



INFECTION PREVENTION CONTROL STANDARD OPERATING PROCEDURE

Principles of IPC strategies associated with health care for suspected COVID-19 infection

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To achieve the highest level of effectiveness in the response to a COVID-19 outbreak using the strategies and practices recommended in this document, an IPC programme with a dedicated and trained team or at least an IPC focal point should be in place and supported by the national and facility senior management.

IPC strategies to prevent or limit transmission in healthcare settings include the following:

1. ensuring triage, early recognition, and source control (isolating patients with suspected COVID-19 infection);
2. applying standard precautions for all patients;
3. implementing empiric additional precautions (droplet and contact and, whenever applicable, airborne precautions) for suspected cases of COVID-19 infection;
4. implementing administrative controls;
5. using environmental and engineering controls.

1. Ensuring triage, early recognition, and source control

Clinical triage includes a system for assessing all patients at admission allowing early recognition of possible COVID-19 infection and immediate isolation of patients with suspected COVID-19 infection in an area separate from other patients (source control). To facilitate the early identification of cases of suspected COVID-19 infection, healthcare facilities should:

- encourage HCWs to have a high level of clinical suspicion;
- establish a well-equipped triage station at the entrance of health care facility, supported by trained staff;
- institute the use of screening questionnaires according to the case definition
- post signs in public areas reminding symptomatic patients to alert HCWs.
- The promotion of hand hygiene and respiratory hygiene are essential preventive measures.

2. Applying standard precautions for all patients

Standard precautions include hand and respiratory hygiene, the use of appropriate personal protective equipment (PPE) according to risk assessment, injection safety practices, safe

waste management, proper linens, environmental cleaning and sterilization of patient-care equipment. Ensure that the following respiratory hygiene measures are used:

- ensure that all patients cover their nose and mouth with a tissue or elbow when coughing or sneezing;
- offer a surgical mask to patients with suspected COVID-19 infection while they are in waiting/public areas or in cohorting rooms;
- perform hand hygiene after contact with respiratory secretions.
- HCWs should apply the WHO's My 5 Moments for Hand Hygiene approach before touching a patient, before any clean or aseptic procedure is performed, after exposure to body fluid, after touching a patient, and after touching a patient's surroundings.
- hand hygiene includes either cleansing hands with an alcohol-based hand rub (ABHR) or with soap and water;
- alcohol-based hand rubs are preferred if hands are not visibly soiled;
- wash hands with soap and water when they are visibly soiled.
- The rational, correct, and consistent use of PPE also helps to reduce the spread of pathogens. The use of PPE effectiveness strongly depends on adequate and regular supplies, adequate staff training, appropriate hand hygiene and specifically appropriate human behaviour. It is important to ensure that environmental cleaning and disinfection procedures are followed consistently and correctly. Thoroughly cleaning environmental surfaces with water and detergent and applying commonly used hospital level disinfectants (such as sodium hypochlorite) are effective and sufficient procedures. Medical devices and equipment, laundry, food service utensils and medical waste should be managed in accordance with safe routine procedures.

3. Implementing empiric additional precautions

Contact and droplet precautions

- in addition to using standard precautions, all individuals, including family members, visitors and HCWs, should use contact and droplet precautions before entering the room where suspected or confirmed COVID-19 patients are admitted;
- patients should be placed in adequately ventilated single rooms. For general ward rooms they should have adequate natural ventilation;
- when single rooms are not available, patients suspected of being infected with COVID-19 should be grouped together;
- all patients' beds should be placed at least 1 m apart regardless of whether they are suspected to have COVID-19 infection;
- where possible, a team of HCWs should be designated to care exclusively for suspected or confirmed cases to reduce the risk of transmission;
- HCWs should use N95 mask;
- HCWs should wear eye protection (goggles) or facial protection (face shield) to avoid contamination of mucous membranes;
- HCWs should wear a clean, non-sterile, long sleeved gown;
- HCWs should also use gloves;

