapid admission (or referral) to intensive care unit .

Table 1: Clinical syndromes associated with COVID - 19 infection

Uncomplicated illness	Patients with uncomplicated upper respiratory tract viral infection, may have non-specific symptoms such as fever, cough, sore throat, nasal congestion, malaise, headache. The elderly and immunosuppressed may present with atypical symptoms.
Mild pneumonia	Patient with pneumonia and no signs of severe pneumonia. Child with non-severe pneumonia has cough or difficulty in breathing/ fast breathing: (fast breathing - in breaths/min): <2 months, ≥ 60 ; 2–11 months, ≥ 50 ; 1–5 years, ≥ 40 and no signs of severe pneumonia
Severe pneumonia	Adolescent or adult: fever or suspected respiratory infection, plus one of the following; respiratory rate >30 breaths/min, severe respiratory distress, SpO ₂ $<90\%$ on room air Child with cough or difficulty in breathing, plus at least one of the following: central cyanosis or SpO ₂ $<90\%$; severe respiratory distress (e.g. grunting, chest indrawing); signs of pneumonia with any of the following danger signs: inability to breastfeed or drink, lethargy or unconsciousness, or convulsions. Other signs of pneumonia may be present: chest indrawing, fast breathing (in breaths/min): <2 months ≥ 60 ; 2–11 months ≥ 50 ; 1–5 years ≥ 40 . The diagnosis is clinical; chest imaging can exclude complications.
Acute Respiratory Distress Syndrome	Onset: new or worsening respiratory symptoms within one week of known clinical insult. Chest imaging (radiograph, CT scan, or lung ultrasound): bilateral opacities, not fully explained by effusions, lobar or lung collapse, or nodules.

	<p>Origin of oedema: respiratory failure not fully explained by cardiac failure or fluid overload. Need objective assessment (e.g. echocardiography) to exclude hydrostatic cause of oedema if no risk factor present.</p> <p>Oxygenation (adults):</p> <ul style="list-style-type: none"> • Mild ARDS: $200 \text{ mmHg} < \text{PaO}_2/\text{FiO}_2 \leq 300 \text{ mmHg}$ (with PEEP or CPAP $\geq 5 \text{ cm H}_2\text{O}$, or non-ventilated) • Moderate ARDS: $100 \text{ mmHg} < \text{PaO}_2/\text{FiO}_2 \leq 200 \text{ mmHg}$ with PEEP $\geq 5 \text{ cm H}_2\text{O}$, or non-ventilated) • Severe ARDS: $\text{PaO}_2/\text{FiO}_2 \leq 100 \text{ mmHg}$ with PEEP $\geq 5 \text{ cm H}_2\text{O}$, or non-ventilated) • When PaO_2 is not available, $\text{SpO}_2/\text{FiO}_2 \leq 315$ suggests ARDS (including in non-ventilated patients) <p>Oxygenation (children; note OI = Oxygenation Index and OSI = Oxygenation Index using SpO_2)</p> <ul style="list-style-type: none"> • Bilevel NIV or CPAP $\geq 5 \text{ cm H}_2\text{O}$ via full face mask: $\text{PaO}_2/\text{FiO}_2 \leq 300 \text{ mmHg}$ or $\text{SpO}_2/\text{FiO}_2 \leq 264$ • Mild ARDS (invasively ventilated): $4 \leq \text{OI} < 8$ or $5 \leq \text{OSI} < 7.5$ • Moderate ARDS (invasively ventilated): $8 \leq \text{OI} < 16$ or $7.5 \leq \text{OSI} < 12.3$ • Severe ARDS (invasively ventilated): $\text{OI} \geq 16$ or $\text{OSI} \geq 12.3$
Sepsis	<p>Adults: life-threatening organ dysfunction caused by a dysregulated host response to suspected or proven infection, with organ dysfunction. Signs of organ dysfunction include: altered mental status, difficult or fast breathing, low oxygen saturation, reduced urine output, fast heart rate, weak pulse, cold extremities or low blood pressure, skin mottling, or laboratory evidence of coagulopathy, thrombocytopenia, acidosis, high lactate or hyperbilirubinemia.</p> <p>Children: suspected or proven infection and ≥ 2 SIRS criteria, of which one must be abnormal temperature or white blood cell count</p>
Septic Shock	<p>Adults: persisting hypotension despite volume resuscitation, requiring vasopressors to maintain $\text{MAP} \geq 65 \text{ mmHg}$ and serum lactate level $< 2 \text{ mmol/L}$</p> <p>Children: any hypotension ($\text{SBP} < 5\text{th centile}$ or $> 2 \text{ SD}$ below normal for age) or 2-3 of the following: altered mental state; bradycardia or tachycardia ($\text{HR} < 90 \text{ bpm}$ or $> 160 \text{ bpm}$ in infants and $\text{HR} < 70 \text{ bpm}$ or $> 150 \text{ bpm}$ in children); prolonged</p>

	capillary refill (>2 sec) or warm vasodilation with bounding pulses; tachypnea; mottled skin or petechial or purpuric rash; increased lactate; oliguria; hyperthermia or hypothermia
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3. Immediate implementation of appropriate IPC measures

Infection prevention control (IPC) is a critical and integral part of clinical management of patients and should be initiated at the point of entry of the patient to hospital (typically the Emergency Department). Standard precautions should always be routinely applied in all areas of health care facilities. Standard precautions include hand hygiene; use of PPE to avoid 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.

