



मनोज कुमार, भा0प्र0से0
कार्यपालक निदेशक—सह—
अपर सचिव, स्वास्थ्य विभाग।

पत्रांक : SHSB/ED CELL/15/2020/.....9796

सेवा में,

सभी जिला पदाधिकारी

सभी क्षेत्रीय अपर निदेशक, स्वास्थ्य सेवाएँ

सभी असैनिक शल्य चिकित्सक—सह—मुख्य चिकित्सा पदाधिकारी

पटना, दिनांक : 30/3/2020

विषय: कोरोना वायरस (COVID-19) के मद्देनजर समुचित प्रबंधन हेतु सभी जिला अस्पताल एवं अनुमंडलीय अस्पताल में सम्पूर्ण चिकित्सा व्यवस्था के साथ-साथ Isolation Facility/Ward पूर्णतः क्रियाशील करने के संबंध में।

प्रसंग: SHSB के पत्रांक 9664 दिनांक 26.03.2020 एवं पत्रांक 9700 दिनांक 28.03.2020।

महाशय,

कोरोना वायरस के बिहार में बढ़ते प्रकोप के मद्देनजर, स्वास्थ्य एवं परिवार कल्याण मंत्रालय, भारत सरकार एवं स्वास्थ्य विभाग, बिहार सरकार के दिशा-निदेश के आलोक में COVID-19 संक्रमण को रोकने तथा इससे संभावित/पीड़ित मरीजों की चिकित्सा हेतु विभिन्न प्रकार के सुरक्षात्मक उपाय एवं आवश्यक चिकित्सकीय प्रबंधन का कार्य किया जा रहा है। इसी क्रम में सभी जिला अस्पताल में Protocol के अनुसार Flu Corner स्थापित करते हुए अस्पताल में आने वाले मरीजों को पृथक कर आवश्यक जाँच इत्यादि की सुविधा उपलब्ध करायी जाय, ताकि कम-से-कम लोग संक्रमित हो।

Isolation उन व्यक्तियों को अलग करने की प्रक्रिया है जो बीमार हैं और COVID-19 के संदिग्ध हो या उसकी सम्पुष्टि हो गयी है। सभी सिविल सर्जन/सभी जिला कार्यक्रम प्रबंधक के द्वारा चिह्नित Isolation facility/ward की विवरणी उपलब्ध कराई गई है। समेकित चिह्नित Isolation facility/ward की विवरणी पत्र के साथ संलग्न है। चिह्नित Isolation facility/ward सफल संचालन एवं समुचित प्रबंधन हेतु निम्न निदेश दिया जाता है:-

1. स्वास्थ्य एवं परिवार कल्याण मंत्रालय, भारत सरकार से प्राप्त दिशा-निर्देश के आलोक में Isolation Ward की सुरक्षा एवं समुचित प्रबंधन/व्यवस्था यथा - चिकित्सक एवं अन्य स्वास्थ्य कर्मों की उलब्धता, आवश्यक औषधि, उपकरणों एवं उपस्करों की उपलब्धता सुनिश्चित किया जाए। साथ ही Isolation Ward में प्रतिनियुक्त चिकित्सकों एवं कर्मियों हेतु पर्याप्त मात्रा में मास्क, दस्ताना, PPE Kit आदि की समुचित व्यवस्था की जाए। स्वास्थ्य एवं परिवार कल्याण मंत्रालय, भारत

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सरकार से प्राप्त COVID-19 guideline for setting up isolation facility/ ward प्रपत्र सहित की छायाप्रति इस पत्र के साथ संलग्न है, इसका अनुपालन सुनिश्चित किया जाये। दिशा-निर्देश की कुछ महत्वपूर्ण बिन्दु निम्नवत् है:-

- Post signages on the door indicating that the space is an isolation area/ward. It should be in a segregated area which is not frequented by outsiders.
- Remove all non-essential furniture and ensure that the remaining furniture is easy to clean, and does not conceal or retain dirt or moisture within or around it.
- COVID-19 patients should be housed in single rooms. However, if sufficient single rooms are not available, beds could be put with a spatial separation of at least 1 meter (3 feet) from one another.
- Preferably the isolation ward should have a separate entry/exit and should not be co-located with post-surgical wards/dialysis unit/SNCU/labour room etc.
- There should be double door entry with changing room and nursing station. Enough PPE should be available in the changing room with waste disposal bins to collect used PPEs. Used PPEs should be disposed as per the BMW guidelines.
- Stock the PPE supply and linen outside the isolation room or area (e.g. in the change room). Setup a trolley outside the door to hold PPE. A checklist may be useful to ensure that all equipment is available.
- Non-critical patient-care equipment (e.g. stethoscope, thermometer, blood pressure cuff, and sphygmomanometer) should be dedicated for each patient, if possible. Any patient-care equipment that is required for use by other patients should be thoroughly cleaned and disinfected before use.
- Place an appropriate container with a lid outside the door for equipment that requires disinfection or sterilization.
- Ensure that appropriate hand washing facilities and hand-hygiene supplies are available. Stock the sink area with suitable supplies for hand washing, and with alcohol-based hand rub, near the point of care and the room door.
- The isolation ward should have a separate toilet with proper cleaning and supplies.





- Ensure regular cleaning and proper disinfection of common areas, and adequate hand hygiene by patients, visitors and care givers.
- Visitors to the isolation facility should be restricted /disallowed. For unavoidable entries, they should use PPE according to the hospital guidance, and should be instructed on its proper use and in hand hygiene practices prior to entry into the isolation room/area.
- Ensure that visitors consult the health-care worker in charge (who is also responsible for keeping a visitor record) before being allowed into the isolation areas. Keep a roster of all staff working in the isolation areas, for possible outbreak investigation and contact tracing.
- Doctors, nurses and paramedics posted to isolation facility need to be dedicated and not allowed to work in other patient-care areas.
- All health staff involved in patient care should be well trained in the use of PPE.
- Set up a telephone or other method of communication in the isolation room or area to enable patients, family members or visitors to communicate with health-care workers. This may reduce the number of times the workers need to don PPE to enter the room or area.

2. दिशा-निर्देश के अनुसार COVID-19 सम्पुष्ट रोगियों में से 15 प्रतिशत रोगियों में निमोनिया विकसित होने की संभावना रहती है, जिसमें से 5 प्रतिशत को Ventilator की आवश्यकता पड़ती है। अतः सभी जिला अस्पताल के Intensive Care Unit (ICU) में चिकित्सक एवं स्वास्थ्य कर्मी एवं क्रियाशील Ventilator तथा Oxygen आदि के साथ आवश्यक व्यवस्था सुनिश्चित किया जाए।

3. इस आपात स्थिति के मद्देनजर सभी जिला अस्पताल में एम्बुलेंस की पर्याप्त संख्या में समुचित व्यवस्था के साथ उपलब्धता सुनिश्चित करेंगे। इसके लिए भारत सरकार से प्राप्त "Standard Operating Procedure for Transporting a suspect/confirmed case of COVID-19" का अनुपालन सुनिश्चित किया जाये (छायाप्रति संलग्न)।

4. सभी जिला अस्पताल द्वारा COVID-19 से संबंधित जाँच हेतु Lab Technician को प्रशिक्षण प्रदान किया जाए, तदनुसार उन्हें VTM एवं PPE Kit आदि आपूर्ति की जाए, ताकि संदिग्ध मरीजों का नमूना यथाशीघ्र संग्रह कर संबंधित जाँच केन्द्र में पहुँचाया जा सके।

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5. COVID-19 के नमूना जाँच से संबंधित राज्य स्वास्थ्य समिति, बिहार के पत्रांक 9700 दिनांक 28.03.2020 का अनुसरण कर ससमय शीत श्रृंखला बनाये रखते हुए नमूना जाँच हेतु Tag किये गये केन्द्रों पर पहुँचाना सुनिश्चित किया जाए।

6. जिला स्तर पर COVID-19 से संबंधित सभी प्रतिवेदनों के लिए (जैसे— IDSP डेली रिपोर्ट, Isolation facility/Ward, Quarantine Centre इत्यादि) जिला स्तर पर नोडल पदाधिकारी नामित किया जाए जो प्रतिदिन राज्य स्वास्थ्य समिति, बिहार को प्रतिवेदन उपलब्ध कराने हेतु जिम्मेवार होंगे। उनके साथ dedicated डाटा इंट्री ऑपरेटर प्रतिनियुक्त किया जाए। प्रतिवेदन उपलब्ध कराने वाले नोडल ऑफिसर का नाम, पदनाम, दूरभाष तथा ईमेल इत्यादि की सूचना 24 घंटे के अंदर उपलब्ध कराया जाए।

अतः उपर्युक्त निदेशों का दृढ़ता से अनुपालन करते हुये संलग्न प्रपत्र में प्रतिवेदन प्रत्येक दिन संध्या 04:00 बजे तक ईमेल hwc Bihar@gmail.com एवं spmnuhmbihar@gmail.com पर उपलब्ध कराना सुनिश्चित किया जाये।

इसे अतिआवश्यक समझा जाय।

अनुलग्नक: यथोक्त।

विश्वासभाजन्,

(मनोज कुमार)





