

## Policy & Procedure

Page 1 of 10	Revision #: 7
Owner: Infection Prevention	Authorized by: Policy Management Committee
<b>High Consequence Infectious Diseases</b>	

<b>Applicable To:</b>	<input checked="" type="checkbox"/> GSRMC	<input checked="" type="checkbox"/> SAGH	<input checked="" type="checkbox"/> SLCH	<input checked="" type="checkbox"/> SNLH	<input checked="" type="checkbox"/> SPCH	<input type="checkbox"/> CORP	<input type="checkbox"/> SHP	<input type="checkbox"/> SMG	<input type="checkbox"/> System-wide
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### APPLICATION

All hospital employees.

### POLICY

This policy directs the isolation and 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. It utilizes a combination of Droplet Isolation + Airborne Isolation + Contact Isolation + Eye Protection.

Diseases that fall in this category include:

- Severe Acute Respiratory Syndrome (SARS)
- Middle East Respiratory Syndrome (MERS)
- 2019 Novel Coronavirus (SARS-CoV-2)
- Avian Influenza
- Other pathogens, as directed by Infection Control

### PROCEDURE

#### DEFINITIONS:

1. NONE

#### IMPLEMENTATION:

When a patient meeting the criteria to be a person under investigation (PUI) for one of these conditions is identified, staff must contact county health department & infection prevention and nursing supervisor to activate the appropriate response. Infection Preventionist or Nursing Supervisor/Designee will respond as needed to the location and provide support, review procedures with staff and provide just in time training (JIT).

1. Hand Hygiene

- A. HAND HYGIENE IS THE SINGLE MOST IMPORTANT MEANS OF PREVENTING THE SPREAD OF INFECTION.
- B. Hands must be disinfected with an alcohol-based hand rub or washing with soap and water before and after providing care that involves touching the patient or the patient's environment. Hands must also be disinfected after removing gloves, gowns, or respiratory protection devices and after touching inanimate objects in the immediate vicinity of the patient or touching contaminated items or surfaces. If hands are visibly soiled, wash hands with soap and water, dry hands, and apply an alcohol-based hand rub.

## 2. Patient Placement

- A. Patients with known or suspected infection should be placed in a single-person room with the door closed. The patient should have a dedicated bathroom.
- B. Airborne Infection Isolation Rooms (AIIRs) should be reserved for patients who will be undergoing aerosol-generating procedures. (CDC guidance 3/10/20)
  - 1) If AIIR is used, 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 must be validated daily when in use and documented. Methods of validation include use of a visual indicator e.g. tissue test, electronic monitoring device or observation of ball-in-tube device. Both ball-in-tube device, and tissue should be pulled into the room when the door(s) are closed. If there is an anteroom, air should flow from the corridor into the anteroom and from the anteroom into the patient room. Cohorting of patients may be necessary on the same unit or patient room with the approval of Infectious Disease or Infection Prevention.
  - 2) If an AIIR is not available, patients should be placed in a single room with the door closed.

## 3. Patient Management.

- A. Limit Health Care Worker (HCW) contact. Students should not be assigned to this category of patient.
- B. Nursing:
  - 1) Staffing:
    - a) Patients should be assigned a single dedicated nurse when staffing allows. Cohorts of patients to a single unit is advised, allowing dedicated healthcare workers to care for multiple suspected COVID-19 patients at one time. If staffing issues make it impossible to have a single dedicated nurse, the assigned nurse's other clinical responsibilities should be significantly curtailed. If a single designated nurse is not possible due to staffing, infection prevention should be notified. The assigned nurse will wear hospital-issued scrubs and PPE while in the patient room. Hospital-issued scrubs are not required for hospital personnel entering the room on an occasional or infrequent basis. A cover coat/gown should be worn over their scrubs when outside the room. Scrubs should be removed before leaving the hospital.
    - b) The assigned nurse will not be available for routine, non-emergent assistance to other unassigned patients in the unit. If they are called for emergent duty, they must place a clean cover gown over their clothing before assuming patient care.
    - c) The assigned nurse is responsible for performing all patient care within their scope of practice and competency including, but not limited to:
      - i. Regular nursing duties
      - ii. Phlebotomy
      - iii. Patient personal care
      - iv. Handling of the disposable meal tray
      - v. Assistance with ambulation in the room and transport
      - vi. Clean the high touch areas every four hours; routine room cleaning by EVS will not occur. Normal processes for trash and linen should occur. Contact EVS if specific cleaning is needed
      - vii. Monitor the log-in sheet