Table 2: How to implement infection prevention and control measures for patients with suspected or confirmed COVID - 19 infection

At triage	<ul style="list-style-type: none"> Give suspect patient a triple layer surgical mask and direct patient to separate area, an isolation room if available. Keep at least 1 meter distance between suspected patients and other patients. Instruct all patients to cover nose and mouth during coughing or sneezing with tissue or flexed elbow for others. Perform hand hygiene after contact with respiratory secretions
Apply droplet precautions	<ul style="list-style-type: none"> Droplet precautions prevent large droplet transmission of respiratory viruses. Use a triple layer surgical mask if working within 1-2 metres of the patient. Place patients in single rooms, or group together those with the same etiological diagnosis. If an etiological diagnosis is not possible, group patients with similar clinical diagnosis and based on epidemiological risk factors, with a spatial separation. When providing care in close contact with a patient with respiratory symptoms (e.g. coughing or sneezing), use eye protection (face-mask or goggles), because sprays of secretions may occur. Limit patient movement within the institution and ensure that patients wear triple layer surgical masks when outside their rooms

Apply contact precautions	<ul style="list-style-type: none"> • Droplet and contact precautions prevent direct or indirect transmission from contact with contaminated surfaces or equipment (i.e. contact with contaminated oxygen tubing/interfaces). Use PPE (triple layer surgical mask, eye protection, gloves and gown) when entering room and remove PPE when leaving. If possible, use either disposable or dedicated equipment (e.g. stethoscopes, blood pressure cuffs 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). Ensure adequate room ventilation. Avoid movement of patients or transport. Perform hand hygiene.
Apply airborne precautions when performing an aerosol generating procedure	<ul style="list-style-type: none"> • Ensure that healthcare workers performing aerosol-generating procedures (i.e. open suctioning of respiratory tract, intubation, bronchoscopy, cardiopulmonary resuscitation) use PPE, including gloves, long-sleeved gowns, eye protection, and fit-tested particulate respirators (N95). (The scheduled fit test should not be confused with user seal check before each use.) Whenever possible, use adequately ventilated single rooms when performing aerosol-generating procedures, meaning negative pressure rooms with minimum of 12 air changes per hour or at least 160 litres/second/patient in facilities with natural ventilation. Avoid the presence of unnecessary individuals in the room. Care for the patient in the same type of room after mechanical ventilation commences

Abbreviations: ARI, acute respiratory infection; PPE, personal protective equipment

4. Laboratory diagnosis

Guidance on specimen collection, processing, transportation, including related biosafety procedures, is available on <https://mohfw.gov.in/media/disease-alerts>.

As per directive from MoHFW, Government of India, all suspected cases are to be reported to district and state surveillance officers.



Figure 1: Helpline for COVID-19 (MOHFW, GOI)

Sample collection:

Preferred sample: Throat and nasal swab in viral transport media (VTM) and transported on ice

Alternate: Nasopharyngeal swab, BAL or endotracheal aspirate which has to be mixed with the viral transport medium and transported on ice

General guidelines:

- Trained health care professionals to wear appropriate PPE with latex free purple nitrile gloves while collecting the sample from the patient. Maintain proper infection control when collecting specimens
- Restricted entry to visitors or attendants during sample collection
- Complete the requisition form for each specimen submitted
- Proper disposal of all waste generated

Respiratory specimen collection methods:

A. Lower respiratory tract

- Bronchoalveolar lavage, tracheal aspirate, sputum
- Collect 2-3 mL into a sterile, leak-proof, screw-cap sputum collection cup or sterile dry container.

B. Upper respiratory tract

- Nasopharyngeal swab AND oropharyngeal swab

Oropharyngeal swab (e.g. throat swab): Tilt patient's head back 70 degrees. Rub swab over both tonsillar pillars and posterior oropharynx and avoid touching the tongue, teeth, and gums. Use only synthetic fiber swabs with plastic shafts. Do not use calcium alginate swabs or swabs with wooden shafts. Place swabs immediately into sterile tubes containing 2-3 ml of viral transport media.

Combined nasal & throat swab: Tilt patient's head back 70 degrees. While gently rotating the swab, insert swab less than one inch into nostril (until resistance is met at turbinates). Rotate the swab several times against nasal wall and repeat in other nostril using the same swab. Place tip of the swab into sterile viral transport media tube and cut off the applicator stick. For throat swab, take a second dry polyester swab, insert into mouth, and swab the posterior pharynx and tonsillar areas (avoid the tongue). Place tip of swab into the same tube and cut off the applicator tip.

Nasopharyngeal swab: Tilt patient's head back 70 degrees. Insert flexible swab through the nares parallel to the palate (not upwards) until resistance is encountered or the distance is equivalent to that from the ear to the nostril of the patient. Gently, rub and roll the swab. Leave the swab in place for several seconds to absorb secretions before removing.

Clinicians may also collect lower respiratory tract samples when these are readily available (for example, in mechanically ventilated patients). In hospitalized patients with confirmed COVID - 19 infection, repeat upper respiratory tract samples should be collected to demonstrate viral clearance.

5. Early supportive therapy and monitoring

- a Give supplemental oxygen therapy immediately to patients with SARI and respiratory distress, hypoxaemia, or shock: Initiate oxygen therapy at 5 L/min and titrate flow rates to reach target $\text{SpO}_2 \geq 90\%$ in non-pregnant adults and $\text{SpO}_2 \geq 92-95\%$ in pregnant patients. Children with emergency signs (obstructed or absent breathing, severe respiratory distress, central cyanosis, shock, coma or convulsions) should receive oxygen therapy during resuscitation to target $\text{SpO}_2 \geq 94\%$; otherwise, the target SpO_2 is $\geq 90\%$. All areas where patients with SARI are cared for should be equipped with pulse oximeters, functioning oxygen systems and disposable, single-use, oxygen-delivering interfaces (nasal cannula, simple face mask, and mask with reservoir bag). Use contact precautions when handling contaminated oxygen interfaces of patients with COVID – 19.
- b Use conservative fluid management in patients with SARI when there is no evidence of shock: Patients with SARI should be treated cautiously with intravenous fluids, because aggressive fluid resuscitation may worsen oxygenation, especially in settings where there is limited availability of mechanical ventilation.
- c Give empiric antimicrobials to treat all likely pathogens causing SARI. Give antimicrobials within one hour of initial patient assessment for patients with sepsis: Although the patient may be suspected to have COVID - 19, Administer appropriate empiric antimicrobials within ONE hour of identification of sepsis. Empirical antibiotic treatment should be based on the clinical diagnosis (community-acquired pneumonia, health care-associated pneumonia [if infection was acquired in healthcare setting], or sepsis), local epidemiology and susceptibility data, and treatment guidelines. Empirical therapy includes a neuraminidase inhibitor for treatment of influenza when there is local circulation or other risk factors, including travel history or exposure to animal influenza viruses. Empirical therapy should be de-escalated on the basis of microbiology results and clinical judgment
- d Do not routinely give systemic corticosteroids for treatment of viral pneumonia or ARDS outside of clinical trials unless they are indicated for another reason: A systematic review of observational studies of corticosteroids administered to patients with SARS reported no survival benefit and possible harms (avascular necrosis, psychosis, diabetes, and delayed viral clearance). A systematic review of observational studies in influenza found a higher risk of mortality and secondary infections with corticosteroids; the evidence was judged as very low

to low quality due to confounding by indication. A subsequent study that addressed this limitation by adjusting for time-varying confounders found no effect on mortality. Finally, a recent study of patients receiving corticosteroids for MERS used a similar statistical approach and found no effect of corticosteroids on mortality but delayed lower respiratory tract (LRT) clearance of MERS-CoV. Given lack of effectiveness and possible harm, routine corticosteroids should be avoided unless they are indicated for another reason. See section F for the use of corticosteroids in sepsis.