5. COVID-19 के नमूना जाँच से संबंधित राज्य स्वास्थ्य समिति, बिहार के पत्रांक 9700 दिनांक 28.03.2020 का अनुसरण कर ससमय शीत श्रृंखला बनाये रखते हुए नमूना जाँच हेतु Tag किये गये केन्द्रों पर पहुँचा ना सुनिश्चित किया जाए।

6. जिला स्तर पर COVID-19 से संबंधित सभी प्रतिवेदनों के लिए (जैसे- IDSP डेली रिपोर्ट, Isolation facility/Ward, Quarantine Centre इत्यादि) जिला स्तर पर नोडल पदाधिकारी नामित किया जाए जो प्रतिदिन राज्य स्वास्थ्य समिति, बिहार को प्रतिवेदन उपलब्ध कराने हेतु जिम्मेवार होंगे। उनके साथ dedicated डाटा इंट्री ऑपरेटर प्रतिनियुक्त किया जाए। प्रतिवेदन उपलब्ध कराने वाले नोडल ऑफिसर का नाम, पदनाम, दूरभाष तथा ईमेल इत्यादि की सूचना 24 घंटे के अंदर उपलब्ध कराया जाए।

अतः उपर्युक्त निदेशों का दृढ़ता से अनुपालन करते हुये संलग्न प्रपत्र में प्रतिवेदन प्रत्येक दिन संध्या 04:00 बजे तक ईमेल hwc Bihar@gmail.com एवं spmnuhmbihar@gmail.com पर उपलब्ध कराना सुनिश्चित किया जाये।

इसे अतिआवश्यक समझा जाय।

विश्वासभाजन,

अनुलग्नक: यथोक्त।

ह०/-

(मनोज कुमार)

ज्ञापांक : 9796

पटना, दिनांक : 30/3/2020

प्रतिलिपि : प्रधान सचिव/सचिव, स्वास्थ्य विभाग, बिहार, पटना को कृपया सूचनार्थ।

प्रतिलिपि : सभी प्रमंडलीय आयुक्त, बिहार को कृपया सूचनार्थ।

प्रतिलिपि: प्रशासी पदाधिकारी/सभी उप सचिव/राज्य कार्यक्रम पदाधिकारी, HWC/राज्य कार्यक्रम पदाधिकारी, PC&PNDT/राज्य कार्यक्रम प्रबंधक, NUHM, राज्य स्वास्थ्य समिति, बिहार को सूचनार्थ एवं आवश्यक कार्रवाई हेतु प्रेषित।

प्रतिलिपि: प्रभारी राज्य सर्वेक्षण पदाधिकारी, राज्य स्वास्थ्य समिति, बिहार को सूचनार्थ एवं आवश्यक कार्रवाई हेतु प्रेषित।

प्रतिलिपि: अपर मुख्य चिकित्सा पदाधिकारी/सभी उपाधीक्षक/सभी जिला सर्वेक्षण पदाधिकारी/सभी जिला कार्यक्रम पदाधिकारी/जिला कार्यक्रम प्रबंधक को सूचनार्थ एवं आवश्यक कार्रवाई हेतु प्रेषित।

कार्यपालक निदेशक-सह-
अपर सचिव, स्वास्थ्य



राज्य के चिकित्सा महाविद्यालय अस्पताल, जिला अस्पताल एवं अनुमण्डलीय / रेफरल अस्पताल में Isolation Bed की संख्या एवं उसके नोडल पदाधिकारी का नाम, पदनाम एवं मोबाईल नम्बर से संबंधित प्रतिवेदन

क्रम सं०	जिला का नाम	Isolation Ward का पता	No. of Beds	Isolation Centre में प्रतिनियुक्त नोडल पदाधिकारी का नाम, पदनाम	
				Name	Designation Mob No.
1	Araria	Sadar Hospital	9	Dr. Jetendar Prasad	Suptd. 9546956133
		SDH Forbiganj	5	Dr. Ashutosh Kumar	DS 7542840990
2	Arwal	DH Arwal	10	Dr. Raman Aryabhata	MO 9939920018
3	Aurangabad	Sadar Hospital, Aurangabad	35	Dr. Sunil Kumar	DS 9470003054
4	Banka	DH Banka	50	Dr. Anjani Kumar	MO 9470003075
5	Begusarai	DH	45	Dr. Arun Kumar	MO 9430845562
6	Bhagalpur	Nasha Mukti Kendra Sadar Hospital Complex Ghantaghar, Bhaglapur	10	Dr. A.K Mandal	DS, Bhagalpur 8709895007
		SDH Kahalgao	30		Dy Suptt. 9470003129
		SDH Naugachiya	30		Dy Suptt. 9431001695
		JLNMCH	100		DS 9431874400
7	Bhojpur	DH ARA	10	Dr. Satish Kumar Sinha	DS 9470003156
		SDH Jagdishpur	15	Dr. C. V. Narayan	DS 7903653342
8	Buxar	DH Buxar	14	Dr. D. N. Pandey	DS 9470003162
		SDH Dumraon	8	Dr. Anil Bhatt	DS 8709831678

राज्य के चिकित्सा महाविद्यालय अस्पताल, जिला अस्पताल एवं अनुमण्डलीय / रेफरल अस्पताल में Isolation Bed की संख्या एवं उसके नोडल पदाधिकारी का नाम, पदनाम एवं मोबाईल नम्बर से संबंधित प्रतिवेदन

क्रम सं०	जिला का नाम	Isolation Ward का पता	No. of Beds	Isolation Centre में प्रतिनियुक्त नोडल पदाधिकारी का नाम, पदनाम		
				Name	Designation	Mob No.
9	Darbhanga	Nursing Hostel DMCH	112	Dr. Baleshwar Sagar	DS, DMCH	9470003253
10	East Champaran	DH East Champaran	16		DS	9470003179
		SDH Pakaridayal	5	Dr. Veena Kumari Das	MO	9470003183
		RH Dhaka	5	Dr. S. K. Gupta	MO	9955071036
		RH Areraj	5	Dr. Niraj Kumar	MO	9470003182
		RH Chakai	5	Dr. Chandan Kumar	MO	9470003190
11	Gaya	Dunckan Hospital, Motihari	6			9835474249
		DH Gaya	20	Dr. Shivranyan Singh	ACMO	9470003296
		SDH Tekari	20		DS	9470003279
		SDH Sherghati	5		DS	9470003276
		CHC Mahkar	25	Dr. Shivranyan Singh	ACMO	9470003296
12	Gopalganj	ANMCH, Gaya	100		DS	9470003300
		DH	11	Dr. P. C. Prabhat	DS	9470003311
		SDH Hathua	5	Dr. Ramesh Ram	DS	9470003318
		RH Bhore	5	Dr. Khawar Imam	MOIC	9470003310
		RH Kateya	5	Dr. Bhagwanlal Singh	MOIC	9470003307
		RH Phulwariya	5	Dr. Rajeev Ranjan Kumar	MOIC	9470003309

राज्य के चिकित्सा महाविद्यालय अस्पताल, जिला अस्पताल एवं अनुमण्डलीय / रेफरल अस्पताल में Isolation Bed की संख्या एवं उसके नोडल पदाधिकारी का नाम, पदनाम एवं मोबाईल नम्बर से संबंधित प्रतिवेदन

क्रम सं०	जिला का नाम	Isolation Ward का पता	No. of Beds	Isolation Centre में प्रतिनियुक्त नोडल पदाधिकारी का नाम, पदनाम	
				Name	Designation Mob No.
13	Jamui	DH Jamui	5	Dr. SN Ahamad	DS Sadar Hospital 9470003349
		RH Jhajha	5		
14	Jehanabad	Sadar Hospital, Jehanabad	17	Dr. Vinay Krishna Sinha	DIO 9470003336
		RH, Ghosi	4	Dr. Vinay Krishna Sinha	DIO 9470003336
		RH, Makhdumpur	5	Dr. Vinay Krishna Sinha	DIO 9470003336
		DH, Kaimur	20	Dr. Vinod	DS 9470003362
15	Kaimur	SDH, Mohaniya	5	Dr. Rajat	DS 9470003361
16	Katihar	Katihar Medical College	100	Dr. Arvind Prasad Shahi	MO 9470003366
17	Khagaria	Sadar Hospital Khagaria	20	Dr. Yogendra Singh Prayasi	DS Khagaria 9431689373
	Kishanganj	Sadar Hospital, Kishanganj	10	Dr. Anwar Hussain	Deputy Supritendent, Sadar Hospital, 9470003402
18		MGM Medical College & Hospital, Kishanganj	100	Dr. Ashok Kumar Ghosh	Medical Supritendent 9102315663
19		Sadar Hospital	16	Dr. Bipin Kumar	MO Sadar Hospital 9507209040
20	Madhepura	Sadar Hospital Madhepura	10	Dr. D.P Gupta	DS 9431685789
		Govt. Medical College Madhepura	107		
	Madhubani	Sadar Hospital Madhubani	6	Dr. Sunil Kumar	ACMO 9470003433
21		SDH Jaynagar	5	Dr. Kumar Ronit	MOIC 9470003436