- the use of boots, coverall and apron (sometimes called Ebola PPE) is not required during routine care;
- after patient care, appropriate doffing and disposal of all PPE's and hand hygiene should be carried out. A new set of PPE's is needed, when care is given to a different patient;
- equipment should be either single-use and disposable or dedicated equipment (e.g., stethoscopes, blood pressure cuffs and thermometers). If equipment needs to be shared among patients, clean and disinfect it between use for each individual patient (e.g., by using ethyl alcohol 70%);
- HCWs should refrain from touching eyes, nose or mouth with potentially contaminated gloved or bare hands;
- 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 using a surgical mask;
- ensure that HCWs who are transporting patients perform hand hygiene and wear appropriate PPE as described;
- **notify the area receiving the patient of any necessary precautions as early as possible before the patient's arrival;**
- routinely clean and disinfect surfaces which the patient is in contact;
- limit the number of HCWs, family members and visitors who are in contact with a suspected and confirmed COVID-19 patient;
- maintain a record of all persons entering the patient's room, including all staff and visitors.

Airborne precautions for aerosol-generating procedures

Some aerosol-generating procedures have been associated with an increased risk of transmission of coronaviruses, such as tracheal intubation, non-invasive ventilation, tracheotomy, cardiopulmonary resuscitation, manual ventilation before intubation, and bronchoscopy.

Ensure that HCWs performing aerosol-generating procedures:

- perform procedures in an adequately ventilated room
- use N95 respirator. HCWs must always perform the seal check. Note that if the wearer has facial hair (i.e., a beard) it may prevent a proper respirator fit;
- use eye protection (i.e., goggles or a face shield);
- wear 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;
- limit the number of persons present in the room to the absolute minimum required for the patient's care and support.

4. Implementing Administrative controls

Policies for the prevention and control of transmission of COVID-19 infections within the healthcare setting include, but may not be limited to:

- establishing sustainable IPC infrastructures and activities;
- educating patients' caregivers;
- developing policies on the early recognition of acute respiratory infection potentially caused by COVID-19;
- ensuring access to prompt laboratory testing for identification of the etiologic agent; preventing overcrowding, especially in the emergency department; providing dedicated waiting areas for symptomatic patients; appropriately isolating hospitalized patients; ensuring adequate supplies of PPE;
- ensure the adherence of IPC policies and procedures for all facets of health care.
- Administrative measures related to healthcare workers
 - provision of adequate training for HCWs;
 - ensuring an adequate patient-to-staff ratio;
 - establishing a surveillance process for acute respiratory infections potentially caused by COVID-19 among HCWs;
 - ensuring that HCWs and the public understand the importance of promptly seeking medical care;
 - monitoring HCW compliance with standard precautions and providing mechanisms for improvement as needed

5. Using environmental and engineering controls

These controls address the basic infrastructure of the health care facility. These controls aim to ensure there is adequate ventilation in all areas in the healthcare facility, as well as adequate environmental cleaning. Additionally, spatial separation of at least 1 meter should be maintained between all patients.

- Ensure that cleaning and disinfection procedures are followed consistently and correctly. Cleaning environmental surfaces with water and detergent and applying commonly used hospital disinfectants (such as sodium hypochlorite) is an effective and sufficient procedure.
- Manage laundry, food service utensils and medical waste in accordance with safe routine procedures.
- Standard precautions should be applied at all times. Additional contact and droplet precautions should continue until the patient is asymptomatic.

Collecting and handling laboratory specimens from patients with suspected COVID-19 infection

All specimens collected for laboratory investigations should be regarded as potentially infectious. HCWs who collect, handle or transport any clinical specimens should adhere rigorously to the following standard precaution measures and biosafety practices to minimize the possibility of exposure to pathogens.

- ensure that HCWs who collect specimens use appropriate PPE (i.e., eye protection, N95 respirator, a long-sleeved gown, gloves).
- ensure that all personnel who transport specimens are trained in safe handling practices and spill decontamination procedures;
- place specimens for transport in leak-proof specimen bags (i.e., secondary containers) that have a separate sealable pocket for the specimen (i.e., a plastic biohazard specimen bag), with the patient's label on the specimen container (i.e., the primary container), and a clearly written laboratory request form;
- ensure that laboratories in health care facilities adhere to appropriate biosafety practices and transport requirements, according to the type of organism being handled;
- deliver all specimens by hand whenever possible.
- document clearly each patient's full name, date of birth and suspected COVID-19 of potential concern on the laboratory request form. Notify the laboratory as soon as possible that the specimen is being transported.

