

DEPARTMENT: CRITICAL CARE

SUBJECT: Inpatient guidelines of care for Infectious Disease requiring Airborne, Droplet, and Contact Isolation Precautions

ORIGINAL DATE: APRIL 2020

CLINICAL NURSE SPECIALIST, INTENSIVE CARE UNIT APPROVAL: _____

DEPARTMENT HEAD, CRITICAL CARE UNIT APPROVAL: _____

MEDICAL DIRECTOR, INTENSIVE CARE UNIT APPROVAL: _____

ENCLOSURE: (1) COVID Treatment Unit (CTU) Monitor Duties

PURPOSE:

To provide a standardized policy and guidelines of care for patients known or suspected to be infected with highly pathogenic organisms transmitted by both the airborne route and by direct or indirect contact with the patient, with environmental surfaces, or with contaminated patient care equipment.

BACKGROUND:

Preventing transmission of respiratory pathogens including COVID-19 in hospitals requires the application of infection control procedures and protocols including environmental controls, administrative controls, safe work practices, and personal protective equipment (PPE).

POLICY:

1. Patients with suspected or confirmed COVID-19 are subject to the hospital's Infection Control Isolation Policy.
2. All nursing staff assigned to care for suspected patients will be properly trained in proper PPE practices and aware of command protocols prior to assuming care.
3. Staff will ensure adherence to the following Isolation Precautions:
 - a. Airborne + Contact + Eye Protection (goggles or face shield).
 - b. Clinicians must wear a "single use only" respirator (a fit-tested N95 mask), gown, gloves and eye protection (goggles or wrapped eye glasses)
4. Limit staff in the room, especially for any aerosol-generating procedures.
5. When feasible, nursing care will be bundled to limit excessive exposure time.

6. A staff member will be designated to Special Precautions Unit to serve as a “Clean” monitor to assist with monitoring adherence to Infection control guidelines, retrieving medications and/or supplies.
7. When supply of respirators are unable to meet the demand, facemasks are acceptable alternative to protect the wearer from splashes or sprays. The use of respirators should be prioritized for procedures that would likely pose exposures to health care personnel (HCP).
8. When there is a shortage of isolation gowns, the use of gown should be prioritized for aerosol generating procedures, activities with anticipated splashes or sprays and high contact patient care activities.

PROCEDURE:

A. Hand Hygiene

HAND HYGIENE IS THE SINGLE MOST IMPORTANT MEANS OF PREVENTING THE SPREAD OF INFECTION.

Wash hands with soap and water for 20 seconds before and after patient contact, when in contact with potentially infectious material, and before putting on and upon removal of PPE. Disinfect hands with an alcohol-based sanitizer if handwashing is not readily available, then wash hands with soap and water as soon as possible. Sanitize hands with an alcohol-based sanitizer upon leaving the Ante Room.

B. Patient Placement – Airborne Infection Isolation Room (AIIR)

Patients will be placed in an Airborne Infection Isolation Room (AIIR), preferably with an anteroom. Doors into the room must be kept closed at all times to ensure adequate negative pressure.

For rooms that require activation of negative pressure airflow, pressure conversion switches must be switched to “negative”. Negative pressure rooms must be validated every 12 hours during shift change when in use and documented. Methods of validation include use of a visual indicator wall monitor device.

Only essential personnel should enter the room. All persons entering the rooms will sign the Entry & Exit log and will use PPE, including respiratory protection. An Observer will be assigned to watch and document proper donning/doffing of PPE.

C. Personal Protective Equipment (PPE)

Correct use of PPE is critical to preventing staff exposure. Monitors will be assigned to the SPU to review correct donning and doffing procedures with staff when this protocol is initiated and will monitor staff to ensure compliance with donning and doffing protocols.

