

## STANDARD PRECAUTIONS

### PURPOSE

**Standard Precautions** are designed to reduce the risk of transmission of microorganisms from both recognized and unrecognized sources of infection in healthcare settings. Standard Precautions apply to all patients and in all situations, regardless of diagnosis or presumed infection status. Because **all patients can serve as reservoirs for infectious agents**, adhering to Standard Precautions during the care of ALL patients is essential to interrupting the transmission of microorganisms.

### POLICY

Staff, faculty and students will assess situations and implement Standard and Transmission-Based Precautions as noted in the Practices below.

Standard Precautions are sufficient to interrupt the spread of most infectious agents. **Transmission-based precautions** are used in addition to Standard Precautions.

Transmission of infection requires three elements:

- a source of infecting microorganisms,
- a susceptible host, and
- a means of transmission for the microorganism.

**Standard Precautions** are practices to reduce healthcare associated infections are used with ALL patients, regardless of diagnosis or isolation status, and apply to interacting with blood, all body fluids, secretions, and excretions *except sweat*, regardless of whether they contain visible blood, non-intact skin and mucous membranes. The required elements include:

1. Adequate hand hygiene at all appropriate times.
2. Disinfecting surfaces and equipment between patient uses.
3. Appropriate use of Personal Protective Equipment (PPE) (e.g., gowns, gloves, mask, eye protection) for reasonably anticipated contact with body substances or contaminated equipment.
4. Safe injection practices.
5. Respiratory Hygiene/Cough Etiquette.
6. Infection Control practices for special lumbar puncture situations (see B. 7. below, Mask and Eye Protection).

**A. Hand Hygiene:** refer to IC 1.2 Hand Hygiene Policy

**B. Personal Protective Equipment (PPE)**

1. Symptoms, condition, and expected interaction with each patient must be critically assessed when determining what type of PPE use is appropriate.
2. Use of protective equipment (i.e., gowns, gloves, masks, eye protection) is mandated by the OSHA bloodborne pathogens final rule to reduce the risk of exposures to bloodborne pathogens under specified circumstances.

3. Under routine circumstances, remove and discard all PPE and CLEAN HANDS prior to leaving the patient care zone, defined as the patient's room OR the immediate patient care area in open bay situations
4. It is acceptable to wear appropriate PPE while performing a task beyond the patient care zone *while hands are occupied* and there is reasonable anticipation that contact with blood or body fluid may occur OR during transport of a patient on Contact Isolation Precautions
5. Remove and discard PPE and perform hand hygiene at the completion of the task, and when moving from a contaminated body site to a clean body site. Do not wear the same pair of gloves for the care of more than one patient, and do not wash gloves between uses with different patients.
6. Gloves: Glove use does not replace the need for hand hygiene. Gloves are worn:
  - a. To provide a protective barrier and to prevent gross contamination of the hands
  - b. For anticipated contact with mucous membranes and non-intact skin
  - c. For invasive procedures
7. Gowns reduce the opportunity for transmission of pathogens from patients or items in their environment to other patients or environments; when gowns are worn for this purpose, remove the gown and CLEAN HANDS before leaving the patient's environment.
  - a. Wear a clean, non-sterile disposable gown to protect skin and to prevent soiling of clothing during procedures and patient-care activities that are likely to generate splashes or sprays of blood, body fluids, secretions, or excretions.
  - b. Unanticipated soiling of skin and/or clothing may occur upon close physical contact with a patient. A gown *may* be worn when physically moving a patient to or from a transport device such as a gurney or wheelchair, but is only required when the patient is on Contact Isolation Precautions.
  - c. Remove and discard gown at completion of task, and clean hands to avoid transfer of microorganisms to other patients or environments.
8. Mask and Eye Protection
  - a. A mask worn to cover the nose and mouth, and eye protection (i.e., goggles or a face shield) are worn to protect the healthcare worker during procedures and patient-care activities that are likely to generate splashes or sprays of blood or body fluids.
  - b. Wear a surgical mask and eye protection when providing care in the room/care area of a patient who is coughing, sneezing, spitting, or being suctioned in a closed system
  - c. Wear a fit tested N-95 respirator and eye protection when performing "aerosol generating procedures" (see High Risk Medical Procedures, Infection Control Manual, Policy 7.8, Tuberculosis Exposure Control Plan) such as sputum induction, bronchoscopy, open system suctioning or delivering nebulized medications.
  - d. Wear a surgical mask when placing a catheter or injecting material into the spinal canal or subdural space (i.e., during myelograms, lumbar puncture).

