# Clinical Center Infection Control Guidelines

Revised 2003

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
HOSPITAL EPIDEMIOLOGY SERVICE • WARREN G. MAGNUSON CLINICAL CENTER • NATIONAL INSTITUTES OF HEALTH

# Frequently Used Phone Numbers/Websites

### Contacting HES

- During weekday, daytime hours call the Hospital Epidemiology Service office (HES) at 301-496-2209.
- An HES Infection Control Specialist is assigned to each patient care area. Call HES to determine the liaison for your area.
- For emergencies or for evenings and weekends contact the HES on-call person through the Page Operator.

### Phone numbers/websites

| *Department* | *Phone* | *Website* |
|---|---|---|
| Admissions | 301-496-3141 | http://www.cc.nih.gov/ccc/aboutcc/msh/adm.html |
| Central Hospital Supply (CHS) | 301-496-3392 | |
| Division of Safety | 301-496-1357 | http://www.nih.gov/od/ors/ds/ |
| Housekeeping and Fabric Care (HFCD) | 301-496-2417 | |
| Hospital Epidemiology Service (HES) | 301-496-2209 | http://www.cc.nih/gov/hes/ |
| Infectious Disease Service: on-call | Page Operator 301-496-1211 | |
| Laboratory of Pathology (NCI) | 301-496-2035 | http://home.ccr.cancer.gov/LOP/Clinical/clinops.asp |
| Laboratory Medicine (DLM) | 301-496-4433 | http://intranet.cc.nih.gov/dlm/index.html |
| Messenger and Escort Service | 301-496-9295 | |
| Microbiology Service (DLM) | 301-496-4433 | http://intranet.cc.nih.gov/dlm/index.html |
| Occupational Medical Service (OMS) | 301-496-4411 | http://www.nih.gov/od/ors/ds/ |
| Page Operator | 301-496-1211 | |
| Pediatric Service | 301-496-0718 | http://www.cc.nih.gov/ccc/pedweb/pedsstaff/index2.html |
| Respiratory Virus Management | 301-496-1211 | http://www.cc.nih.gov/ccc/CC/pedsstaff/respvirpub.pdf |
| Radiation Safety | 301-496-5774 | http://www.nih.gov/od/ors/ds/ |
| Recreation Therapy | 301-496-2276 | http://www.cc.nih.gov/ccc/aboutcc/msh/hab.html |
| Safety Officer CC | 301-496-5281 | http://www.nih.gov/od/ors/ds/ |
| Transfusion Medicine | 301-496-8393 | http://www.cc.nih.gov/dtm/dtm-only/index.htm |

Frequently Used Phone Numbers/Websites

Standard/Universal Precautions must be followed at all times for all patient care. Additional isolation categories are designed to prevent the spread of microorganisms among patients, personnel, and visitors that are beyond the scope of Standard/Universal Precautions. The following additional categories are used at the Clinical Center (CC): Contact, Respiratory, AFB (Acid Fast Bacilli), Strict, Special Respiratory Isolation and CNS (Central Nervous System) Precautions. Contact Hospital Epidemiology Service (HES) for assistance or refer to the section entitled "Implementing Isolation."

The need for personal protective equipment (PPE) will change based on the patient care activity being preformed regardless of isolation status. ■

[1] Persons susceptible to chickenpox should not have contact with patients who have chickenpox or shingles. Persons susceptible to measles should not have contact with patients who have measles. Contact HES if a susceptible person needs to enter the room.

[2] Training required – contact CC Safety Officer

[3] Labels available from HES

| *Category* | *Transmission Route* | *Basic PPE* | *General Guidelines* |
|---|---|---|---|
| **Contact Isolation** | Contact with:<br>• patient<br>• infectious materials<br>• contaminated items in the patient's environment | • Gloves | • Private room<br>• Linen – water soluble liner and yellow laundry bag |
| **Respiratory Isolation**[1] | Contact with:<br>• respiratory droplets or secretions<br>• items contaminated with respiratory secretions | • Gloves<br>• Mask | • Private room<br>• Linen – water soluble liner and yellow laundry bag |
| **AFB Isolation** | • airborne<br>• pulmonary tuberculosis | • Gloves<br>• N95 or PAPR[2] | • Private room – negative pressure<br>• Linen – water soluble liner and yellow laundry bag |
| **Strict Isolation** | • airborne<br>• contact with infectious materials | • Gloves<br>• Gown<br>• Mask | • Private room<br>• Linen – water soluble liner and yellow laundry bag |
| **CNS Precautions** | • contact with high-risk tissues brain, eye and spinal cord | | • Private room<br>• Label specimens[3] |
| **Special Respiratory** | • Contact Hospital Epidemiology for specific instructions | | |

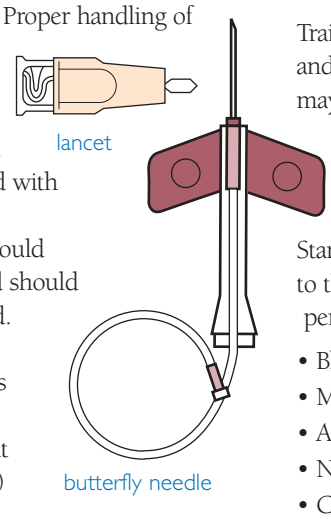
# Standard/Universal Precautions

The Clinical Center (CC) strives to maintain a safe environment and minimize the infection risk for patients, staff and visitors. Standard/Universal Precautions is an infection control strategy designed to reduce the risk of transmission of bloodborne pathogens such as Human Immunodeficiency Virus (HIV), Hepatitis B Virus (HBV) and other pathogens from blood, body fluids and other infectious materials. In March 1993, the Occupational Safety and Health Administration's (OSHA) bloodborne pathogen regulation (29 CRF 1910.1030) became effective. The Clinical Center has adopted a four tiered hierarchy of controls for workplace safety; administrative controls, engineering controls, work practice controls and personal protective equipment.

Administrative controls provide the framework for a safe working environment. They include: 1) developing strategies to manage the risk of exposure to blood borne pathogens and 2) developing policies and procedures that direct staff in the use of infection control guidelines. Specific examples of these controls would be: having systems for evaluating and selecting safer medical devices, ensuring training for use of safer medical devices, and providing counseling and retraining when improper techniques are observed.

Engineering controls are the most important level of protection and are intended to eliminate exposures through the design of safer products. Puncture resistant sharps containers and retractable needles are examples of engineering controls. Another example of an engineering control is the emergency resuscitation equipment located on the walls near elevators. These plastic boxes are sealed to ensure the integrity of the contents and are for use by trained personnel. If the box is not intact or the seal is broken, notify Central Hospital Supply (CHS). Safer medical devices must be used according to the manufacturer's directions. They should be designed to help prevent occupational exposures but must also avoid increasing the risk to the patient. The CC Standardization Committee is charged with evaluating and implementing safer medical devices. Adverse events are monitored through the Occurrence Reporting System (ORS). Injuries are evaluated by the Occupational Medical Service (OMS) and the CC Safety Officer. The Clinical Center enforces the 2001 Federal Needlestick Safety and Prevention Act (Public Law 106-430).

The next level of protection is provided by work practice controls which define how work should be performed to minimize risk. Proper handling of sharps and proper disposal of infectious waste are examples of work practice controls. Since manipulation of sharps has been associated with occupational injury; needles, syringes and other sharps should be handled with caution and should not be bent, cut, or recapped. Used needles and other disposable sharp instruments should be discarded into leak proof, puncture-resistant containers (sharps container) designed specifically for this purpose. Sharps containers should be located as close to the point of use as possible, such as patient rooms and treatment areas, unless their location is deemed inappropriate by staff members (i.e., near children or patients with impaired judgment). When the container is three-quarters full, it should be closed and discarded into a Medical Pathological Waste (MPW) box.




Hand hygiene is a work practice control that remains the single most important means to prevent the spread of infection and is an important part of Standard/Universal Precautions and all isolation categories.

Personal protective equipment (PPE) is the final level of protection. PPE such as masks, gowns, eye protection, and gloves should be used when exposure to blood, body fluids and other infectious materials may occur despite engineering and work practice controls. Hand hygiene should be performed after removal of PPE.

The CC has expanded the original Centers for Disease Control and Prevention (CDC) Universal Precautions to include protection from other infectious agents in addition to protection from bloodborne pathogens. Standard/Universal Precautions as defined by the CC is similar to CDC's Standard Precautions. Standard/Universal Precautions is an important part of the CC's Bloodborne Pathogen Exposure Control Plan and must be followed at all times for all patient care.

Training is required at the time of initial employment and yearly thereafter for personnel whose job duties may include contact with blood or other infectious materials that might contain bloodborne pathogens. Contact HES to schedule a training session.

Standard/Universal Precautions at the CC apply to the following potentially infectious fluids from persons or animals whether they are living or dead:

- Blood
- Mucous membranes
- Amniotic fluid
- Non-intact skin
- Cerebral spinal fluid
- Secretions and excretions (except sweat)
- Pericardial fluid
- Unfixed tissue
- Peritoneal fluid
- HIV containing cell, tissue or organ cultures
- Pleural fluid
- HIV or HBV containing culture medium or solutions
- Synovial fluid
- Blood, organs or tissues from HIV or HBV infected experimental animals

When an employee sustains a sharps injury or exposure to blood, body fluids or other infectious materials he/she should first ensure patient safety and then immediately start first aid at the work site. Occupational Medical Service (OMS) should be notified as soon as possible, within one hour of the incident, at the OMS clinic or through the page operator. The employee's supervisor should also be notified.

First aid for injuries or exposures

- Percutaneous injuries and non-intact skin contaminated with blood, body fluids or other infectious materials should be thoroughly cleaned for 15 minutes with soap and water or a 10% povidone-iodine solution.
- Contaminated eyes and mucous membranes should be irrigated for 15 minutes with normal saline or water.

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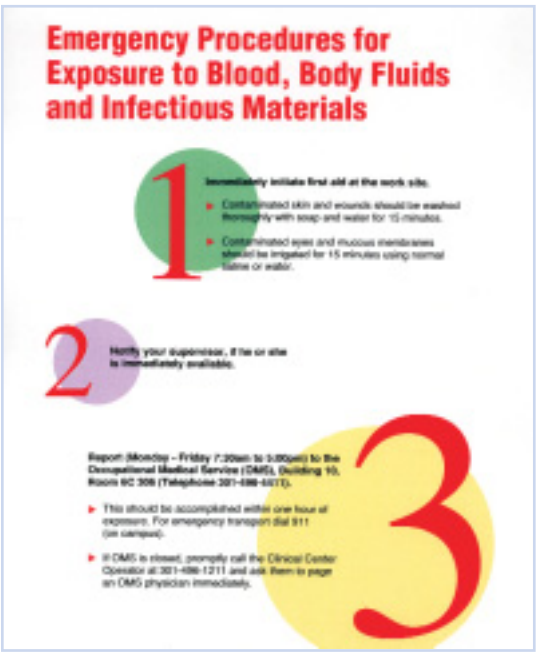
Personnel who are ill should consult their supervisor before reporting for duty. If symptoms develop while on duty, consult with the supervisor. The employee may be asked to report to the OMS clinic or sent home.