राज्य के चिकित्सा महाविद्यालय अस्पताल, जिला अस्पताल एवं अनुमण्डलीय / रेफरल अस्पताल में Isolation Bed की संख्या एवं उसके नोडल पदाधिकारी का नाम, पदनाम एवं मोबाईल नम्बर से संबंधित प्रतिवेदन

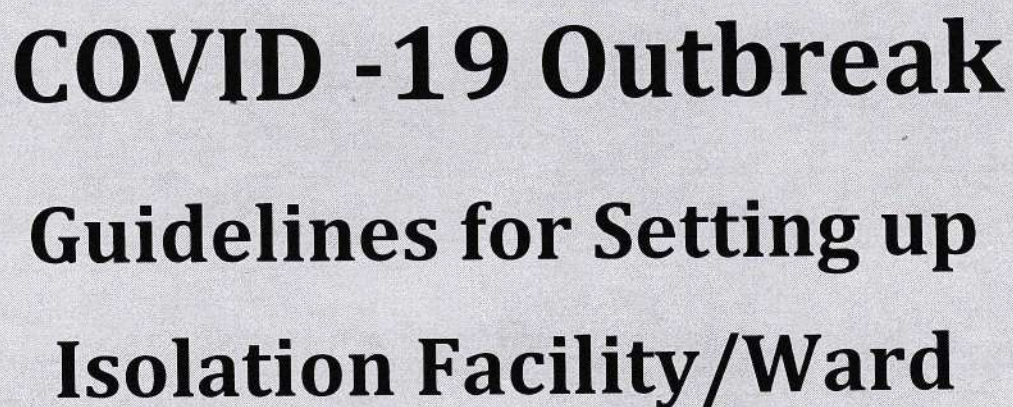
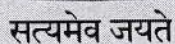
क्रम सं०	जिला का नाम	Isolation Ward का पता	No. of Beds	Isolation Centre में प्रतिनियुक्त नोडल पदाधिकारी का नाम, पदनाम	
				Name	Designation Mob No.
		SDH Jhnajharpur	5	Dr. Mukesh kumar	MOIC 9470003455
		SDH Phulparas	5	Dr. Ram Naresh Chaudhary	MOIC 9431627857
		Sadar Hospital Munger	6	Dr. Niranjan Kumar	DS 9470003456
22	Munger	Sub Divisional Hospital Tarapur	4	Dr. B.N. Singh	DS 9470003464
23	Muzaffarpur	Sadar Hospital, Muzaffarpur	15	Dr. Vinay Kumar Sharma	ACMO 9470003495
		SKMCH	120	Dr. P. C. Verma	Dy. Suptd. 9470003474
24	Nalanda	Sadar Hospital, Bihar Sharif	10		DS 9470003506
		VIIMS, Pawapuri Nalanda	96		
25	Nawada	DH Nawada	48	Dr. Ashok Kumar	DIO 9470003531
		SDH Rajauli	40		DS 9431270464
26	Patna	PMCH	100		
		NMCH	102		
		AIIMS	12		
		IGIMS	24		
		DH - GGS, Patna City	10		DS 9470003583
		SDH Danapur	24	Dr. Ashok Kumar Singh	MO 9470003588
		SDH Masaurhi	30	Dr. Harish Chandra Hari	MO 9431084310

राज्य के चिकित्सा महाविद्यालय अस्पताल, जिला अस्पताल एवं अनुमण्डलीय / रेफरल अस्पताल में Isolation Bed की संख्या एवं उसके नोडल पदाधिकारी का नाम, पदनाम एवं मोबाईल नम्बर से संबंधित प्रतिवेदन

क्रम सं०	जिला का नाम	Isolation Ward का पता	No. of Beds	Isolation Centre में प्रतिनियुक्त नोडल पदाधिकारी का नाम, पदनाम		
				Name	Designation	Mob No.
		SDH Paliganj	4	Dr. Abha Kumari	MO	9470003602
27	Purnea	Sadar Hospital, Purnea	45	Dr. Niranjan Kumar Jha	MO Sadar Hospital Purnea	9199714779
		Sub Divisional Hospital Dhamdaha.	8	Dr. J.P. Pandey	MOIC	9470003622 7739649836
		Sub Divisional Hospital Banmankhi.	8	Dr. Prince Kumar Suman	MOIC	9470003629
28	Rohtas	Sadar Hospital Sasaram	6	Dr. K.N. Tiwary	DS	9470003656
		Narayan Medical College & Hospital, Jamuhar	50	DR. D.K. Raman	Supretendent	9431015246
29	Saharsa	Sadar Hospital Saharsa, Near Naya Bazar - 852201	50	Dr. Rabindra Mohan	Dist. Suprintendent (cum co-coordinator)	9470003664
		Koshi Medical College, Saharsa	50			
30	Samastipur	DH Hospital	10		DS	9430903681
		SDH Rosera	5	Dr. Rana Vishwa Vijay Singh	DS	9470003682
		SDH Dalsinghsarai	8	Dr. Arun Kumar	DS	9470003683
		SDH Pusa	10	Dr. Arun Kumar Mahto	DS	9470003684
31	Saran	Sadar Hospital Chapra	15	Dr. Ram Iqbal Singh	DS	9470003711
32	Sheikhpura	Sadar Hospital, Sheikhpura	10	Dr. Vinay Kumar	MO	8405915878
33	Sheohar	Sadar Hospital Sheohar	10	Dr. Rizwan Rashid	Medical Officer	7541896153

राज्य के चिकित्सा महाविद्यालय अस्पताल, जिला अस्पताल एवं अनुमण्डलीय / रेफरल अस्पताल में Isolation Bed की संख्या एवं उसके नोडल पदाधिकारी का नाम, पदनाम एवं मोबाईल नम्बर से संबंधित प्रतिवेदन

क्रम सं०	जिला का नाम	Isolation Ward का पता	No. of Beds	Isolation Centre में प्रतिनियुक्त नोडल पदाधिकारी का नाम, पदनाम	
				Name	Designation Mob No.
34	Sitamarhi	Sadar Hospital	6	DR A. ANJUM	MOIC 9470003754
35	Siwan	Sadar Hospital	6	Dr. M. K. Alam (Incharge)	DS 9470003785
		SDH Maharajanjanj	50	Dr. Sujata Sumbrai (Incharge)	DS 9006269608
36	Supaul	L. N. S. DH, Birpur	53	Dr. Kumar Birendra	Dy. Supt. 9431478314
		SDH Triveniganj	30	Dr. R. P. Sinha	Dy. Supt. 9470003801
37	Vaishali	Sadar Hospital, Hajipur-Hajipur Vaishali	10	Dr. Kameshwar Mandal	DS 9470003811
		SDH Mahua-Vaishali	2	Dr. Satyendra Kumar	DS 9473072010
38	West Champaran	Govt. Medical College, Bettiah	100	Dr. Vijay Kumar	HOD, Microbiology 9430035358
Grand Total			2358		



Ministry of Health and Family Welfare

LSB

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WHO has declared the COVID-19 (SARS-CoV-2) outbreak as Public Health Emergency of international concern and has raised the risk assessment of China, Regional Level and Global Level to Very High and "all countries should be prepared for containment, including active surveillance, early detection, isolation and case management, contact tracing and prevention of onward spread of SARS-CoV-2 infection. Among the factors affecting cluster containment, Isolation of cases and quarantine of contacts is the mainstay of outbreak containment.

Scope of document: This guidance document has been prepared to establish an isolation facility at the level of district hospital, a secondary health care facility.

A. Quarantine and isolation

Quarantine and Isolation are important mainstay of cluster containment. These measures help by breaking the chain of transmission in the community.

Quarantine

Quarantine refers to separation of individuals who are not yet ill but have been exposed to COVID-19 and therefore have a potential to become ill. There will be voluntary home quarantine of contacts of suspect /confirmed cases. The guideline on home quarantine available on the website of the Ministry provides detail guidance on home quarantine.

Isolation refers to separation of individuals who are ill and suspected or confirmed of COVID-19. All suspect cases detected in the containment/buffer zones (till a diagnosis is made), will be hospitalized and kept in isolation in a designated facility till such time they are tested negative. Persons testing positive for COVID-19 will remain to be hospitalized till such time 2 of their samples are tested negative as per MoHFW's discharge policy. About 15% of the patients are likely to develop pneumonia, 5 % of whom requires ventilator management.

Hence dedicated Intensive care beds need to be identified earmarked. Some among them may progress to multi organ failure and hence critical care facility/ dialysis facility/ and Salvage therapy [Extra Corporeal Membrane Oxygenator (ECMO)] facility for managing the respiratory/renal complications/ multi-organ failure shall be required. If such facilities are not available in the containment zone, nearest tertiary care facility in Government / private sector needs to be identified, that becomes a part of the micro-plan.

There are various modalities of isolating a patient. Ideally, patients can be isolated in individual isolation rooms or negative pressure rooms with 12 or more air-changes per hour.

In resource constrained settings, all positive COVID-19 cases can be cohorted in a ward with good ventilation. Similarly, all suspect cases should also be cohorted in a separate

ward. However under no circumstances these cases should be mixed up. A minimum distance of 1 meter needs to be maintained between adjacent beds. All such patients need to wear a triple layer surgical mask at all times.

