

**STANDARD OPERATING PROCEDURE**  
**FOR**  
**MANAGEMENT AT COVID – 19 HOSPITALS / UNITS**  
**IN**  
**GOVERNMENT AND PRIVATE HOSPITALS**  
**IN THE STATE**



Government of Odisha  
Health & Family Welfare Department, Odisha  
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Hospitals play a critical role within the health system in providing essential medical care to the community, particularly in a crisis. Prolonged and combined outbreaks can lead to the progressive spread of disease with rapidly increasing service demands that can potentially overwhelm the capacity of hospitals and the health system at large. To enhance the readiness of the health facilities to cope with the challenges of the outbreak, a pandemic, or any other emergency or disaster, hospital managers need to ensure the initiation of relevant generic priority action.

Hospitals are complex and vulnerable institutions, dependent on crucial external support and supply lines. Well-established partnerships with local authorities, service providers (e.g. of water, power, and means of communication), supply vendors, transportation companies, and other organizations are essential to ensure the continuity of essential services.

An interruption of these critical support services and supplies would potentially disrupt the provision of acute health care by an unprepared health-care facility. In addition, a high rate of HR requirement, shortage of critical equipment and supplies could limit access to needed care and have a direct impact on healthcare delivery.

The greatest benefits of an effective, hospital-based response include

1. Continuity of essential services;
2. Well-coordinated implementation of priority action;
3. Clear and accurate internal and external communication;
4. Swift adaptation to increased demands;
5. Effective use of scarce resources; and
6. Safe environment for health workers.

This SOP has been prepared with the aim of supporting hospital managers and emergency planners in achieving the above by defining and initiating actions needed to ensure a rapid response to the COVID-19 outbreak.

## **B. Infrastructure**

The COVID -19 hospital/ unit shall be set up in a standalone building modified to a hospital setup having isolated small units for 20 to 30 beds. The building must have separate entry and exit point. There must be isolated chambers for the health care

providers, the central sterilization service department, internal pharmacy, waste disposal mechanism.

### **C. Incident Management System**

The hospital must have a well-functioning hospital Incident Management System for the effective management of all emergency. An IMS is essential for the effective development and management of the hospital-based systems and procedures required for successful COVID-19 response. While organizing a hospital IMS, the following representatives from the services dealing with must be considered:

1. Hospital administration (Hospital Director, Nursing Director, CEO)
2. Communication
3. Medical personnel (e.g. Medical and Nursing Heads of emergency medicine,
4. Intensive care, internal medicine, paediatrics)
5. Infection prevention and control
6. Respiratory therapy
7. Human resources
8. Security
9. Pharmaceuticals
10. Clinical engineering and maintenance
11. Laboratory services
12. Dietary services
13. Laundry, cleaning and waste management.
14. Supply department

### **D. Preparedness for surge management**

Surge capacity is the ability of a health service to expand beyond its normal capacity to meet an increased demand for clinical care. COVID-19 cases may cause rapid increase in demand over a prolonged period of time. The following actions must be exercised by the managers.

1. The maximal case admission capacity, determined by the total number of beds, the availability of human resources, the adaptability of facility space for critical care, isolation, the accessibility of mechanical ventilators and the availability of other resources shall be calculated to meet the sudden surge.
2. The potential gaps in the provision of health care, with an emphasis on critical care must be identified and these gaps shall be addressed in coordination with the authorities and neighboring hospitals.
3. The care of non-critical patients shall be outsourced to appropriate alternative treatment sites (e.g. home for mild illness, long term care facilities for patients requiring chronic care).

4. All nonessential services (e.g. elective surgery) shall be cancelled when necessary and feasible.
5. Appropriate admission and discharge criteria shall be followed and according to available treatment capacity and demand, the patients shall be prioritized for management or clinical interventions