Symptoms that may make you unfit for duty include

- fever
- flu-like symptoms
- generalized rash
- gastrointestinal illnesses, such as vomiting and/or diarrhea
- jaundice or yellowing of the skin or eyes
- weeping dermatitis
- exposed skin lesions that are blistering, pustular, or weeping

## Elements of Standard/Universal Precautions

**1. Room** A private room may be indicated when a patient has poor hygiene, may contaminate the environment (e.g. profuse bleeding or diarrhea), or may not be able to comply with infection control measures (e.g. infants, children or patients with impaired judgment).

**2. Hand Hygiene** is the single most important means of preventing the spread of infection. Only CC-approved soaps, lotions and waterless antiseptic gels should be used by health care workers. If skin irritation develops as a result of frequent use of hand hygiene products, contact OMS for an evaluation.

***Hand hygiene options***

Hand hygiene can be performed with soap and running water or with a waterless hand antiseptic gel.

- Antimicrobial soap is available in all patient care areas in either wall mounted dispensers or stand alone pump dispensers. Contact the Housekeeping Department if a soap dispenser is empty or does not function properly.
- Waterless hand antiseptic gel is available in all patient care areas in pump dispensers and pocket size bottles. Waterless hand antiseptic gel is available from Central Hospital Supply.

See the section entitled "Hand Hygiene" for more information.

**3. Visitors** should avoid coming to the CC if they are ill or have been exposed to someone who is infectious. Visitors are asked to perform hand hygiene before and after each patient visit. Flowers or personal items may not be allowed in some areas. Visitors should check with the nursing staff before bringing in items. In certain situations, visitors may be requested to wear PPE.

**4. Personal Protective Equipment**

**Gloves** do not replace the need for hand hygiene. Gloves may have small defects, may be torn during use or could contaminate hands during removal. Remove gloves promptly after use and before touching clean items or environmental surfaces (e.g. door knobs, telephones, computers, or elevator buttons). Hand hygiene is required after removing gloves. Latex, latex free, specialty gloves and cotton glove liners are available from CHS. If latex allergies are suspected, call OMS for an evaluation.

***Purpose– Gloves are worn to:***

- Prevent gross contamination of hands when touching blood, body fluids or other infectious materials, mucous membranes, non-intact skin or contaminated items
- Reduce the transmission of hand flora to patients during patient-care procedures
- Reduce hand contamination from the environment (e.g. equipment, furniture, table tops)

***Additional points***

- Change gloves between tasks and procedures on the same patient
- Change gloves after contact with potentially infectious material
- Change gloves between patients
- Disposable (single use) gloves should never be washed or reused
- Utility gloves (thick rubber gloves) manufactured for multiple uses, may be decontaminated and reused if the integrity of the glove is not compromised and and must be discarded if they are cracked, peeling, torn, punctured, exhibit other signs of deterioration or when their ability to function as a barrier is compromised

**Gowns**

Disposable gowns should be worn to prevent soiling of skin or clothing during procedures where there is gross contamination or when patient-care activities are likely to generate splashes or sprays of blood, body fluids or infectious materials. For example, gowns are indicated for changing bed linen that is heavily soiled. Select a gown appropriate for the activity and amount of fluid likely to be encountered. Disposable gowns and water-resistant gowns are available from CHS. Gowns should be replaced after each use or when their ability to function as a barrier is compromised. Used gowns should be discarded into a patient waste receptacle or an MPW box. Hand hygiene is necessary after gown removal.

**Eye Protection**

Eye protection, in combination with masks, should be worn when procedures may generate splashes or sprays of blood, body fluids or other infectious materials toward the eyes, nose, or mouth. Personal eyewear is not considered PPE unless there are side-shields. Plastic glasses with solid side-shields, goggles, masks with clear visors, and chin-length face shields are available from CHS. Select either mask and eye protection or a chin-length face shield. Hand hygiene is necessary after removing eye protection.

**Masks (Surgical/Procedure)**

Masks, in combination with eye protection, should be worn when splashes or sprays of blood, body fluids or other potentially infectious materials may be generated toward the eyes, nose, or mouth (e.g. during suctioning or intubation). Masks should cover both the nose and mouth. Staff providing care to patients with productive coughs should consider using masks and protective eyewear. Used masks should be discarded into a patient waste receptacle or an MPW box. Hand hygiene is necessary after removal of masks. *(continued on next page)*

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**5. Ancillary Patient Services**

**Patient Transport Outside Room**

- No patient restrictions are indicated for Standard/Universal Precautions
- Special precautions are not routinely indicated, since escort personnel are not likely to have contact with blood, body fluids, or other infectious materials; however, they should know the location of PPE for unexpected circumstances (e.g., patient with a bloody nose). For additional information refer to the section of this flipchart entitled "Transporting Patients on Isolation"
- Wheelchairs and stretchers should be cleaned according to Ambulatory Care policy after each patient transport

**Nutrition Department staff** delivers meal trays using regular dishes and eating utensils.

**6. Patient Care Equipment**

Disposable equipment should be separated from reusable equipment after use. Call CHS for assistance.

**Disposable equipment**

- Discard disposable equipment into a patient waste receptacle or an MPW box.
- Discard disposable sharp instruments and syringes into a sharps container.

**Reusable equipment** must be disinfected or sterilized before reuse; disinfection is usually preformed in CHS.

- Do not rinse, scrub or soak reusable items in patient care areas.
- Place reusable equipment in a CHS-issued, OSHA transport tray. The tray is a covered, puncture-resistant, leak proof container labeled with the biohazard symbol.
- When an OSHA transport tray is not located at the point of use, equipment should be physically contained in a manner that will prevent environmental contamination (e.g. in an emesis basin) and transported to the dirty utility room and placed into the OSHA transport tray.
- Equipment with minimal contamination will be picked up by CHS on a routine schedule.
- Grossly soiled equipment or equipment with tissue adherence should be transported to CHS as soon as possible. Call CHS for immediate pick up of the equipment.

**Oversized Equipment**

- Large items (e.g. bedside commode, hypothermia unit) should be cleaned to remove visible organic material and disinfected with a CC-approved disinfectant before returning to CHS.
- Place equipment into a CHS issued bag or container prior to transport.

**Other considerations**

- Equipment that needs to be serviced or repaired should be decontaminated externally and internally with a CC-approved disinfectant before transport. If any part cannot be decontaminated, the equipment must be labeled with a "Biohazard" sticker that indicates the contaminated areas. Attach a "Service Tag" (NIH Form 2611) to the equipment.
- Equipment used on patients on CNS Precautions may require special handling. For additional information refer to the section of this flipchart entitled "CNS Precautions" or call HES.

**Electronic Thermometers** are recommended.

- Thermometers should be wiped after use with a CC-approved disinfectant.
- Thermometers are available from Biomedical Engineering.
- Disposable probe covers are available from CHS.

**Blood Pressure Equipment**

- Reusable blood pressure equipment requires decontamination before re-use.
- Portable automated equipment is available from Biomedical Engineering.
- Portable aneroid equipment is available from CHS.
- Disposable, latex-free blood pressure cuffs are available from CHS.

Stethoscopes generally do not require special cleaning but should be disinfected with a CC-approved disinfectant after use (e.g. 70% alcohol).

**7. Waste and Disposable Patient Care Equipment**

Waste should be discarded inside the room. Disposable patient care equipment should not be reused and should be discarded inside the room. All waste should be handled, labeled and packaged in accordance with the Division of Safety's "NIH Waste Disposal Guide." Waste from the Department of Laboratory Medicine, Department of Transfusion Medicine, NCI Laboratory of Pathology, clinical diagnostic laboratories and patient care areas will be considered infectious and disposed of in an MPW box. Waste contaminated with radioactive material should be handled as radioactive waste. Refer to the "NIH Waste Disposal Guide" or contact the Radiation Safety Branch or the CC Safety Officer for additional information.

**Sharps** should be discarded into a sharps container. When containers are three-quarters full, they should be closed and placed in an MPW box.

**Urine, feces and other liquid waste** should be flushed down a toilet or hopper by placing the waste as close to the drain as possible to avoid splashing. Liquid waste can also be solidified by adding a CC-approved absorbent liquid solidifier to the container prior to placing the sealed container into an MPW box. PPE may be necessary during waste disposal.

**8. Clothing and Linen**

**Patient clothing** can be laundered using the patient token-operated washing machines or on a case-by-case basis by contacting the Housekeeping and Fabric Care Department or HES.

**Staff clothing** (lab coats) visibly soiled with blood, body fluids or other infectious materials should be discarded or placed into a clear plastic bag and labeled to identify the contents and owner. Contact the Housekeeping and Fabric Care Department when staff clothing needs to be laundered.

**Linen** The risk of disease from soiled linen is negligible, however all linen should be handled, transported, and laundered in a manner that avoids transfer of microorganisms. Soiled linen should be placed in an impervious white laundry bag with a water soluble liner.

**9. Clinical Laboratory Specimens** from all patients must be treated as potentially infectious. To preserve specimen integrity, specimens should be properly collected, prepared and transported to the laboratory as soon as possible.

**Specimen collection**

- Collect specimens in a container with a lid that can be closed tightly to prevent leakage.
- Specimens contaminated on the exterior will not be accepted and will be discarded without analysis after contacting the area of origination.

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- Syringes that contain specimens will be accepted only if the needle has been removed and replaced with a plastic cap. On rare occasions when the needle cannot be removed due to small specimen volume, the physician should bring the syringe to the laboratory directly.

**Specimen labeling**
Special labeling is not indicated for most laboratory specimens. A notation on the transmittal sheet should be made for unfixed biopsy and tissue specimens, or when dimorphic fungi or agents that might be related to bioterrorism are suspected. See "Alphabetical List of Selected Infections and Conditions," the "Clinical Center Emergency Management Procedures" or the "Clinical Center Emergency Preparedness Flipchart."

**Specimen transport**
Gloves are not necessary for transporting specimens in sealed bags. Make sure that specimens are delivered to the correct laboratory.

- Transport specimens in sealed plastic bags with the transmittal sheet inserted into the outer pouch. If there is no outer pouch, affix the transmittal sheet to the bag but do not staple.
- Specimens sent on ice must be double-bagged. Seal the specimen in one bag and place this bag into a second bag containing ice.

**Transport options**

- The Ambulatory Care Service, Messenger and Escort Service pick up and deliver specimens.
- Most clinical laboratory specimens, up to a total weight of two pounds, can be sent via the pneumatic tube system (PTS). Do not use the PTS for specimens with needles attached, radioactive samples, feces, bone marrow slides, blood products for infusion, or their containers, sterile fluids, biopsies, "one of a kind" specimens, and specimens from patients suspected or known to have diseases or syndromes associated with bioterrorism.
- Secure the specimen during transport by using a foam insert, bubble-wrap, or similar material.
- Blood culture tubes should be inserted into additional separate plastic bags to prevent impact of the bottle.

**In the event of contamination or suspected contamination in the PTS**

- Do not remove the transport tube from the PTS and do not send the transport tube back to the sender.
- Call the Automated Systems Unit to report the situation and wait for instructions.
- Automated Systems Unit staff will provide instructions.
- The staff will investigate immediately and develop a management strategy for safe cleaning/sanitizing of the affected area.
- Do not use the PTS until Automated Systems Unit staff gives their approval.
- File an Occurrence Reporting System (ORS) report on the event.

**Additional information** on specimen collection, preparation and transportation

- Refer to the Department of Transfusion Medicine Test Guide website.
- Refer to the Department of Laboratory Medicine website.
- Refer to the NCI Laboratory of Pathology website.
- Call the laboratory or area where the specimen is being sent for additional assistance.