1. Donning (putting on) PPE: These requirements apply to all staff entering the room of a patient. The following PPE is required to be donned prior to entry into the patient room. Donning in the following order is recommended.
 - a. Gown - A clean, nonsterile, disposable, isolation gown must be worn. Ensure that gown is tied in back and provides full coverage.
 - b. N-95 respirator
 - i. All staff must wear approved respiratory protection (N-95 respirator).
 - ii. Before using an N-95 respirator, staff must be medically cleared and trained in how to wear/use each device.
 - iii. For N-95 respirators, staff must have been fit-tested within the past year to ensure proper size and fit.
 - iv. A “fit-check” (also known as a “seal check”) should be performed before each N-95 respirator use.
 - v. The N-95 respirator must be discarded after each use upon leaving contaminated room.
 - c. Goggles/Face shield
 - i. All staff must wear goggles or face shield to protect mucous membranes from exposure due to splash or potential for hand contamination of eyes, nose or mouth.
 - d. Gloves
 - i. All staff must wear clean, nonsterile gloves. Gloves must be pulled over the sleeves/cuffs of gown.
2. Doffing (removing) PPE: When removing protective equipment; remove in the following order and then perform hand hygiene. Use the doffing checklist (Enclosure 1) provided and dispose in appropriate bin. See doffing sequence (Enclosure 2).
 - a. Gloves and Gown in a single step
 - b. Goggles/Face shield
 - c. Respirator Mask (in Anteroom, if no Anteroom, remove outside room)

For Airborne Infection Isolation Room (AIIR) with anteroom:

Remove all PPE in the patient's room EXCEPT for the respirator. Perform hand hygiene after doffing and anytime between doffing steps if hands become contaminated. Close the AIIR door. Remove the respirator in the anteroom and discard in the designated covered waste container. Wash hands with soap and water for 20 seconds. Exit the anteroom and close the anteroom door. Perform hand hygiene.

For AIIR/Isolation Room without anteroom

Remove all PPE in the patient's room EXCEPT for the respirator. Perform hand hygiene after doffing and anytime between doffing steps if hands become contaminated. Close the AIIR door. Remove the respirator outside the room and discard in the designated covered waste container. Wash hands with soap and water. If handwashing is not readily available, sanitize hands immediately and avoid touching any surfaces, then wash hands with soap and water.

D. Patient Care Equipment/Supplies

1. Equipment (e.g., stethoscope, blood pressure cuff, thermometers) should be single-use or dedicated to use of the patient to avoid sharing with other patients. Reusable patient care equipment must be disinfected with a hospital-approved disinfectant per the equipment Instruction for Use (IFU) before use for another patient.
2. Supplies in the room of a patient should be kept to a minimum. Disposable items (e.g. adhesive tape, gauze etc.) must be discarded on discharge.
3. On-hand inventory of supplies needed will be monitored and updated by unit Division Officer. Division Officer will ensure areas will be stocked for daily use, weekends, and holidays.
4. Material Management Department (MMD) will supply the following items:
 - a. Respirator Masks
 - b. Gloves
 - c. Gowns
 - d. Surgical Masks
 - e. Goggles
5. Request for restocking supplies will be made via email to MMD, Jesus Saenz jesus.m.saenz10.civ@mail.mil.

6. A dedicated COVID-19 crash cart will stay in the CTU. Crash cart checks will be performed every 12 hour at the beginning of every shift by the nursing personnel. Provide CSD with a list of needed supplies to restock the crash cart. Do NOT bring the crash cart to CSD.

E. Patient Transport: Strict Isolation Requirements

1. Person Under Interest (PUI) and confirmed COVID-19 patients who require essential diagnostic procedures (i.e., CT) and patients being discharged home will be transported off unit.
2. Notify the receiving department that the patient is on Airborne Isolation + Contact Isolation + Eye Protection.
 - a. If transport or movement outside of an AIIR room is necessary, place a regular surgical mask on the patient for transport.
 - b. If the patient is intubated, on a transport vent, or if a bag valve mask (BVM) will be used to transport the patient ensure a bacterial filter is placed on the endotracheal tube or on the expiratory side of the breathing circuit of a ventilator or anesthesia machine.
 - c. If the patient is on a nasal canula, place a surgical mask over the nasal canula.
 - d. A minimum of two (2) staff (1 RN/1HM) will transport the patient. One staff will be in full PPE with a respirator and the other will remain “clean” and will be there to assist with opening doors and elevators.
 - e. All staff involved should wear appropriate PPE in the isolation room while preparing the patient for transport. PPE should be removed per doffing procedures above when leaving the room.
 - f. The patient should wash or disinfect his or her hands before leaving the room. The patient should wear a clean gown or robe or be covered by a clean sheet or drape for transport to another department. The patient should wear a clean yellow gown when being escorted to their car during discharge.
 - g. The patient chart will be transported in a manner that prevents contact with the patient and/or contaminated linen.
 - h. PPE should not routinely be worn when transporting the patient. Exception – If patient contact and/or contact with contaminated equipment will occur during transport (e.g., for ICU patients or patient transported in their bed) full PPE must be worn by those having direct contact with the patient and/or the