**C. Surface Disinfection and Reusable Equipment**

Hospitality Services policy entitled "Patient Care Equipment Cleaning, In-Patient and Diagnostic Testing Areas" details responsibility for and frequency of cleaning and disinfection of patient care equipment. Departmental procedures detail the processes by which all equipment should be cleaned/disinfected.

1. All patient care items and surfaces used for multiple patient contacts must be disinfected between uses. Remove visible soiling. A hospital-approved detergent disinfectant must be applied and allowed to air dry before the next patient contact using disposable detergent disinfectant impregnated wipes or hospital-approved detergent disinfectant. Examples of equipment to which this practice applies include, but is not limited to: glucometers, blood pressure cuffs, thermometers, stethoscopes, pulse oximeters, gurneys, wheelchairs, therapy mats, bed scales, patient movement assistive devices.
2. Surfaces in the patient's environment, such as telephones, call lights, bedrails, over-bed tables, bedside stands, televisions and remote controls are cleaned daily and upon patient discharge or transfer using disposable detergent-disinfectant impregnated wipes or a cloth moistened with hospital-approved detergent-disinfectant.
3. Hospitality Services provides regular disinfection of all restrooms, countertops, furniture, public televisions, public telephones, elevators, meeting rooms and lounges according to established departmental policies and procedures.
4. Office equipment and storage units are cleaned by their owners/users as needed.

**D. Safe Injection Practices**

1. Scrub the cap or port with alcohol using friction to a count of ten before injecting an IV medication.
2. Use a sterile, single-use disposable needle and syringe for each injection given Do not administer medications from a syringe to multiple patients, even if the needle or cannula on the syringe is changed.
3. Use fluid infusion and administration sets (i.e., intravenous bags, tubing and connectors) for one patient only and dispose appropriately after use. Consider a syringe or needle/cannula contaminated once it has been used to enter or connect to a patient's intravenous infusion bag or administration set
4. Use single-dose vials whenever possible, especially when medications will be administered to multiple patients.
5. If multidose vials (MDV) must be used, both the needle or cannula and syringe used to access the MDV must be sterile.
6. Before each withdrawal from a MDV, wipe the surface of the rubber diaphragm with alcohol using friction.
7. Do not administer medications from single-dose vials or ampules to multiple patients or combine leftover contents for later use.
8. Do not keep MDV in the immediate patient treatment area and store in accordance with the manufacturer's recommendations; discard if sterility is compromised or questionable.
9. Do not use bags or bottles of intravenous solution as a common source of supply for multiple patients.

**E. Respiratory Hygiene and Cough Etiquette**

This section applies to patients and accompanying family members and friends with undiagnosed transmissible respiratory infections, and applies to any person with signs of illness including cough, congestion, rhinorrhea, or increased production of respiratory secretions when entering a healthcare facility.

1. Elements are implemented in inpatient and ambulatory points of entry:
  - a. Educate healthcare personnel on the importance of source control measures to contain respiratory secretions to prevent droplet and fomite transmission of respiratory pathogens, especially during seasonal outbreaks of viral respiratory tract infections (e.g., influenza,

RSV, adenovirus, parainfluenza virus) in communities—this information is included in the Infection Control Educational Module.

- b. Post signs, in language(s) appropriate to the population served, with instructions to patients and other persons with symptoms of a respiratory infection to cover their mouths/noses when coughing or sneezing, use and discard tissues, and perform hand hygiene after hands have been in contact with respiratory secretions .
- c. Offer masks to coughing patients and other symptomatic persons (e.g., persons who accompany ill patients) upon entry into the facility or medical office.
- d. Encourage spatial separation, ideally >3 feet, between those with respiratory infections in common waiting areas when possible.

**F. Infection Control Practices for special lumbar puncture situations**

1. Wear a surgical mask when placing a catheter or injecting material into the spinal canal or subdural space (e.g., during myelograms, lumbar puncture).