**10. Environmental Cleaning** should be performed by the Housekeeping and Fabric Care Department with a CC-approved disinfectant/detergent in accordance with standard policies and procedures. Areas contaminated with blood should be cleaned and disinfected based on the volume of the spill according to policy. Refer to the section of this flipchart entitled "Sterilization and Disinfection" or call the Housekeeping and Fabric Care Department.

**11. Recreational Items** The Rehabilitation Medicine Department's Recreation Therapy Section should approve all toys and games for use in playrooms, clinics and patient care areas. Toys should be made of non-porous, smooth material that can be disinfected or laundered before reuse. Soft, non-washable toys (e.g. stuffed animals) are limited to single child use and then discarded. Board games, arts and crafts that are not washable are discarded if soiled with blood or other infectious materials. Electronic toy surfaces may be carefully wiped with a CC-approved disinfectant. Toys are inspected and cleaned on a routine basis to ensure the toy is not broken or soiled. If toys are discarded, contact the Recreation Therapy Section supervisor and inform the staff which toys are being discarded. Books and Magazines that are visibly soiled should be discarded. For additional information see "Sterilization and Disinfection." Call the Recreation Therapy Section for information on toy management in the CC.

**12. Handling a Deceased Patient** requires the same precautions as if the patient were alive. Masks and protective eyewear usually are not indicated but should be worn when splashes to the face are anticipated. Contact the Admissions staff for access to the morgue.

**13. Exceptions** to the requirements for Standard/Universal Precautions may be made for certain procedures in the CC and must be approved by the Hospital Infections Committee.

**14. Compliance** with these guidelines is required. The responsibility for the development of compliance criteria and record keeping is delegated to each CC department. Employee performance should be monitored and employees will be counseled and retrained when compliance is not met. Employees who are repeatedly identified as failing to comply with these guidelines will be subject to disciplinary action. ■

The Centers for Disease Control and Prevention (CDC) 2002 Guideline for Hand Hygiene in Health-Care Settings, emphasizes that "Hand hygiene reduces the incidence of health-care associated infections." Antiseptic hand wash products intended for use by health care workers (HCW) are regulated by the Food and Drug Administration (FDA).

Hand hygiene products selected for use in the CC are chosen for efficacy, safety, compatibility with latex and user acceptance. Only CC-approved soaps, lotions and waterless antiseptic gels should be used by health care workers in the CC. If skin irritation develops, contact OMS for an evaluation. Hand hygiene is the single most important means of preventing the spread of infection.

Hand hygiene should be performed often:

- before and after each patient contact
- between tasks on the same patient
- after contact with blood, body fluids or other infectious materials
- after contact with soiled equipment, or environment
- after removing gloves or other PPE
- after using the bathroom
- after sneezing or coughing
- before preparing food
- before eating
- after changing diapers

Hand hygiene can be performed with soap and water or with a waterless hand antiseptic. A waterless hand antiseptic may be used when hands are not visibly soiled.

To wash hands with soap or an antimicrobial-containing soap

- wet hands with warm running water
- apply soap to hands
- rub hands together for 15 seconds, cover all surfaces of the hands, fingers and nails
- rinse hands with running water
- dry hands thoroughly with a paper towel
- use the paper towel to turn off the faucet and open the door
- use a CC-approved hand lotion to help maintain skin moisture

To clean hands with a waterless hand antiseptic

- apply enough product to moisten all hand surfaces
- rub hands together for 15 seconds, cover all surfaces of the hands, fingers and nails
- allow hands to dry
- do not wipe off excess hand gel
- after every 10 applications of hand gel, perform hand hygiene with soap and running water.

Artificial nails and long natural nails have been suggested as being causally-related to outbreaks of infection. Freshly applied nail polish does not increase the number of bacteria around the nail but chipped nail polish may support the growth of larger numbers of organisms on fingernails. Wearing of artificial nails is discouraged. ■

All health care workers, including pregnant health care workers, must follow Standard/Universal Precautions at all times. Following Standard/Universal Precautions will minimize the risk of acquiring the following infections commonly seen in the Clinical Center's (CC) high-risk patients: cytomegalovirus (CMV), herpes simplex virus (HSV), and bloodborne pathogens (e.g., HIV, Hepatitis B, and Hepatitis C). Call Hospital Epidemiology Service (HES) for questions.

All health care workers of child-bearing age should discuss vaccination with their primary care physician. Occupational acquisition of the following infections is possible, but preventable through pre-pregnancy vaccination:

- Hepatitis B
- Rubella (German Measles)
- Rubeola (Measles)
- Infectious parotitis (Mumps)
- Varicella Zoster Virus (chicken pox, shingles)

Due to the increased risk of cardiopulmonary complications of influenza during the later stages of pregnancy, influenza vaccine is recommended for pregnant women who will be in the second or third trimester during influenza season.

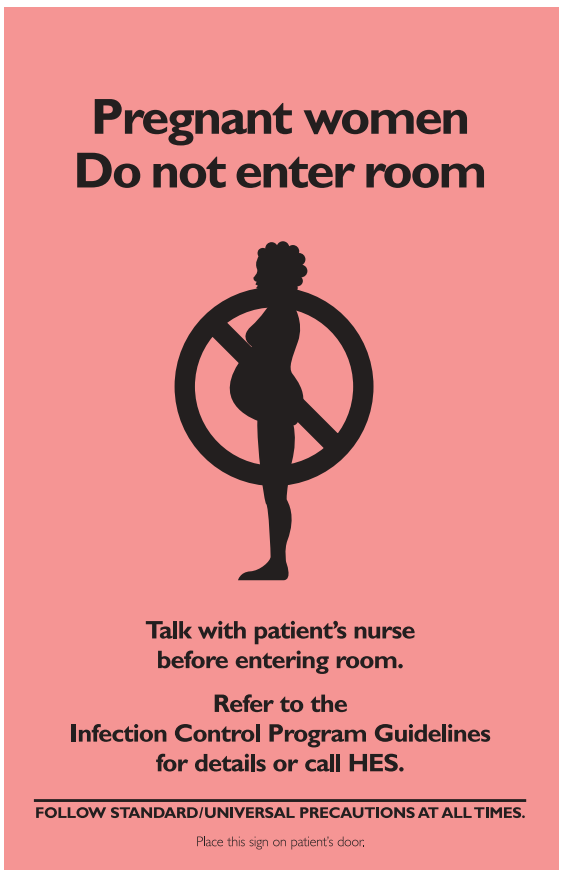
Generally, a healthy pregnant woman is not considered immunocompromised and pregnancy does not increase the risk of acquiring an infectious disease. However, since some infectious diseases may cause congenital syndromes when primary infection occurs during pregnancy, pregnant health care workers must take precautions when caring for patients with certain infections.

With few exceptions, CC policy does not restrict pregnant health care workers from caring for patients with infections. The exceptions are:

1. Susceptible pregnant health care workers (those with a documented negative antibody titer) may not care for patients with the following infections:
   - Parvovirus B19 infection in immuno-compromised patients (chronic infection or transient aplastic crisis)
   - Rubella (German Measles)
   - Rubeola (Measles)

2. Pregnant health care workers may consider not caring for patients receiving aerosolized Ribavirin treatment (during treatment and for 5-10 minutes after turning off aerosol generating equipment). Contact Critical Care Medicine (CCMD) Department Respiratory Therapy Section (RTS) for more information on aerosolized Ribavirin treatment. Contact the CC Safety Officer for respiratory protection training.

Pregnant health care workers should discuss reassignment with their supervisor (e.g., Nurse Manager). ■



# Personal Protective Equipment Use

**Personal Protective Equipment (PPE)** should be used when exposure to blood, body fluids or other infectious materials is likely. PPE includes gloves (sterile and non-sterile), disposable water-resistant gowns, masks (surgical and procedure), particulate respirators and protective eyewear (plastic glasses with side-shields, goggles, and face shields). PPE is available from Central Hospital Supply (CHS).

Gloves, disposable gowns, and surgical masks are not reusable items and should be discarded into a patient waste receptacle or a medical pathological waste (MPW) box immediately after use. Reusable goggles must be disinfected with a CC-approved disinfectant before reuse.

The type of PPE indicated will depend on the procedure and risk of exposure from that procedure. Gloves are worn during procedures in which blood, body fluids or other infectious materials are likely to contaminate the hands. Gowns are worn during procedures that are likely to contaminate exposed skin or clothing.

A face shield or mask and protective eye-wear are worn during procedures in which blood, body fluids or other infectious materials are likely to splash onto the face.

PPE is usually donned in this order:

- Mask
- Gown
- Gloves

PPE is usually removed in this order:

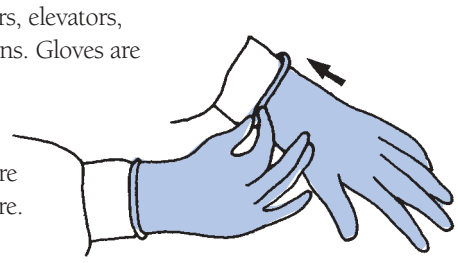
- If gloves are soiled, remove the soiled gloves and, unless the exposed hands are not likely to be contaminated, don clean gloves before removal of other PPE.
- Protective eyewear, if personal eyewear (with side shields) is worn, the eyeglasses may be removed last to check for visible soiling or to provide cleaning and disinfection.
- Gown
- Gloves
- Mask
- Discard PPE into a waste receptacle or MPW box.
- Hand hygiene should be performed after removal of PPE.

**Gloves**

Gloves should not be worn in corridors, elevators, or for transporting laboratory specimens. Gloves are single-use items and are not reusable.

*Donning gloves*

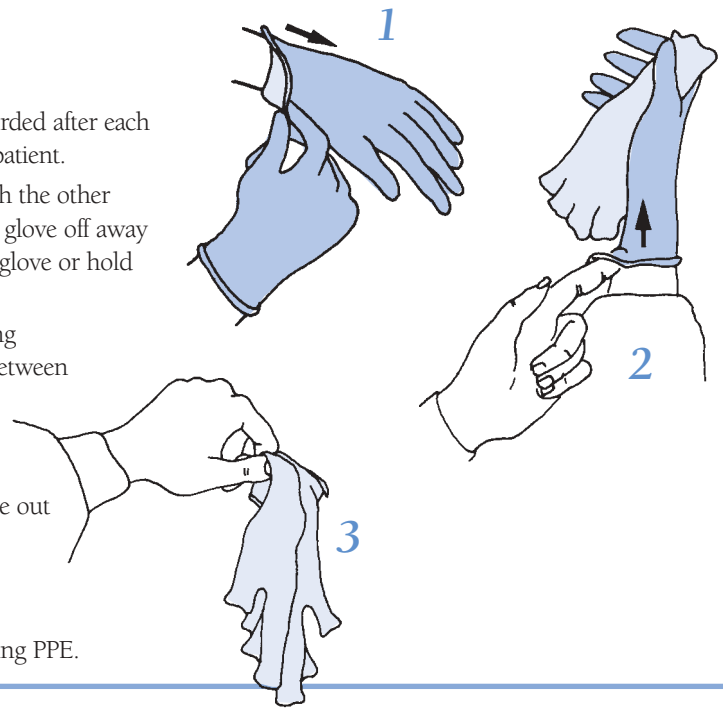
Select gloves that fit your hands and are appropriate for the particular procedure.