bed or equipment during transport. PPE is removed per doffing procedure when contact with patient and/or contaminated equipment is completed. Every effort will be made not to touch clean surfaces (e.g., elevator buttons) with gloved or contaminated hands by team members in PPE. **There must be a member of the transport team, not wearing PPE, who has clean hands to interact with the environment.**

F. Dietary

- a. Only disposable plates, tray, and utensils will be used.

G. Specimen Collection

A. Preparation

1. Prepare appropriate tubes/containers, labels, plastic specimen transport bags, a clean chux (do not use one already in the room) and 2 clean emesis basins. Label one basin “Clean” and the second basin “Dirty”.
2. Place all items in the “dirty” emesis basin. This will be used to transport these items into the patient room and this basin will remain in the room after specimen collection.
3. Disinfect hands and don personal protective equipment (PPE), putting on a second pair of clean gloves.

B. Procedure

1. Place a chux pad in the “clean” emesis basin and leave in the Anteroom. Bring “dirty” emesis basin containing supplies and unused specimen transport bags into the patient’s room, do not place on patient bed.
2. Follow standard procedures for patient identification and specimen collection.
3. Place specimen containers/tubes in the dirty basin in the patient room.
4. Label all specimens at patient bedside.
5. Remove 1st pair of gloves and discard.
6. With clean gloves, place labeled specimens into the unused specimen transport bag and seal the bag.
7. Wipe outside of bag with hospital-approved disinfectant wipes. At this time, the bag is considered “clean”.
8. Place “clean” bagged specimens in the “clean” emesis basin (previously placed next to the door in the Anteroom).
9. Bagged specimens should be hand-delivered directly to the lab. Staff should use a one hand gloving technique, by donning gloves on one hand to carry specimen and keeping the other hand clean (to open doors or operate elevators). Remove gloves after drop-off and perform hand hygiene after removal of gloves. Please refer to the COVID-19 Laboratory SOP on the COVID-19 SharePoint Site.

H. Visitors

1. At present visitation for suspected or confirmed cases is not permitted.
2. Follow unit specific and visitation hospital policy on:
 - a. Screening of visitors for symptoms of illness
 - b. Limiting number of visitors
 - c. PPE for visitors
 - d. Written instructions for patient and visitors

I. Healthcare Worker Monitoring

1. A list of healthcare workers caring for patients in CTU or entering room of a patient will be maintained.
2. Healthcare workers caring for a patient in the CTU will be monitored for the length of the incubation period. Staff with fever and lower respiratory symptoms (e.g., cough, difficulty breathing) must report to the ER for evaluation and inform their Departmental Leadership of ER visit.
3. HCW Exposure
 - a. HCWs who report an unprotected exposure (i.e., entering the room without appropriate PPE) or possible exposure should be assessed by healthcare team as to whether exposure has occurred. NOD will be paged for awareness.
 - b. If it is determined that an exposure did occur; post exposure follow-up will be conducted based on direction from Infectious Disease.

J. Room Turnover Time and Discharge Cleaning

1. Daily cleaning and disinfection of highly touched surfaces will be done by nursing personnel with proper PPE (See Section C).
2. Linen will be double bagged and sent to Linen.
3. All trash will be considered biohazard. Trash will be placed in a red biohazard bag, doubled bagged and secured. Leave trash in the Anteroom until discarded. Follow unit procedure on disposing biohazard trash.