- d) When not providing patient care, the assigned nurse or relief caregiver is to remain in direct view of the patient's room in order to monitor compliance with precaution measures and minimizing traffic into the room.
  - e) A relief caregiver should take over room monitoring so the assigned nurse can have lunch and breaks per standard protocol.
  - f) When possible, elective bedside care is deferred until the assigned nurse returns from their break.
  - g) The assigned nurse has the authority to ensure and enforce compliance with proper precautions.
  - h) Students are not permitted in patient rooms
- C. Clinicians
- 1) Clinical teams should designate one essential member of each team to enter the patient room.
  - 2) Medical students should not enter patient rooms.
- D. Sign In/Sign Out:
- 1) A Sign In/Sign Out log-sheet is posted outside the patient's room. Indicate time and date of entry and exit from room.
  - 2) All healthcare workers and visitors entering and exiting the patient's room must sign in/out.
  - 3) Upon discharge, the unit manager or their designee forwards the log to Infection Prevention.
  - 4) The assigned nurse has the authority to manage and enforce compliance with the sign in/sign out requirement.
4. Personal Protective Equipment (PPE)
- A. Correct use of PPE is critical to preventing staff exposure. Infection prevention staff or designee will be deployed to the unit to review correct donning and doffing procedures with staff when this protocol is initiated and will periodically monitor staff to ensure compliance with donning and doffing protocols. Doffing checklists are available to guide correct doffing sequence.
- 1) Donning (putting on) PPE:
    - a) 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
      - i. Gown
        - A clean, nonsterile, disposable, isolation gown must be worn. Ensure that gown is tied in back and provides full coverage.
      - ii. Face Mask (surgical or procedural mask)
      - iii. For patients undergoing Aerosol Generating Procedures (Appendix D an N-95 respirator or Powered Air Purifying Respirator (PAPR)\* must be worn
        - Before using an N-95 respirator or PAPR, staff must be medically cleared and trained in how to wear/use each device.
        - For N-95 respirators, staff must have been fit-tested within the past year to ensure proper size and fit.
        - A "fit-check" (also known as a "seal check") should be performed before each N-95 respirator use.
        - If staff is unable to be fit-tested for an N-95 respirator, they must wear a PAPR.
      - iv. Goggles/Face shield
        - All staff must wear goggles or face shield (preferred) to protect mucous membranes from exposure due to splash or potential for hand contamination of

eyes, nose or mouth. Goggles or face shield are not required if using a PAPR as the hood provides face protection.