- e. Closely monitor patients with SARI for signs of clinical deterioration, such as rapidly progressive respiratory failure and sepsis, and apply supportive care interventions immediately: Application of timely, effective, and safe supportive therapies is the cornerstone of therapy for patients that develop severe manifestations of COVID – 19.
- f. Understand the patient's co-morbid condition(s) to tailor the management of critical illness and appreciate the prognosis: During intensive care management of SARI, determine which chronic therapies should be continued and which therapies should be stopped temporarily.
- g. Communicate early with patient and family: Communicate pro-actively with patients and families and provide support and prognostic information. Understand the patient's values and preferences regarding life-sustaining interventions.

6. Management of hypoxemic respiratory failure and ARDS

- Recognize severe hypoxemic respiratory failure when a patient with respiratory distress is failing standard oxygen therapy. Patients may continue to have increased work of breathing or hypoxemia even when oxygen is delivered via a face mask with reservoir bag (flow rates of 10-15 L/min, which is typically the minimum flow required to maintain bag inflation; FiO_2 0.60-0.95). Hypoxemic respiratory failure in ARDS commonly results from intrapulmonary ventilation-perfusion mismatch or shunt and usually requires mechanical ventilation.
- High – flow nasal catheter oxygenation or non – invasive mechanical ventilation: When respiratory distress and/or hypoxemia of the patient cannot be alleviated after receiving standard oxygen therapy, high – flow nasal cannula oxygen therapy or non – invasive ventilation can be considered. If conditions do not improve or even get worse within a short time (1 – 2 hours), tracheal intubation and invasive mechanical ventilation should be used in a timely manner. Compared to standard oxygen therapy, HFNO reduces the need for intubation. Patients with hypercapnia (exacerbation of obstructive lung disease, cardiogenic pulmonary oedema), hemodynamic instability, multi-organ failure, or abnormal mental status should generally not receive HFNO, although emerging data suggest that HFNO may be safe in patients with mild-moderate and non-worsening hypercapnia²⁵. Patients receiving HFNO should be in a monitored setting and cared for by experienced personnel capable of endotracheal intubation in case the patient acutely deteriorates or does not improve after a short trial (about 1 hr).
- NIV guidelines make no recommendation on use in hypoxemic respiratory failure (apart from cardiogenic pulmonary oedema and post-operative respiratory failure) or pandemic viral illness (referring to studies of SARS and pandemic influenza). Risks include delayed intubation, large tidal volumes, and injurious transpulmonary pressures. Limited data suggest a high failure rate when MERS patients received NIV. Patients receiving a trial of NIV should be in a monitored setting and cared for by experienced personnel capable of endotracheal intubation in case the patient acutely deteriorates or does not improve after a short trial (about 1 hr). Patients with hemodynamic instability, multiorgan failure, or abnormal mental status should not receive NIV.

- Recent publications suggest that newer HFNO and NIV systems with good interface fitting do not create widespread dispersion of exhaled air and therefore should be associated with low risk of airborne transmission.
- Endotracheal intubation should be performed by a trained and experienced provider using airborne precautions. Patients with ARDS, especially young children or those who are obese or pregnant, may de-saturate quickly during intubation. Pre-oxygenate with 100% FiO₂ for 5 minutes, via a face mask with reservoir bag, bag-valve mask, HFNO, or NIV. Rapid sequence intubation is appropriate after an airway assessment that identifies no signs of difficult intubation.
- Implement mechanical ventilation using lower tidal volumes (4–8 ml/kg predicted body weight, PBW) and lower inspiratory pressures (plateau pressure <30 cmH₂O). This is a strong recommendation from a clinical guideline for patients with ARDS, and is suggested for patients with sepsis-induced respiratory failure. The initial tidal volume is 6 ml/kg PBW; tidal volume up to 8 ml/kg PBW is allowed if undesirable side effects occur (e.g. dyssynchrony, pH <7.15). Hypercapnia is permitted if meeting the pH goal of 7.30–7.45. Ventilator protocols are available. The use of deep sedation may be required to control respiratory drive and achieve tidal volume targets.
- In patients with severe ARDS, prone ventilation for >12 hours per day is recommended. Application of prone ventilation is strongly recommended for adult and paediatric patients with severe ARDS but requires sufficient human resources and expertise to be performed safely.
- Use a conservative fluid management strategy for ARDS patients without tissue hypoperfusion.
- In patients with moderate or severe ARDS, higher PEEP instead of lower PEEP is suggested. PEEP titration requires consideration of benefits (reducing atelectrauma and improving alveolar recruitment) vs. risks (end-inspiratory overdistension leading to lung injury and higher pulmonary vascular resistance). Tables are available to guide PEEP titration based on the FiO₂ required to maintain SpO₂. A related intervention of recruitment manoeuvres (RMs) is delivered as episodic periods of high continuous positive airway pressure [30–40 cm H₂O], progressive incremental increases in PEEP with constant driving pressure, or high driving pressure; considerations of benefits vs. risks are similar. Higher PEEP and RMs were both conditionally recommended in a clinical practice guideline. In patients with moderate-

severe ARDS ($\text{PaO}_2/\text{FiO}_2 < 150$), neuromuscular blockade by continuous infusion should not be routinely used.