**G. Other Infection Prevention Safety Practices**

1. Patient Placement: Appropriate patient assessment and placement is imperative to controlling infection. Place patients with confirmed or suspected highly transmissible and/or epidemiologically important microorganism (e.g. tuberculosis, influenza, *Clostridium difficile*, chickenpox) in a private room.
2. Needles and Sharps: Discard all used needles and sharps in designated puncture-resistant containers. Containers are in all patient rooms, treatment rooms, delivery rooms, nurseries, OR suites, critical care cubicles, laboratory workstations, and ED cubicles. Sharps containers must be stabilized (e.g. “doggy dishes”, brackets or rolling carts) and closed and discarded when filled to the “full” line. Additional information on safety devices available at UCSF Medical Center can be found on the Material Services website:  
<http://www.ucsfmedicalcenter.org/matserv/>.
3. Solid Waste: Discard all trash in impervious plastic bag lined waste baskets. Regulated (“red bag”) waste includes liquid blood wastes, containers of bloody body fluids, pathological waste, laboratory and microbiology waste, dialysis waste and full, closed sharps containers.
4. Linen: Handle used textiles and fabrics with minimum agitation to avoid contamination of air, surfaces and persons; Place soiled linen in designated linen bags. Upon discharge or room transfer, unused linen stored in that patient’s room will be considered soiled. When linen bag is 2/3 full or less, it will be tied securely for transport to the laundry.
5. Reusable procedure trays and equipment contaminated with blood and/or body fluids will be returned to Sterile Processing for reprocessing in case carts or in impermeable bags or containers.
6. Laboratory specimens: All specimens will be considered potentially infectious. All specimens will be placed in a container that is securely closed, labeled, and will, size permitting, be placed in a “Biohazard” labeled impervious bag.

7. Blood spills: Environmental surfaces contaminated with blood or body substances will be immediately cleaned with a hospital-approved detergent disinfectant. Personnel will wear personal protective equipment during the cleaning process to protect them from exposure.
8. Bloodborne Pathogens Exposures: First aid and thorough washing or flushing of the exposed site is essential at the time of the exposure. After sufficiently washing the site, blood and body substance exposures will be immediately reported to Employee Health Services via the Needlestick Hotline (443-STIC), and then to the area supervisor. Refer to the Bloodborne Pathogens Exposure Control Plan, found on the Safety website at [http://safety/forms\\_and\\_documents/safety/documents/3.1.1\\_2010ECBloodBornePathogen.pdf](http://safety/forms_and_documents/safety/documents/3.1.1_2010ECBloodBornePathogen.pdf)
9. Deceased patient: Standard Precautions will be followed when preparing a deceased patient for moving and transport.

\* Exceptions to this policy in the care of a patient with suspected or confirmed human prion disease are addressed in [Section 4.2](#) of the Infection Control Manual.

## TRANSMISSION-BASED PRECAUTIONS

### PURPOSE

**Transmission-based Precautions** are designed for patients with symptoms and/or documented or suspected infection or colonization with one of the organisms listed on the table [“General Conditions and Specific Organisms Requiring Transmission-Based Precautions”](#)

### POLICY

Use Transmission-based precautions in addition to Standard Precautions for patients with suspected or confirmed diseases listed in the “General Conditions and Specific Organisms Requiring Transmission-Based Precautions” table shall be placed on the appropriate Transmission-based Precautions until the condition has been ruled out or the criteria for removal from isolation have been met.

The three types of Transmission-based Precautions may be used alone, or in combination for diseases that have multiple routes of transmission:

1. Contact Isolation Precautions
2. Droplet Isolation Precautions
3. Airborne isolation precautions

Institute the appropriate precautions when a condition is suspected enough to test for the causative agent.

A physician's order is not required to initiate Transmission –Based Isolation Precautions

Cohorting patients may be considered only after consultation with Infection Control.

### B. Contact Isolation Precautions

Contact, or touch, is the most common and most significant mode of transmission of infectious agents. Contact transmission can occur by directly touching the patient, through contact with the patient's environment, or by using contaminated gloves or equipment. Patients in Contact Isolation Precautions include those infected or colonized with *Clostridium difficile* ("C. diff"), rotavirus, or other organisms deemed significant by Infection Control.

Contact Isolation Precautions requires:

1. Private Room
2. Dedicated, disposable equipment (e.g., stethoscope, blood pressure cuff, thermometer, etc.). If shared equipment is used, it must be cleaned with hospital disinfectant (e.g. disposable detergent disinfectant-impregnated wipes) after each use.
3. Appropriate door signage (green)
4. Education for the patient/representative: [“Contact Isolation Precautions Patient Information Sheet”](#)