*Removing gloves*

Gloves should be removed and discarded after each use and between tasks on the same patient.

- Grasp the cuff of the first glove with the other gloved hand and carefully peel the glove off away from the body. Dispose of the first glove or hold it in the remaining gloved hand.
- Remove the second glove by placing a finger from the ungloved hand between the cuff of the glove and the skin of the wrist.
- With a peeling motion remove the second glove while turning it inside out and enclosing the other glove.
- Discard used gloves into a patient waste receptacle or an MPW box.
- Perform hand hygiene after removing PPE.

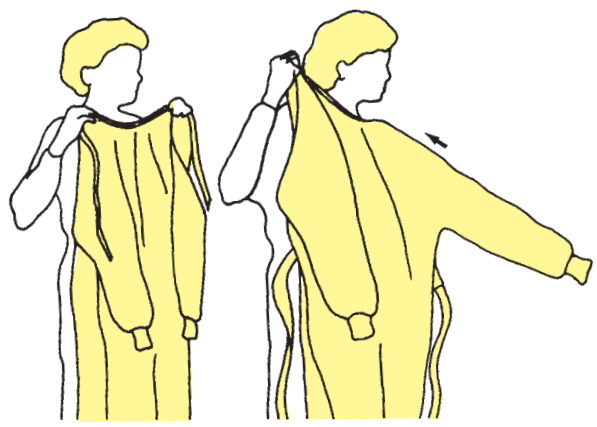



**Gowns**

*Donning a gown*

If both a gown and gloves are worn, the gown should be donned first.

- Hold the gown so that the back is facing you.
- Slip your arms one at a time into the sleeves.
- Fasten the neck tab located at the back of the gown.
- Extend the waste ties and tie them in the back of the gown taking care to overlap the edges to protect your clothing.



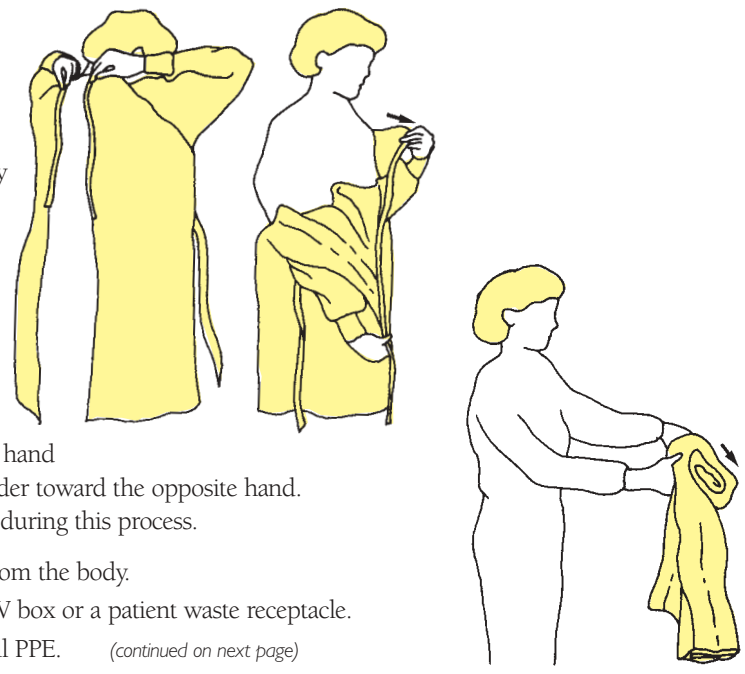
*Removing a gown*

If both a gown and gloves are worn, the gown should be removed first. If gloves are visibly soiled, remove the soiled gloves and don clean gloves prior to removing the gown.

- Untie the waist ties and then unfasten the neck tab.
- Using a peeling motion gently pull the gown from one shoulder toward the same hand and then from the other shoulder toward the opposite hand. The gown will turn inside out during this process.

Roll the gown into a ball away from the body.

- Discard the gown into an MPW box or a patient waste receptacle.
- Wash hands after removal of all PPE. *(continued on next page)*



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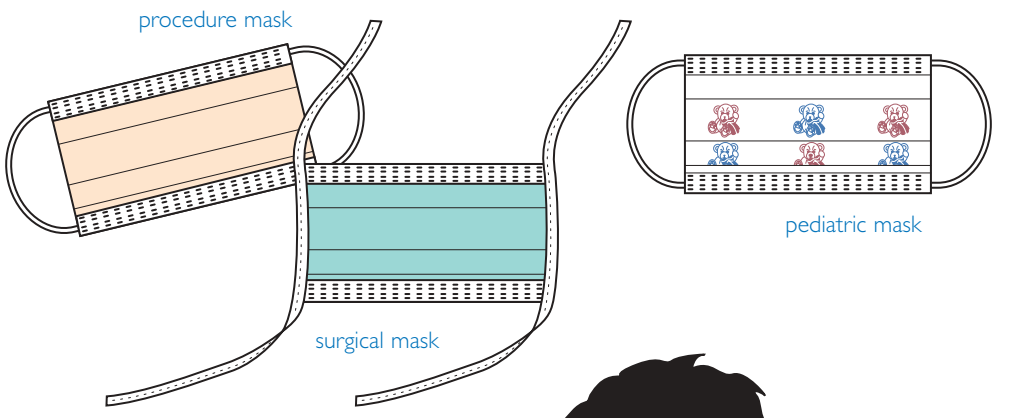
**Masks and Particulate Respirators**

Masks (Surgical/Procedure) are adequate for most procedures and isolation precautions. Masks are designed to protect the mucous membranes of the mouth and nose when splashing is likely. They are lightweight, fluid resistant and have a metal tab that fits across the bridge of the nose. If splashing of the face is likely eye protection is also indicated.

Masks are ineffective if the integrity is damaged or the mask becomes wet. Replace wet or torn masks as soon as possible.

Masks with attached face shields are available from CHS.

Types of masks:
- Surgical masks have four ties and a flexible metal nose tab.
- Procedure masks have elastic bands that loop around the ears and a metal nose tab.
- Pediatric masks are available for children and come in both surgical and procedure models.




*Donning a mask*

**Surgical mask**
- Place the mask over both the nose and mouth.
- Tie the top ties above the ears and at the back of the head.
- Tie the bottom ties at the back of the neck.
- Secure the flexible metal tab by bending it over the nose.

**Procedure mask**
- Place the mask over both the nose and mouth.
- Place the elastic loops over the ears.
- Secure the flexible metal tab by bending it over the nose.

*Removing a mask*

**Surgical mask**
- Untie the bottom ties while holding the mask in place.
- Untie the top ties.
- Discard mask into a patient waste receptacle or MPW box.
- Perform hand hygiene after removal of all PPE.

**Procedure mask**
- Unhook the elastic bands from behind each ear while holding the mask in place.
- Discard mask into a patient waste receptacle or MPW box.
- Perform hand hygiene after removal of all PPE.

**Particulate Respirators** are only for special situations, administration of aerosolized ribavirin, and for entering a patient's room with suspected or confirmed pulmonary or laryngeal tuberculosis. Particulate respirators are available from CHS and PAPRs are located on inpatient care units with negative pressure rooms and are also available from CHS. Training is required prior to using particular respirators.

Types of respiratory protection
- N-95 mask
- Powered Air Purifying Respirator (PAPR)

A training program for the use of N-95 masks and Powered Air Purifying Respirator's is available from the Environmental Safety Officer.

Perform hand hygiene after removal of all PPE.

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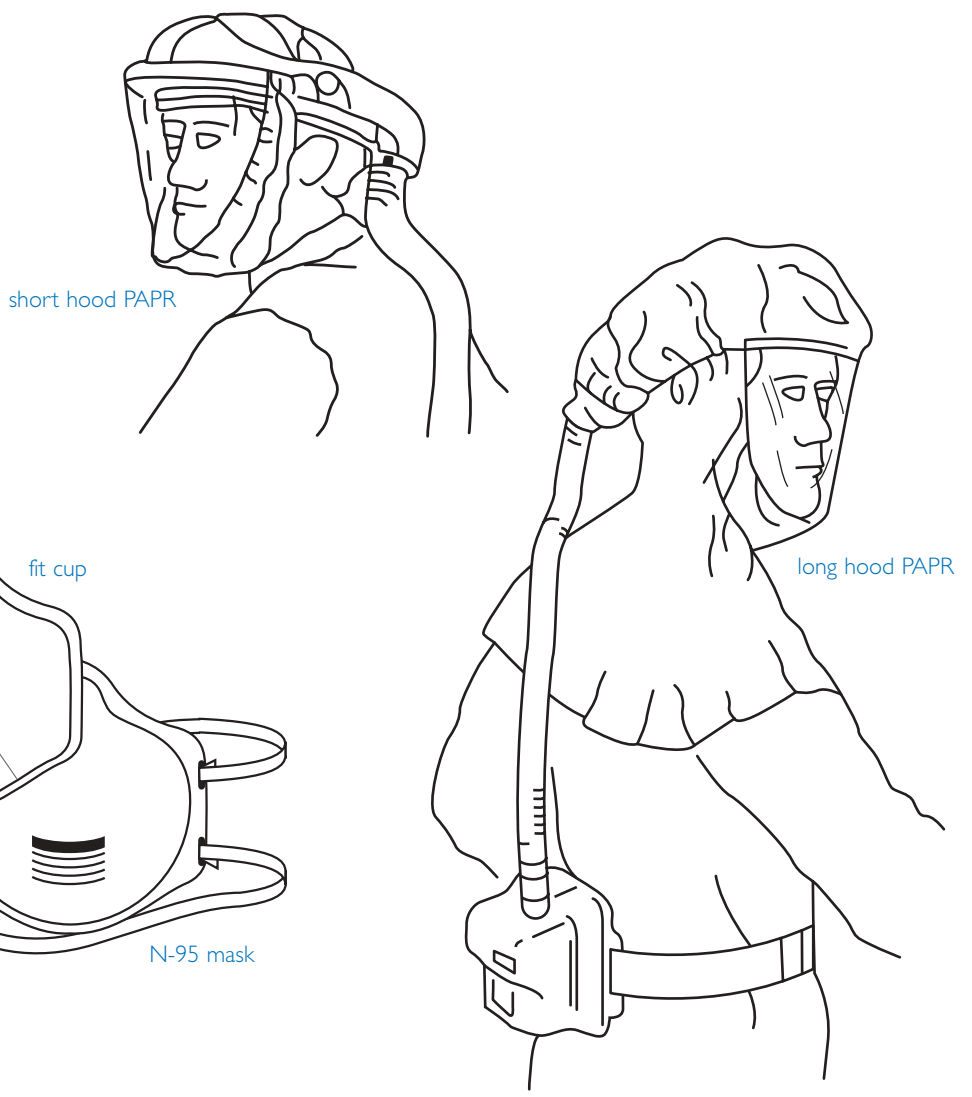

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## Eye Protection

Eye protection should be worn when blood, body fluids or other infectious materials may be splashed on the face. Each worker should have dedicated eyewear protection. Eyewear protection intended for multiple uses must be disinfected after use or discarded if damaged. Personal eyeglasses are not adequate for protection unless they have solid side-shields

The type of eye protection should be based on the risks associated with the procedure for which it is worn. Eye protection devices include plastic glasses with solid side-shields, protective goggles, masks with clear visors and chin length visor shields. When PAPRs are being worn for respiratory protection, they fulfill the requirements for eye protection.