- In settings with access to expertise in extracorporeal life support (ECLS), consider referral of patients with refractory hypoxemia despite lung protective ventilation. ECLS should only be offered in expert centres with a sufficient case volume to maintain expertise and that can apply the IPC measures required for COVID – 19 patients
- Avoid disconnecting the patient from the ventilator, which results in loss of PEEP and atelectasis. Use in-line catheters for airway suctioning and clamp endotracheal tube when disconnection is required (for example, transfer to a transport ventilator)

7. Management of septic shock

- Recognize septic shock in adults when infection is suspected or confirmed AND vasopressors are needed to maintain mean arterial pressure (MAP) ≥ 65 mmHg AND lactate is < 2 mmol/L, in absence of hypovolemia. Recognize septic shock in children with any hypotension (systolic blood pressure [SBP] < 5 th centile or > 2 SD below normal for age) or 2-3 of the following: altered mental state; tachycardia or bradycardia (HR < 90 bpm or > 160 bpm in infants and HR < 70 bpm or > 150 bpm in children); prolonged capillary refill (> 2 sec) or warm vasodilation with bounding pulses; tachypnea; mottled skin or petechial or purpuric rash; increased lactate; oliguria; hyperthermia or hypothermia.
- In the absence of a lactate measurement, use MAP and clinical signs of perfusion to define shock. Standard care includes early recognition and the following treatments within 1 hour of recognition: antimicrobial therapy and fluid loading and vasopressors for hypotension. The use of central venous and arterial catheters should be based on resource availability and individual patient needs. Detailed guidelines are available for the management of septic shock in adults and children.
- In resuscitation from septic shock in adults, give at least 30 ml/kg of isotonic crystalloid in adults in the first 3 hours. In resuscitation from septic shock in children in well-resourced settings, give 20 ml/kg as a rapid bolus and up to 40-60 ml/kg in the first 1 hr. Do not use hypotonic crystalloids, starches, or gelatins for resuscitation.
- Fluid resuscitation may lead to volume overload, including respiratory failure. If there is no response to fluid loading and signs of volume overload appear (for example, jugular venous distension, crackles on lung auscultation, pulmonary oedema on imaging, or hepatomegaly in children), then reduce or discontinue fluid administration. This step is particularly important where mechanical ventilation is not available. Alternate fluid regimens are suggested when caring for children in resource-limited settings.
- Crystalloids include normal saline and Ringer's lactate. Determine need for additional fluid boluses (250-1000 ml in adults or 10-20 ml/kg in children) based on clinical response and improvement of perfusion targets. Perfusion targets include MAP (> 65 mmHg or age-appropriate targets in children), urine output (> 0.5 ml/kg/hr in adults, 1 ml/kg/hr in children), and improvement of skin mottling, capillary refill, level of consciousness, and lactate. Consider

dynamic indices of volume responsiveness to guide volume administration beyond initial resuscitation based on local resources and experience. These indices include passive leg raises, fluid challenges with serial stroke volume measurements, or variations in systolic pressure, pulse pressure, inferior vena cava size, or stroke volume in response to changes in intrathoracic pressure during mechanical ventilation.

- **Administer vasopressors when shock persists during or after fluid resuscitation. The initial blood pressure target is MAP \geq 65 mmHg in adults and age-appropriate targets in children.**
- If central venous catheters are not available, vasopressors can be given through a peripheral IV, but use a large vein and closely monitor for signs of extravasation and local tissue necrosis. If extravasation occurs, stop infusion. Vasopressors can also be administered through intraosseous needles.
- If signs of poor perfusion and cardiac dysfunction persist despite achieving MAP target with fluids and vasopressors, consider an inotrope such as dobutamine

8. Other therapeutic measures:

For patients with progressive deterioration of oxygenation indicators, rapid worsening on imaging and excessive activation of the body's inflammatory response, glucocorticoids can be used for a short period of time (3 to 5 days). It is recommended that dose should not exceed the equivalent of methylprednisolone 1 – 2mg/kg/day. Note that a larger dose of glucocorticoid will delay the removal of coronavirus due to immunosuppressive effects. For pregnant severe and critical cases, pregnancy should be preferably terminated. Consultations with obstetric, neonatal, and intensive care specialists (depending on the condition of the mother) are essential. Patients often suffer from anxiety and fear and they should be supported by psychological counseling.

9. Prevention of complications

Implement the following interventions (Table 3) to prevent complications associated with critical illness. These interventions are based on Surviving Sepsis or other guidelines, and are generally limited to feasible recommendations based on high quality evidence.

Table 3: Prevention of complications

Anticipated Outcome	Interventions
Reduce days of invasive mechanical ventilation	<ul style="list-style-type: none"> • Use weaning protocols that include daily assessment for readiness to breathe spontaneously • Minimize continuous or intermittent sedation, targeting specific titration endpoints (light sedation unless contraindicated) or with daily interruption of continuous sedative infusions
Reduce incidence of ventilator associated pneumonia	<ul style="list-style-type: none"> • Oral intubation is preferable to nasal intubation in adolescents and adults • Keep patient in semi-recumbent position (head of bed elevation 30–45°) • Use a closed suctioning system; periodically drain and discard condensate in tubing • Use a new ventilator circuit for each patient; once patient is ventilated, change circuit if it is soiled or damaged but not routinely • Change heat moisture exchanger when it malfunctions, when soiled, or every 5–7 days
Reduce incidence of venous thromboembolism	<ul style="list-style-type: none"> • 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).
Reduce incidence of catheter related bloodstream infection	<ul style="list-style-type: none"> • Use a checklist with completion verified by a real-time observer as reminder of each step needed for sterile insertion and as a daily reminder to remove catheter if no longer needed
Reduce incidence of pressure	<ul style="list-style-type: none"> • Turn patient every two hours

Ulcers	
Reduce incidence of stress ulcers and gastrointestinal bleeding	<ul style="list-style-type: none"> • Give early enteral nutrition (within 24–48 hours of admission) • Administer histamine-2 receptor blockers or proton-pump inhibitors in patients with risk factors for GI bleeding. Risk factors for gastrointestinal bleeding include mechanical ventilation for ≥ 48 hours, coagulopathy, renal replacement therapy, liver disease, multiple co-morbidities, and higher organ failure score
Reduce incidence of ICU-related weakness	<ul style="list-style-type: none"> • Actively mobilize the patient early in the course of illness when safe to do so

10. Specific therapy

NO SPECIFIC ANTIVIRALS have been proven to be effective as per currently available data. However, based on the available information (uncontrolled clinical trials), the following drugs may be considered as an off – label indication **in patients with severe disease and requiring ICU management:**

- Hydroxychloroquine (Dose 400mg BD – for 1 day followed by 200mg BD for 4 days)

In combination with

- Azithromycin (500 mg OD for 5 days) under close monitoring including QTc interval.