- v. Gloves
  - All staff must wear clean, nonsterile gloves. Gloves must be pulled over the sleeves/cuffs of gown.
- 2) Doffing (taking off) PPE:
  - a) For Airborne Infection Isolation (AII) room with anteroom:
    - i. Remove all PPE in anteroom. Make sure the door from the anteroom into the patient room is closed and negative airflow into patient room has been confirmed.
  - b) For AII room without anteroom
    - ii. Except for respiratory protection, remove and discard PPE (gloves, gown, face shield or goggles) just inside doorway before exiting to hall. Remove respiratory protection (N-95 or PAPR) after leaving the patient room and closing door.
  - c) **Doffing sequence if N-95 respirator is worn - See Doffing Checklist below - N-95 Respirator below for removal sequence.** Avoid touching face. If shortage has been declared, reuse of N-95 may be approved.
  - d) **Doffing sequence if PAPR is worn - See Doffing Checklist below- PAPR below for removal sequence.**
    - i. PAPR needs to be cleaned per SHS Policy (LINK: [Powered Air-Purifying Respirator](#))
    - ii. The PAPR belt and blower motor must be wiped down with a hospital-approved disinfectant and be stored (plugged into charging cord). Don clean gloves to perform this step, then remove and discard and disinfect hands with an alcohol-based hand rub.
    - iii. Strict Isolation PPE Donning and Doffing Video Link:  
<https://infectioncontrol.ucsfmedicalcenter.org/novel-coronavirus-covid-19-videos>
5. Patient Care Equipment/Supplies
  - A. 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 before use for another patient.
  - B. 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.
6. Patient Transport: Strict Isolation Requirements
  - A. Limit patient transport for essential purposes only. Notify the receiving department and report patient precaution (contact, airborne) protection.
    - 1) If transport or movement outside of an AII room is necessary, place a regular surgical mask on the patient for transport.
    - 2) If the patient is intubated, place a bacterial filter on the endotracheal tube or on the expiratory side of the breathing circuit of a ventilator or anesthesia machine.
    - 3) 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. Use of a facemask by the transporter is recommended for anything more than brief encounters with patients.

- 4) Wounds must be covered, and body fluids contained. The patient should wash or disinfect his or her hands before leaving the room if possible. The patient should wear a clean gown or robe or be covered by a clean sheet or drape for transport to another department or area.
  - 5) The patient chart will be transported in a manner that prevents contact with the patient and/or contaminated linen.
  - 6) PPE with the exception of the facemask with eye protection, should not routinely be worn when transporting the patient. All equipment accompanying the patient must be wiped down with hospital approved disinfectant prior to leaving the patients room. 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.
7. Urgent procedures for patients with known or suspected COVID-19:
- A. Must undergo a risk/benefit assessment prior to proceeding with the case.
    - 1) The review will be conducted with the care team, medical director (or designee), and infection prevention team at a minimum.
    - 2) If a decision to proceed is made, then the procedure must be done using all of the following: Airborne/Respirator, Contact, and Eye Shield.
    - 3) If the procedure requires intubation, the procedural team will follow current PPE guidance for performing an aerosolizing procedure.
8. Specimen Collection (all types)
- A. Preparation
    - 1) Collect appropriate tubes/containers, labels, plastic specimen transport bags, labs should be drawn by the patients care team if that is in line with care teams training.-If the care team cannot draw the lab, one phlebotomist should be assigned to the cohort of patients per shift.
    - 2) Disinfect hands and don PPE, as detailed above.
  - B. Procedure
    - 1) Follow standard procedures for patient identification and specimen collection.
    - 2) Label all specimens at patient bedside.
    - 3) Remove gloves and disinfect hands with alcohol-based hand rub, then don clean gloves.
    - 4) With clean gloves, place labeled specimens into the clean specimen transport bag.
    - 5) Wipe outside of bag with hospital-approved disinfectant
    - 6) A care team member outside of the room should have a second clean specimen transport bag. The original bag should be dropped into the second clean bag that the care team member outside of the room is holding.
    - 7) Remove PPE per doffing protocol and disinfect hands.
      - i. Bagged specimens may be transported to the lab per standard processes.  
**Note: If specimen is being sent to test for confirmation or rule out of diagnosis (e.g.**

**COVID-19/MERS/SARS or Avian Flu), specimen should be delivered directly to the lab to avoid delays in processing.**

9. Healthcare Worker Monitoring

- A. A list of healthcare workers entering the room of a patient will be maintained.
- B. Healthcare workers caring for a patient, and those that perform tasks associated without appropriate PPE will be referred to Employee Health. For healthcare workers who have performed tasks with appropriate PPE will self-monitor for fever and other relevant symptoms for the length of the incubation period, specific to the infection, from their last date of potential exposure.
- C. Any Employee with fever or positive symptom screening after caring for a patient should report to Employee Health by telephone and not come to work until cleared by Employee Health to return.