PATIENTS IN CONTACT ISOLATION Precautions
<ul style="list-style-type: none"> <li>Place in a private room unless a shared space has been approved by Infection Control</li> <li>May leave their rooms after cleaning their hands and putting on a clean gown</li> <li>Patients in Contact Isolation Precautions are not allowed in communal spaces (playroom, school room, solarium etc.) but may ambulate in hallway</li> </ul>
STAFF Caring for Patients in CONTACT ISOLATION Precautions
<ul style="list-style-type: none"> <li>Clean hands, then put on a gown and gloves before entering the room</li> <li>Remove and discard gloves and gown and clean hands before leaving the patient's room or, in semi-private room or multi-bed bay situation, before leaving the patient's immediate vicinity</li> <li>For patients in Contact Isolation Precautions for diarrhea, use soap and water to clean hands upon exiting unless C. diff is ruled out</li> <li>Use dedicated disposable equipment (e.g. stethoscope, blood pressure cuff, thermometer, etc.) when possible</li> <li>Wash the GLOVES on patients in Contact Isolation Precautions are not required to wear gowns and gloves unless they visit other patients</li> <li>Inform VISITORS to patients in Contact Isolation Precautions to clean their hands before entering and exiting the patient's room</li> <li>Place the following outside patient room: <b>GOWN, GLOVES</b></li> </ul>
For additional information, visit the "Standard and Transmission-based Precautions Policy" at <a href="http://infectioncontrol.ucsfbenioffchildrens.org/">http://infectioncontrol.ucsfbenioffchildrens.org/</a> or page in Infection Control Procedure on call at 443.2044
GENERAL INDICATIONS for CONTACT ISOLATION Precautions
<ul style="list-style-type: none"> <li>Strains of enteric, cutaneous, viral, fungal or mycobacterial organisms by dressing in hot blood</li> <li>Acute diarrhea of unknown etiology (Stool and water hand hygiene required)</li> <li>Impetigo or other of unknown etiology</li> </ul>
COMMON SPECIFIC INDICATIONS for CONTACT ISOLATION Precautions
<ul style="list-style-type: none"> <li>Adenovirus or RSV (with Droplet Precautions for respiratory infections in infants and young children) <ul style="list-style-type: none"> <li>Rotavirus</li> </ul> </li> <li>Chlamydia (ophthal conjunctivitis) <ul style="list-style-type: none"> <li>Chlamydia trachomatis (Dermatolymphoglymphangitis)</li> </ul> </li> <li>Ethelovirus (infants and young children) <ul style="list-style-type: none"> <li>Scabies</li> <li>HSV in neonates</li> </ul> </li> </ul>
High-Hazard Medical Procedures (HHMP, aka Aerosol-Generating Procedures)
<p>NOTE: is required for most or airborne infectious disease cases. All lower MSB requirements must be worn during HHMP for all other patients. HHMP include:</p> <ul style="list-style-type: none"> <li>bronchoscopies and pulmonary function testing</li> <li>airway instrumentation</li> <li>cardiopulmonary resuscitation</li> <li>airway extubation</li> <li>open tracheostomy</li> <li>airway (clinical, surgical and laboratory) procedures that may aerosolize pathogens (e.g. bronchoscopy, thoracostomy or open lung biopsy)</li> </ul>

**Healthcare workers caring for patients in Contact Isolation Precautions must:**

1. Put on gloves and gown prior to entering the patient's room.
2. Remove and discard gloves and gown and clean hands before leaving the patient's room or, in semi-private room or multi-bed bay situation, before leaving the patient's immediate vicinity.
3. Patients on Contact Isolation Precautions are not allowed in communal spaces (play room, school room, solarium), but may ambulate in hallways.

NOTE: Gown and gloves may be worn during transport of a patient on Contact Isolation Precautions. PPE must be removed and hand hygiene performed when the transfer is complete.

**Visitors** may choose to wear indicated PPE.

**Discontinuing isolation precautions:**

1. *Clostridium difficile*: when patient's diarrhea has resolved. (See [Diarrhea Decision Tree](#))
2. Rotavirus: when diarrhea is resolved AND rotavirus antigen test is negative.
3. Other conditions/diseases: consult with Infection Control

**C. Droplet Isolation Precautions**

Droplets are formed when a person coughs, sneezes, speaks, spits, sings, or undergoes oral or tracheal/bronchial suctioning. Transmission occurs when droplets containing microorganisms generated from an infected person are propelled a short distance (about 3 feet), and may come in contact with another person's conjunctivae or mucous membranes (eyes, nose or mouth). Droplets do not remain suspended in the air, and are not transmitted by the airborne route. Table 1 shows a sampling of diseases and conditions identified by CalOSHA as requiring Droplet Isolation Precautions. A complete table can be found in the table ["General Conditions and Specific Organisms Requiring Transmission-Based Precautions"](#)

