



Republic of the Philippines
Department of Health
OFFICE OF THE SECRETARY

April 27, 2020

DEPARTMENT MEMORANDUM

No. 2020 - 0208

TO: ALL UNDERSECRETARIES AND ASSISTANT SECRETARIES; DIRECTORS OF BUREAUS/SERVICES AND CENTERS FOR HEALTH DEVELOPMENT; CHIEFS OF MEDICAL CENTERS, HOSPITALS, SANITARIA AND TREATMENT, AND REHABILITATION CENTERS; EXECUTIVE DIRECTORS OF SPECIALTY HOSPITALS AND ATTACHED AGENCIES; AND ALL OTHERS CONCERNED

SUBJECT: Interim Guidelines on Enhancing the Infection Prevention and Control Measures through Engineering and Environmental Controls in All Health Facilities and Temporary Treatment and Monitoring Facilities during the COVID-19 Pandemic

I. Background:

Pursuant to the Memorandum from the Executive Secretary last March 16, 2020 with the subject Community quarantine over the entire Luzon and further guidelines for the management of COVID-19 situation, the government has attached great importance to the infection prevention and control (IPC) of the pandemic. In line with this, great efforts have been made to increase the number of isolation beds for patients with COVID-19 by establishing temporary facilities, designating COVID-19 hospitals as well as facilities for step down care.

Health care workers providing patient care in the COVID-19 pandemic have a higher risk of infection due to their work environment. As of April 22, 2020, more than 1,000 healthcare workers in the country were tested positive for the coronavirus disease, most of whom are doctors.

In the efforts to strengthen existing measures for IPC in all facilities catering to suspect, probable and confirmed COVID-19 patients, the Department of Health has coordinated with the Anti-epidemic Medical Expert Team from China (CMET) to come up with engineering and environmental controls to mitigate the risks/ hazards particularly of our health care workers.

II. OBJECTIVE

To provide guidance on the engineering and environmental controls for the enhancement of infection prevention and control in all health facilities, and temporary treatment and monitoring facilities.

III. SCOPE AND COVERAGE

These guidelines shall cover all health facilities, and temporary treatment and monitoring facilities catering to suspect, probable, and confirmed COVID-19 patients.

IV. GENERAL GUIDELINES

- A. All health facilities and temporary treatment and monitoring facilities shall implement engineering and environmental controls to enhance infection prevention and control measures.
- B. The Design and Build should reflect the recommendations of the Infection Prevention and Control Team/ Committee or its equivalent personnel.
- C. Patient accommodation and patient placement should be designed in a way that addresses several IPC requirements as follows:
 - 1. Maximizing patient comfort and dignity while ensuring ease of delivery inpatient care;
 - 2. Minimizing the risk of transmission of microorganisms;
 - 3. Adequate ventilation and adequate environmental cleaning in all areas in the healthcare facility;
 - 4. Adequate toilet and shower, and hand hygiene facilities (visible location of wash hand sinks and alcohol hand rub dispensers)
- D. All health facilities shall involve its Infection Prevention and Control (IPC) Officers at every stage in designing new and refurbishing old infrastructures, adding extensions, upgrading existing facilities and undertaking any building work that will impact on how care is provided to patients.
- E. Regular environmental cleaning and disinfection according to protocols must be done to minimize the risk of infection.
- F. Safety of healthcare workers and patients must be ensured through the utilization of engineering measures to supplement infection prevention and control.
- G. All cited issuances within this guideline may be accessed through the links provided in **Annex A**.

V. SPECIFIC GUIDELINES

A. Engineering Controls

All Health Facilities and Temporary Treatment and Monitoring Facilities catering to COVID-19 patients shall apply the prescribed zoning in all areas where care for suspect, probable, and confirmed COVID-19 cases will be provided. These include, but are not limited to, the following: Emergency Department, Triage Area, and COVID-19 Isolation Ward.

1. The prescribed zoning shall be the following:
 - a. **Contaminated Zone:** serves as the area where patients admitted are contained.
 - b. **Buffer Zone (Potentially contaminated area):** serves as an area for Personal Protective Equipment (PPE) donning and doffing, decontamination, and hand hygiene.
 - c. **Sterile Zone (Clean Area):** serves as holding area and entrance for healthcare workers.
2. Each zone shall be divided by glass and steel. In cases that this is not feasible, the use of drywall and translucent material for the view window may be permitted to act as a viewing panel from the nurse's station to the patient's room or ward to provide an observation panel.
3. The buffer zone shall have a negative pressure ventilation to ensure that the air flows from clean to the contaminated area (**Annex B**). If this is not feasible, a dilution ventilation must be utilized, with air exhausted to an air space with no people.
4. The buffer zone shall be divided further into three levels, separated by partitions such as polycarbonate sheets, drywall, plywood or any other construction material available. Donning and Doffing processes will utilize two separate pathways with corresponding procedures per level. Refer to **Annex C** for pathways

	Donning Area	Doffing Area
Level 1	Change from outside clothes to uniform	Misting (if applicable), removal and disposal of gloves and gown
Level 2	Hand Hygiene	Hand hygiene, removal of mask and goggles
Level 3	Wearing of complete PPE	Change from uniform to outside clothes

5. Footbath shall be utilized in transition areas from highly infectious to lower infectious. It shall be placed between doffing and clean area, and at the exits of the health facilities.