10. Room Turnover Time and Discharge Cleaning

- A. After a confirmed case patient vacates room or is discharged, communicate clearly with whomever may be assigned to clean room. If patient was in droplet precautions, standard droplet precaution cleaning protocol to be followed. If patient was on airborne precautions, then:
  - a. Room must remain in negative pressure with the door closed for the minutes outlined in section C below, based on the number of air changes per hour (ACH) for the room, before staff enters the room without PPE or another patient is admitted to the room. Precaution signs must stay on the door until the room is cleaned.
  - b. Cleaning staff must wear respiratory protection and other PPE required for Strict Isolation when cleaning during this airing time. If cleaning is performed after the required airing time, respiratory protection is not required but gown, gloves and face protection are. Cleaning staff must follow correct doffing sequence when removing PPE.
  - c. **See Airborne Infection Isolation Room List** for documentation of Airborne Infection Isolation Room (All) air changes per hour (ACH). See facility specific Airborne Infection Isolation Policy in Lippincott.
- B. When patient is discharged, the room is to be cleaned using the facility cleaning protocol for infectious organisms including removal and laundering of privacy curtains and thorough cleaning of the patient storage cabinets with the approved hospital disinfectant. Disposable supplies must be discarded. Equipment that has air going through it (i.e. ventilators) or circulates air, need to be cleaned by bio-medical engineering.

**REFERENCES**

- Center for Disease Control Coronavirus Guidance: <https://www.cdc.gov/coronavirus/2019-nCoV/hcp/index.html>
- Oregon Health Authority Coronavirus Guidance: <https://www.oregon.gov/oha/PH/DISEASES/CONDITIONS/DISEASESAZ/Pages/emerging-respiratory-infections.aspx>
- SHS Policy:
  - Temporary SHS Visitor Policy in Response to COVID-19
  - Powered Air-Purifying Respirator
- **Appendix A: PPE Doffing and Donning Checklist**

- Appendix **B**: Aerosol Generating Procedures

#### REVIEW/REVISION HISTORY

<b>Date of Revision</b>	<b>Revision #</b>	<b>Revision / Review</b>	<b>Revision Description</b>	<b>Collaborated With (i.e. Standardization Committee, VP's, Quality, Risk)</b>
3/3/2020	0	New		Infectious Disease, Infection Prevention, Patient Care Services, Emergency Management, Administration, Project Management
3/6/2020	1	Revision	Dedicated health care worker language added. Room turnover language updated.	SHS Coronavirus Task Force
3/12/2020	2	Revision	Significant changes to align with Oregon Health Authority Guidance.	SHS Coronavirus Task Force
3/16/2020	3	Revision	Significant changes to align with Oregon Health Authority Guidance; visitor policy language updated.	SHS Coronavirus Task Force
3/19/2020	4	Revision	Removed Appendix regarding movement of patients.	SHS Coronavirus Task Force
4/9/2020	5	Revision	Updated Aerosol Generating Procedures, updating transport and cleaning protocols.	SHS Coronavirus Task Force
4/10/2020	6	Revision	Added preferred to use of face shields.	SHS Coronavirus Task Force
4/14/2020	7	Revision	Updated PPE Donning/Doffing Checklist	SHS Coronavirus Task Force

**Appendix A: PPE Doffing and Donning Checklist**

Reference PPE Protocol on Emerging Pathogens Page under Resources & Infection Control