4. At discharge or transfer of a confirmed case patient, the room must remain in negative pressure with the door closed for 60 minutes before terminal cleaning, to allow enough air exchanges to remove potentially infectious particles. Note: If room is needed right away, Housekeeping staff can clean the room prior to 60 minutes as long as proper PPE is worn including a respirator.
5. Terminal cleaning will be performed by the Housekeeping Staff. The housekeeping staff should wear a gown, gloves, respirator, and eye protection when performing terminal cleaning. The housekeeping staff must follow correct doffing sequence when removing PPE.

J. Post-Mortem Care

1. Call Laboratory at 953-1526 or 953-1540 to inform them of the deceased PUI/COVID-19 positive patient. Pick up the covered gurney from laboratory for use when transporting patient from CTU to morgue.
2. Use Standard Precautions when preparing the body to prevent direct contact with infectious material. Standard precautions include hand hygiene and use of PPE (gowns, gloves, eye protection, and surgical masks).
3. If collection of postmortem clinical specimen for testing is required, collect a Nasopharyngeal Swab AND Oropharyngeal Swab specimen.
4. Follow proper PPE doffing sequence and hand hygiene protocol.

REFERENCES:

1. Centers for Disease Control and Prevention, <https://www.cdc.gov/coronavirus/2019-ncov/index.html>
2. World Health Organization, <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>
3. Centers for Disease Control and Prevention 2020, Healthcare Infection Prevention and Control FAQs for COVID-19, <https://www.cdc.gov/coronavirus/2019-ncov/infection-control/infection-prevention-control-faq.html>

Enclosure 1

NAME: _____ **OBSERVER:** _____ **TIME & DATE:** _____

NMCP DONNING PPE CHECKLIST:

- 1. Perform hand hygiene.
- 2. GOWN
 - Fully cover torso from neck to knees, arms to wrists, wrap around back.
 - Fasten in back of neck and waist.
- 3. RESPIRATOR
 - Secure elastic band at middle of head and neck.
 - Fit flexible band to nose bridge. Fit snug to face and below chin. Fit check respirator.
- 4. GOGGLES/FACE SHIELD
 - Place over face and eyes. Adjust to fit.
- 5. GLOVES
 - Extend to cover wrist of isolation gowns.

NMCP DOFFING PPE CHECKLIST:

****Remove all PPE before exiting the room EXCEPT for the RESPIRATOR. Remove the Respirator AFTER leaving the room and closing the door.** Remove the PPE in the following sequence:

- 1. Remove GOWN & GLOVES
 - Grasp gown in the middle, pull away from body, fold inside out into a bundle, peeling off gloves at the same time.
 - Discard gown & gloves in designated waste container.
 - If your hands get contaminated after removal, wash or sanitize hands immediately!
- 2. Remove GOGGLES or FACE SHIELD
 - Remove GOGGLES/FACE SHIELD from the back by lifting head band WITHOUT touching FRONT of goggles or face shield.
- 3. Remove RESPIRATOR
 - Grasp the bottom ties then top ties WITHOUT touching the FRONT of the respirator. Remove and discard in designated waste container.

- 4. Hand Hygiene. Wash hands with soap and water and use an alcohol-based sanitizer immediately after removing all PPEs.

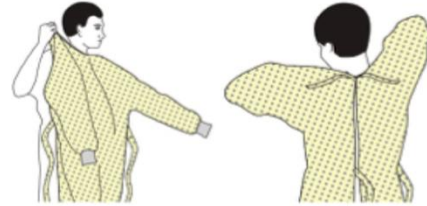
Enclosure 2

SEQUENCE FOR PUTTING ON PERSONAL PROTECTIVE EQUIPMENT (PPE)

The type of PPE used will vary based on the level of precautions required, such as standard and contact, droplet or airborne infection isolation precautions. The procedure for putting on and removing PPE should be tailored to the specific type of PPE.