### Plastic Glasses

*Donning plastic glasses*

Plastic glasses are worn similar to personal eyeglasses.

*Removing plastic glasses with solid side shields*

- Lift the earpieces carefully from behind the ears and pull forward and away from the body.
- If gloves are soiled they should be removed and replaced prior to removing plastic glasses.
- Disinfect the eyewear as soon as possible after each use with a CC-approved disinfectant.
- Plastic eyewear that is damaged or soiled with blood, body fluids or other infectious materials should be discarded into an MPW box or patient waste receptacle.
- Wash hands after removal of all PPE.

**Protective Goggles** are positioned to cover and form a protective seal around the eyes

*Donning protective goggles*

- Hold the goggles in one hand, allowing head straps to fall behind the hand.
- Place goggles on the bridge of the nose and over the eyes.
- Raise top strap to top back of head.
- Pull bottom strap over head, below ears and around neck.
- Adjust for comfortable fit.

*Removing protective goggles*

- If gloves are soiled, they should be removed and replaced prior to removing protective goggles.
- Lift the top strap from the back of the head to the front while holding the goggles.
- Lift the bottom strap from the back of the head to the front.
- Disinfect the goggles as soon as possible after each use with a CC-approved disinfectant.
- Goggles that are damaged or soiled with blood, body fluids or other infectious materials should be discarded into an MPW box or patient waste receptacle.
- Perform hand hygiene after removal of all PPE.

**A visor shield** protects the face from splashes. Some visor shields need to be assembled prior to use, read and follow the manufacturer's instructions for assembly.

*Donning visor shields*

- The visor shield is donned similar to eyeglasses.
- The visor shield may fit a little higher on your forehead than glasses. Make sure the visor shield covers your entire face to below the chin.

*Removing visor shield*

- If gloves are soiled, they should be removed and replaced prior to removing visor shields.
- Visor shields are removed similarly to eyeglasses.
- Lift the visor shield carefully from behind the ears and pull forward and away from the body.
- If the visor shield has an elastic band, lift the face shield carefully from behind the ears and pull forward and away from the body.
- Disinfect the visor shield as soon as possible after each use with a CC-approved disinfectant.
- Visors that are damaged or soiled with blood, body fluids or other infectious materials should be discarded into an MPW box or patient waste receptacle.
- Perform hand hygiene after removal of all PPE. ■

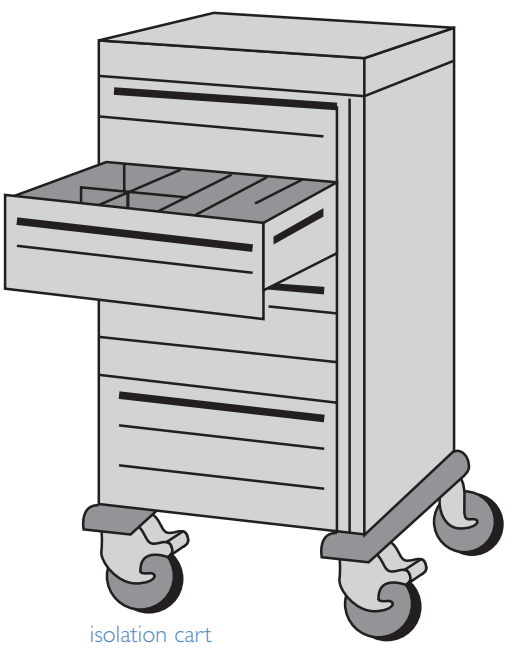
# Implementing Isolation

## General Guidelines

### • Order

**1. Isolation precautions** are ordered through the MIS/CRIS physician's pathways or by Hospital Epidemiology Service (HES) staff. Notify HES whenever isolation is initiated. HES will assist in the management of isolated patients staying, or planning to stay, at the NIH Children's Inn or the Family Lodge.

**2. Isolation carts** are ordered from Central Hospital Supply (CHS) by MIS/CRIS-o-gram. Call CHS for questions.



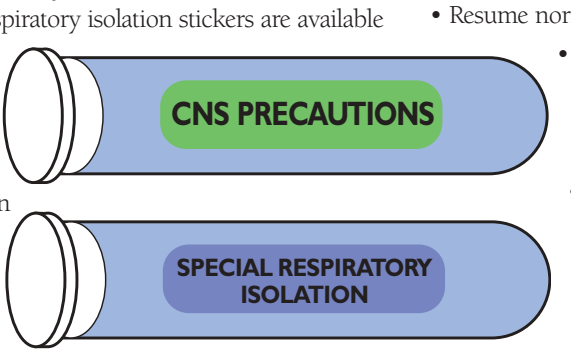
isolation cart

patient's chart

**3. Label patient's chart** with the appropriate isolation sign. A smaller sign is available for the patient's chart.

**4. Label patient's specimens** when appropriate. Labeling is indicated for all specimens from patients on CNS (Central Nervous System) Precautions or Special Respiratory isolation. CNS Precautions and Special Respiratory isolation stickers are available from HES.

For labeling instructions refer to the specific isolation category and the specific organism in "Alphabetical List of Selected Infections and Conditions."




specimens

**2. Ancillary Patient Services** (e.g. Escort, Diagnostic Radiology, Nuclear Medicine, etc.) should be notified before a patient on isolation precautions is transported to their area. The patient's isolation status should always be communicated to the receiving area in advance of their transport. This communication ensures that staff is aware that isolation precautions are in place prior to the patient's arrival and allows them to prepare accordingly.

**3. Hospital Epidemiology Service** should be consulted for questions regarding implementing isolation.

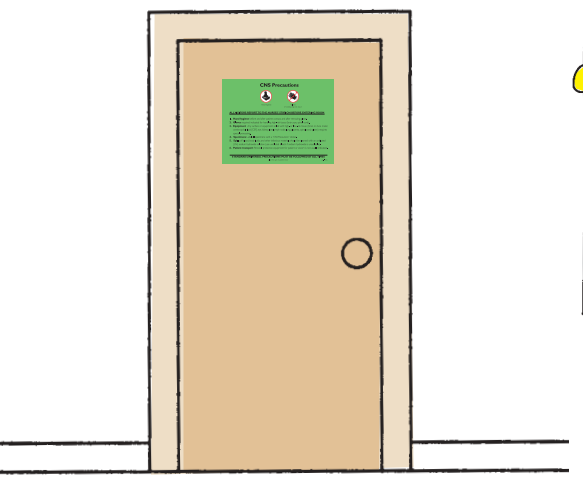
### • Discontinuation of isolation

The patient must meet criteria for discontinuing isolation precautions. Consult "Alphabetical List of Selected Infections and Conditions" for information on isolation, or call HES for assistance.

**1. General**

- Standard/Universal Precautions still apply.
- Resume normal patient activities.
- Discontinue notification of isolation before transportation.
  - Remove the isolation sign from the patient's chart.
- Ask Housekeeping to remove MPW box.
  - Resume handling linens as described in the section entitled "Standard/Universal Precautions."
- Discontinue special specimen labeling if it was indicated while on isolation.

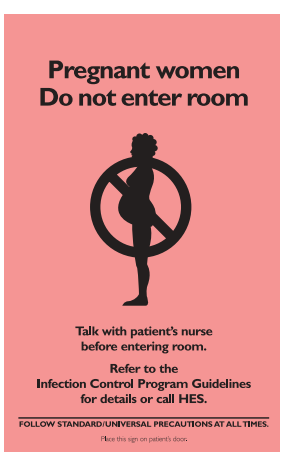
patient's door



### • Identify

**1. Label patient's door** with proper isolation sign. A large sign is available for the patient's door.

**2.** Consult with HES to determine the need for additional signage in special situations.




Do not enter this room unless you are certain you have had **CHICKENPOX!**

**Stringent Handwashing Required**

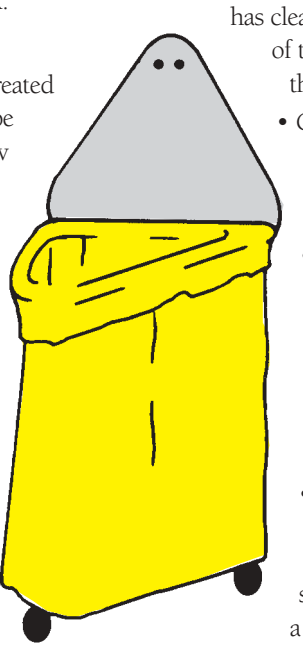
special signs

MPW box

### • Notify

**1. Housekeeping and Fabric Care Department** staff will provide:

- *MPW (medical pathological waste) box*
  All trash or waste from the patient room must be placed in this box. The box (with lid) should be placed be placed outside the door of the patient's room. Housekeeping staff will label, seal and dispose of the MPW box.
- *Linen hamper*
  Linen from a patient requiring isolation is treated as contaminated. Extra linen hampers can be obtained from Housekeeping. Place a yellow laundry bag with water-soluble plastic liner (found in the bottom drawer of the isolation cart) in the hamper. Put all linen used in patient care into the hamper. When three-quarters full, securely close the plastic liner and close the yellow bag.



linen hamper

**2. MIS/CRIS Order**

- Isolation is discontinued in MIS/CRIS via the physicians' pathways or by HES staff.

**3. Notify**

- Housekeeping to clean the patient's room. Do not remove the isolation sign from the patient's door until cleaning is complete. It is not necessary for the patient to vacate the room. Do not remove the isolation sign from patient's door until after the room has sat undisturbed (if required) and Housekeeping has cleaned. A nurse or another member of the health care team removes the isolation sign from the door.
- CHS by MIS/CRIS-o-gram to pick up isolation cart.

**4. Fomite Management**

- Patient care supplies (e.g. dressing supplies) kept in the patient's room during the period of isolation should be discarded into an MPW box or, if not visibly contaminated, sent home with the patient.
- Large items (e.g. VCRs) brought into the patient's room need to be cleaned before reuse. Surfaces should be decontaminated with a CC-approved disinfectant.
- Reusable patient room equipment (e.g. sequential compression devices and pumps for air mattresses) should be sent to CHS for reprocessing before reuse. This equipment usually does not need high-level disinfection or sterilization but should be decontaminated with a CC-approved disinfectant agent. ■

# Contact Isolation

## Contact Isolation

**ALL VISITORS REPORT TO THE NURSES' STATION BEFORE ENTERING ROOM**

1. **Private room** required.
2. **Hand hygiene** before and after patient contact, and after removing gloves. Use an antimicrobial agent or a waterless hand antiseptic.
3. **Gloves** required for all persons entering room.
4. **Gowns** required for direct contact with patient, contaminated items or the environment.
5. **Patient transport** Minimize the patient's activity outside the room. Personal protective equipment for patient is not usually indicated. Escort personnel wears gloves and should wash hands after patient transport.

**STANDARD/UNIVERSAL PRECAUTIONS MUST BE FOLLOWED AT ALL TIMES**

place this sign on patient's door (Rev. 10/03)

Contact isolation is designed to prevent transmission of organisms that may be spread by direct patient contact, contact with infectious materials, or contact with items in the patient's environment.

**Standard/Universal Precautions are indicated at all times for all patient contact.**

**Transmission route: Direct or indirect contact with patient, infectious materials, or items in the patient's environment**

## Specifications for Contact Isolation

**1. Notify** the Hospital Epidemiology Service (HES) of all cases of resistant bacteria, infection or colonization.

**2. Private room** A private room is required. If a private room is not available, consult HES for patient placement (e.g. cohorting).