6. Laboratories performing RT-PCRs shall ensure the following:
 - a. A dedicated space for each of the following activity:
 - i. Specimen reception;
 - ii. Virus inactivation and nucleic acid extraction (Pre-PCR);
 - iii. Reagent storage and handling;
 - iv. PCR; and
 - v. Clerical activities.
 - b. A unidirectional workflow;
 - c. Controlled and adequate ventilation with prescribed air exchanges; and
 - d. Adequate lighting

B. Administrative Control and Patient Flow

All health facilities and temporary treatment and monitoring facilities shall establish a clear foot traffic within the health facility with the following strategies:

1. Separate entrance and exit for patients and healthcare workers;
2. Unidirectional flow when moving from one area to another; and
3. For health facilities catering to both COVID-19 and non COVID-19 patients, the care of each of the population should be in separate dedicated areas (i.e. triage, emergency department, patient ward etc).

C. Patient placement

All health facilities and temporary treatment and monitoring facilities shall adhere to the following principles of patient placement:

1. Suspect, probable, and confirmed COVID-19 patients shall follow patient placement in accordance with DOH Department Memorandum (DM) No. 2020-0062 *Guidelines on the Standard of Airborne Infection Isolation Room and Conversion of Private Rooms and/ or Wards into Temporary Isolation Rooms for the Management of Patients Under Investigation* and its Amendment.
2. Patients exhibiting symptoms of COVID-19 should immediately be isolated.

D. Healthcare Worker Safety

1. All health facilities and temporary treatment and monitoring facilities shall have clear policies and protocols on reporting of probable breaks of IPC protocols and sick leaves.
2. All health facilities and temporary treatment and monitoring facilities shall orient the staff on the facility's infection prevention and control protocols prior to start of duty.

3. Temperature and respiratory symptoms check before and after the tour of duty shall be done for all healthcare workers.
4. All health workers shall be subjected to risk assessment and subsequent management based on DOH Department Circular (DC) No. 2020-0106 *Use of World Health Organization Interim Guidelines for Health Workers Exposure Risk Assessment and Management in the Context of COVID-19 Virus*.
5. Rational and proper use of PPE shall be ensured at all times in accordance with DOH DM 2020-0176 *Interim Guidelines on the Rational Use of Personal Protective Equipment for Coronavirus Disease 2019*.
6. An accommodation outside the hospital premises must be provided to all healthcare workers outside the health facility and in accordance with DOH DM No. 2020-0162 *Interim Guidelines on the Accommodation Arrangement for Healthcare Workers during COVID-19 Health Emergency Response Period*.
7. If feasible, monitoring of status of patients in the ward shall be done using cameras or with a transparent window view from the nurse's station to limit exposure of healthcare workers in the contaminated zone.
8. Clothes such as scrub suits and uniforms worn during the tour of duty must be kept inside the health facility and must be disinfected in accordance with DOH DM 2020-0167 *Interim Guidelines on the Proper Handling and Disinfection of Non-critical Items Used in the Management of COVID-19 Patients in All Health Facilities and Temporary Treatment and Monitoring Facilities*. Laundry services shall be provided for these uniforms or scrub suits.

E. Environmental Cleaning

1. Cleaning and disinfection of surfaces and non-critical items must adhere to the standards of disinfection in DM 2020-0167 and DM 2020-0157 or "*Guidelines on Disinfection in Various Settings as an Infection Prevention and Control Measure Against COVID-19*".
2. Surfaces and areas where suspect, probable, and confirmed COVID-19 patients receive care shall be cleaned and disinfected at least once a day, and after a patient is discharged using the following recommended disinfectants:
 - a. 70% ethyl alcohol to disinfect small surface areas and equipment between uses, such as reusable dedicated equipment