**Table 1. Diseases/Pathogens Requiring Droplet Isolation Precautions (CalOSHA)**

Diphtheria pharyngeal
Epiglottitis, due to <i>Haemophilus influenzae</i> type b
<i>Haemophilus influenzae</i> Serotype b (Hib) disease/ <i>Haemophilus influenzae</i> serotype b -- Infants and children
Influenza, human (typical seasonal variations)/influenza viruses
Meningitis
<i>Haemophilus influenzae</i> , type b known or suspected
<i>Neisseria meningitidis</i> (meningococcal) known or suspected
Meningococcal disease sepsis, pneumonia (see also meningitis)
Mumps (infectious parotitis)/Mumps virus
Mycoplasmal pneumonia
Parvovirus B19 infection (erythema infectiosum)
Pertussis (whooping cough)
Pharyngitis in infants and young children/Adenovirus, Orthomyxoviridae, Epstein-Barr virus, Herpes simplex virus,
Pneumonia
Adenovirus
<i>Haemophilus influenzae</i> Serotype b, infants and children
Meningococcal
<i>Mycoplasma, primary atypical</i>
<i>Streptococcus Group A</i>
Pneumonic plague/ <i>Yersinia pestis</i>
Rubella virus infection (German measles)/Rubella virus
Severe acute respiratory syndrome (SARS)
Streptococcal disease (group A streptococcus)
Skin, wound or burn, Major
Pharyngitis in infants and young children
Pneumonia
Scarlet fever in infants and young children
Serious invasive disease
Viral hemorrhagic fevers due to Lassa, Ebola, Marburg, Crimean-Congo fever viruses (airborne infection isolation and respirator use may be required for aerosol-generating procedures)
Any other disease for which public health guidelines recommend Droplet Isolation Precautions

**Droplet Isolation Precautions require:**

1. Private room, except when directed otherwise by Infection Control.
2. Patients to remain in their room except for essential purposes, in which case, a regular mask (surgical or paper without eye shield) is worn.

- Appropriate door signage (yellow).
- Education for the patient/representative: "[Droplet Isolation Precautions Patient Information Sheet](#)".



PATIENTS IN DROPLET ISOLATION PRECAUTIONS	
<ul style="list-style-type: none"> <li>Place in private room unless a shared space has been approved by Infection Control</li> <li>Must wear a regular mask (surgical or paper) over mouth and nose when outside the room</li> <li>Must leave the room after cleaning hands, and exiting promptly</li> <li>Are not allowed in communal spaces (playroom, school room, solarium, etc.)</li> </ul>	
STAFF Caring for patients in DROPLET ISOLATION PRECAUTIONS	
<ul style="list-style-type: none"> <li>Wear a regular mask (surgical or paper) over mouth and nose, and eye protection (safety goggles, fluid shield) upon entry to patient room</li> <li>Remove and discard PPE and clean hands before leaving the patient environment</li> <li>Encourage patients to remain in the room except for essential purposes</li> <li>Other VISITORS to patients in Droplet Isolation Precautions must also use protection and instructions for use</li> <li>Instruct VISITORS to patients in Droplet Isolation Precautions to clean their hands before entering and exiting the patient's room</li> <li>Place the following outside patient room: Paper masks or face shields, paper or surgical masks, goggles, face shields</li> </ul>	
For additional information, refer to "Standard and Transmission-based Precautions Policy" at <a href="#">http://infectioncontrol.ucsfbenioffchildrens.org</a> or call the Infection Control Practitioner at 415-224-2844	
GENERAL INDICATIONS FOR DROPLET ISOLATION PRECAUTIONS	
<ul style="list-style-type: none"> <li>Bronchitis</li> <li>Patients with respiratory of unknown etiology</li> <li>Respiratory virus (S/P/PCR, pneumonia or pertussis PCR or Group A streptococcus patients only) being tested on respiratory specimen</li> </ul>	<ul style="list-style-type: none"> <li>Symptoms consistent with upper respiratory infection, shingles, unknown</li> <li>Strabismic, bilateral</li> </ul>
COMMON SPECIFIC INDICATIONS FOR DROPLET ISOLATION PRECAUTIONS	
<ul style="list-style-type: none"> <li>Respiratory viruses: influenza, parainfluenza, adenovirus, rhinovirus, respiratory syncytial virus</li> <li>Adenovirus or RSV with Contact Precautions for respiratory infections in infants and young children</li> <li>Group A streptococcal pharyngitis in infants and young children</li> <li>Haemophilus influenzae in infants and children</li> </ul>	<ul style="list-style-type: none"> <li>Pharyngitis</li> <li>Severe meningitis, pneumonia, meningitis or sepsis</li> </ul>
High Hazard Medical Procedures (HMP) (See Approved Generating Procedures)	
<ul style="list-style-type: none"> <li>APPE is required for minor or unknown infectious disease cases. All tested RSV specimens must be worn during HMP for all other patients. HMP include: <ul style="list-style-type: none"> <li>nasopharyngeal administration of medications</li> <li>sputum induction</li> <li>airway manipulation</li> <li>airway, clinical, surgical and laboratory procedures that may aerosolize pathogens (e.g. bronchoscopy, intubation or open lung biopsy)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Intubation and laboratory function testing</li> <li>Cardiopulmonary resuscitation</li> <li>Open suctioning of ETT or nasotracheal</li> </ul>