Nosocomial infection in fellow patients and attending healthcare personnel are well documented in the current COVID-19 outbreak as well. There shall be strict adherence to Infection prevention control practices in all health facilities. IPC committees would be formed (if not already in place) with the mandate to ensure that all healthcare personnel are well aware of IPC practices and suitable arrangements for requisite PPE and other logistic (hand sanitizer, soap, water etc.) are in place. The designated hospitals will ensure that all healthcare staff is trained in washing of hands, respiratory etiquettes, donning/doffing & proper disposal of PPEs and bio-medical waste management.

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

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

B. Setting up isolation facility/ward

An isolation facility aims to control the airflow in the room so that the number of airborne infectious particles is reduced to a level that ensures cross-infection of other people within a healthcare facility is highly unlikely.

- At State level, a minimum of **50** bed isolation ward should be established.
- At District level, a minimum of **10** bed isolation ward should be established.
- ✓ Post signages on the door indicating that the space is an isolation area.
 - Remove all non-essential furniture and ensure that the remaining furniture is easy to clean, and does not conceal or retain dirt or moisture within or around it.
- ✓ COVID-19 patients should be housed in single rooms.
 - However, if sufficient single rooms are not available, beds could be put with a spatial separation of at least 1 meter (3 feet) from one another.
 - To create a 10 bed facility, a minimum space of 2000 sq. feet area clearly segregated from other patientcare areas is required.
- ✓ Preferably the isolation ward should have a separate entry/exit and should not be co-located with post-surgical wards/dialysis unit/SNCU/labour room etc.
 - It should be in a segregated area which is not frequented by outsiders.
 - The access to isolation ward should be through dedicated lift/guarded stairs.

BMWM

- There should be double door entry with changing room and nursing station. Enough PPE should be available in the changing room with waste disposal bins to collect used PPEs. Used PPEs should be disposed as per the BMWM guidelines.
- Stock the PPE supply and linen outside the isolation room or area (e.g. in the change room). Setup a trolley outside the door to hold PPE. A checklist may be useful to ensure that all equipment is available.
- Place appropriate waste bags in a bin. If possible, use a touch-free bin. Ensure that used (i.e. dirty) bins remain inside the isolation rooms.
- Place a puncture-proof container for sharps disposal inside the isolation room/area and bio-medical waste should be managed as per the BMWM guidelines.
- Keep the patient's personal belongings to a minimum. Keep water pitchers and cups, tissue wipes, and all items necessary for attending to personal hygiene within the patient's reach.
- Non-critical patient-care equipment (e.g. stethoscope, thermometer, blood pressure cuff, and sphygmomanometer) should be dedicated for the patient, if possible. Any patient-care equipment that is required for use by other patients should be thoroughly cleaned and disinfected before use.
- Place an appropriate container with a lid outside the door for equipment that requires disinfection or sterilization.
- Ensure that appropriate hand washing facilities and hand-hygiene supplies are available. Stock the sink area with suitable supplies for hand washing, and with alcohol-based hand rub, near the point of care and the room door.
- Ensure adequate room ventilation. If room is air-conditioned, ensure 12 air changes/ hour and filtering of exhaust air. A negative pressure in isolation rooms is desirable for patients requiring aerosolization procedures (intubation, suction nebulisation). These rooms may have standalone air-conditioning. These areas should not be a part of the central air-conditioning.
- If air-conditioning is not available negative pressure could also be created through putting up 3-4 exhaust fans driving air out of the room.
- In **district hospital**, where there is sufficient space, natural ventilation may be followed. Such isolation facility should have large windows on opposite walls of the room allowing a natural unidirectional flow and air changes. The principle of natural ventilation is to allow and enhance the flow of outdoor air by natural forces such as wind and thermal buoyancy forces from one opening to another to achieve the desirable air change per hour.
- The isolation ward should have a separate toilet with proper cleaning and supplies.
- Avoid sharing of equipment, but if unavoidable, ensure that reusable equipment is appropriately disinfected between patients.

- Ensure regular cleaning and proper disinfection of common areas, and adequate hand hygiene by patients, visitors and care givers. Keep adequate equipment required for cleaning or disinfection inside the isolation room or area, and ensure scrupulous daily cleaning of the isolation room or area.
- **Visitors to the isolation facility should be restricted /disallowed.** For unavoidable entries, they should use PPE according to the hospital guidance, and should be instructed on its proper use and in hand hygiene practices prior to entry into the isolation room/area.
- Ensure that visitors consult the health-care worker in charge (who is also responsible for keeping a visitor record) before being allowed into the isolation areas. Keep a roster of all staff working in the isolation areas, for possible outbreak investigation and contact tracing.
- Doctors, nurses and paramedics posted to isolation facility **need to be dedicated** and not allowed to work in other patient-care areas.
- Consider having designated portable X-ray and portable ultrasound equipment.
- Corridors with frequent patient transport should be well-ventilated.
- All health staff involved in patient care should be well trained in the use of PPE.
- Set up a telephone or other method of communication in the isolation room or area to enable patients, family members or visitors to communicate with health-care workers. This may reduce the number of times the workers need to don PPE to enter the room or area.

C. Checklist for isolation rooms

- Eye protection (visor or goggles)
- Face shield (provides eye, nose and mouth protection)
- Gloves
- reusable vinyl or rubber gloves for environmental cleaning
- latex single-use gloves for clinical care
- Hair covers
- Particulate respirators (N95, FFP2, or equivalent)
- Medical (surgical or procedure) masks
- Gowns and aprons
- single-use long-sleeved fluid-resistant or reusable non-fluid-resistant gowns
- plastic aprons (for use over non-fluid-resistant gowns if splashing is anticipated and if fluid-resistant gowns are not available)
- Alcohol-based hand rub
- Plain soap (liquid if possible, for washing hands in clean water)
- Clean single-use towels (e.g. paper towels)
- Sharps containers

- (53)
- Appropriate detergent for environmental cleaning and disinfectant for disinfection of surfaces, instruments or equipment
 - Large plastic bags
 - Appropriate clinical waste bags
 - Linen bags
 - Collection container for used equipment
 - Standard IEC
 - Standard protocols for hand hygiene, sample collection and BMW displayed clearly
 - Standard Clinical management protocols

D. Wearing and removing Personal Protective Equipment (PPE)

Before entering the isolation room or area:

- Collect all equipment needed;
- Perform hand hygiene with an alcohol-based hand rub (preferably when hands are not visibly soiled) or soap and water;
- Put on PPE in the order that ensures adequate placement of PPE items and prevent self-contamination and self-inoculation while using and taking off PPE; an example of the order in which to don PPE when all PPE items are needed is hand hygiene, gown, mask or respirator, eye protection and gloves

Leaving the isolation room or area

- Either remove PPE in the anteroom or, if there is no anteroom, make sure that the PPE will not contaminate either the environment outside the isolation room or area, or other people.
- Remove PPE in a manner that prevents self-contamination or self-inoculation with contaminated PPE or hands. General principles are:
 - remove the most contaminated PPE items first;
 - perform hand hygiene immediately after removing gloves;
 - remove the mask or particulate respirator last (by grasping the ties and discarding in a rubbish bin);
 - discard disposable items in a closed rubbish bin;
 - put reusable items in a dry (e.g. without any disinfectant solution) closed container; an example of the order in which to take off PPE when all PPE items are needed is gloves (if the gown is disposable, gloves can be peeled off together with gown upon removal), hand hygiene, gown, eye protection, mask or respirator, and hand hygiene
 - Perform hand hygiene with an alcohol-based hand rub (preferably) or soap and water whenever un-gloved hands touch contaminated PPE items.

E. Transport of Infectious Patients

It is recommended that transport of infectious patients is limited to movement considered medically essential by the clinicians, e.g. for diagnostic or treatment purposes. Where infectious patients are required to be transported to other units within the hospital or outside the following precautions may be implemented:

- Infected or colonised areas of the patient's body are covered: - For contact isolation this may include a gown, sheets or dressings to surface wounds; these patients are transferred to a Standard Pressure or Protective Environment Isolation room - For respiratory isolation the patient is dressed in a mask, gown and covered in sheets; these patients are accommodated in a Negative Pressure Isolation Room - For quarantine isolation the patient may be transported in a fully enclosed transport cell or isolator with a filtered air supply and exhaust; these patients are accommodated in a high level quarantine isolation suite.
- The transport personnel remove existing PPE, cleanse hands and transport the patient on a wheelchair, bed or trolley, applying clean PPE to transport the patients and when handling the patient at the destination. Gown-up and gown-down rooms located at the entry to a Unit will assist the staff to enter and exit the facility according to the strict infection control protocols required, thereby reducing the risk of contamination
- The destination unit should be contacted and notified prior to the transfer to ensure suitable accommodation on arrival.
- It is preferred that the patient is transported through staff and service corridors, not public access corridors During planning stages, design can assist transfer of infectious patients by providing service corridors and strategically placed lifts, capable of separation from other lifts. The nominated lift may be isolated from public and staff transit through access control measures and cleaned following transit of the infectious patient.
- Design may also incorporate a designated floor for horizontal bed transfers of infectious patients away from busy clinical areas. The designated floor may be located at mid-level in the hospital
- A combination of nominated lifts, corridors and a bed transfer floor would assist in the movement of infectious patients through the hospital and minimise the risk of spread of infection.