## **E. Infection Prevention Control**

1. An infection prevention and control (IPC) programme is essential to minimize the risk of transmission of healthcare-associated infection to patients, hospital staff, and visitors.
2. Ensure that health care workers (HCW), patients, and visitors are aware of respiratory and hand hygiene and prevention of healthcare-associated infections. Provide verbal instructions, informational posters, cards, etc. If possible, install hand hygiene stations (water, soap, paper towel, alcohol-hand rub), and waste bins at strategic locations across the hospital.
3. Ensure that HCW are applying standard precautions for all patients. Droplets and contact precautions are recommended for suspected or confirmed COVID-19 cases. These precautions should continue until the patient is asymptomatic.
4. Patients should be placed in adequately ventilated single rooms (160 L/s per patient). When single rooms are not available, patients suspected of having COVID-19 should be grouped together. Avoid mixing of suspected and confirmed cases.
5. Ensure a one-meter distance between beds regardless of whether patients are suspected of having COVID-19.
6. Ensure equipment is either single-use and disposable or if equipment (e.g., stethoscopes, blood pressure cuffs, thermometers, food trays) needs to be shared among patients, clean and disinfect between use for each patient (e.g., by using ethyl alcohol 70%). Routinely clean and disinfect surfaces with which the patient is in contact. Implement methods of routine cleaning and disinfection of ambulances following the recommended standards and guidelines for COVID-19.
7. Ensure that HCWs are applying droplet and contact precautions before entering the room where suspected or confirmed COVID-19 patients are admitted.
8. Ensure that HCWs are applying airborne precautions for aerosol-generating procedures, such as tracheal intubation, non-invasive ventilation, tracheotomy, cardiopulmonary resuscitation, manual ventilation before intubation, bronchoscopy, collection of nasopharyngeal

swap/aspirate and autopsy. Where possible, a team of HCWs should be designated to care exclusively for suspected or confirmed cases to reduce the risk of transmission.

9. Ensure that staff (HCW, cleaning personnel) receives training on standard, contact, droplets, and airborne precautions (including correct use of PPE, donning and doffing, masks tested for fitting, hand hygiene, respiratory hygiene, etc.). Ensure that adequate personal protective equipment (PPE) (i.e., medical/surgical masks, N95/FFP2 respirators, gloves, gowns, eye protection) is easily accessible to staff. Avoid moving and transporting patients out of their room or area unless medically necessary. Use designated portable X-ray equipment and/or other designated diagnostic equipment. If transport is required, use predetermined transport routes to minimize exposure for staff, other patients, and visitors, and have the patient use a medical mask if tolerable or reinforce respiratory hygiene. The use of boots, coverall and apron is not required during routine care. After patient care, appropriate doffing and disposal of all PPE and hand hygiene should be carried out. A new set of PPE is needed, when care is given to a different patient. If the supply of PPE is limited, prioritize staff caring for cases. HCWs should use a clean, non-sterile, long-sleeved gown and gloves. If gowns are not fluid resistant, HCWs should use a waterproof apron for procedures expected to have high volumes of fluid that might penetrate the gown. When HCWs put on a disposable particulate respirator, they must always perform the seal check.
10. Ensure that HCWs who are transporting patients perform hand hygiene and wear appropriate PPE. Notify the area receiving the patient of any necessary precautions as early as possible before the patient's arrival. Limit visitors to those essential for patient support.
11. Ensure procedures are performed in an adequately ventilated room (for natural ventilation: air flow of at least 160 L/s per patient or in negative pressure rooms with at least 12 air changes per hour and controlled direction of air flow when using mechanical ventilation)
12. Manage laboratory specimens, laundry, food service utensils, and medical waste following safe routine procedures according to IPC guidelines.
13. Ensure visitors apply droplet and contact precautions. Maintain a record of all persons entering the patient's room, including all staff and visitors.

## **F. Case Management**

An efficient and accurate triage system and an organized in-patient management strategy are required to ensure adequate treatment of COVID-19 acute respiratory infection.

1. Ensure mechanisms to implement triage, early recognition, and source control (isolating patients with suspected COVID-19). Establish a well-

equipped triage station at the entrance of the health-care facility, supported by trained staff.