The above medication is presently not recommended for children less than 12 years, pregnant and lactating women.

These guidelines are based on currently available information and would be reviewed from time to time as new evidence emerges.

Support to Treating Physicians: AIIMS, New Delhi is running a 24x7 helpline to provide support to the treating physicians on clinical management. The helpline number is 9971876591. The identified nodal doctor of the State, appointed for clinical management of COVID – 19 should only contact AIIMS Call Centre.

MoHFW, GoI

Guidelines on Clinical Management of COVID – 19

	17 th March 2020	30 th March 2020
Case definition	Symptomatic and requiring hospitalization – with history of travel, HCP, unusual clinical course Symptomatic having close contact with positive case /from healthcare facility	Symptomatic – with history of travel, contact, HCP, requiring hospitalization Asymptomatic having contact with positive case
Uncomplicated cases	do not have any signs of dehydration, sepsis or shortness of breath	Removed from new guideline
Sample collection	1. Blood culture 2. Nasopharyngeal and oro – pharyngeal swab for RT-PCR 3. LRT sample (Lower Respiratory Tract) in mechanically ventilated patients 4. Both URT & LRT specimen testing for other respiratory viruses indicated 5. In hospitalized patients with confirmed COVID-19 infection, repeat URT sample for demonstrating viral clearance indicated every 2-4 days till 2 consecutive negative result (of URT sample minimum 24 hrs. apart)	1. Preferred sample: Throat and nasal swab in viral transport media (VTM) and transported on ice 2. Alternate: Nasopharyngeal swab, BAL or endotracheal aspirate mixed with VTM and transported on ICE Detailing of procedure for sample collection given 3. Both URT & LRT specimen testing for other respiratory viruses removed in new guideline 4. Repeat testing of URT sample In hospitalized patients with confirmed COVID-19 infection not mentioned
Specific therapy	Administration of Lopinavir/ Ritonavir to be considered Criteria and Dosage given	NO SPECIFIC ANTIVIRALS have been proven to be effective Off – label indication in patients with severe disease and requiring ICU management: • Hydroxychloroquine (Dose 400mg BD – for 1 day followed by 200mg BD for 4 days) In combination with • Azithromycin (500 mg OD for 5 days) under close monitoring including QTc interval. The above medication is presently not recommended for children less than 12 years, pregnant and lactating women. Mention of- These guidelines are based on currently available information and would be reviewed from time to time as new evidence emerges.

**संचालनालय स्वास्थ्य सेवार्यें
मध्यप्रदेश**

क्रमांक/अ.प्रशा./2020 /505

भोपाल दिनांक 27/3/2020

प्रति,

समस्त मुख्य चिकित्सा एवं स्वास्थ्य अधिकारी म.प्र.
समस्त सिविल सर्जन सह मुख्य अस्पताल अधीक्षक म.प्र.।

विषय- नोवल कोरोना वायरस (COVID-19) के संक्रमण से बचाव एवं रोकथाम हेतु संभावित रोगियों का वर्गीकरण (I) तथा उपचार (II) के संबंध में दिशानिर्देश।

संदर्भ- संचालनालय स्वास्थ्य सेवार्यें से जारी पत्र क्रमांक /आई.डी.एस.पी./20/238 दिनांक 17.03.2020 तथा पत्र क्रमांक /आई.डी.एस.पी./20/240 दिनांक 17.03.2020, विषय - (COVID-19) बीमारी के उपचार के संबंध में मार्गदर्शिका के संबंध में (प्रतिलिपि संलग्न)।

नोवल कोरोना वायरस (COVID-19) के संक्रमण से बचाव एवं रोकथाम हेतु भारत सरकार द्वारा विभिन्न दिशानिर्देश जारी किये गये हैं। संदर्भित पत्र के माध्यम से "Guidelines of Clinical Management of (COVID-19)"- (Annexure C) भी उपलब्ध कराये गये हैं। इसके अतिरिक्त नोवल कोरोना वायरस रोग (COVID-19) के संभावित रोगियों के वर्गीकरण (I) तथा उपचार (II) के संबंध में राज्य स्तर पर गठित तकनीकी सलाहकार समिति द्वारा निर्धारित निम्नलिखित दिशानिर्देशों का पालन करना सुनिश्चित करें :-

(I) वर्गीकरण-

नोवल कोरोना वायरस (COVID-19) के संभावित रोगियों को 3 श्रेणी (ABC) में वर्गीकृत करें।

केटेगिरी A - Mild Cases

- लक्षण- सर्दी के लक्षण के साथ हल्का बुखार/गले में खराश/खांसी/नाक बहना/दस्त।
- पुष्ट (COVID-19) केस की कान्टेक्ट हिस्ट्री नहीं।
- इन रोगियों की लेब जांच न की जाये।

कार्यवाही- 14 दिन होम क्वारेन्टाईन में रखा जाये तथा इनका लक्षणों के आधार पर उपचार किया जाये।

केटेगिरी B - Moderate Cases

- लक्षण- तेज बुखार के साथ/गले में खराश/खांसी।
- ऐसे रोगियों को 2 भागों में विभाजित किया गया है :-

1. हाई रिस्क कॉन्टेक्ट

- पुष्ट (Confirmed) कोरोना वायरस (COVID-19) केस से संपर्क।
- चिकित्सालय जहाँ कोरोना वायरस (COVID-19) केसों का उपचार हो रहा हो वहाँ भ्रमण किया।
- ऐसा क्षेत्र जिन्हें लोकल ट्रांसमिशन क्षेत्र चिन्हित किया गया है, में भ्रमण किया हो। (Source WHO situation)
- मरीज के शारीरिक द्रव्य (respiratory tract secretion, blood, vomitus, saliva, urine, faeces) के संपर्क में आया हो।
- बिना पी.पी.ई. के मरीज के Physical Contact में आया हो।
- मरीज के कपड़े/पलंग के वस्त्र/खाने के बर्तन के संपर्क में आया हो।