MANAGEMENT OF WASTE PRODUCED THROUGH MANAGEMENT OF A PATIENT WITH CONFIRMED OR SUSPECTED COVID-19

- The waste produced during the healthcare or home care of patients with suspected or confirmed COVID-19 should be disposed of as infectious waste in the infectious waste bag e.g. red bag as per the Ministry of Health and Social Services waste management guidelines. The infectious waste should be incinerated as soon as possible.
- The incinerator operators should don the appropriate PPE when handling infectious waste.

MANAGEMENT (HANDLING, MOVEMENT, STORAGE AND BURIAL) OF HUMAN REMAINS OF A PERSON WHO DIED OF COVID-19

- Handling of the Human Remains must be strictly monitored by **Environmental Health Practitioners** throughout the process.
- Human remains shall be placed in a leak proof triple body bag both first two bags shall be transparent and sealed while the third one shall be non-transparent and unsealed.
- After the body has been placed in the triple body bag, the remains must be placed in a non-transparent coffin.
- The Human remains are considered contagious and should be kept only in designated health facilities' mortuaries.
- Human Remains can only be transferred from one designated facility to another designated facility or from such to a cemetery.
- Under no circumstances shall the human remains be directly handled, whether for aesthetic, hygiene preparations, cultural or religious reasons.
- The human remains may not be embalmed or viewed by breaking the seals of

first two bags but by opening the third bag.

- In all cases, remains should not be kept in households for vigil or any purpose but be kept in designated health facility mortuary premises and directly transported from designated health facility mortuary straight to place of burial or cremation or the home on the day of burial.
- The body should be buried in a sufficiently deep grave to prevent access by rodents and carnivores.
- Human remains shall be placed in a triple body bag both first two bags shall be transparent and sealed while the third one shall be non-transparent and unsealed zip-up body bag with handles and appropriate BIOHAZARD warning tag written "hazard Group 4 Pathogens" before transporting to designated health facility mortuary.

RECOMMENDED TYPE OF PERSONAL PROTECTIVE EQUIPMENT (PPE) TO BE USED IN THE CONTEXT OF COVID-19 DISEASE, ACCORDING TO THE SETTING, PERSONNEL AND TYPE OF ACTIVITY

SETTING	TARGET PERSONNEL OR PATIENTS	ACTIVITY	TYPE OF PPE OR PROCEDURE
HEALTHCARE FACILITIES			
OUTPATIENT FACILITIES			
Consultation room	Healthcare workers	Physical examination of patient with respiratory symptoms	N 95 respirator Gown Gloves Eye protection
	Healthcare workers	Physical examination of patients without respiratory symptoms.	PPE according to standard precautions and risk assessment
	Patients with respiratory symptoms	Any	Provide surgical mask if tolerated
	Patients without respiratory symptoms.	Any	No PPE required
	Cleaners	After and between consultations with patients with respiratory symptoms.	N95 respirator Gown Heavy duty gloves Eye protection (if risk of splash from organic material or chemicals). Boots or closed work shoes
Waiting room	Patients with respiratory symptoms	Any	Provide surgical mask if tolerated. Immediately move the patient to an isolation room or

			separate area away from others; if this is not feasible, ensure spatial distance of at least 1 m from other patients.
	Patients without respiratory symptoms	Any	No PPE required
Administrative areas	All staff, including healthcare workers	Administrative tasks	No PPE required
Triage	Healthcare workers	Preliminary screening not involving direct contact.	Maintain spatial distance of at least 1 m. No PPE required
	Patients with respiratory symptoms	Any	Maintain spatial distance of at least 1 m. Provide surgical mask if tolerated
	Patients without respiratory symptoms	Any	No PPE required
Inpatient facilities			
Patient room	Healthcare workers	Providing direct care to COVID-19 patients.	N95 respirator Gown Gloves Eye protection (goggles or face shield). Closed shoes
		Aerosol-generating procedures performed on COVID-19 patients.	Respirator N95 Gown Gloves Eye protection Apron
	Cleaners	Entering the room of COVID-19 patients	Respirator N95 Gown Heavy duty gloves Eye protection (if risk of splash from organic material or chemicals). Boots or closed work shoes
	Visitors	Entering the room of a COVID-19 patient	Surgical mask Gown Gloves
Other areas of patient transit (e.g., wards, corridors).	All staff, including healthcare workers.	Any activity that does not involve contact with COVID-19 patients.	No PPE required
Healthcare facility	Healthcare worker	Taking of nasopharyngeal or oropharyngeal swabs	Respirator N95 Gown Gloves Eye protection (if risk of