2. Institute the use of screening questionnaires according to the updated case definition and post signs in public areas reminding symptomatic patients to alert HCWs.
3. Ensure that health-care workers have a high level of clinical suspicion. Designate an exclusive waiting and examination area for individuals presenting with respiratory symptoms and/or fever. The area should be well ventilated, low-transit, and secured. Within that group of patients, those with symptoms of respiratory distress and severe underlying conditions should be prioritized for medical evaluation.
4. Ensure establishing additional areas for triage of patients on presentation at the hospital, possibly outside the hospital. Appoint a triage supervisor responsible for overseeing all triage operations.
5. Establish a triage protocol aimed at ensuring that cases of acute respiratory infection are recognized. Suspected cases of COVID19 require sufficient distancing in space in the space that is assigned to them.
6. Ensure the application of standard, and droplet precautions at all times. In coordination with local health authorities, implement the hospital strategy for the admission, internal transfer, referral, and discharge of SARI patients, in line with relevant criteria and operational protocols.
7. Ensure home care for mild cases of COVID-19 acute respiratory infection in individuals with no comorbidities, recognized as posing a risk for severe or fatal disease associated with COVID-19. A caregiver may be identified preferably a family member.
8. Hospital admission for cases of COVID-19 acute respiratory infection with comorbidities recognized as posing a risk for a severe or fatal course of COVID-19 shall be considered.

Ensure the availability of staffed beds for the admission of severe COVID-19 acute respiratory infection cases requiring supportive care and the continuous/regular monitoring of vital signs, regardless of comorbidities, recognized as posing a risk for a severe or fatal course of COVID-19.

Provide continuous monitoring of vital signs (e.g., temperature, blood pressure, pulse, respiratory rate, level of consciousness, clinical signs of dehydration or shock), and oxygen saturation (pulse oximetry or blood gas analyses).

9. Ensure the availability of oxygen and means of respiratory support, as well as sufficient sedation for intubated patients. Oxygen masks and nasal canulae should be single-use.
10. Provide patient care following national and international guidelines.
11. Ensure that all staff is aware of the national and international guidelines for case management.
12. Communicate admission criteria and triage logistics (e.g., location, routes

of entry/exit) to the relevant hospital personnel, referring hospitals and clinics, pre-hospital networks, and ambulance services.

13. Ensure health-care personnel are aware of protocols for off-license use of medicines, which should be done against observational trial protocol and outcomes recorded against standardized variables (see clinical characterization form).

## **G. Human Recourse management**

1. The available human resource shall be entrusted for management of COVID-19 cases for a continuous period of two weeks. During such period they shall be given separate accommodation along with all support like conveyance to the hospital, food and all other day to day requirements. After the completion of two weeks they shall be released from duty but will remain in self quarantine for another two weeks.
2. Update the staff contact list. Estimate staff absenteeism in advance and monitor it continuously.
3. Establish a clear policy (the policy should define levels of exposure) to monitor and manage staff suspected or confirmed of having COVID-19 or who have had exposure to a confirmed, probable or suspected COVID-19 patient.
4. For each unit or service, identify the minimum number of health-care workers and other hospital staff needed to ensure the sufficient operation of the unit or service.
5. Prioritize staffing needs by unit or service and distribute personnel accordingly.
6. Recruit and train additional staff (e.g. retired staff, reserve military personnel, university affiliates/students, and community volunteers) according to the anticipated need.
7. Familiarize ward staff to work in high-demand areas (e.g. infectious disease wards, emergency and intensive care units) to support surge.
8. Provide training and exercises relevant to areas of need, including infection prevention and control, clinical management, to ensure staff competency and safety.
9. Identify domestic support measures (e.g. travel, childcare, care of ill or disabled family members) that could enhance staff flexibility for shift work and longer working hours and define off work time for recuperation.
10. Ensure the availability of the services of multidisciplinary psycho-social support teams for the families of staff and patients, including social workers, counselors, interpreters and clergymen.
11. Address liability, insurance and temporary licensing issues with respect to staff who may be working outside their areas of expertise.
12. Ensure there are policies in place to manage volunteer workers (vetting,

- accepting, rejecting, liability issues etc.).
13. Consider reassigning staff at high risk for complications of COVID-19 acute respiratory infection.

## **H. Continuity of Essential Health Services And Patient Care**

An outbreak of COVID-19 will not dispel an already existing need for essential medical and surgical care (e.g. emergency services, urgent surgical operations, maternal and child-care). Hence, it is necessary to ensure the continuity of essential health services.

1. Identify and maintain the hospital services that your facility must provide at all times and under any circumstances.
2. Identify the resources (human resources and logistics) needed to ensure the continuity of the identified essential hospital services.
3. Be familiar with preparedness mechanisms across the local health-care network for other high demand contingencies (e.g. disasters or mass casualty incidents).