- पुष्ट (Confirmed) कोरोना वायरस (COVID-19) केस के करीब संपर्क में (1 मीटर से कम) आया हो।
- पुष्ट (Confirmed) कोरोना वायरस (COVID-19) केस का हवाई/रेल सहायात्री जो उसी पंक्ति या 3 पंक्ति आगे या पीछे बैठा हो।

कार्यवाही— ऐसे रोगियों को COVID-19 की पुष्टि करने हेतु केस की नियमानुसार लेब जांच की जाये।

- यदि जांच निगेटिव आती है तो रोगी को जिला चिकित्सालय में अंडर ऑब्जरवेशन रख के लक्षणों के आधार पर जांच की जाये तथा यदि रोगी की हालत स्थिर हो तो 14 दिन होम क्वारेन्टाईन में रखा जाये।
- यदि जांच पॉजिटिव तथा रोगी लक्षण रहित है तथा रोगी को 72 घण्टों से अधिक की समयावधि में बुखार न आया हो/7 दिनों से अधिक समयावधि में लक्षण न आये हो/यथासंभव रोगी के पूर्व में COVID-19 की 2 जांचे निगेटिव आई हो। ऐसे रोगी को अपने घरों में होम आईसोलेशन में रखा जाये तथा इसके साथ रोगी की बुखार की निगरानी की जाये, पैरासिटामॉल तथा लक्षणों के आधार पर उपचार किया जाये, रोगी से अन्य व्यक्तियों का संपर्क निषेध तथा ड्रापलेट संक्रमण को रोका जाये एवं रोगी को खतरो के लक्षणों की समझाईश दी जाये।
- उपरोक्त में हाई रिस्क रोगियों (उम्र 05 वर्ष से कम अथवा 60 वर्ष से अधिक, कार्डियोवास्कुलर डिजीज, उच्च रक्तचाप, मधुमेह, ईम्यूनोकोम्प्रोमाईज्ड स्टेट, क्रोनिक लंग, किडनी, लीवर डिजीजेस) को क्लीनिकल जांच के आधार पर निर्णय लेकर चिकित्सालयों में भर्ती किया जा सकता है।
- यदि जांच पॉजिटिव आती है तथा रोगी में बीमारी के लक्षण है तो तत्काल उच्च उपचार के लिये मेडिकल कॉलेज/चिन्हित चिकित्सालय में ईलाज के लिये रेफर करें।

2. लो रिस्क कॉन्टेक्ट

- ऐसे व्यक्ति जिनके द्वारा एक ही स्थान (जैसे— कक्षा/कार्यस्थल आदि) में साथ रहे हो परंतु पुष्ट (Confirmed) केस से संपर्क हाई रिस्क की श्रेणी में न आते हो।
- ऐसे व्यक्ति जिनके द्वारा एक ही साथ यात्रा की हो परंतु पुष्ट (Confirmed) केस से संपर्क हाई रिस्क की श्रेणी में न आते हो।
- ऐसे व्यक्ति जिनके द्वारा विदेश यात्रा की हो परंतु व क्षेत्र हाई रिस्क की श्रेणी में न आते हो।

कार्यवाही— ऐसे रोगियों को COVID-19 की पुष्टि करने के लिये केस की नियमानुसार लेब जांच की जाये।

- यदि जांच निगेटिव आती है तो रोगी को 14 दिनों के लिये जिला चिकित्सालय के आईसोलेशन वार्ड में भर्ती कर लक्षणों के आधार पर उपचार करें।
- यदि जांच पॉजिटिव आती है तथा रोगी लक्षण रहित है तो को 14 दिन होम क्वारेन्टाईन में रखा जाये।
- यदि जांच पॉजिटिव आती है तथा रोगी में बीमारी के लक्षण है तो तत्काल उच्च उपचार के लिये मेडिकल कॉलेज चिकित्सालय में ईलाज के लिये रेफर करें।

कटेगिरी C -

- लक्षण— तेज बुखार के साथ/ गले में खराश/खांसी के साथ सॉस लेने में तकलीफ, सीने में दर्द, चक्कर, रक्तचाप में कमी, खांसी के साथ खून, सायनोसीस, रोगी का आक्सीजन सेचुरेशन आक्सीजन थेरेपी के साथ 88 प्रतिशत से कम हो/बच्चों में पलू जैसे लक्षण।

कार्यवाही— आवश्यक रूप से रोगी की लेब जांच करायें। जांच में पुष्ट (Confirmed) केस आने पर ऐसे रोगियों को मेडिकल कॉलेज/चिन्हित चिकित्सालय में ईलाज के लिये रेफर करें।

तथा जांच में निगेटिव आने पर जिला चिकित्सालय में अंडर ऑब्जरवेशन रख के लक्षणों के आधार पर जांच की जाये, यदि रोगी स्थिर न हो तो मेडिकल कॉलेज/चिन्हित चिकित्सालय में ईलाज के लिये भर्ती किया जाये।

इस संदर्भ में (Annexure A) में दिए गए FLOWCHART का उपयोग करें तथा समस्त को निर्देशित किया जाता है कि नोवल कोरोना वायरस रोग (COVID-19) के संभावित रोगियों के वर्गीकरण तथा उपचार के संबंध में उपरोक्त दिशानिर्देशों का पालन करना सुनिश्चित करें।

(II) उपचार –

वर्तमान में राज्य स्तर पर गठित तकनीकी सलाहकार समिति नोवल कोरोना वायरस (COVID-19) के द्वारा भारत सरकार, एम्स नई दिल्ली तथा अन्य संस्थानों द्वारा जारी उपचार संबंधित दिशा-निर्देश एवं मार्गदर्शिकायें का अध्ययन कर नोवल कोरोना वायरस (COVID-19) रोग के उपचार संबंधित संक्षिप्त दिशा-निर्देश **ADDITIONAL GUIDELINES FOR CLINICAL MANAGEMENT PROTOCOL FOR COVID-19 (Annexure B)** जारी किये जा रहे हैं। इन दिशा-निर्देशों का कड़ाई से पालन किया जाना सुनिश्चित करें। नोवल कोरोना वायरस (COVID-19) के उपचार में उपयोग होने वाली औषधियों का वर्तमान में ट्रायल प्रचलन में है। अतः जनस्वास्थ्य के दृष्टिगत आमजन के उपयोग हेतु समस्त उपचाररत रोगियों से Informed Consent form भी भरना सुनिश्चित करावें।