- b. Sodium hypochlorite at 0.1% (1000 ppm) for disinfecting surfaces and 0.5% (5000 ppm) for disinfection of blood or bodily fluids spills (note: for surfaces or walls with blood or bodily fluids, allow the disinfectant to sit for 30 mins).
- 3. For non-patient areas such as administrative offices, nutrition & dietetics, engineering & maintenance and etc., routine cleaning may be performed with detergent or disinfectant solution/ wipe at least daily or when visibly dirty.
- 4. Environmental cleaning and disinfection per zone shall be done as follows:
 - a. Contaminated (Dirty) area
 - i. For walls, floor, and surfaces, clean and disinfect using appropriate recommended disinfectants at least 4 times/day and increase if necessary.
 - ii. For non-critical items, disinfection shall follow the standards of DM2020-0167.
 - iii. For office supplies, including medical personnel office desk and computers, disinfect using disinfectant wipes at least 4 times/day.
 - iv. Floors contaminated with excreta, blood, vomit, and secretions must be cleaned and disinfected using 0.5% sodium hypochlorite.
 - b. Buffer (Potentially contaminated) Area
 - i. Clean and disinfect the floor at least 2 times per day
 - ii. Wipe surfaces of desk, lockers, and frequently touched surfaces with 70% ethyl alcohol at least twice a day.
 - iii. Clean up medical waste in the exit of the doffing area of the buffer room 4 times a day or in between shifts.
 - iv. An exhaust fan directed to an open air space with no foot traffic is recommended for air disinfection and ventilation. If not feasible, open the windows and doors for ventilation for 30 minutes each time after doffing.
 - c. Sterile (Clean) area
 - i. Maintain the area clean and organize the overall environment per shift.
 - ii. Clean and disinfect the floors, surfaces, and walls using the prescribed disinfectants at least twice daily.

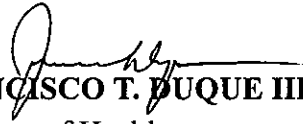
F. Waste Management

- 1. Proper collection, storage, transfer, treatment, transport and disposal of infectious waste from healthcare facilities and COVID -19 treatment units is key may refer to the DOH DM 2020-0170 entitled *“Interim Guidelines on the Management of Health Care Waste in Health Facilities, Community*

quarantine Units, and Temporary Treatment and Monitoring Facilities with Cases of Coronavirus Disease 2019 (COVID-19)”

2. Pedal-operated waste collection bins with liners should be available at point of use in healthcare facilities as the preferred choice. In the absence of pedal-operated waste bins, bins with swinging lids can be opted as the alternative. Otherwise, open waste containers are better than those which require physical opening/covering by hands.
3. Waste record keeping is important to understand how much waste is generated per day.
4. Storage location to cater for large volumes, transport mechanism in decontaminated trucks and final disposal arrangements through autoclaves and other technologies is indicated in the DC No. 2020-0191 entitled “*Circulation of the Health Care Waste Management Manual 4th Edition*”.

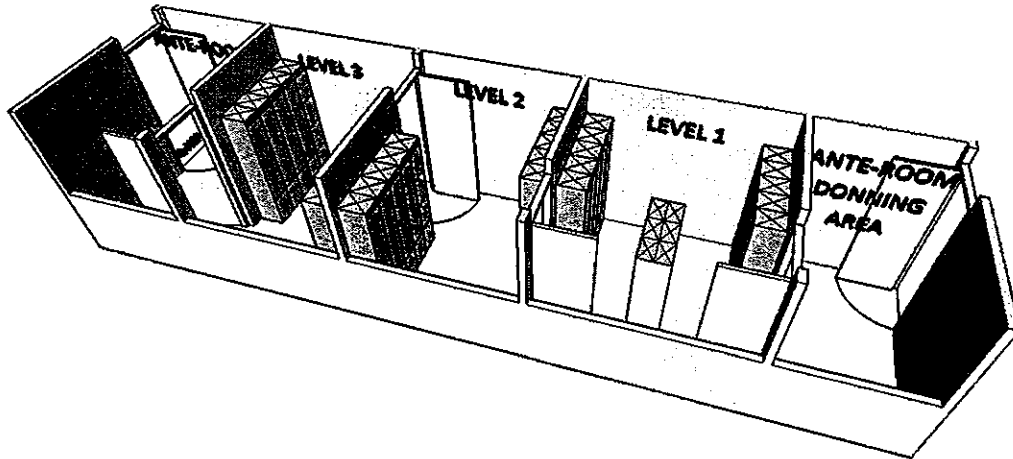
For strict compliance and dissemination to all concerned.