Annexure I

Checklist for isolation rooms

- Eye protection (visor or goggles)
- Face shield (provides eye, nose and mouth protection)
- Gloves
- reusable vinyl or rubber gloves for environmental cleaning
- latex single-use gloves for clinical care
- Hair covers
- Particulate respirators (N95, FFP2, or equivalent)
- Medical (surgical or procedure) masks
- Gowns and aprons
- single-use long-sleeved fluid-resistant or reusable non-fluid-resistant gowns
- plastic aprons (for use over non-fluid-resistant gowns if splashing is anticipated and if fluid-resistant gowns are not available)
- Alcohol-based hand rub
- Plain soap (liquid if possible, for washing hands in clean water)
- Clean single-use towels (e.g. paper towels)
- Sharps containers
- Appropriate detergent for environmental cleaning and disinfectant for disinfection of surfaces, instruments or equipment
- Large plastic bags
- Appropriate clinical waste bags
- Linen bags
- Collection container for used equipment
- Standard IEC
- Standard protocols for hand hygiene, sample collection and BMW displayed clearly
- Standard Clinical management protocols

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Annexure II

Hospital Preparedness & Isolation Facility Assessment Checklist - COVID19

I. GENERAL INFORMATION

1. Name of the healthcare facility (HCF)				
2. Type	<input type="checkbox"/> Public <input type="checkbox"/> Private			
3. Category of HCF	<input type="checkbox"/> Primary <input type="checkbox"/> Secondary <input type="checkbox"/> Tertiary			
4. Subcategory	<input type="checkbox"/> PHC <input type="checkbox"/> UPHC <input type="checkbox"/> CHC <input type="checkbox"/> Taluk/Sub-District Hospital <input type="checkbox"/> District Hospital <input type="checkbox"/> General Hospital <input type="checkbox"/> Medical College Hospital <input type="checkbox"/> Multi-Speciality Hospital <input type="checkbox"/> Nursing Home <input type="checkbox"/> Dispensary <input type="checkbox"/> Clinic			
5. Address of the health facility				
a) Block				
b) District				
c) State				
d) Email ID				
e) Contact no.				
6. Name of Director/ Principal/Medical superintendent				
a) Email ID				
b) Contact no.				
7. Name of RMO/Hospital In-charge				
a) Email ID				
b) Contact no				
8. Total number of inpatient beds				
9. Total number of ICU beds				
10. Average number of OPD attendance per month				
11. Average number of new admissions /months				
12. Bed occupancy rate (Annual)				
13. Total staff strength	Doctors – MBBS			
	Doctors- AYUSH			
	Clinical Specialists other than Intensivist/Pulmonologist			
	Non-Clinical specialists other than Microbiologist			
	Microbiologists			
	Intensivists #	Pulmonologist #	Int	Pulm
	Senior Resident #	Junior Resident #	SR	JR
	Interns			
	Nurses			
	Lab technicians			

	Pharmacists	
	Laboratory Technicians	
	Cleaning staff	
	Ambulance drivers	
14. Does this HCF have a designated COVID 19 isolation facility		<input type="checkbox"/> Yes <input type="checkbox"/> No

II. HCF PREPAREDNESS TO MANAGE MAJOR EPIDEMICS & PANDEMICS

15. Core Emergency Response / Rapid Response Team for outbreak management identified?	<input type="checkbox"/> Available <input type="checkbox"/> In progress <input type="checkbox"/> Not started
16. Roles and responsibilities of RRT/ERT clearly defined?	<input type="checkbox"/> Available <input type="checkbox"/> In progress <input type="checkbox"/> Not started
17. Is there a contingency plan for covering for a core team member who is absent?	<input type="checkbox"/> Available <input type="checkbox"/> In progress <input type="checkbox"/> Not started
18. Monitoring and managing Health Care Personnel (HCP) a) The facility follows the Central/State public health policies/procedures for monitoring and managing HCP with potential for exposure to COVID-19 b) The facility have a process to conduct symptom and temperature checks prior to the start of duty shift for HCP	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No
19. Training for Healthcare Personnel (HCP) a) Education and job-specific training to HCP regarding <ul style="list-style-type: none"> Signs and symptoms of infection Triage procedures including patient placement and filling the CIF Safely collect clinical specimen Correct infection control practices and PPE use HCP sick leave policies Recommended actions for not using recommended PPE How and to whom suspected cases (COVID-19) should be reported 	<input type="checkbox"/> Completed <input type="checkbox"/> In Progress <input type="checkbox"/> Not Started <input type="checkbox"/> Completed <input type="checkbox"/> In Progress <input type="checkbox"/> Not Started <input type="checkbox"/> Completed <input type="checkbox"/> In Progress <input type="checkbox"/> Not Started <input type="checkbox"/> Completed <input type="checkbox"/> In Progress <input type="checkbox"/> Not Started <input type="checkbox"/> Completed <input type="checkbox"/> In Progress <input type="checkbox"/> Not Started <input type="checkbox"/> Completed <input type="checkbox"/> In Progress <input type="checkbox"/> Not Started <input type="checkbox"/> Completed <input type="checkbox"/> In Progress <input type="checkbox"/> Not Started <input type="checkbox"/> Completed <input type="checkbox"/> In Progress <input type="checkbox"/> Not Started

III. TRIAGE

20. Triage protocols available at the healthcare facility?	<input type="checkbox"/> Available <input type="checkbox"/> In progress <input type="checkbox"/> Not started
21. Availability of telemedicine facility as a way to provide clinical support without direct interaction with the patient	<input type="checkbox"/> Available <input type="checkbox"/> In progress <input type="checkbox"/> Not started
22. Is there specific waiting area for people with respiratory symptoms?	
23. Availability of designated ARI/COVID-19 triage area	<input type="checkbox"/> Available <input type="checkbox"/> In progress <input type="checkbox"/> Not started
24. Do they have non-contact Infra-Red thermometer available near the registration desk?	
25. Availability of signage directing to triage area and signage to instruct patients to alert staff if they have symptoms of COVID-19	<input type="checkbox"/> Available <input type="checkbox"/> In progress <input type="checkbox"/> Not started
26. Do they have dedicated/single examination rooms in Triage area? (Dedicated room should satisfy criteria of one patient per room with door closed for examination)	<input type="checkbox"/> Yes <input type="checkbox"/> No
27. Triage area has signs/alerts about respiratory etiquette and hand hygiene?	<input type="checkbox"/> Yes <input type="checkbox"/> No
28. Does the HCF provide masks for patients with respiratory symptoms?	<input type="checkbox"/> Yes <input type="checkbox"/> No

29. Triage staff trained on revised COVID19 case definition and identify suspected cases ?	<input type="checkbox"/> Yes <input type="checkbox"/> No
30. Screening questionnaire and algorithm for triage available with staff	<input type="checkbox"/> Available <input type="checkbox"/> In progress <input type="checkbox"/> Not started
31. Infrared thermometer available with the triage staff	<input type="checkbox"/> Available <input type="checkbox"/> In progress <input type="checkbox"/> Not started
32. Waste bins and access to cleaning/ disinfection supplies available in Triage area	<input type="checkbox"/> Available <input type="checkbox"/> In progress <input type="checkbox"/> Not started
33. Physical barriers (e.g., glass or plastic screens) at reception areas available to limit close contact between triage staff and potentially infectious patients	<input type="checkbox"/> Available <input type="checkbox"/> In progress <input type="checkbox"/> Not started
34. Does the patient waiting area have cross ventilation	<input type="checkbox"/> Yes <input type="checkbox"/> No
35. Waiting area cleaned at least twice daily with 0.5% hypochlorite solution (or) 70% alcohol for surfaces that do not tolerate chlorine	<input type="checkbox"/> Yes <input type="checkbox"/> No
36. Does the hospital have dedicated infrastructure for isolation facility? (If No skip to Section IV)	<input type="checkbox"/> Yes <input type="checkbox"/> No
37. Type of isolation Facility	<input type="checkbox"/> Temporary <input type="checkbox"/> Permanent
IV Isolation Facility	
38. Is the isolation facility near OPD/IPD/other crowded area?	<input type="checkbox"/> Yes <input type="checkbox"/> No
39. Screening rooms identified and available at the isolation area?	<input type="checkbox"/> Available <input type="checkbox"/> In progress <input type="checkbox"/> Not started
40. Is there separate entry to the isolation area?	<input type="checkbox"/> Yes <input type="checkbox"/> No
41. Dedicated space for staff to put on PPE while entering the isolated area	<input type="checkbox"/> Available <input type="checkbox"/> In progress <input type="checkbox"/> Not started
42. Is there separate exit for isolation area?	<input type="checkbox"/> Yes <input type="checkbox"/> No
43. Dedicated space for staff to take off PPE near exit?	<input type="checkbox"/> Available <input type="checkbox"/> In progress <input type="checkbox"/> Not started
44. Isolation facility is separate and has rooms/wards?	<input type="checkbox"/> Rooms <input type="checkbox"/> Wards
45. Are washrooms available as 1 toilet per 20 persons?	<input type="checkbox"/> Yes <input type="checkbox"/> No
46. Number of beds in each isolation rooms/wards	
47. Is the distance between two beds in isolation wards/rooms more than 1 meter?	<input type="checkbox"/> Yes <input type="checkbox"/> No
48. Do the hospital have policy to segregate clinical staff (e.g. nurses) for care of COVID19 cases?	<input type="checkbox"/> Yes <input type="checkbox"/> No
49. Whether PPEs available and located near point of use?	
a. Gloves	<input type="checkbox"/> Yes <input type="checkbox"/> No
b. Gowns	<input type="checkbox"/> Yes <input type="checkbox"/> No
c. Face masks	<input type="checkbox"/> Yes <input type="checkbox"/> No
d. 95 respirators	<input type="checkbox"/> Yes <input type="checkbox"/> No
50. Whether the hospital limits the movement of patients in the isolation facility outside for medically necessary purposes only?	<input type="checkbox"/> Yes <input type="checkbox"/> No
51. Are the known or suspected COVID19 patients placed on contact and droplet precautions?	<input type="checkbox"/> Yes <input type="checkbox"/> No
52. If a patient leaves their room for medical purposes, are they provided face mask ?	<input type="checkbox"/> Yes <input type="checkbox"/> No
53. Do staff transporting the patient wear PPE?	<input type="checkbox"/> Yes <input type="checkbox"/> No
54. While transporting patients are specific routes used to minimize contact with other patients and staff?	<input type="checkbox"/> Yes <input type="checkbox"/> No
55. For a patient on Airborne Precautions, air pressure is monitored daily with visual indicators (e.g., smoke tubes, flutter strips), regardless of the presence of differential pressure sensing devices (e.g., manometers):	<input type="checkbox"/> Yes <input type="checkbox"/> No