### Healthcare workers caring for patients in Droplet Isolation Precautions will:

- Put on a mask that covers the mouth and nose (regular surgical or paper mask), and eye protection (safety goggles, fluid shield) upon entering the room of a patient in precautions.
- Wear eye protection and respiratory protection at least as effective as an N-95 respirator when performing high hazard procedures (bronchoscopy, sputum induction, elective intubation and extubation, autopsies, open suctioning of airways. and when feasible during emergent situations such as cardiopulmonary resuscitation, emergent intubation) for patients with suspected or confirmed diseases requiring Droplet Isolation Precautions.
- Remove and discard mask/respirator and clean hands before leaving the patient's room or, in semi-private room or multi-bed bay situation, before leaving the patient's immediate vicinity. Goggles may be reused; they should be cleaned with a disinfectant wipe between uses by different healthcare workers.

### Visitors

- Visitors will be educated regarding the transmission of diseases requiring Droplet Isolation Precautions:
  - Hand hygiene with alcohol based hand rub or soap and water should be performed regularly and always upon leaving the patient's room.
  - Risk of acquisition of diseases requiring Droplet Isolation Precautions is reduced through the use of personal protective equipment (i.e. surgical mask with eye shield or goggles). This equipment will be available for visitors upon request.
- Visitors with upper respiratory symptoms are asked to refrain from visiting. Special consideration may be given to close family members.
- Nursing staff will instruct family/visitors to clean hands after contact with patient secretions or contact with immediate patient environment.
- Visitors may choose to wear the indicated PPE.
- Patients on Droplet Precautions (and their pediatric siblings) are not allowed in communal spaces (play room, school room, solarium, etc.)

### Discontinuing isolation precautions:

Droplet Isolation Precautions may be discontinued when symptoms resolve or when criteria for discontinuing precautions (see [Transmission-based Precautions Table](#)) have been met.

**D. Airborne Isolation Precautions**

When a person infected with an airborne-transmitted disease coughs, sneezes, speaks, spits, sings, or undergoes oral or tracheal/bronchial suctioning, infectious particles sized 5 microns or smaller, which carry the infectious organism may be released into the air and be carried via air currents. Table 2 shows a sampling of diseases and conditions identified by CalOSHA as requiring Airborne Isolation Precautions. A complete table can be found in the table [“General Conditions and Specific Organisms Requiring Transmission-Based Precautions”](#)

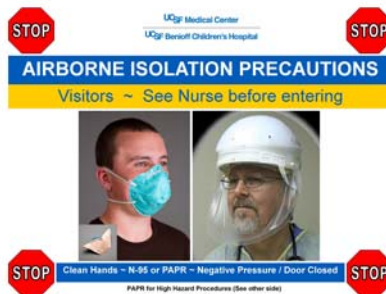
<p><b>Table 2. Diseases/Pathogens Requiring Airborne Isolation Precautions (CalOSHA)</b>  Aerosolizable spore-containing powder or other substance that is capable of causing serious human disease, e.g. Anthrax/<i>Bacillus anthracis</i>  Avian influenza/Avian influenza A viruses (strains capable of causing serious disease in humans)  Varicella disease (chickenpox, shingles)/Varicella zoster and Herpes zoster viruses, disseminated disease in any patient. Localized disease in immunocompromised patient until disseminated infection ruled out  Measles (rubeola)/Measles virus  Monkeypox/Monkeypox virus  Novel or unknown pathogens  Severe acute respiratory syndrome (SARS)  Smallpox (variola)/Variola virus  Tuberculosis (TB)/<i>Mycobacterium tuberculosis</i> -- Extrapulmonary, draining lesion; Pulmonary or laryngeal disease, confirmed; Pulmonary or laryngeal disease, suspected  Any other disease for which public health guidelines recommend airborne infection isolation</p>
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Negative pressure air handling (ventilation) is required for isolating patients diagnosed or suspected of having a disease requiring Airborne isolation precautions.

