# INFECTION PREVENTION AND CONTROL

## RECOMMENDATIONS DURING HEALTH CARE WHEN COVID-19 IS SUSPECTED

**NCDC INTERIM GUIDANCE**

The guidance is intended for all healthcare workers (HCWs), the facility management team and Infection Prevention and Control (IPC) teams at all levels of healthcare in Nigeria

**29th February, 2020**

NIGERIA CENTRE FOR DISEASE CONTROL

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

1. Ensuring triage, early recognition, and source control (isolating) of patients with suspected SARS-CoV-2 (COVID-19) infections.

2. Application of standard precautions for all patients at all times

3. Implementation of empiric additional precautions – droplet and contact precautions in the care of suspected and confirmed cases of COVID-19 and airborne precautions (in certain situations when aerosol generating procedures are carried out on COVID-19 patients).

4. Implementing administrative controls.

5. Use of environmental and engineering controls such as adequate spatial separation of patients, appropriate ventilation and appropriate cleaning of the environment.

## 1. Ensure triage, early recognition, and source control

### The Screen, Isolate and Notify (S-I-N) approach

One of the most critical actions for the prevention and control of the COVID-19 is to identify cases early and separate such patients from others who are not infected.

Every patient coming to a health facility during this COVID-19 outbreak period must be safely **screened** for the disease using the case definition, and patients suspected of having COVID-19 should be isolated from other patients and the appropriate authorities **notified**.

### How to SCREEN Individuals for COVID-19

This should be done using the case definition for COVID-19

**Case Definition for COVID-19.**

## Suspected Case

Any person (including severely ill patients) with **any** of the following symptoms: fever, cough or difficulty in breathing who within 14 days before the onset of illness had any of the following exposures:

- History of travel to any country* with confirmed and ongoing community transmission of SARS-CoV-2 OR
- Close contact with a confirmed case of COVID-19 OR
- Exposure to a healthcare facility where COVID-19 case(s) have been reported

* As at 25/2/20, countries with ongoing community transmission are China, Korea, Iran, Italy.

## How to Screen

- Set up a triage station at healthcare facility points of entry (Accident and emergency, outpatient clinics, antenatal clinics, etc).
- Use triage questions based on case definition to obtain relevant history including travels
- Take temperature reading
- Maintain a screening register
- Maintain a distance of at least 1m from patients and between patients at all times
- Waiting room chairs for patients should be 1m apart
- Maintain a one-way flow for patients and for staff
- Provide clear signage for symptoms and directions
- Family members should wait outside the triage area to prevent overcrowding
- Observe for cough:
    - If coughing (but not COVID-19), fast track patient for consultation, ensure he coughs into elbow. Give a medical mask to patient for use.
    - If sneezing, teach to sneeze into disposable tissue or elbow. Give a medical mask to use.
    - Ensure patient performs hand hygiene after sneezing or coughing.

**Materials needed for triage**: The following materials should be provided in the triage area

1. Screening questionnaire (see appendix)
2. The triage algorithm
3. PPE (gloves, Medical/Surgical mask, gown)
4. Disposable tissue (For patients)
5. Hand hygiene equipment (alcohol-based hand rubs, soap and running water) and hand hygiene posters
6. Infrared thermometer

7. Waste bins
8. Materials for cleaning and disinfection

**If patient does not meet the case definition for suspect case of COVID-19, then he/she should continue to access routine care in the healthcare facility with standard precautions applied at all times.**

**ISOLATE suspect cases**

**IF the patient meets the case definition, S/He is a suspect case and should be immediately isolated.**

- Once identified at screening as a suspected case, the patient should be moved immediately to a holding area for further evaluation and arrangements made to collect sample for laboratory confirmation.
- Isolate the suspect patient in a well-ventilated room, windows open to the outside with doors closed.
- Arrange also for commencement of further care if need be and for transportation to a designated COVID-19 treatment centre.
- Ensure there is a register outside the door. ALL healthcare workers (HCW) that enter the room must fill their name, address, phone number, time of entry, time of exit as well as reason for entry.
- Limit the number of people accessing the room and assign dedicated HCW to this room.
- The room must have the appropriate signage (Contact and Droplet precautions) and have facilities for respiratory hygiene, hand hygiene and safe waste disposal.