**3. Hand hygiene** is required before and after patient contact, after removing personal protective equipment (PPE) and before leaving the patient's environment.

Use the sink inside the room nearest the door, wash hands for 10-15 seconds using a CC-approved soap and water. Use a paper towel to turn off the faucets and to open the door.

**or**

If hands are not visibly soiled, a CC approved waterless hand antiseptic agent can be used. Apply enough product to cover all surfaces of the hands, fingers and nails. Rub hands together for 10-15 seconds until dry. Always handle the doorknob with a paper towel to avoid re-contaminating hands.

**4. Visitors** should report to nursing station before entering the room. Visitors should be instructed in the appropriate use of personal protective equipment (PPE). For more information, a pamphlet entitled "Infection Control at the Clinical Center: Information for Patients and Visitors" is available from HES.

**5. Personal Protective Equipment**

***Gloves*** are required to enter the room, direct or indirect contact with patient, infectious materials, or items in the patient's environment.

***Gowns*** are indicated if clothing may have substantial contact with the patient or the patient's environment. Gowns are indicated if the patient is incontinent or has diarrhea, an ileostomy, a colostomy, or wound drainage not contained by a dressing.

***Masks*** are indicated as described in the section entitled "Standard/Universal Precautions."

***Protective Eyewear*** is indicated as described in the section entitled "Standard/Universal Precautions."

***Personal Protective Equipment removal***

*For an isolation room with an anteroom*
PPE should be removed in the anteroom before exiting to the hallway.

*For an isolation room without an anteroom*
PPE should be removed immediately prior to leaving the patient's room. Follow the procedure described in "Personal Protective Equipment Use."

Hand hygiene is required after removal of PPE.

**6. Ancillary Patient Services** (e.g. Escort, Diagnostic Radiology, Nuclear Medicine, Surgery, etc.) must be notified before a patient on isolation precautions is transported to ensure that staff is prepared for the patient's arrival. Contact with staff, visitors and other patients must be minimized. Contact HES for additional patient activity guidelines.

Wheelchairs and stretchers are cleaned after every transport of a patient on isolation precautions. Ambulatory Care Services cleans this equipment according to policy.

***Patient transport*** should be restricted to essential purposes only.

- Patient transport personnel wear gloves
- A private elevator is indicated.
- Patient may occasionally need to wear a gown and/or gloves. Contact HES for requirements.
- Patient must be escorted directly into the procedure/examination room.

***Additional transport information if patient has Crusted (Norwegian) Scabies***

- Transport personnel and personnel in the area to which the patient is being transported must be notified that the patient has crusted (Norwegian) scabies.
- Transport personnel must wear gloves and gown.
- Patient must wear gloves and gown.
- The transport area should be cleared of non-essential traffic.

***Nutrition Department*** must wear gloves when delivering and removing meal trays from the patient room.

**7. Patient care equipment**

***Blood pressure cuffs*** should be disposable. If a non-disposable cuff is used, it must be disinfected with a CC-approved disinfectant before use on another patient.

***Contaminated reusable equipment*** (electronic thermometers, blood pressure equipment etc.) should be dedicated to a single patient for the duration of isolation. Equipment must be disinfected with a CC-approved disinfectant before use on another patient.

***Portable monitoring instruments*** (EKG, ECHO, X-RAY equipment etc.) may be used in the patient's room. Any equipment surfaces contaminated with blood, body fluids or other infectious materials must be disinfected with a CC-approved disinfectant prior to removal from the patient's room.

***Stethoscopes*** should be disposable. If a non-disposable stethoscope is used, it must be disinfected with a CC-approved disinfectant before use on another patient.

***Wheelchairs and stretchers*** are cleaned after every transport of a patient on isolation precautions. The Ambulatory Care Service cleans wheelchairs according to policy.

*(continued on next page)*

# Contact Isolation *continued from preceding page*

Refer to "Sterilization and Disinfection" or "Standard/Universal Precautions" for more information.

**8. Waste and disposable patient care equipment**
Waste should be discarded inside the room. Disposable patient care equipment should not be reused and should be discarded inside the room. All trash or waste from the patient room should be placed in an MPW (medical pathological waste) box. The box should be placed outside the door of the patient's room (or in the anteroom) and have a lid (provided by the Housekeeping and Fabric Care Department staff). Housekeeping and Fabric Care Department staff will label, seal and dispose of the box.

***Urine and feces*** should be handled with caution by health care workers to avoid accidental spills. Regardless of disposal method, use personal protective equipment as appropriate for the situation (e.g., protective eyewear [safety goggles], gloves, mask, or disposable gown).

Refer to "Standard/Universal Precautions" for more information.

**9. Clothing and linen**
***Patient clothing*** visibly soiled with blood, body fluids or infectious materials should be discarded or disinfected. Soiled patient clothing should be bagged and sent home to be laundered in hot water with detergent. Patient clothing can be laundered using the patient token operated washing machines.

***Staff clothing*** (e.g. lab coats) visibly soiled with blood, body fluids or other infectious materials should be discarded or disinfected by the Housekeeping and Fabric Care Department.

***Linen*** is placed in an impervious yellow laundry bag with a water soluble plastic liner.

For more information call HES or refer to "Sterilization and Disinfection."

**10. Lab specimens** usually do not require special labeling.

For additional information regarding surveillance cultures refer to item number 13.

**11. Environmental cleaning** of rooms should be done according to Housekeeping and Fabric Care Department policy.

**12. Recreational items**
***Books and magazines*** should be dedicated to a single patient. Books and magazines visibly soiled with blood or other potentially infectious materials should be discarded. Books and magazines used by patients on isolation should not be returned to circulation.

***Toys*** should be dedicated to a single patient. Toys should have non-porous cleanable surfaces and must be disinfected according to the Rehabilitation Medicine Department's Recreation Therapy Section policy for toy disinfection before being placed back into circulation. Toys that cannot be disinfected and returned to circulation (e.g. stuffed animals) become the property of the patient. Toys that are visibly soiled with blood or other potentially infectious materials should be discarded.

**13. Discontinuation** of these precautions will depend on the organism and site of colonization and/or infection. Isolation should be discontinued only after consulting with HES.

Some examples are:

- Patients with ORSA/ MRSA infection or colonization are maintained on isolation until all of the following negative cultures are obtained: 1) left and right anterior nares; 2) any wound; 3) other previously positive sites. Cultures from all appropriate sites must be submitted on two separate occasions at least 48 hours apart following discontinuation of effective antibiotic therapy. Transmittal sheets should be marked "rule out ORSA."
- Patients with Vancomycin resistant enterococcus (VRE) infection or colonization are maintained on isolation until all of the following negative cultures are obtained: 1) stool; 2) other previously positive sites. Cultures from all appropriate sites must be negative on three separate occasions at least one week apart following discontinuation of effective antibiotic therapy. Transmittal sheets should be marked "rule out VRE."
- Patients with extended spectrum beta lactamase (ESBL) producing organism infection or colonization are maintained on isolation until a negative culture from each positive site following the discontinuation of effective therapy are obtained. Transmittal sheets should be marked "rule out ESBL."

***Removal of isolation sign from patient's door***
Nursing should remove the isolation sign from the patient's door only after one of the following conditions has been met.

1. The diagnosis that indicated Contact Isolation has been ruled out.

**or**

2. Isolation has been discontinued and the room has been cleaned according to Housekeeping and Fabric Care Department policy regarding the cleaning of isolation rooms.

**or**

3. A patient on isolation has been discharged or transferred and the room has been cleaned according to Housekeeping and Fabric Care Department policy regarding the cleaning of isolation rooms.

For more information call HES.

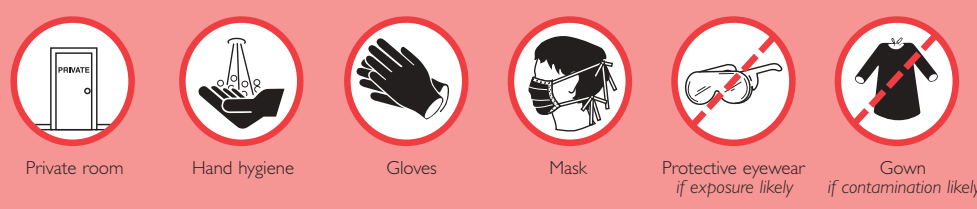
**14. Handling a deceased patient** requires the same precautions as if the patient were alive. Masks and protective eyewear usually are not indicated but should be worn if aerosol generation or splashing of blood, body fluids or infectious materials is likely, as described in the section entitled "Standard/ Universal Precautions." Contact the Ambulatory Care Service Admissions staff for issues regarding access to the morgue or for mortuary arrangements.

**15. Additional guidelines**
Call HES for additional information for any known or suspected case of Norwegian Scabies.

**Diseases requiring Contact Isolation**

Adenovirus infection (keratoconjunctivitis)
Amebic dysentery
*Burkholderia cepacia* in patients with cystic fibrosis
Campylobacter gastroenteritis
Cholera
*Clostridium difficile* diarrhea
Coccidiosis gastroenteritis
Colitis, antibiotic-associated
Colitis, pseudomembranous
Conjunctivitis, adenovirus,
  other viral and etiology unknown
Cryptosporidiosis gastroenteritis
Diarrhea, acute (Communicable etiology suspected)
Decubitus ulcer, major
Diptheria, cutaneous
Dysentery, etiology unknown
Echovirus Disease
Encephalitis or encephalomyelitis
  of unknown etiology
Enterocolitis (Communicable etiology suspected)
Enteroviral infection
*Escherichia coli* diarrhea or gastroenteritis
Exanthem, cutaneous
  (communicable etiology suspected)
Extended spectrum beta-lactamase producing
  organism (ESBL) colonization or infection
Folliculitis, (staphylococcus or streptococcus)
Food poisoning etiology unknown
Food poisoning caused by Salmonella
Furunculosis, (staphylococcal)
Gastroenteritis caused by:
  Adenovirus
  Campylobacter species
  *Clostridium difficile*
  Coccidioides immitis
  Cryptosporidium species
  *Escherichia coli*
  *Giardia lamblia*
  Hymenolepiasis
  Isosporiasis
  Microsporida
  Norwalk or Norwalk-like agent
  Rotavirus
  Salmonella species
  Shigella species
  Staphylococcus
  Unknown etiology but presumed
    to be an infectious agent
  *Vibrio* species
  Viral
  *Yersinia enterocolitica*
Giardiasis, symptomatic
Hand, foot and mouth disease
Hepatitis A virus (HAV) (Type A, "infectious" hepatitis,
  Hepatitis A virus)
Hepatitis E virus (HEV) (Type E, "infectious" hepatitis,
  Hepatitis E virus)
Hepatitis type unspecified
Herpangina
Hymenolepiasis (dwarf tapeworm) gastroenteritis
Isosporiasis (coccidiosis) gastroenteritis
Keratoconjunctivitis, epidemic (adenovirus)
Lice
Meningitis, aseptic (viral)
Methicillin Resistant *Staphylococcus aureus*
  (MRSA) colonization or infection
Microsporidia (enterocolitis or gastroenteritis)
Multi-drug resistant organism (non-tuberculosis)
  colonization or infection
Myocarditis, etiology unknown or infection suspected
Norwalk agent gastroenteritis
Oxacillin Resistant *Staphylococcus aureus*
  (ORSA) colonization or infection
Paratyphoid fever (non-typhoidal salmonellosis)
Pediculosis (lice)
*Pediculus humanus corporis* infestation (body lice)
*Pediculus humanus capititis* infestation (head lice)
Pericarditis, etiology unknown, infection suspected
*Phthirus pubis* infestation (pubic lice)
Pleurodynia epidemic (coxsackie virus)
Poliomyelitis
Rotavirus (gastroenteritis)
Salmonellosis
*Sarcoptes scabiei* infestation (scabies)
Scabies
Shigellosis (including bacillary dysentery)
Syphilis, secondary
Typhoid fever
Vancomycin-intermediate *Staphylococcus aureus*
  (VISA) colonization or infection
Vancomycin-resistant *Staphylococcus aureus*
  (VRSA) colonization or infection
Vancomycin-resistant enterococcus (VRE)
  colonization or infection
*Vibrio parahaemolyticus* gastroenteritis
Viral pericarditis, myocarditis,
  or meningitis (enterovirus)
*Yersinia enterocolitica* gastroenteritis ■