**PPE Donning and Doffing Checklist  
COVID-19 Protocols  
PPE INCLUDING FACEMASKS**

<b>NON-AEROSOLIZING PROCEDURES (NO PAPR OR N95)</b>
<b>DONNING</b>
Secure hair if needed.
Perform hand hygiene.
Don gown, leaving thumbs out of thumb loops.
Tie gown securely in the back.
Don Facemask
Don eye protection, either face shield (preferred) or goggles.
Perform hand hygiene.
Place thumbs through thumb loops and don clean gloves.
<b>DOFFING</b>
While in patient room or anteroom:
Pull gown away from body breaking ties. Touch the outside of the gown only with gloved hands. Pull the gown away from your body and roll into a ball, peeling off your gloves and discarding into the trash.
Perform hand hygiene and exit the isolation room.
Remove and dispose of your goggles or face shield into the trash without touching the front. Lean over the trash can while removing. *If disinfecting face shield, place on designated surface.
Perform hand hygiene.
Remove Facemask by <b>grabbing ear loop bands</b> and pull away from the face. Avoid touching the front of the facemask. If re-using facemask, place in clean paper bag in approved manner. If soiled, wet, or damaged, discard facemask.
Perform hand hygiene.
*Don clean gloves and disinfect face shield. Remove gloves and perform hand hygiene.



**PPE Doffing and Donning Checklist  
COVID-19 Protocol  
PPE INCLUDING N95'S**

<b>AEROSOLIZING PROCEDURES USING N95</b>
<b>DONNING</b>
Secure hair if needed.
Perform hand hygiene.
Don gown, leaving thumbs out of thumb loops.
Tie gown securely in the back if using N95.
Put on N95 BY Placing top strap on the upper area of head and bottom strap on the lower area of the head. Perform self-check. Don eye protection (goggles or face shield). Face shield is preferred.
Perform hand hygiene.
Place thumbs through thumb loops and don clean gloves.
<b>DOFFING</b>
While in patient room:
Pull gown away from body breaking ties. Touch the outside of the gown only with gloved hands. Pull the gown away from your body and roll into a ball, peeling off your gloves and discarding into the trash.
Perform hand hygiene and exit the isolation room.
Remove faceshield. If disinfecting, place on designated surface.
Perform hand hygiene.
Remove bottom strap and then top strap and pull straight away from the face. Mask must be discarded when used for an aerosolizing generating procedure.
Perform hand hygiene.
*Don gloves and disinfect face shield or goggles per protocol. Remove gloves and perform hand hygiene.

**PPE Doffing and Donning Checklist  
COVID-19 Protocols  
PPE USING PAPR'S**

<b>AEROSOLIZING PROCEDURES USING PAPR</b>
<b>DONNING</b>
Secure hair if needed
Perform hand hygiene
Put on belt and blower generator.
Don gown, leaving thumbs out of thumb loops.
Put on PAPR hood and connect hose.
Tie gown securely in the back.
PAPR hood should lay on top of gown. Assure air is blowing across face.
Perform hand hygiene.
Place thumbs through thumb loops and don clean gloves.
<b>DOFFING</b>
While in patient room:
Pull gown away from body breaking ties. Touch the outside of the gown only with gloved hands. Pull the gown away from your body and roll into a ball, peeling off your gloves and discarding into the trash.
Perform hand hygiene and exit the isolation room.
Remove disposable portion of PAPR hood.
Perform hand hygiene
Shut off blower generator, disconnect hose from blower unit, remove belt and place items in area to prepare for disinfections.
Perform hand hygiene
Don clean gloves and disinfect hood, hose, generator and belt per protocol.
Remove gloves and perform hand hygiene.

### **Appendix B – Aerosol Generating Procedures**

Aerosol-generating procedures\* include, but are not limited to:

- a. Intubation, extubation and related procedures such as manual ventilation and open suctioning
- b. Mechanically ventilated patients prone to frequent ventilator circuit disconnects
- c. Tracheotomy/tracheostomy procedures (insertion/open suctioning/removal)
- d. Bronchoscopy
- e. Surgery and post-mortem procedures involving high-speed devices
- f. Some dental procedures (such as high-speed drilling)
- g. Non-invasive ventilation (NIV) such as bi-level positive airway pressure (BiPAP) and continuous positive
- h. airway pressure ventilation (CPAP)
- i. High-frequency oscillating ventilation (HFOV)
- j. High-flow nasal oxygen (HFNO), also called high-flow nasal cannula
- k. Induction of sputum
- l. Medication administration via continuous nebulizer

\*Note: this list is not exhaustive. Please discuss activities not described with your infection prevention department.