**Airborne Isolation Precautions** require:

1. Private Airborne Infection Isolation Room (AIIR, aka Negative Pressure Isolation Room [NPIR]).
2. Healthcare workers entering the room of a patient with suspected or confirmed diseases requiring Airborne isolation precautions to wear a fit-tested N-95 respirator or Powered Air Purifying Respirator (PAPR—see [Tuberculosis Exposure Control Plan](#) and the Aerosol-Transmissible Diseases Exposure Control Plan [on the Safety website]).
3. The healthcare worker to wear a PAPR when performing high hazard procedures (bronchoscopy, sputum induction, elective intubation and extubation, autopsies, open suctioning of airways; and when feasible during emergent situations such as cardiopulmonary resuscitation, emergent intubation) for patients with suspected or confirmed diseases requiring Airborne isolation precautions. Exceptions to wearing a PAPR for aerosol-generating procedures include:
  - a. Emergent patient conditions that do not allow time to don PAPR equipment.
  - b. PAPR equipment interferes with the use of medical devices necessary to conduct a procedure.
  - c. Other exemptions must be submitted to the Office of Environmental Health and Safety on behalf of the department for compilation and annual review.
4. When a patient is suspected or confirmed to have an infection with chickenpox, disseminated varicella or measles, susceptible healthcare workers or visitors should not enter the room. Immunity to chickenpox (varicella) may be confirmed via:

- a. Clinical disease demonstrable by serum antibody titer.
- b. Two doses of varicella vaccine. NOTE: No vaccine is perfect and breakthrough cases of mild disease are not uncommon in vaccinated people. Vaccinated personnel who care for patients with chickenpox or disseminated zoster should monitor themselves for symptoms following exposure.
5. Patients to be confined to their room except for essential purposes, in which case, a regular mask (surgical or paper) is worn by the patient at all times when outside the negative pressure environment. (Patients with airborne transmitted diseases are not required to wear an N-95 respirator.)
6. Appropriate door signage (red).
7. Education for the patient/representative "[Airborne Isolation Precautions Patient Information Sheet](#)".



PATIENTS in AIRBORNE ISOLATION Precautions
<ul style="list-style-type: none"> <li>Place in a private Airborne Isolation Room (AIR) (aka Negative Pressure Isolation Room (NP-IR))</li> <li>Wash the floor daily.</li> <li>Remain in the room except for essential purposes (off-unit testing, surgical procedures, etc.)</li> <li>Wear a regular mask (surgical or paper) NOT an N-95 respirator over mouth and nose when outside the negative pressure environment</li> </ul>
STAFF Caring for Patients in AIRBORNE ISOLATION Precautions
<ul style="list-style-type: none"> <li>Wear an N-95 tested NIOSH respirator or Powered Air Purifying Respiratory (PAPR) upon room entry even if immune to the patient's condition. Do not remove the respirator until you leave the room.</li> <li>Remove and discard respirator after each patient encounter. For PAPR cleaning, refer to instructions in the Airborne Isolation unit.</li> <li>Other VISITORS to patients in Airborne Isolation Precautions in a respiratory and infectious unit.</li> <li>Inform VISITORS to patients in Airborne Isolation Precautions to clean their hands before entering and exiting the patient's room.</li> <li>Place the following outside patient room: N-95 respirators (surgical masks), PAPRS</li> </ul>
<p>For additional information, visit "Standard and Transmission-Based Precautions Policy" at <a href="http://infectiouscontrol.ucsfmedicalcenter.org">http://infectiouscontrol.ucsfmedicalcenter.org</a> or page for Infection Control Practitioner on call at 415.2244</p>
GENERAL INDICATIONS for AIRBORNE ISOLATION Precautions
<ul style="list-style-type: none"> <li>Varicella (chickenpox) rash</li> <li>Symptoms consistent with pulmonary tuberculosis (i.e. cough, night sweats, hemoptysis, unexplained weight loss)</li> <li>Chest radiograph consistent with pulmonary tuberculosis</li> <li>AFB Culture tested on a respiratory specimen when pulmonary tuberculosis is being ruled out</li> </ul>
COMMON SPECIFIC INDICATIONS for AIRBORNE ISOLATION Precautions
<ul style="list-style-type: none"> <li>Measles <ul style="list-style-type: none"> <li>• Measles (rubeola)</li> <li>• Varicella (chickenpox)</li> <li>• Zoster (shingles) OR (herpes) in an immunocompromised patient</li> </ul> </li> </ul>
High Hazard Medical Procedures (HHMP) (aka Aerosol Generating Procedures)
<p>HHMP is required for most air-borne infectious diseases. NIOSH tested N95 respirators must be worn during HHMP for all other patients. HHMP include:</p> <ul style="list-style-type: none"> <li>intrathecal administration of medications</li> <li>airway suction</li> <li>airway manipulation</li> <li>airway circuit, surgical and laboratory procedures that use aerosolized agents (e.g. bronchoscopy, bronchiectomy or open lung biopsy)</li> <li>intubation and extubation</li> <li>cardiopulmonary bypass</li> <li>cardiothoracic surgery</li> <li>other activities of ET or tracheostomy</li> </ul>

## Visitors

- A. Visitors may choose to wear the indicated PPE.
- B. Symptomatic household or other contacts of patient may not visit until medically cleared. If symptomatic contact must visit, a mask will be donned before entering the hospital and worn continuously while in the facility.