FRANCISCO T. DUQUE III, MD, MSc
Secretary of Health

ANNEX A. List of Cited Issuances

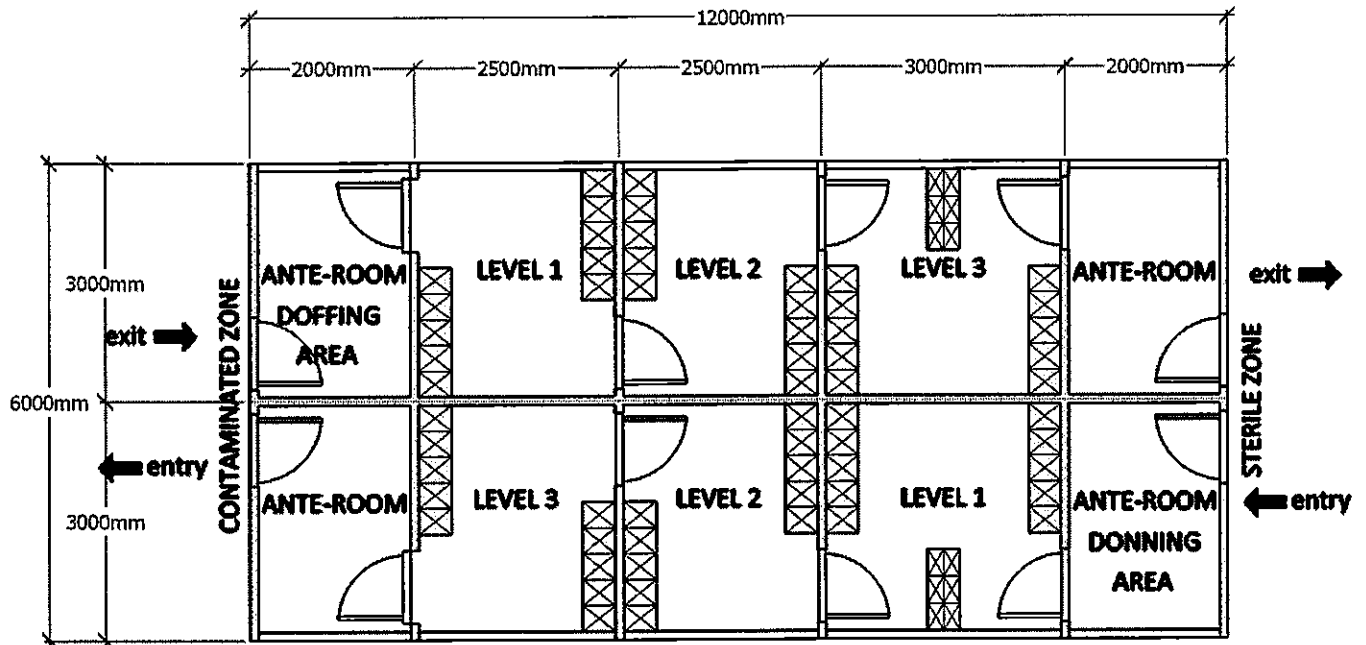
Issuance No.	Title	Link
DC No. 2020-0106	Use of World Health Organization Interim Guidelines for Health Workers Exposure Risk Assessment and Management in the Context of COVID-19 Virus.	bit.ly/DC2020-0106
DM No. 2020-0062 DM No. 2020-0062-A	Guidelines on the Standard of Airborne Infection Isolation Room and Conversion of Private Rooms and/or Wards into Temporary Isolation Rooms for the Management of Patients Under Investigation and its Amendment.	bit.ly/DM2020-0062 bit.ly/DM2020-0062A
DM No. 2020-0176	Interim Guidelines on the Rational Use of Personal Protective Equipment for Coronavirus Disease 2019	bit.ly/DM2020-0176
DM No. 2020-0162	Interim Guidelines on the Accommodation Arrangement for Healthcare Workers during COVID-19 Health Emergency Response Period.	bit.ly/DM2020-0162
DM No. 2020-0167	Interim Guidelines on the Proper Handling and Disinfection of Non-critical Items Used in the Management of COVID-19 Patients in All Health Facilities and Temporary Treatment and Monitoring Facilities	bit.ly/DM2020-0167
DM 2020-0157	Guidelines on Cleaning and Disinfection in Various Settings as an Infection Prevention and Control Measure Against COVID-19	bit.ly/DM2020-0157
DM No. 2020-0170	Interim Guidelines on the Management of Health Care Waste in Health Facilities, Community quarantine Units, and Temporary Treatment and Monitoring Facilities with Cases of Coronavirus Disease 2019 (COVID-19)	bit.ly/DM2020-0170
DC No. 2020-0191	Circulation of the Health Care Waste Management Manual 4th Edition	bit.ly/HCWMmanual4thed

ANNEX B. Buffer Zone Diagram



The Buffer zone is divided into three different levels and is ideally with a negative pressure ventilation. This is to allow a unidirectional airflow from the clean to the contaminated area.

ANNEX C. Donning and Doffing Pathways Through the Buffer Zone



The Healthcare worker will enter through the three levels of the Donning Area and perform the following procedures (Blue arrow): 1. Change into his/her uniform; 2. Perform hand hygiene; and 3. Wear the appropriate PPE (gown/coverall, mask and goggles/face shields, gloves).

The Healthcare worker will exit the contaminated zone by passing through the three levels of the Doffing Area (Red arrow). The HCW will perform the following procedures in each level: 1. Remove his/her gown/coverall, then other PPEs; 2. Perform hand hygiene; and 3. Change from uniform to outside clothes.