**Materials needed for holding/isolation area**

1. PPE (gloves, Medical/Surgical mask, gown)
2. Hand hygiene equipment and posters
3. Infrared thermometer
4. Waste bins
5. Materials made available for cleaning and disinfection
6. If samples for laboratory testing are to be collected here, then (N-95 masks should also be available before entry into the room)

- A trained clinician wearing appropriate PPE based on risk assessment (Medical mask, gloves and gown) should evaluate patient for more information about potential exposures, symptoms and possible alternative diagnosis and verify if the patient meets the definition for a suspected case of COVID-19. The clinician must adhere to the five moments for hand hygiene at all times and must avoid touching his/her face or adjusting PPE.
- After assessing the patient, the clinician must follow the steps for safely doffing and disposing the PPE (see steps in doffing PPE).

- Use dedicated medical equipment for care of patient in isolation (thermometers, cutlery, sphygmomanometers etc,) All non-dedicated, non-disposable medical equipment used for patient care should be cleaned and disinfected appropriately

- Clean stethoscopes with alcohol between patients
- Ensure that appropriate environmental cleaning and disinfection procedures are followed consistently and correctly.

### While in Isolation, educate the patient

- Explain the reasons for the isolation/holding and ensure patient understands by repeating the reasons
- Explain the procedures you are following with respect to controlling transmission to the family, healthcare workers and the community
- Educate the patient on respiratory hygiene and cough etiquette
- Give the patient a Medical mask and make sure he/she understands how to use it.

### Notification (S-I-Notify)

- Notify appropriate authority (Local Government Area Disease Surveillance and Notification Officer (DSNO), State DSNO or State Epidemiologist) about any suspected case
- DO NOT wait for laboratory confirmation before notification. Call NCDC Toll free number: **0800-97-0000-10**
- Make every effort to reduce the waiting time between first contact with the patient and notification/transfer; ideally it should be immediate.

## 2. Application of standard precautions for all patients at all times

### Standard Precautions

The goal of standard precautions is to reduce the risk of transmission of microorganisms from both recognized and unrecognized sources of infection. They should be used every time health care is practiced and should become second nature as part of healthcare practice. When correctly implemented, the spread of the COVID-19 can be prevented or at least decreased.

Elements of Standard Precautions which are important in the care of patients with respiratory infections, including those caused by COVID-19, are:

- Hand hygiene
- Respiratory hygiene and cough etiquette

- Appropriate use of PPE (based on risk assessment) e.g. Gloves, Facial protection (eyes, nose and mouth), gowns and aprons
- Patient placement with adequate ventilation
- Safe handling, cleaning and disinfection of patient care equipment
- Environmental cleaning
- Waste management

These should be strictly adhered to.

## 3. Implementation of empiric additional precautions

**Contact and droplet precautions for all patients with suspected or confirmed COVID-19.**

Additional precautions are implemented "in addition" to standard precautions. These are contact, droplet and airborne precautions.

All patients with a suspected or confirmed case of COVID-19 infection should in addition be hospitalized and isolated under **droplet and contact precautions**.

Staff attending to patients COVID-19 should wear appropriate PPE: Medical mask, goggles or face shield, gown and gloves

Avoid touching eyes, nose or mouth with contaminated gloved or ungloved hands.

Suspect and confirmed COVID-19 patients should be placed in a single, well ventilated room, when possible. Suspect and confirmed patients should not be placed in the same room.

If single rooms are not available, separate patients from others by at least 1m and use hospital blinds to separate patients

Ensure patient remains within the confines of the room with limited movement. If transport/movement is required, ensure that the patient uses a medical mask and convey patient through predetermined transport routes to minimize exposure to staff, other patients and visitors.

Ensure there is material for hand hygiene according to the "5 Moments", and after removing PPE

Appropriate equipment cleaning, disinfection, and sterilization should be done.

Avoiding contaminating surfaces not involved with direct patient care (e.g. door handles, light switches, mobile phones) these are frequently touched areas. Attention should be paid to frequently touched surfaces and cleaning staff should wear appropriate PPE used for routine cleaning.

Environmental cleaning should be done at least twice daily using detergent and water followed by disinfection with 0.05% chlorine solution.

***Airborne precautions*** in COVID-19 **are recommended ONLY for aerosol generating procedures such as**: tracheal intubation, airway suctioning, bronchoscopy, cardiopulmonary resuscitation – pressure on the chest during cardiopulmonary resuscitation may induce production of aerosol.