56. Are these isolation rooms/wards satisfying the criteria of negative pressure class N? (Applicable if an aerosol generating procedure is performed)	<input type="checkbox"/> Yes <input type="checkbox"/> No
57. Is there Provision food in the isolation area?	<input type="checkbox"/> Available <input type="checkbox"/> In progress <input type="checkbox"/> Not started
58. Policy for leftover food waste management?	<input type="checkbox"/> Available <input type="checkbox"/> In progress <input type="checkbox"/> Not started
59. Is there an ICU facility attached to isolation area?	<input type="checkbox"/> Yes <input type="checkbox"/> No
60. Availability of cross ventilation	<input type="checkbox"/> Yes <input type="checkbox"/> No
61. Is there any designated area for sample collection?	<input type="checkbox"/> Yes <input type="checkbox"/> No
62. Are they following standard precautions and PPE while taking sample?	<input type="checkbox"/> Yes <input type="checkbox"/> No
63. Does the facility have a written policy for sample collection and transport?	<input type="checkbox"/> Yes <input type="checkbox"/> No
64. Are these sample transported in triple packing?	<input type="checkbox"/> Yes <input type="checkbox"/> No
65. Does the transportation package contain IATA DG code (UN3373)?	<input type="checkbox"/> Yes <input type="checkbox"/> No
66. Are they following standard precautions while transporting the sample?	<input type="checkbox"/> Yes <input type="checkbox"/> No
67. Are the floors of isolation facility suitable for moping?	<input type="checkbox"/> Yes <input type="checkbox"/> No
68. Is drinking water available at isolation area?	<input type="checkbox"/> Yes <input type="checkbox"/> No
69. Availability of management protocols for COVID19	<input type="checkbox"/> Available <input type="checkbox"/> In progress <input type="checkbox"/> Not started
70. Is rotation roster of duty shift for staff posted at isolation facility	<input type="checkbox"/> Available <input type="checkbox"/> In progress <input type="checkbox"/> Not started
71. Is there any protocol for limiting the entry of visitors at isolation area?	<input type="checkbox"/> Available <input type="checkbox"/> In progress <input type="checkbox"/> Not started
72. Availability of separate Thermometers BP apparatus with adult & Pediatric cuffs?	<input type="checkbox"/> Yes <input type="checkbox"/> No
73. Availability of discharge policy for COVID19	<input type="checkbox"/> Available <input type="checkbox"/> In Progress <input type="checkbox"/> Not Started

IV. INFECTION PREVENTION AND CONTROL PRACTICES

74. Does the hospital have Hospital Infection control Committee (HICC)?	<input type="checkbox"/> Yes <input type="checkbox"/> No
75. Are there any infection control protocols/guidelines available?	<input type="checkbox"/> Available <input checked="" type="checkbox"/> In progress <input type="checkbox"/> Not started
76. Functioning hand washing stations (including water, soap and paper towel or air dry) at isolation area?	
77. Does the facility have uninterrupted running water supply?	<input type="checkbox"/> Yes <input type="checkbox"/> No
78. Is alcohol based hand sanitizer available at isolation area?	<input type="checkbox"/> Yes <input type="checkbox"/> No
79. Are the staff following five movements of hand washing?	<input type="checkbox"/> Yes <input type="checkbox"/> No
80. Are the staff following six steps of hand washing?	<input type="checkbox"/> Yes <input type="checkbox"/> No
81. Is there posters to reinforce hand washing and PPE at hand washing stations	<input type="checkbox"/> Available <input type="checkbox"/> In progress <input type="checkbox"/> Not started

VI. ENVIRONMENTAL CLEANING

82. Are objects and environmental surfaces in patient care areas touched frequently (e.g., bed rails, overbed table, bedside commode, lavatory surfaces) are cleaned	<input type="checkbox"/> Yes <input type="checkbox"/> No
83. Are they disinfected with an approved disinfectant frequently (at least daily) and when visibly soiled?	<input type="checkbox"/> Yes <input type="checkbox"/> No
84. Is there cleaning chart?	<input type="checkbox"/> Yes <input type="checkbox"/> No
85. Frequency of cleaning of high touch areas, Bed rails, Tables, Chairs, Keyboards etc.,	
86. Is there any housekeeping policy available at isolation area?	<input type="checkbox"/> Yes <input type="checkbox"/> No

87. Availability of terminal cleaning checklist	<input type="checkbox"/> Available <input type="checkbox"/> In progress <input type="checkbox"/> Not started
88. Availability of three bucket system	<input type="checkbox"/> Yes <input type="checkbox"/> No
89. Are they following correct contact time for disinfection with hypochlorite solution? (10 minutes for non-porous surfaces)	<input type="checkbox"/> Yes <input type="checkbox"/> No
90. Are the staff following outward mopping technique	<input type="checkbox"/> Yes <input type="checkbox"/> No
91. Availability of separate mops for each area	<input type="checkbox"/> Yes <input type="checkbox"/> No
92. Frequency of cleaning of isolation rooms?	
93. Frequency of cleaning of ambulatory areas?	
94. Frequency of cleaning of bathrooms of isolation areas?	
95. Staff wearing PPE while cleaning	<input type="checkbox"/> Yes <input type="checkbox"/> No
a. Gloves	<input type="checkbox"/> Yes <input type="checkbox"/> No
b. Masks	<input type="checkbox"/> Yes <input type="checkbox"/> No
c. Apron	<input type="checkbox"/> Yes <input type="checkbox"/> No
96. Are the staff trained in housekeeping and infection control practices?	<input type="checkbox"/> Yes <input type="checkbox"/> No
97. Doctors, nurses & cleaning staff available/ shift at isolation area?	<input type="checkbox"/> Yes <input type="checkbox"/> No
98. Barrier nursing practiced at isolation area in 1:1 ratio?	<input type="checkbox"/> Yes <input type="checkbox"/> No
99. Is there any policy for linen management for isolation facility?	<input type="checkbox"/> Available <input type="checkbox"/> In progress <input type="checkbox"/> Not started
100. What is the frequency of changing linen in isolation rooms?	<input type="checkbox"/> Daily <input type="checkbox"/> Alternate Days <input type="checkbox"/> Weekly <input type="checkbox"/> When Soiled
101. Type of linen used	<input type="checkbox"/> Disposable <input type="checkbox"/> Reusable

VII. BIOMEDICAL WASTE MANAGEMENT (BMW)

102. Availability of SOP for BMW management?	<input type="checkbox"/> Available <input type="checkbox"/> In progress <input type="checkbox"/> Not started
103. Availability of agreement with CWTF	<input type="checkbox"/> Available <input type="checkbox"/> In progress <input type="checkbox"/> Not started
104. Are they following color codes bins in BMW management?	<input type="checkbox"/> Yes <input type="checkbox"/> No
105. Is there sufficient quantity color coded bags available?	<input type="checkbox"/> Yes <input type="checkbox"/> No
106. Are they disinfecting the waste before it is disposed?	<input type="checkbox"/> Yes <input type="checkbox"/> No
107. Method of disposing biomedical wastes?	<input type="checkbox"/> CWTF <input type="checkbox"/> Deep burial <input type="checkbox"/> Incineration
108. Disposal of sharps as per the standard protocol?	<input type="checkbox"/> Yes <input type="checkbox"/> No
109. Availability of biomedical waste trolley?	<input type="checkbox"/> Yes <input type="checkbox"/> No
110. Availability of dedicated BMW collection area?	<input type="checkbox"/> Yes <input type="checkbox"/> No
111. BMW collected from isolation facility within 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No