# Respiratory Isolation




Private room | Hand hygiene | Gloves | Mask | Protective eyewear *if exposure likely* | Gown *if contamination likely*

**ALL VISITORS REPORT TO THE NURSES' STATION BEFORE ENTERING ROOM**

1. **Private room** required. Keep door closed.
2. **Hand hygiene** before and after patient contact, and after removing gloves.
3. **Gloves** required for all persons entering room.
4. **Masks** required for all persons entering room..
5. **Protective eyewear** indicated if contact with respiratory secretions is anticipated (e.g., patient is sneezing or coughing).
6. **Gowns** required for direct contact with patient or items contaminated with respiratory secretions.
7. **Patient transport** Minimize the patient's activity outside the room. Patient wears a mask when outside room. Escort personnel wears gloves and should wash hands after patient transport.

**STANDARD/UNIVERSAL PRECAUTIONS MUST BE FOLLOWED AT ALL TIMES**

place this sign on patient's door (Rev. 10/03)

Respiratory isolation is designed to prevent transmission of infections that are spread by contact with respiratory droplets, respiratory secretions and items contaminated with respiratory secretions.

**Standard/Universal Precautions are indicated at all times for all patient contact.**

**Transmission routes: Contact with respiration droplets, respiratory secretions, and items contaminated with respiratory secretions**

## Specifications for Respiratory Isolation

**1. Notify** the Hospital Epidemiology Service (HES) of any known or suspected case of influenza, measles or meningitis.

**2. Private room** A private room is required. If a negative pressure isolation room is readily available, it should be used. Door must be kept closed. If a private room is not available, consult HES for patient placement (e.g. cohorting).

**3. Hand hygiene** is required before and after patient contact, after removing personal protective equipment (PPE) and before leaving the patient's environment.

Use the sink inside the room nearest the door, wash hands for 10-15 seconds using a CC-approved soap and water. Use a paper towel to turn off the faucets and to open the door.

**or**

If hands are not visibly soiled, a CC approved waterless hand antiseptic agent can be used. Apply enough product to cover all surfaces of the hands, fingers and nails. Rub hands together for 10-15 seconds until dry. Always handle the doorknob with a paper towel to avoid re-contaminating hands.

**4. Visitors** should report to nursing station before entering the room. Visitors should be instructed in the appropriate use of personal protective equipment (PPE). For more information, a pamphlet entitled "Infection Control at the Clinical Center: Information for Patients and Visitors" is available from HES.

**5. Personal Protective Equipment**

***Gloves*** are required to enter the room.

***Gowns*** are indicated for contact with patients or items contaminated with respiratory secretions.

***Masks*** are required to enter the room.

***Protective eyewear*** is indicated if mucous membrane contact with respiratory secretions is likely (e.g., the patient is coughing or sneezing). Refer to the section of this flipchart entitled "Standard/Universal Precautions" for more information.

***Personal Protective Equipment removal***

*For an isolation room with an anteroom*
PPE should be removed in the anteroom before exiting to the hallway.

*For an isolation room without an anteroom*
Remove all PPE except the mask immediately prior to leaving the patient's room following the procedure described in "Personal Protective Equipment Use." The mask should be removed immediately after leaving the room and should be discarded into the MPW (medical pathological waste) box placed outside the patient's room

Hand hygiene is required after removal of PPE.

**6. Ancillary Patient Services** (e.g. Escort, Diagnostic Radiology, Nuclear Medicine, Surgery, etc.) must be notified before a patient on isolation precautions is transported to ensure that staff is prepared for the patient's arrival. Contact with staff, visitors and other patients must be minimized. Contact HES for additional patient activity guidelines.

***Patient Transport*** should be restricted to essential purposes only.

- Patient transport personnel wear gloves
- A private elevator is indicated.
- Patient should wear a close fitting surgical mask when outside their room
- Patient must be escorted directly into the procedure/examination room.

***Additional transport information if patient has: VZV (chickenpox or shingles), German measles (Rubella), Measles (Rubeola) or Parvovirus B19 (patient in aplastic crisis or chronic infection):***

- Transport personnel and personnel in the area to which the patient is being transported must be notified that the patient has VZV, Rubella, rubeola or Parvo B-19 and must have documented immunity (positive serologic titer).
- Susceptible, pregnant health care workers must avoid patient contact.
- The transport area should be cleared of non-essential traffic.

***Nutrition Department*** must wear gloves and a mask when delivering and removing meal trays from the patient room.

**7. Patient care equipment**

***Blood pressure cuffs*** should be disposable. If a non-disposable cuff is used, it must be disinfected with a CC-approved disinfectant before use on another patient.

***Contaminated reusable equipment*** (electronic thermometers, blood pressure equipment etc.) should be dedicated to a single patient for the duration of isolation. Equipment must be disinfected with a CC-approved disinfectant before use on another patient.

***Portable monitoring instruments*** (EKG, ECHO, X-RAY equipment etc.) may be used in the patient's room. Any surfaces contaminated with secretions, blood, body fluid or other infectious materials must be disinfected with a CC-approved disinfectant prior to removal from the patient's room.

***Stethoscopes*** should be disposable. If a non-disposable stethoscope is used, it must be disinfected with a CC-approved disinfectant before use on another patient.

***Wheelchairs and stretchers*** are cleaned after every transport of a patient on isolation precautions. The Ambulatory Care Service cleans wheelchairs according to policy.

Refer to "Sterilization and Disinfection" or "Standard/ Universal Precautions" for more information.

**8. Waste and disposable patient care equipment**

Waste should be discarded inside the room. Disposable patient care equipment should not be reused and should be discarded inside the room. All trash or waste from the patient room should be placed in an MPW (medical pathological waste) box. The box should be placed outside the door of the patient's room (or in the anteroom) and have a lid (provided by the Housekeeping and Fabric Care Department staff). Housekeeping and Fabric Care Department staff will label, seal and dispose of the box.

***Urine and feces*** should be handled with caution by health care workers to avoid *(continued on next page)*

 *continued from preceding page*

accidental spills. Regardless of disposal method, use personal protective equipment as appropriate for the situation (e.g., protective eyewear [safety goggles], gloves, mask, or disposable gown).

Refer to "Standard/Universal Precautions" for more information.

**9. Clothing and linen**
***Patient clothing*** visibly soiled with blood or other potentially infectious materials should be discarded or disinfected. Soiled patient clothing should be bagged and sent home for laundering in hot water with detergent. Patient clothing can be laundered using the patient token operated washing machine.

***Staff clothing*** (e.g. lab coats) visibly soiled with blood, body fluids or other infectious materials should be discarded or disinfected by the Housekeeping and Fabric Care Department.

***Linen*** is placed in an impervious yellow laundry bag with a water soluble plastic liner.

For more information call HES or refer to "Sterilization and Disinfection."

**10. Lab specimens** do not require special labeling. Refer to "Respiratory Virus Management" for more information.

**11. Environmental cleaning** of rooms should be done according to Housekeeping and Fabric Care Department policy regarding the cleaning of isolation rooms.

**12. Recreational items**
***Books and magazines*** should be dedicated to a single patient. Books and magazines visibly soiled with blood or other potentially infectious materials should be discarded. Books and magazines used by patients on isolation should not be returned to circulation.

***Toys*** should be dedicated to a single patient. Toys should have non-porous cleanable surfaces and must be disinfected according to the Rehabilitation Medicine Department's Recreation Therapy Section policy for toy disinfection before being placed back into circulation. Toys that cannot be disinfected and returned to circulation (e.g. stuffed animals) become the property of the patient. Toys that are visibly soiled with blood or other potentially infectious materials should be discarded.

**13. Discontinuation** of these precautions will depend on the organism, symptoms exhibited by the patient, and prolonged shedding. Discontinuation should occur only after consulting with HES

***Removal of isolation sign from patient's door***
Nursing should remove the isolation sign from the patient's door only after one of the following conditions has been met.

1. The diagnosis that indicated Respiratory Isolation has been ruled out.

**or**

2. Isolation has been discontinued and the room has been cleaned according to Housekeeping and Fabric Care Department policy regarding the cleaning of isolation rooms

**or**

3. The patient on isolation has been discharged or transferred and the room has been cleaned according to HFCD policy regarding the cleaning of isolation rooms.

For more information call HES.

**14. Handling a deceased patient** requires the same precautions as if the patient were alive. Protective eyewear is indicated per Standard/Universal Precautions. Contact the Ambulatory Care Service Admissions staff for issues regarding access to the morgue or mortuary arrangements.

**15. Additional guidelines**
***Varicella Zoster Virus (VZV) Infection (Varicella/Chickenpox or Herpes Zoster/Shingles)***

- Chickenpox and shingles lesions are considered infectious. Localized lesions in immunocompromised patients may disseminate. Because such dissemination is unpredictable, HES and/or the Infectious Disease Consult Service will assess the need for a negative pressure isolation room or a different isolation category on a case-by-case basis.
- Place a "Do Not Enter This Room Unless You Are Certain You Have Had Chickenpox" sign on patient's door.
- Susceptible persons are discouraged from entering the room and having contact with the patient. Staff not certain of their VZV immune status should contact the Occupational Medical Service (OMS) and make an appointment for evaluation. Vaccination is available to susceptible health care workers who desire it.
- Immune persons (positive serologic titer, history of chickenpox or vaccination for chickenpox) are not susceptible to chickenpox.
- Contact HES for questions.
- Transport personnel and personnel in the area to which the patient is being transported should be notified that they must be immune to chickenpox. The area should be cleared of non-essential traffic prior to patient transport.
- Exposed susceptible patients should be placed in Respiratory Isolation beginning ten days after the first exposure and continuing until 21 days (28 days if VZIG is administered) after last exposure. Contact HES regarding possible exposures.