1. GOWN

- Fully cover torso from neck to knees, arms to end of wrists, and wrap around the back
- Fasten in back of neck and waist



2. MASK OR RESPIRATOR

- Secure ties or elastic bands at middle of head and neck
- Fit flexible band to nose bridge
- Fit snug to face and below chin
- Fit-check respirator



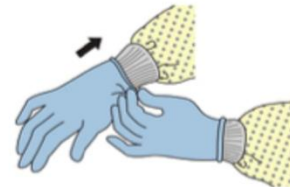
3. GOGGLES OR FACE SHIELD

- Place over face and eyes and adjust to fit



4. GLOVES

- Extend to cover wrist of isolation gown



USE SAFE WORK PRACTICES TO PROTECT YOURSELF AND LIMIT THE SPREAD OF CONTAMINATION

- Keep hands away from face
- Limit surfaces touched
- Change gloves when torn or heavily contaminated
- Perform hand hygiene



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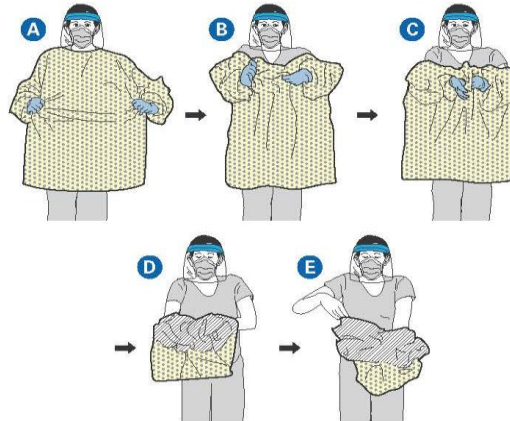
Source: CDC

HOW TO SAFELY REMOVE PERSONAL PROTECTIVE EQUIPMENT (PPE) EXAMPLE 2

Here is another way to safely remove PPE without contaminating your clothing, skin, or mucous membranes with potentially infectious materials. **Remove all PPE before exiting the patient room** except a respirator, if worn. Remove the respirator **after** leaving the patient room and closing the door. Remove PPE in the following sequence:

1. GOWN AND GLOVES

- Gown front and sleeves and the outside of gloves are contaminated!
- If your hands get contaminated during gown or glove removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Grasp the gown in the front and pull away from your body so that the ties break, touching outside of gown only with gloved hands
- While removing the gown, fold or roll the gown inside-out into a bundle
- As you are removing the gown, peel off your gloves at the same time, only touching the inside of the gloves and gown with your bare hands. Place the gown and gloves into a waste container



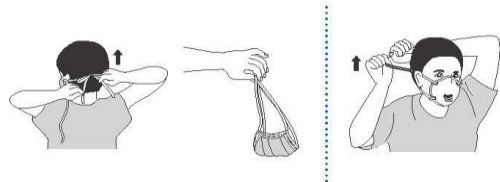
2. GOGGLES OR FACE SHIELD

- Outside of goggles or face shield are contaminated!
- If your hands get contaminated during goggle or face shield removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Remove goggles or face shield from the back by lifting head band and without touching the front of the goggles or face shield
- If the item is reusable, place in designated receptacle for reprocessing. Otherwise, discard in a waste container

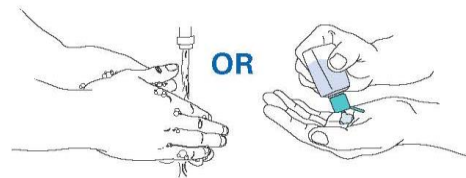


3. MASK OR RESPIRATOR

- Front of mask/respirator is contaminated — DO NOT TOUCH!
- If your hands get contaminated during mask/respirator removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Grasp bottom ties or elastics of the mask/respirator, then the ones at the top, and remove without touching the front
- Discard in a waste container



4. WASH HANDS OR USE AN ALCOHOL-BASED HAND SANITIZER IMMEDIATELY AFTER REMOVING ALL PPE



PERFORM HAND HYGIENE BETWEEN STEPS IF HANDS BECOME CONTAMINATED AND IMMEDIATELY AFTER REMOVING ALL PPE



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