			splash)
Laboratory	Lab technician	Manipulation of respiratory samples.	Respirator N95 Gown Gloves Eye protection (if risk of splash)
Administrative areas	All staff, including healthcare workers.	Administrative tasks that do not involve contact with COVID-19 patients.	No PPE required
COMMUNITY			
Home	Patients with respiratory symptoms.	Any	Maintain spatial distance of at least 1 m. Provide surgical mask if tolerated, except when sleeping.
	Caregiver	Entering the patient's room, but not providing direct care or assistance.	Surgical mask
	Caregiver	Providing direct care or when handling stool, urine or waste from COVID-19 patient being cared for at home.	Gloves Surgical mask Apron (if risk of splash)
	Healthcare workers	Providing direct care or assistance to a COVID-19 patient at home	Respirator N95 Gown Gloves Eye protection
Public areas (e.g., schools, shopping malls, bus stations).	Individuals without respiratory symptoms	Any	No PPE required
	Individuals with respiratory symptoms	Any	Use surgical mask
POINTS OF ENTRY (Border points)			
Administrative areas	All staff	Any	No PPE required
Screening area	Staff	First screening (temperature measurement) not involving direct contact.	Maintain spatial distance of at least 1 m. No PPE required
	Staff	Second screening (i.e., interviewing passengers with fever for clinical symptoms suggestive of COVID-19 disease and travel history).	Respirator N95 Gloves
	Cleaners	Cleaning the area where	Respirator N95

		passengers with fever are being screened.	Gown Heavy duty gloves Eye protection (if risk of splash from organic material or chemicals). Boots or closed work shoes
Temporary isolation area	Staff	Entering the isolation area, but not providing direct assistance.	Maintain spatial distance of at least 1 m. Respirator N95 Gloves
	Staff, healthcare workers facility.	Assisting passenger being transported to a healthcare facility.	Respirator N95 Gown Gloves Eye protection
	Cleaners	Cleaning isolation area	Respirator N95 Gown Heavy duty gloves Eye protection (if risk of splash from organic material or chemicals). Boots or closed work shoes
Ambulance or transfer vehicle	Healthcare workers	Transporting suspected COVID-19 patients to the referral healthcare facility.	Respirator N95 Gowns Gloves Eye protection
	Driver	Involved only in driving the patient with suspected COVID-19 disease and the driver's compartment is separated from the COVID-19 patient.	Maintain spatial distance of at least 1 m. No PPE required
		Assisting with loading or unloading patient with suspected COVID-19 disease.	Respirator N95 Gowns Gloves Eye protection
		No direct contact with patient with suspected COVID-19, but no separation between driver's and patient's compartments.	Respirator N95
	Patient with suspected COVID-19 disease.	Transport to the referral healthcare facility.	Surgical mask if tolerated
	Cleaners	Cleaning after and between transport of patients with suspected COVID-19 disease to the referral healthcare facility.	Respirator N95 Gown Heavy duty gloves Eye protection (if risk of splash from organic material or chemicals).

			Boots or closed work shoes
Special considerations for rapid response teams assisting with public health investigations			
Community			
Anywhere	Rapid response team investigators.	Interview suspected or confirmed COVID-19 patients or their contacts.	No PPE if done remotely (e.g., by telephone or video conference). Remote interview is the preferred method.
		In-person interview of suspected or confirmed COVID-19 patients without direct contact.	Respirator N95 Maintain spatial distance of at least 1 m. The interview should be conducted outside the house or outdoors, and confirmed or suspected COVID-19 patients should wear a surgical mask if tolerated.
		In-person interview with asymptomatic contacts of COVID-19 patients.	Maintain spatial distance of at least 1 m. No PPE required The interview should be performed outside the house or outdoors. If it is necessary to enter the household environment, use a thermal imaging camera to confirm that the individual does not have a fever, maintain spatial distance of at least 1 m and do not touch anything in the household environment.
Healthcare Facility, Home or else where			