VIII. ICU FACILITY

112. Are there any beds dedicated for COVID 19 infection?	<input type="checkbox"/> Yes <input type="checkbox"/> No
113. If Yes, Number of beds dedicated to COVID 19 cases?	
114. Is the distance between beds in ICU more than 1 meter?	<input type="checkbox"/> Yes <input type="checkbox"/> No
115. Is the oxygen supply by cylinder or central connection?	
116. Are there any separate Ventilators, nebulizers, Infusion pumps in ICU?	<input type="checkbox"/> Yes <input type="checkbox"/> No
117. Adequate supply of masks, ET tubes, PPE kits available at ICU?	<input type="checkbox"/> Yes <input type="checkbox"/> No
118. All ICU Staff received training in donning & doffing of PPE?	<input type="checkbox"/> Completed <input type="checkbox"/> In progress <input type="checkbox"/> Not started
119. Are there separate area for donning & doffing of PPE?	<input type="checkbox"/> Yes <input type="checkbox"/> No
120. Hand washing facility & hand sanitizer available at donning & doffing areas?	<input type="checkbox"/> Yes <input type="checkbox"/> No

XII. OTHER ESSENTIAL SERVICES

121. Is there strategy available for optimizing the PPE supply	<input type="checkbox"/> Available <input type="checkbox"/> In progress <input type="checkbox"/> Not started
122. Are there any stockout experience for PPEs in the last year.	<input type="checkbox"/> Yes <input type="checkbox"/> No
123. Designated ambulance facility for transporting patients from isolation area?	<input type="checkbox"/> Yes <input type="checkbox"/> No
124. List of contact numbers of ambulance drivers displayed at isolation area?	<input type="checkbox"/> Available <input type="checkbox"/> In progress <input type="checkbox"/> Not started
125. Ambulance staff trained in wearing PPE & and other Infection control practices?	<input type="checkbox"/> Yes <input type="checkbox"/> No
126. SOP for disinfecting ambulance after transporting confirmed case/dead body?	<input type="checkbox"/> Available <input type="checkbox"/> In progress <input type="checkbox"/> Not started
127. Written protocol available for disposing dead bodies of confirmed cases?	<input type="checkbox"/> Available <input type="checkbox"/> In progress <input type="checkbox"/> Not started
128. Is there enough availability of body bags?	<input type="checkbox"/> Yes <input type="checkbox"/> No
129. Are the staff trained in handling dead bodies and wearing PPE?	<input type="checkbox"/> Yes <input type="checkbox"/> No

**Ministry of Health and Family Welfare
Directorate General of Health Services
[Emergency Medical Relief]**

Coronavirus Disease 2019 (COVID-19): Standard Operating Procedure (SOP) for transporting a suspect/confirmed case of COVID-19

1. About this SOP

This SOP is applicable to current phase of COVID-19 pandemic in India (local transmission and limited community transmission), wherein as per plan of action, all suspect cases are admitted to isolation facilities. These procedures are meant to guide and be used for training ambulance drivers and technicians in transporting COVID-19 patients. These also aim to support programme officers in monitoring functionality and infection prevention protocols of the ambulances.

2. Introduction

Coronaviruses are a large family of viruses, some causing illness in people and others that circulate among animals, including camels, cats and bats. In humans, the transmission of COVID-19 can occur via respiratory droplets directly (through droplets from coughing or sneezing) or indirectly (through contaminated objects or surfaces). The people most at risk of COVID-19 infection are those who are in close contact with a suspect/confirmed COVID-19 patient and those who care for such patients.

3. Transportation of patients

Ideally, there should be ambulances identified specifically for transporting COVID suspect patients or those who have developed complications, to the health facilities. Currently, there are two types of ambulances – ALS (with ventilators) and BLS (without ventilators). States may empanel other ambulances having basic equipment like that of BLS and use it for COVID patients. However, this must be ensured that strict adherence to cleaning and decontamination protocols given here in the guidance note need to be followed. The fleet in - charge or person designated by CMO/CS, will supervise its adherence.

Call centres after receiving the call will try to triage the condition of the patient and accordingly dispatch either ALS, BLS or other registered ambulances. However, please ensure that 102 ambulances should not be used for corona patients and should only be used for transporting pregnant women and sick infants. Ambulance staff (technicians as well as drivers) should be trained and oriented about common signs and symptoms of COVID-19 (fever, cough and difficulty in breathing). A sample questionnaire to identify COVID-19 cases is placed at **Annexure I**. They should also be aware about common infection, prevention and control practices including use of Personal Protective Equipment (PPE). Both the EMT and driver of ambulance will wear PPE while handling, managing and transporting the COVID identified/ suspect patients. Similar use of PPE is to be ensured by the health personnel at receiving

health facility. Patient and attendant should be provided with triple layer mask and gloves. Simple public health measures like hand hygiene, respiratory etiquettes, etc. need to be adhered by all.

Augmenting the capacity of ambulances in districts

Local authorities should prepare a line list of all private ambulance service providers in their respective areas. These ambulances should be linked with centralized call centre so as to ensure adequate number of ambulances based on population and time to care approach (Avg. response time of 20 minutes). Orientation on Infection Prevention Protocols and protocols for transporting COVID patients should also be ensured for staff of these ambulances. To ensure response time of 20 minutes, ambulances should be strategically located at hospitals, police stations.

Only identified and designated ambulances should be used for transportation. People, health functionaries, nursing homes, private clinics, hospitals should be made aware to use ambulance services for COVID patients being provided through toll free numbers. Otherwise it might increase the chances of transmission of infection. Every district should facilitate empaneling of ambulances other than those in the public health system even if the present situation may not require using them. To minimize the risk of transmission, it is strongly recommended that if other than empaneled ambulances are bringing COVID or suspect patients, such vehicles need to be quarantined for thorough cleaning and disinfection and should only be released after certification by district administration/ district health official.

3.1 Call Centre: On receiving the call, the call centre needs to enquire following details:

- a) Demographic details of the patient i.e. name, age, gender etc.
- b) To ascertain whether the patient is suspect case of COVID-19
 - i. Symptoms of patient: Ask whether the patient is suffering from fever, cough and difficulty in breathing
 - ii. Whether patient has recently returned from a foreign country
 - iii. Whether the patient was under home quarantine as directed by local health administration
- c) Clinical condition of patient to be transported: whether stable or critical

3.2 In case of an inter-facility transfer, the casualty medical officer of the referring hospital has to ensure that bed is available in referral hospital with supporting equipment and needs to convey the same while making the call.

3.3 Assign the job to nearest ambulance with dedicated facility at strategic locations as mentioned in the box above.

3.3.1 Check for state of preparedness of ambulance: **Annexure II**

3.3.2 Ensure PPE for ambulance staff: **Annexure III**

3.4 Both call centre and ambulances should always keep the updated list of available hospitals and beds.

3.5 On receiving the call, from the call centre and prior to shifting the patient, EMT will perform following:

- 3.5.1 the EMT will seek the above mentioned details again to ensure whether the patient is a suspect case of COVID-19.
- 3.5.2 The EMT will wear the appropriate PPE.
- 3.5.3 The EMT shall assess the condition of the patient
- 3.5.4 If the patient is ambulatory and stable, he/she may be asked to board the ambulance otherwise the EMT (while using the prescribed PPE) may assist loading of patient.
- 3.5.5 Only one caregiver should be allowed to accompany the patient (while using the prescribed PPE).
- 3.5.6 EMT should also ensure availability and provision of adequate triple layered mask and gloves for patient and/or attendant.
- 3.5.7 The patient and the care giver will be provided with a triple layer medical mask.
- 3.5.8 EMT will contact the identified health facility for facility preparedness and readiness.

3.6 Management on board

- 3.6.1 Measure vitals of patient and ensure patient is stable.
- 3.6.2 If required, give supplementary O₂ therapy at 5 L/min and titrate flow rates to reach target SpO₂ ≥90%.
- 3.6.3 If patient is being transported on ventilator to a higher center, follow ventilator management protocols, provided the EMT is either trained or assisted by a doctor well versed in ventilator management.

3.7 Handing over the patient

- 3.7.1 On reaching the receiving hospital, the EMT will hand over the patient and details of medical interventions if any during transport. After handing over the patient, the PPEs will be taken off as per protocol followed by hand washing. Use Alcohol based rub /soap water for hand hygiene.
- 3.7.2 The biomedical waste generated (including PPE) to be disposed off in a bio-hazard bag (yellow bag). Inside would be sprayed with Sodium Hypochlorite (1%) and after tying the exterior will also be sprayed with the same. It would be disposed off at their destination hospital. This shall again be followed by hand washing.