संलग्न:-

(Annexure A) - FLOWCHART

(Annexure B) - ADDITIONAL GUIDELINES FOR CLINICAL MANAGEMENT PROTOCOL FOR COVID-19

(Annexure C) - दिनांक 17.03.2020 को पत्र क्रमांक /आई.डी.एस.पी./20/238 दिनांक 17.03.2020

द्वारा प्रेषित GUIDELINES OF CLINICAL MANAGEMENT OF (COVID-19)

आयुक्त स्वास्थ्य द्वारा अनुमोदित


27-3-2020

(डॉ. मोहन सिंह)

संचालक स्वास्थ्य सेवायें
संचालनालय स्वास्थ्य सेवायें
भोपाल म.प्र.

पृ.क्रमांक/अ.प्रशा./2020 /506
प्रतिलिपि (समस्त अनुलग्नक सहित)–

भोपाल दिनांक 27/3/2020

1. प्रमुख सचिव म.प्र. शासन चिकित्सा शिक्षा विभाग मंत्रालय।
2. प्रमुख सचिव म.प्र. शासन लोक स्वास्थ्य एवं परिवार कल्याण विभाग मंत्रालय।
3. वि.क.सह. आयुक्त स्वास्थ्य, म.प्र.।
4. आयुक्त चिकित्सा शिक्षा, म.प्र.।
5. मिशन संचालक, राष्ट्रीय स्वास्थ्य मिशन म.प्र.।
6. संचालक चिकित्सा शिक्षा म.प्र.।
7. समस्त क्षेत्रीय संचालक, स्वास्थ्य सेवायें म.प्र.।
8. समस्त जिला कलेक्टर म.प्र.।
9. समस्त अधिष्ठाता, शासकीय महाविद्यालय, मध्यप्रदेश।
10. श्री राकेश मुंशी, प्रभारी (COVID-19) कंट्रोल रूम, संचालनालय स्वास्थ्य सेवायें मध्यप्रदेश।
11. समस्त मुख्य चिकित्सा एवं स्वास्थ्य अधिकारी, मध्यप्रदेश



संचालक स्वास्थ्य सेवायें
संचालनालय स्वास्थ्य सेवायें
भोपाल म.प्र.

7/4/2020

Ministry of Health & Family Welfare
Directorate General of Health Services
EMR Division

Guidance document on appropriate management of suspect/confirmed cases of COVID-19

1. Introduction: Since its first detection in China, Coronavirus Disease 2019 (COVID-19) has now spread to over 210 countries/territories, with reports of local transmission happening across the world. As per WHO (as of 7th April, 2020), there has been a total of 12,14,466 confirmed cases and 67,767 deaths due to COVID-19 worldwide.

In India, as on 7th April, 2020, 4421 confirmed cases and 114 deaths reported from 31 States/UTs.

2. Purpose of this document

A series of measures have been taken by both the Central and State Governments to break the chain of transmission. One among these is to isolate all suspect and confirmed cases of COVID-19. However, as the number of cases increases, it would be important to appropriately prepare the health systems and use the existing resources judiciously. Available data in India suggests that nearly 70% of cases affected with COVID-19 either exhibit mild or very mild symptoms. Such cases may not require admission to COVID-19 blocks/ dedicated COVID-19 hospitals.

It is important to put in place mechanisms for triaging and decisions making for identification of the appropriate COVID dedicated facility for providing care to COVID-19 patients. The purpose of this document is to put in place such SOPs to ensure optimal utilization of available resources and thereby providing appropriate care to all the COVID-19 patients. This will ensure that available hospital beds capacity is used only for moderate to severe cases of COVID-19. The SOPs specified hereafter also specify the different types of facilities to be set up for various categories of Covid-19 cases.

Guiding principles

All the selected facilities must be dedicated for COVID management. Three types of COVID dedicated facilities are proposed in this document. All 3 types of COVID Dedicated facilities will have separate ear marked areas for suspect and confirmed cases. Suspect and confirmed cases should not be allowed to mix under any circumstances.

All suspect cases (irrespective of severity of their disease) will be tested for COVID-19. Further management of these cases will depend on their (i) clinical status and (ii) result of COVID-19 testing.

All three types of facilities will be linked to the Surveillance team (IDSP)

All these facilities will follow strict infection prevention and control practices

3. Types of COVID Dedicated Facilities: There are three types of COVID Dedicated Facilities –

(1) COVID Care Center (CCC):

- 1.1. The COVID Care Centers shall offer care only for cases that have been clinically assigned as **mild** or **very mild cases** or **COVID suspect cases**.
- 1.2. The COVID Care Centers are makeshift facilities. These may be set up in hostels, hotels, schools, stadiums, lodges etc., both public and private. If need be, existing quarantine facilities could also be converted into COVID Care Centers. Functional hospitals like CHCs, etc, which may be handling regular, non-COVID cases should be designated as COVID Care Centers as a last resort. This is important as essential non COVID Medical services like those for pregnant women, newborns etc, are to be maintained.
- 1.3. Wherever a COVID Care Center is designated for admitting both the confirmed and the suspected cases, these facilities **must have separate areas for suspected and confirmed cases with preferably separate entry and exit. Suspect and confirmed cases must not be allowed to mix under any circumstances.**
- 1.4. As far as possible, wherever suspect cases are admitted in the COVID Care Center, preferably individual rooms should be assigned for such cases.
- 1.5. Every Dedicated COVID Care Centre must necessarily be mapped to one or more Dedicated COVID Health Centres and at least one Dedicated COVID Hospital for referral purpose (details

given below).

- 1.6. Every Dedicated COVID Care Centre must also have a dedicated Basic Life Support Ambulance (BLSA) equipped with sufficient oxygen support on 24x7 basis, for ensuring safe transport of a case to Dedicated higher facilities if the symptoms progress from mild to moderate or severe.
- 1.7. The human resource to man these Care Centre facilities may also be drawn from AYUSH doctors. Training protocols developed by AIIMS is uploaded on MoHFW website. Ministry of AYUSH has also carried out training sessions. The State AYUSH Secretary/Director should be involved in this deployment. State wise details of trained AYUSH doctors has been shared with the States. Their work can be guided by an Allopathic doctor.