- Place patient in single room with adequate ventilation: natural ventilation with wide open windows that open to the outside, away from other wards with doors closed and preferably with an ante-room. Rooms should provide air flow of at least 160 L/s per patient and 12 air exchanges per hou. The direction of air flow should be controlled, and the air should flow away from the healthcare worker towards the patient and not from the patient towards the healthcare worker.
- The Health care worker should put on (N-95 respirator, gown, gloves, goggles or face shield).
- N95 must not be removed until the healthcare worker is outside the patient's room with the door closed.
- All the other precautions that apply in contact and droplet precautions should also be maintained.

## 4. Implementing administrative controls

All healthcare facilities in Nigeria must ensure that they have an IPC programme, with their healthcare workers correctly trained on basic IPC procedures and able to implement standard precautions as well as droplet and contact precautions. All facilities must provide the supplies, equipment, information leaflets and posters needed to assist healthcare workers and visitors adhere to IPC requirements.

### The Health facility management team must:

- Restrict healthcare workers from entering the rooms of COVID-19 patients if they are not involved in direct care.
- Consider bundling activities to minimize the number of times a room is entered (e.g., check vital signs during medication administration or have food delivered by healthcare workers while they are performing other care) and plan which activities will be performed at the bedside.
- Visitors will not be allowed but if this is not possible, restrict the number of visitors to areas where COVID-19 patients are being isolated; restrict the amount of time visitors

are allowed to spend in the area; and provide clear instructions about how to put on and remove PPE and perform hand hygiene to ensure visitors avoid self-contamination

- Train and Educate Healthcare Workers
    - **i.** Provide HCW with job- or task-specific education and training on preventing transmission of COVID-19.
    - **ii.** Ensure that HCW are educated, trained, and practice the appropriate use of PPE prior to caring for a patient. They should also ensure prevention of contamination of clothing, skin and environment during the process healthcare delivery
  - ➢ Monitor and ensure Management of ill and Exposed Healthcare Personnel and
    - **i.** Inform NCDC of all healthcare worker infection
  - ➢ Provide appropriate isolation rooms
  - ➢ Provide physical barriers or partitions to guide patients through triage areas
  - ➢ Provide adequate quantities as well as appropriate supplies for prevention of disease transmission e.g. Medical masks, certified N95masks, gloves, hand hygiene, respiratory hygiene and waste disposal materials etc.
  - ➢ Report all suspect and confirmed cases in healthcare facilities to the State Epidemiologist or DSNO and NCDC.

## Use of Engineering and Environmental controls

The following engineering controls should be put in place

- Provide isolation rooms that are well ventilated (wide open windows that open to the outside, away from other wards with doors closed and preferably with an ante-room. Rooms should provide air flow of at least 160 L/s per patient with at least 12 air exchanges per hour and controlled direction of air flow (air flow should be away from the healthcare worker towards the patient to the outside through the open window. Air should not flow from the patients room into the hallway or other rooms/wards.
- Provide physical barriers or partitions to guide patients through triage areas,
- Provide closed suctioning systems for airway suctioning for intubated patients.

## Environmental Infection Control

- ➢ Dedicated medical equipment should be used for patient care.
- ➢ All non-dedicated, non-disposable medical equipment used for patient care should be cleaned and disinfected appropriately.
- ➢ Ensure that environmental cleaning and disinfection procedures are followed consistently and correctly.

- There should be no sweeping of either holding areas or isolation units, wet cleaning is the rule of thumb.
- Routine cleaning with detergent and water and disinfection procedures (use of cleaning agent and water to clean surfaces prior to use of 0.05% Chlorine solution to clean frequently touched surfaces and floors) are appropriate for COVID-19 in healthcare settings, including those patient-care areas in which aerosol-generating procedures are performed.

In summary we wish to state that the disease is still evolving and we are daily following and learning from global trends and scientific evidence coming out to refine our recommendations.

## References


1. European Centre for Disease Prevention and Control. Guidance for wearing and removing personal protective equipment in healthcare settings for the care of patients with suspected or confirmed COVID-19. Stockholm: ECDC; 2020

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4. Interim Infection Prevention and Control Recommendations for Patients with Confirmed Coronavirus Disease 2019 (COVID-19) or Persons Under Investigation for COVID-19 in Healthcare Settings. https://www.cdc.gov/coronavirus/2019-ncov/infection-control/control-recommendations.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fhcp%2Finfection-control.html Accessed 22/02/2020

5. Rational use of personal protective equipment for coronavirus disease 2019 (COVID-19). World Health Organization Interim guidance. 27 February 2020.