3.8 Disinfection of ambulance

- 3.8.1 All surfaces that may have come in contact with the patient or materials contaminated during patient care (e.g., stretcher, rails, control panels, floors, walls and work surfaces) should be thoroughly cleaned and disinfected using 1% Sodium Hypochlorite solution. (see **Annexure – IV** for preparation of 1% Sodium hypochlorite solution)
- 3.8.2 Clean and disinfect reusable patient-care equipment before use on another patient with alcohol based rub.

- 3.8.3 Cleaning of all surfaces and equipment should be done morning, evening and after every use with soap/detergent and water.

3.9 Capacity building

District Authorities to ensure capacity building of EMT and driver on following areas:

- 3.9.1 Donning and doffing of PPE
- 3.9.2 Infection prevention protocols given in this guideline (**Annexure V**)
- 3.9.3 Triaging and identifying COVID-19 suspects based on their signs and symptoms.
- 3.9.4 Similarly, emergency staff of health facility should also be trained in segregation, isolation and management of COVID-19 patients. They should not be mixed with other patients.

3.10 Monitoring

A checklist for weekly monitoring by District Surgeon/ Anesthetist is at Annexure VI

Annexure I

<u>Question</u>	<u>Response</u>
Has someone in your close family returned from a foreign country	Yes/No
Is the patient under home quarantine as advised by local health authority?	Yes/No
Have you or someone in your family come in close contact with a confirmed COVID-19 patient in the last 14 days?	Yes/No
Do you have fever?	Yes/No
Do you have cough?	Yes/No
Do you have sore throat?	Yes/No
Do you feel shortness of breath?	Yes/No

Annexure II**Checklist for list of consumables, equipment**

S. No.	Item	Available (Yes/No)	If yes, whether functional	Remarks: quantity, expiry, last inspection date etc.
1	Stretcher trolley (foldable)			
2	Vital sign monitor			
2.1	✓ NIBP			
2.2	✓ SPO ₂			
2.3	✓ ECG			
3	Ventilator with O ₂ Source			
4	Defibrillator with battery			
5	Syringe infusion pump			
6	Ventimask with O ₂ flowmeter			
7	Ambu bag with face mask			
8	Laryngoscope with batteries			
9	ETT with oro-pharyngeal airway			
10	Suction apparatus with suction and catheter			
11	Emergency drug tray			
12	IV Fluids			
13	Nebulizer			
14	Any other items:			
14.1	✓ Foleys catheter			
14.2	✓ ECG Electrode			
14.3	✓ IV Cannula			

Annexure III

Rational use of PPE by ambulance staff*

Activity	Risk	Recommended PPE	Remarks
Transporting patients not on any assisted ventilation	Moderate risk	N-95 mask Gloves	
Management of SARI patient while transporting	High risk	Full complement of PPE	When aerosol generating procedures are anticipated
Driving the ambulance	Low risk	Triple layer medical mask Gloves	

* The training of EMTs on COVID-19 will strictly adhere to the above mentioned rational use of PPE (the above recommendation is by an expert group (including WHO) and recommended by Joint Monitoring Group under DGHS available at www.mohfw.gov.in)

Annexure IV

Guidelines for Preparation of 1% sodium hypochlorite solution

Product	Available chlorine	1 percent
Sodium hypochlorite – liquid bleach	3.5%	1 part bleach to 2.5 parts water
Sodium hypochlorite – liquid	5%	1 part bleach to 4 parts water
NaDCC (sodium dichloro-isocyanurate) powder	60%	17 grams to 1 litre water
NaDCC (1.5 g/ tablet) – tablets	60%	11 tablets to 1 litre water
Chloramine – powder	25%	80 g to 1 litre water
Bleaching powder	70%	7g g to 1 litre water
Any other	As per manufacturer's Instructions	

Infection Prevention for Pre-hospital Care

1.1. General

Ambulance or emergency health care workers are exposed to many infectious agents during their work. Transmission of infectious disease can occur while providing emergency care, rescue and body recovery/removal. Effective infection prevention and control is central to providing high quality health care for patients and a safe working environment for those that work in healthcare settings. Implementation of good infection control practices help to minimize the risk of spread of infection to patients and staff.

Pre-hospital care need to have an infection prevention program to monitor for HAIs* (Healthcare Associated Infections) and prevent the spread of diseases/infection.

1.2. Standard Precautions

Standard precautions are based on the principle that all blood, body fluids, secretions, excretions (except sweat), non-intact skin, and mucous membranes may contain transmissible infectious agents. These set of measures are intended to be applied to the care of all patients in all healthcare settings, regardless of the suspected or confirmed presence of an infectious agent. Standard precautions include:

- Hand hygiene
- Use of barrier precautions or personal protective equipment
- Safe injection practices

1.2.1. Hand Hygiene

Hand hygiene is the single most important practice to reduce the transmission of infectious agents in healthcare settings. The term "hand hygiene" includes both hand washing with either soap and water, and use of alcohol-based products (gels, rinses, foams) that do not require the use of water. It is important to ensure the availability of hand rub products at all times in the ambulance to ensure hand hygiene compliance.

HOW TO HAND WASH ?

RUB HANDS FOR HAND HYGIENE! WASH HANDS WHEN VISIBLY SOILED

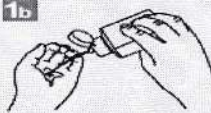
⌚ Duration of the entire procedure: 20-30 seconds

1a



Apply a palmful of the product in a cupped hand, covering all surfaces;

1b



2



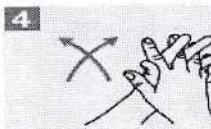
Rub hands palm to palm;

3



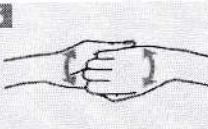
Right palm over left dorsum with interlaced fingers and vice versa;

4



Palm to palm with fingers interlaced;

5



Backs of fingers to opposing palms with fingers interlocked;

6



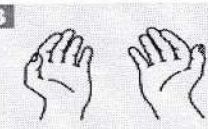
Rotational rubbing of left thumb clasped in right palm and vice versa;

7



Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;

8



Once dry, your hands are safe.

1.2.2. Use of barrier precautions or Personal Protective Equipment (PPE)

COVID-19 is primarily a droplet transmitted infection, with indirect transmission through fomites/contaminated surfaces/objects. The standard precautions on use of personal protective equipment, as per the risk profile are given in annexure III.

The Healthcare worker must possess knowledge and skill regarding use and removal of the PPE after its use.

1.3. Equipment disinfection:

Equipment and surfaces are contaminated if they have come in contact with patient's skin, blood or body fluids. These can spread infection. Therefore, it is mandatory that these are cleaned and disinfected using 1% sodium hypochlorite or alcohol based disinfectants at least once daily and after every patient contact. Patient care items and surfaces that can contribute to the spread of infection include:

- Stethoscopes
- Blood pressure cuffs

- Monitors
- Stretchers, backboards, and immobilization devices
- Laryngoscope blades
- Radios/mobiles
- Shelves
- Door handles
- Other items and surfaces in ambulance or transport vehicle

1.4. Decontamination of ambulance:

- Decontamination of ambulance needs to be performed every time a suspect/confirmed case is transported in the ambulance. The following procedure must be followed while decontaminating the ambulance:
- Gloves and N-95 masks are recommended for sanitation staff cleaning the ambulance.
- Disinfect (damp wipe) all horizontal, vertical and contact surfaces with a cotton cloth saturated (or microfiber) with a 1% sodium hypochlorite solution. These surfaces include, but are not limited to: stretcher, Bed rails, Infusion pumps, IV poles/Hanging IV poles, Monitor cables, telephone, Countertops, sharps container. Spot clean walls (when visually soiled) with disinfectant-detergent and windows with glass cleaner. Allow contact time of 30 minutes and allow air dry.
- Damp mop floor with 1% sodium hypochlorite disinfectant.
- Discard disposable items and Infectious waste in a Bio/Hazard bag. The interior is sprayed with 1% sodium hypochlorite. The bag is tied and exterior is also decontaminated with 1% sodium hypochlorite and should be given to the hospitals to dispose of according to their policy.
- Change cotton mop water containing disinfectant after each cleaning cycle.
- Do not place cleaning cloth back into the disinfectant solution after using it to wipe a surface.
- Remove gloves and wash hands.

Annexure VI

Checklist for Monitoring

Weekly monitoring by District Surgeon/ Anesthetist to be ensured. Following parameters to be monitored:

1. Daily stock-check & functionality test of critical equipment (Oxygen, Suction, etc.)
2. Decontamination & Disinfection Protocols – before and after transporting COVID patients
3. Waste Management – Segregation, General Waste, BMW, Liquid Waste, etc.
4. Spill Management
5. Linen Management
6. Patients' property
7. 'End of Life' care
8. Fire Safety
9. Outcome –
 1. Deaths while transporting
 2. Death after reaching the facility
 3. No. of successful resuscitation (return to spontaneous circulation after cardiac arrest)
 4. IV Fluid Usage Rate – Number of Units (1 unit = 500 ml) transfused/ Patients transported
 5. Percentage of cases, reporting more than 95% Oxygen Saturation level on arrival
 6. Incidence of Aspiration Pneumonia
 7. Service Experience (Feed-back Score on Likert scale 1-5)

Mention the total no. of Beds in Isolation ward :

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]