(2) Dedicated COVID Health Centre (DCHC):

- 2.1. The Dedicated COVID Health Centre are hospitals that shall offer care for all cases that have been **clinically assigned as moderate.**
- 2.2. These should either be a full hospital or a separate block in a hospital with preferably separate entry\exit/zoning.
- 2.3. Private hospitals may also be designated as COVID Dedicated Health Centres.
- 2.4. Wherever a Dedicated COVID Health Center is designated for admitting both the confirmed and the suspect cases with moderate symptoms, these hospitals **must have separate areas for suspect and confirmed cases. Suspect and confirmed cases must not be allowed to mix under any circumstances.**
- 2.5. These hospitals would have beds with assured Oxygen support.
- 2.6. Every Dedicated COVID Health Centre must necessarily be mapped to one or more Dedicated COVID Hospitals.
- 2.7. Every DCHC must also have a dedicated Basic Life Support Ambulance (BLSA) equipped with sufficient oxygen support for ensuring safe transport of a case to a Dedicated COVID Hospital if the symptoms progress from moderate to severe.

(3) Dedicated COVID Hospital (DCH):

- 3.1. The Dedicated COVID Hospitals are hospitals that shall offer comprehensive care primarily for those who have been **clinically assigned as severe.**
- 3.2. The Dedicated COVID Hospitals should either be a full hospital or a separate block in a hospital with preferably separate entry\exit.

- 3.3. Private hospitals may also be designated as COVID Dedicated Hospitals.
- 3.4. These hospitals would have fully equipped ICUs, Ventilators and beds with assured Oxygen support.
- 3.5. These hospitals will have separate areas for suspect and confirmed cases. Suspect and confirmed cases should not be allowed to mix under any circumstances.
- 3.6. The Dedicated COVID Hospitals would also be referral centers for the Dedicated COVID Health Centers and the COVID Care Centers.

All these facilities will follow strict infection prevention and control practices.

4. Management of COVID cases

4.1. Assessment of patients:

In addition to patients arriving directly through helpline/ referral to above categories of COVID dedicated facilities, in field settings during containment operations, the supervisory medical officer to assess for severity of the case detected and refer to appropriate facility.

States\UTs may identify hospitals with dedicated and separate space and set up Fever Clinics in such hospitals. The Fever Clinics may also be set up in CHCs, in rural areas subject to availability of sufficient space to minimize the risk of cross infections. In urban areas, the civil/general hospitals, Urban CHCs and Municipal Hospitals may also be designated as Fever Clinics. These could be set up preferably near the main entrance for triage and referral to appropriate COVID Dedicated Facility. Wherever space allows, a temporary make shift arrangement outside the facility may be arranged for this triaging.

The medical officer at the fever clinics could identify suspect cases and refer to COVID Care Centre, Dedicated COVID Health Centre or Dedicated COVID Hospital, depending on the clinical severity.

4.2 Categorization of patients

Patients may be categorized into three groups and managed in the respective COVID hospitals
- Dedicated COVID Care Centre, dedicated COVID Health Centre and dedicated COVID

Hospitals.

Group 1: Suspect and confirmed cases clinically assigned as mild and very mild

Group 2: Suspect and confirmed cases clinically assigned as moderate

Group 3: Suspect and confirmed cases clinically assigned as severe

Group 1: Suspect and confirmed cases clinically assigned as mild and very mild (COVID Care Centres)

- **Clinical criteria:** Cases presenting with fever and/or upper respiratory tract illness (Influenza Like Illness, ILI).
- These patients will be accommodated in COVID Care Centers.
- The patients would be tested for COVID-19 and till such time their results are available they will remain in the "suspect cases" section of the COVID Care Center preferably in an individual room.
- Those who test positive, will be moved into the "confirmed cases" section of the COVID Care Center.
- If test results are negative, patient will be given symptomatic treatment and be discharged with advice to follow prescribed medications and preventive health measures as per prescribed protocols.
- If any patient admitted to the COVID Care Center qualifies the clinical criteria for moderate or severe case, such patient will be shifted to a Dedicated COVID Health Centre or a Dedicated COVID Hospital.
- Apart from medical care the other essential services like food, sanitation, counseling etc. at the COVID Care Centers will be provided by local administration. Guidelines for quarantine facilities (available on MoHFW website) may be used for this purpose.

Group 2: Suspect and confirmed cases clinically assigned as moderate (Dedicated COVID Health Centres)

- **Clinical criteria:** Pneumonia with no signs of severe disease (Respiratory Rate 15 to 30/minute, SpO₂ 90%-94%).
- Such cases will not be referred to COVID Care Centers but instead will be admitted to Dedicated COVID Health centres.
- It will be manned by allopathic doctors and cases will be monitored on above mentioned clinical parameters for assessing severity as per treatment protocol (available on MoHFW website).
- They will be kept in "suspect cases" section of Dedicated COVID Health Centres, till such time as their results are not available preferably in an individual room.
- Those testing positive shall be shifted to "confirmed cases" section of Dedicated COVID Health Centre.
- Any patient, for whom the test results are negative, will be shifted to a non-COVID hospital and will be managed according to clinical assessment, Discharge as per clinical assessment.
- If any patient admitted to the Dedicated COVID Health Center qualifies the clinical criteria for severe case, such patient will be shifted to a Dedicated COVID Hospital.

Group 3: Suspect and confirmed cases clinically assigned as severe (Dedicated COVID Hospital)

- **Clinical criteria:** Severe Pneumonia (with respiratory rate ≥ 30 /minute and/or SpO₂ $< 90\%$ in room air) or ARDS or Septic shock
- Such cases will be directly admitted to a Dedicated COVID Hospital's ICU till such time as test results are obtained.
- If test results are positive, such patient will remain in COVID-19 ICU and receive treatment as per standard treatment protocol. Patients testing negative will be managed with adequate infection prevention and control practices.

Algorithm for isolation of suspect/confirmed cases of COVID-19

Suspect cases directly reporting to COVID dedicated facility.

Screening at Fever Clinics