## Discontinuing isolation precautions:

Consult with Infection Control before discontinuing Airborne Isolation Precautions. In addition, for "R/O TB", consult the [Tuberculosis Exposure Control Plan](#).

## Admission to Comfort Care Suites/Rooms:

1. Patients in Contact or Droplet Isolation Precautions may be admitted to Comfort Care Suite L1439, and to Comfort Care Rooms on 7 Long.
2. Patients on Airborne Isolation Precautions may be admitted only to M1524 Comfort Care Suite. This room should be set to negative pressure prior to admission of a patient on Airborne Isolation Precautions.

## E. Cadaver Handling

1. Wear a PAPR when performing aerosol generating procedures in cadavers with suspected or confirmed diseases requiring Droplet or Airborne Isolation Precautions. Exceptions to wearing a PAPR for aerosol generating procedures include:
  - a. Emergent patient conditions that do not allow time to don PAPR equipment.
  - b. PAPR equipment interferes with the use of medical devices necessary to conduct a procedure.
  - c. Other exemptions must be submitted to the Office of Environmental Health and Safety on behalf of the department for compilation and annual review.

## F. Definitions

1. Aerosol transmissible disease (ATD) or aerosol transmissible pathogen (ATP). A disease or pathogen for which droplet or airborne isolation precautions are required.
2. Aerosol transmissible pathogen -- laboratory (ATP-L). A pathogen that meets one of the following criteria: (1) the pathogen appears on the list in Appendix D of the CalOSHA Aerosol Transmissible Diseases Standard, (2) the Biosafety in Microbiological and Biomedical Laboratories (BMBL) recommends biosafety level 3 or above for the pathogen, (3) the biological safety officer recommends biosafety level 3 or above for the pathogen, or (4) the pathogen is a novel or unknown pathogen.
3. Airborne infection isolation (AII). Infection control procedures as described in Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health-Care Settings. These procedures are designed to reduce the risk of transmission of airborne infectious pathogens, and apply to patients known or suspected to be infected with epidemiologically important pathogens that can be transmitted by the airborne route.
4. Airborne infection isolation room or area (AIIR). A room, area, booth, tent, or other enclosure that is maintained at negative pressure to adjacent areas in order to control the spread of aerosolized *M. tuberculosis* and other airborne infectious pathogens and that meets the requirements stated in subsection (e)(5)(D) of this standard.
5. Airborne infectious disease (AirID). Either: (1) an aerosol transmissible disease transmitted through dissemination of airborne droplet nuclei, small particle aerosols, or dust particles containing the disease agent for which AII is recommended by the CDC or CDPH, or (2) the disease process caused by a novel or unknown pathogen for which there is no evidence to rule out with reasonable certainty the possibility that the pathogen is transmissible through dissemination of airborne droplet nuclei, small particle aerosols, or dust particles containing the novel or unknown pathogen.
6. Airborne infectious pathogen (AirIP). Either: (1) an aerosol transmissible pathogen transmitted through dissemination of airborne droplet nuclei, small particle aerosols, or dust particles containing the infectious agent, and for which the CDC or CDPH recommends AII, or (2) a novel or unknown pathogen for which there is no evidence to rule out with reasonable certainty the possibility that it is transmissible through dissemination of airborne droplet nuclei, small particle aerosols, or dust particles containing the novel or unknown pathogen.
7. aka: also known as
8. CalOSHA: California Occupational Safety and Health Administration.

## F. References

1. Abbott, D and JS McGurk. Authority and Responsibility of Local Health Officers in Emergencies and Disasters. September 30, 1998. *The local health authority, San Francisco Department of Public Health (SFDPH), is the ultimate authority in a public health emergency. UCSF will implement precautions and use personal protective equipment according to SFDPH guidance.*
2. California Code of Regulations, Title 8, Section 5199, *Aerosol-Transmissible Diseases.*
3. Siegel JD, Rhinehart E, Jackson M, Chiarello L, and the Healthcare Infection Control Practices Advisory Committee, *2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings*

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HOSPITAL EPIDEMIOLOGY AND  
INFECTION CONTROL:  
**STANDARD AND TRANSMISSION  
BASED PRECAUTIONS**

**POLICY 1.1**  
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