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INFECTION PREVENTION AND CONTROL GUIDELINES 2019-Novel coronavirus(nCoV) infection in the Healthcare setting: Interim Guidance

BACKGROUND

Coronaviruses are a large family of viruses associated with causing less-severe disease, such as the common cold, and others more severe disease such as MERS and SARS. Some transmit easily from person to person, while others do not.

Globally, novel coronaviruses emerge periodically in different areas, including SARS in 2002 and MERS in 2012. The Chinese authorities made a preliminary determination of **a novel (or new) coronavirus**, identified in a hospitalized person with pneumonia in Wuhan, China.

An animal source has not yet been identified for this current outbreak however the mode(s) of transmission for nCoV from human to human is via **Droplets and Contact.**

Transmission to health-care workers (HCWs) will occur when appropriate IPC measures are not observed. This guidance is intended for healthcare workers (HCWs), healthcare managers and IPC teams at the facility level but it is also relevant for the national and district/provincial level.

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

- Early recognition, triage and source control
- Application and adherence of Standard Precautions for all patients
- Implementation of contact, droplet or aerosol precautions where indicated.
- Administrative controls
- Environmental and engineering controls

As a result, the Ministry of Health and Wellness (MOHW) Jamaica is issuing this as the first edition of guidance on infection prevention and control (IPC) strategies for use when infection with a novel coronavirus (2019-nCoV) is suspected.



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1. ENSURING TRIAGE, EARLY RECOGNITION, AND SOURCE CONTROL

Clinical triage includes a system for assessing all patients at admission allowing early recognition of possible 2019-nCoV infection and immediate isolation of patients with suspected nCoV infection in an area separate from other patients (source control).

To facilitate the early identification of cases of suspected nCoV 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 updated 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.



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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 medical mask to patients with suspected 2019-nCoV 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.⁵

- 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.⁷ Medical devices and equipment, laundry, food service utensils and medical waste should be managed in accordance with safe routine procedures.



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3. IMPLEMENTING EMPIRIC ADDITIONAL PRECAUTIONS

3.1 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 nCoV patients are admitted;
- Patients should be placed in adequately ventilated single rooms and when single rooms are not available, patients suspected of being infected with nCoV should be grouped together.
- All patients' beds should be placed at least 1 m apart regardless of whether they are suspected to have nCov 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 the following when handling the patient:
 - o medical mask
 - eye protection (googles) or facial protection (face shield) to avoid contamination of mucous membranes;
 - o clean, non-sterile, long-sleeved gown;
 - o gloves
- the use of boots, coverall and apron is not required during routine care
- Appropriate doffing and disposal of all PPE's and hand hygiene should be carried out.
- Equipment should be either single-use 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 medical mask.
- Ensure that HCWs who are transporting patients perform hand hygiene and wear appropriate PPE as described in this section.



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- 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 2019-nCoV patient.
- Maintain a record of all persons entering the patient's room, including all staff and visitors.

3.2 Airborne precautions for aerosol-generating procedures

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

Sample collection for investigation of 2019-nCoV is aerosol generating procedure (Refer to Section 7)

Ensure that HCWs performing aerosol-generating procedures:

- o perform procedures in an adequately ventilated room
- o use a (NIOSH)-certified N95particulate respirator

When HCWs put on a disposable particulate respirator, they must always perform the seal check. NB. If the wearer has facial hair (i.e., a beard) it may prevent a proper respirator fit;

- \circ 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.



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4. IMPLEMENTING ADMINISTRATIVE CONTROLS

Administrative controls and policies for the prevention and control of transmission of 2019-nCoV 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 2019-nCoV
- 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.

4.1. 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 nCoV 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.



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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.
- Spatial separation of at least 1 meter should be maintained between all patients.
- Ensure that cleaning and disinfection procedures are followed consistently and correctly
- Manage laundry, food service utensils and medical waste in accordance with safe routine procedures.

Both spatial separation and adequate ventilation can help reduce the spread of many pathogens in the healthcare setting.

Cleaning environmental surfaces with water and detergent and applying commonly used hospital disinfectants (such as sodium hypochlorite) is an effective and sufficient procedure.



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6. DURATION OF CONTACT AND DROPLET PRECAUTIONS FOR PATIENTS WITH nCoV INFECTION

Standard precautions should be applied at all times.

Additional contact and droplet precautions should continue until the patient is asymptomatic.

7. COLLECTING AND HANDLING LABORATORY SPECIMENS FROM PATIENTS WITH SUSPECTED 2019-NCOV 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.

Procedure

- Ensure that HCWs who collect specimens use appropriate PPE (i.e., eye protection, a long-sleeved gown, gloves and a particulate NIOSH-certified N95respirator)
- All specimens are to be transported using safe handling
- 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 date of onset of illness, clinical diagnosis and date sample taken and suspected nCoV of potential concern on the laboratory request form.



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• Notify the laboratory as soon as possible that the specimen is being transported.

8. **RECOMMENDATION FOR OUTPATIENT CARE**

The basic principles of IPC and standard precautions should be applied in all health care facilities, including outpatient care and primary care.

For 2019-nCoV infection, the following measures should be adopted:

- Triage and early recognition
- Emphasis on hand hygiene, respiratory hygiene and medical masks to be used by patients with respiratory symptoms
- Appropriate use of contact and droplet precautions for all suspected cases
- Prioritization of care of symptomatic patients, ensure they have a designated waiting area
- Educate patients and families about the early recognition of symptoms, basic precautions to be used and which health care facility they should refer to.



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DROPLET/ CONTACT PRECAUTION PPE CHECKLIST

- Gloves (nitrile, powder-free, non-sterile. Cuff length preferably reach mid-forearm)
 Yes □ No □
- 3. **Eye protection** (Made of clear plastic and provides good visibility to both the wearer and the patient, Adjustable band to attach firmly around the head and fit snuggly against the forehead, Fog resistant (preferable), Completely cover the sides and length of the face, may be re-usable (made of robust material which can be cleaned and disinfected or disposable.)

Yes 🗆 🛛 No 🗆

4. Surgical Facemasks (Medical/surgical mask, high fluid resistance, good breathability, internal and external faces should be clearly identified, structured design that does not collapse against the mouth (e.g. duckbill, cup shaped)
 Yes □ No □



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AEROSOL PRECAUTION PPE CHECKLIST

- Long sleeve gowns (Single use, fluid resistant, disposable, length mid-calf to cover the top of the boots, light colours preferable to better detect possible contamination, thumb/finger loops or elastic cuff to anchor sleeves in place)
 Yes □ No □
- Internal Gloves (nitrile, powder-free, non-sterile. Cuff length preferably reach mid-forearm)
 Yes
 No
- 3. **Eye protection** (Made of clear plastic and provides good visibility to both the wearer and the patient, Adjustable band to attach firmly around the head and fit snuggly against the forehead, Fog resistant (preferable), Completely cover the sides and length of the face, may be re-usable (made of robust material which can be cleaned and disinfected or disposable.) Yes □ No □
- Respirator (N95, Good breathability with design that does not collapse against the mouth (e.g. duckbill, cup shaped) Yes □ No □
- 5. **External Gloves** (nitrile, powder-free, non-sterile. Cuff length preferably reach mid-forearm)

Yes 🗌 No 🗆



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APPENDIX 1: CDC GUIDELINES FOR PPE DONNING AND DOFFING PROCEDURES





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