## **I. Surveillance & Monitoring.**

Health-care workers recognizing and immediately reporting unusual health events (e.g., clusters of cases, atypical clinical presentations, etc.) occurring in health-care facilities are the cornerstone of the early warning function. In addition to serving the early warning function, the laboratory and epidemiological data obtained through systematic collection and analysis allows the public health authorities to monitor the progression of COVID-19 and inform interventions on those at the highest risk of severe outcome

1. Appoint a hospital epidemiologist with the overall responsibility for activities related to early warning and surveillance in the hospital.
2. Identify the information that needs to be collected and define the objectives for its use.
3. Promote the reporting of unusual health events (COVID-19) by health-care workers by establishing communication channels and procedures within the hospital and with public health authorities.
4. Implement data collection and reporting mechanisms following the national health policy and directives.
5. Comply with standardized case definitions, recommended levels of surveillance, and triggers for surveillance escalation or de-escalation in accordance with national criteria. Immediately investigate reports by health care workers of unusual health events and/or unusual signals detected through monitoring activities.
6. Ensure prompt distribution to hospital clinicians, front-line workers,



and other relevant decision makers of information obtained through monitoring activities and/or the investigation of unusual health events and/or signals.

7. Ensure that testing of persons hospitalized for COVID-19 complies with the standardized case definitions, recommended levels of surveillance, and triggers for surveillance escalation or de-escalation in accordance with the national criteria.
8. Ensure all staff are conversant with standardized case definitions, recommended levels of surveillance and triggers for surveillance escalation or de-escalation, in accordance with the national criteria, as well as recognizing unusual health events through training.

## **J. Communication**

Accurate and timely communication is necessary to ensure informed decision-making, effective collaboration and cooperation, and public awareness and trust.

1. Establish mechanisms of communication to streamline the sharing of information between the hospital administration, department/unit heads, and facility staff.
2. Brief the hospital staff on their roles and responsibilities in the management of COVID-19 under the IMS.
3. Ensure that all decisions on clinical triage, patient prioritization (e.g., adapted admission and discharge criteria), infection prevention and control measures, and policies related to case management and hospital epidemiology are communicated to all relevant staff and stakeholders.
4. Ensure the collection, processing, and reporting of information to supervisory stakeholders (e.g., public health authorities), and through them to neighboring hospitals, private practitioners, and pre-hospital networks.
5. Draft in advance, key messages, addressing a variety of COVID-19-related scenarios with different target audiences in mind (e.g., patients, visitors, staff, the general public, and media).
6. Appoint a public information spokesperson to coordinate communication with the public, the media, and health authorities.
7. Ensure reliable and sustainable primary and backup communication systems (e.g., landlines, the internet, mobile devices, pagers, satellite telephones, two-way radio equipment, unlisted numbers) and access to updated contact lists.
8. Consider having a contact list with roles rather than specific people.
9. Be familiar with referral mechanisms established at the national level and related communication mechanisms.

## **K. Logistic Management**

The continuity of hospital services and the availability of essential equipment and supplies, including pharmaceuticals, require a proactive approach to resource and facility management.

1. Develop/maintain an updated inventory of all equipment, supplies, and pharmaceuticals; establish a shortage alert and reordering mechanism.
2. Estimate the consumption of essential equipment, supplies, and pharmaceuticals (e.g., amount used per week) based on most likely outbreak scenario.
3. Consult with authorities to ensure the continuous provision of essential medications and supplies (e.g. institutional and central stockpiles, emergency agreements with local suppliers, donations).
4. Assess the quality of contingency items prior to purchase; request quality certification.
5. Establish contingency agreements (e.g., memorandum of understanding, mutual aid agreement) with vendors to ensure the procurement and prompt delivery of equipment, supplies, and other resources in times of shortage.
6. Identify physical space within the hospital for the storage and stockpiling of additional supplies.
7. Factors to consider include accessibility, security, ambient temperature, ventilation, light exposure, and humidity. Ensure an uninterrupted cold chain for essential items requiring refrigeration.
8. Stockpile essential supplies and pharmaceuticals according to recommended guidelines. Ensure the timely use of stockpiled items to avoid loss due to expiration.
9. Define the role of the hospital pharmacy in providing pharmaceuticals for cases treated at home or other alternative treatment sites.
10. Ensure a mechanism for the prompt maintenance and repair of the equipment required for the essential services. Postpone non-essential maintenance and repair.
11. Coordinate with pre-hospital networks and transportation services in establishing a contingency transportation strategy to ensure continual patient transfers, such as designated ambulance teams (as the outbreak grows, the strategy may need to change).
12. Ensure there is a policy in place for managing donations of medical supplies, food for staff, etc.

## **L. Laboratory Services**

Maintenance of the essential laboratory services is necessary for the appropriate clinical management of both pandemic and other patients, as well as for the

hospital based surveillance of COVID-19.

1. Ensure the continuous availability of basic laboratory testing (e.g., complete blood count, biochemistry profile, electrolytes, blood gas analysis, blood culture, and sputum examination).
2. Identify essential laboratory supplies and resources and ensure their continuous availability.
3. Identify back-up laboratory personnel and/or alternative laboratory services. For hospital-based surveillance, ensure mechanisms for the prompt provision of laboratory data to the physicians and health authorities responsible for clinical management and surveillance.
4. Prioritize testing for respiratory viruses (e.g., COVID-19) according to clinical requirements and hospital-based surveillance needs. Use a panel of respiratory pathogens for differential diagnosis when required.
5. Establish a laboratory referral pathway for the identification, confirmation, and monitoring of COVID-19, (including changes in virus characteristics, such as virulence, transmissibility, and antiviral resistance).
6. Establish and train staff on packaging and transportation procedures for specimen referrals in accordance with national and international transport regulations and requirements.

## **M. Essential Support System.**

To optimize patient care during the COVID-19 outbreak, it is necessary to identify and maintain essential support services, such as those for laundry, cleaning, waste management, dietary services, and security.

1. Estimate the additional supplies required by the support services and introduce a mechanism to ensure the continuous availability of these supplies.
2. Enable the adaptation of the support services to cope with increased demand.
3. Anticipate the impact of COVID-19 on hospital food supplies; take proactive measures to ensure the availability of food.
4. Ensure the availability of appropriate back-up arrangements for essential life-lines, including water, power, and oxygen.
5. Solicit the input of hospital security in identifying potential security constraints and optimizing the control of facility access, essential pharmaceutical stocks, patient flow, traffic, and parking.
6. Designate an area for use as a temporary morgue; ensure the adequate supply of body bags and shroud packs.
7. Formulate a postmortem care contingency plan with appropriate partners (e.g., undertakers, funeral services).

## **N. Legal Bindings.**

The above guidelines shall be adhered to in true letter and spirit. Violation of the guidelines shall be seriously viewed and action as deemed proper shall be initiated in accordance to the Epidemic Disease Act 1897 and any other orders or instructions issued there under in force.

NB: This draft has been prepared taking the Hospital emergency preparedness checklist for pandemic influenza: Focus on pandemic (H1N1) 2009 published by WHO EURO.

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DIRECTORATE OF HEALTH SERVICES ODISHA, BHUBANESWAR

File No. HA MISS 01 / No. 8452 / 2020 Dated 28.03.2020

From:

Dr. Bijaya Kumar Mohapatra,  
Director, Health Services, Odisha

To

All Collectors & DM,  
All CDM& PHO.

Sub: Standard Operating Procedure for standalone COVID – 19 Hospitals setup at Private / Govt. level.

Sir/Madam,

With reference to the subject cited above I am to state that in view of the ensuing COVID-19 infection outbreaks, Government has taken several initiatives in addition to setting up of separate COVID-19 hospitals both at Government and private setups. A standard operating procedure has been prepared by the DHS (O) and DMET (O) to be followed scrupulously for such hospitals. (Copy enclosed)

This SOP is in addition to any other guidelines or instruction issued by the Govt. of India or State Government and is not a replacement of them.

This may be treated as most URGENT.

Yours faithfully,

  
Director health Services Odisha.

Memo No. 8453 // Dt. 28.03.2020

Copy forwarded to all Directors for information and necessary action.

  
Director health Services Odisha.

Memo No. 8454 // Dt. 28.03.2020

Copy forwarded to all Dean & Principals / Superintendents of Govt Medical College / Director VIMSAR Burla / Director AHPGIC Cuttack / Superintendent SVPPGIP Cuttack Directors for information and necessary action.

  
Director health Services Odisha.

Memo No. 8455 // Dt. 28.03.2020

Copy forwarded to The President IMA, Odisha for information and necessary action.

  
Director health Services Odisha.