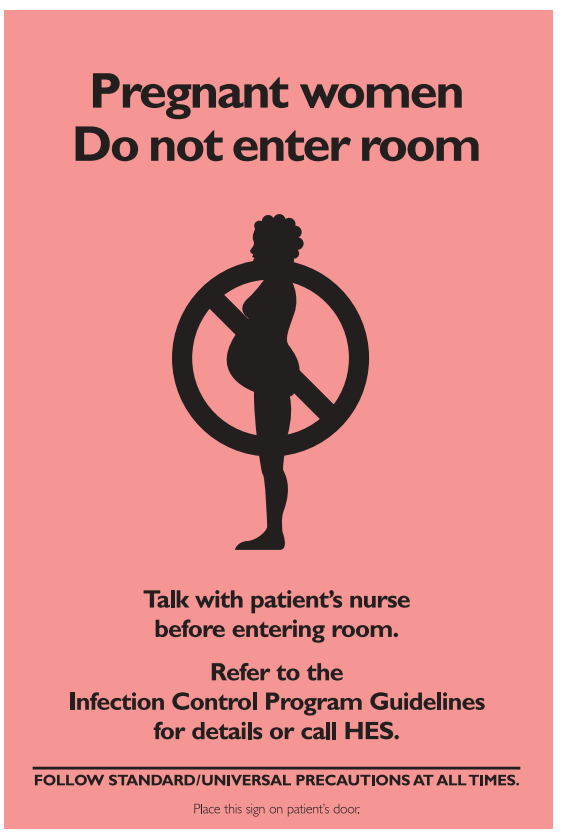
***Influenza***

- Refer to "Respiratory Virus Management" for more information.

***Measles (Rubeola)***

- Susceptible persons are discouraged from entering the room. Contact HES for questions.
- Health care workers born after 1950 must have proof of measles immunity. For measles vaccine, call OMS to make an appointment. Notify HES of all suspected measles cases.

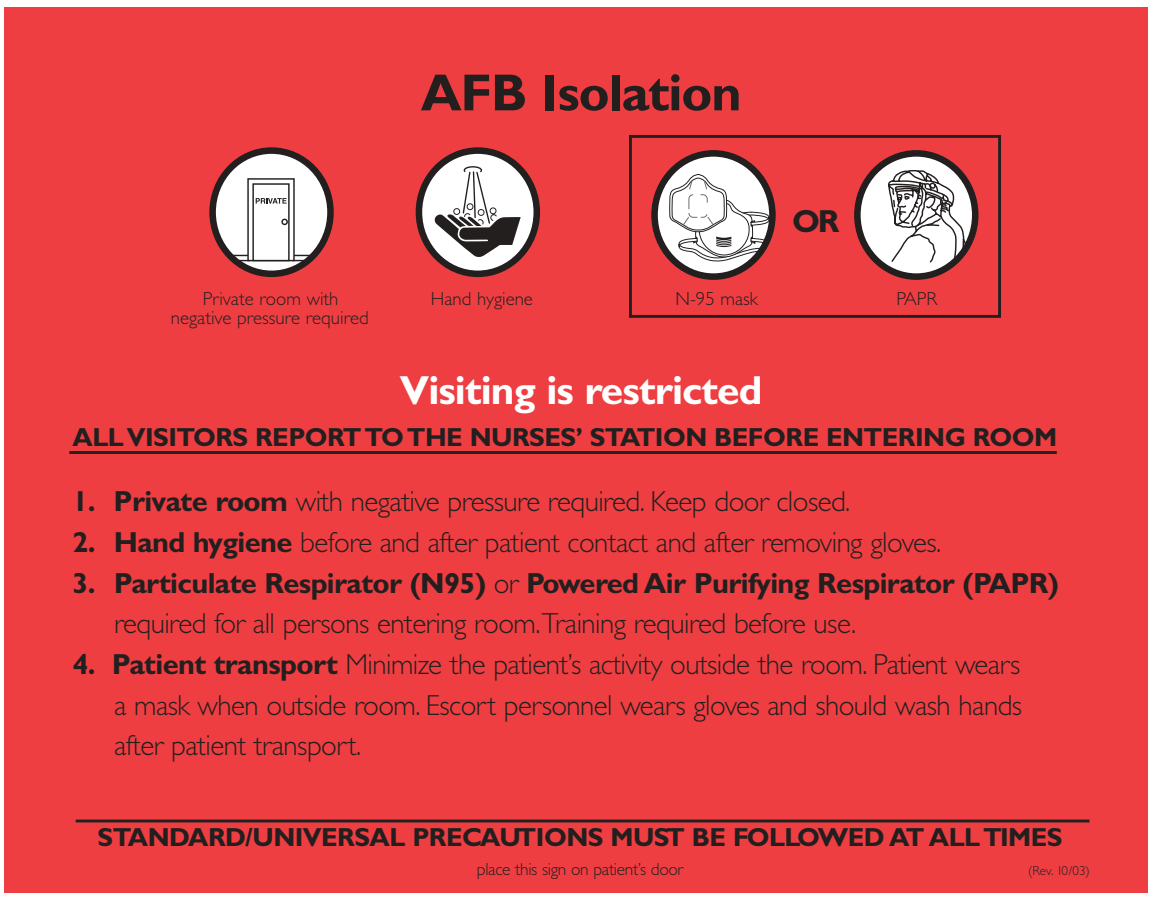
**Do not enter this room unless you are certain you have had CHICKENPOX!**




***Pregnant Staff and Visitors*** should be aware that primary Rubella or Parvovirus B19 infections may cause congenital infection or abnormalities. Pregnant workers should avoid contact with patients who have Parvovirus B19-induced aplastic crisis or immunocompromised patients with chronic Parvovirus B19 infection. Place a **"Pregnant women do not enter room"** sign on patient's door if the patient has Parvovirus B19 or Rubella.

**Diseases requiring Respiratory Isolation**

Adenovirus infection or shedding, respiratory, in young children and immunocompromised patients
Bronchiolitis or Bronchitis, etiology unknown in young children and immunocompromised patients
Chickenpox (varicella)
Common cold, in infants, young children, and immunocompromised patients
Coronavirus infection, respiratory, in young children and immunocompromised patients
Coxsackievirus disease (pharyngitis, stomatitis)
German measles (rubella)
Herpes zoster (varicella-zoster), localized in immunocompromised patient or disseminated
Influenza
Measles (rubeola)
Meningitis, *Haemophilus influenzae,* known or suspected
Meningitis, *Neisseria meningitidis* (meningococcal), known or suspected
Meningococcal pneumonia
Meningococcemia
Mumps (infectious parotitis)
Parainfluenza infection or shedding, in young children, immunocompromised patients, immunocompetent adults
*Parvovirus B19* (fifth disease) chronic infection in immunocompromised patients
*Parvovirus B19* (fifth disease) in patients with transient aplastic MIS/CRISis
Pertussis (whooping cough)
Pneumonia, *Haemophilus influenzae:* in infants, young children, and immunocompromised patients
Pneumonia, meningococcal
Pneumonia, viral, young children and immunocompromised patients
*Respiratory syncytial* virus (RSV) infection or shedding
Rhinovirus infection, respiratory, in infants, young children, and immunocompromised patients
Rubella ("German measles")
Rubeola (Measles)
Scarlet fever
Streptococcal disease (Group A streptococcus), pharyngitis, in infants, young children and immunocompromised patients
Varicella (chickenpox)
Varicella zoster virus (chickenpox)
Whooping cough (pertussis)
Zoster (varicella-zoster, shingles), localized in immunocompromised patients
Zoster, disseminated ■




AFB (Acid Fast Bacilli) isolation is designed to prevent the airborne transmission of pulmonary/laryngeal mycobacterium tuberculosis through the air.

**Standard/Universal Precautions are indicated at all times for all patient contact.**

**Transmission route: Airborne**

## Specifications for AFB (Acid Fast Bacilli) Isolation

**1. Notify** Hospital Epidemiology Service (HES) and CC Department of Microbiology of any known or suspected cases of pulmonary or laryngeal tuberculosis (TB) or multi-drug resistant tuberculosis (MDR-TB).

**2. Private room** with negative pressure is required. Door must be kept closed.

**3. Hand hygiene** is required before and after patient contact, after removing personal protective equipment (PPE) and before leaving the patient's environment.

Use the sink inside the room nearest the door, wash hands for 10-15 seconds using a CC-approved soap and water. Use a paper towel to turn off the faucets and to open the door.

**or**

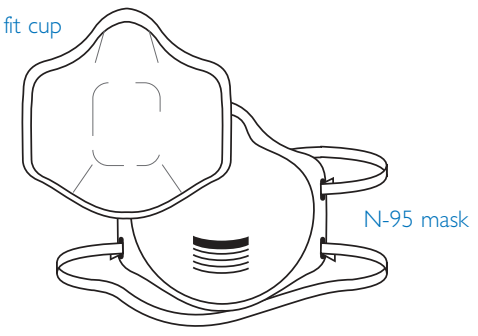
If hands are not visibly soiled, a CC approved waterless hand antiseptic agent can be used. Apply enough product to cover all surfaces of the hands, fingers and nails. Rub hands together for 10-15 seconds until dry. Always handle the doorknob with a paper towel to avoid re-contaminating hands.

**4. Visitors** are strongly discouraged from entering rooms of patients with known or suspected pulmonary or laryngeal tuberculosis. Essential visitors should talk with the nurse before entering the room and should be instructed in the appropriate use of particulate respirators. A "Visitor Training Manual for Particulate Respirators" is available on inpatient units with negative pressure rooms and from HES. A booklet entitled, "Infection Control at the Clinical Center: Information for Patients and Visitors" (available from HES) contains a brief summary of general infection control guidelines.

**5. Personal Protective Equipment**

***Gloves*** are indicated as described in the section entitled "Standard/Universal Precautions".

***Gowns*** are indicated as described in the section entitled "Standard/Universal Precautions".

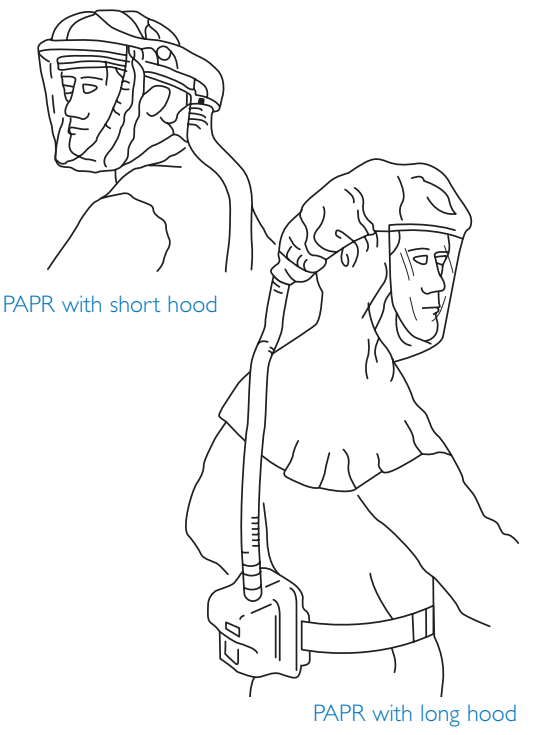



***N-95 Masks*** or ***Powered Air Purifying Respirator (PAPR)*** must be worn by all persons entering the room. Training is required for particulate respirators. Contact CC Safety Officer to schedule training.

N-95 masks are dedicated to individual health care workers and should be fit-checked before each use. These masks may be reused unless:

1. the health care worker is unable to achieve a facial seal,
2. the mask is soiled, or
3. the integrity of the mask is damaged.

PAPR hoods are dedicated to individual health care workers, and may be reused unless the hood is soiled or the integrity of the hood is damaged. PAPR motor units and hoses are reusable and should be disinfected by wiping surfaces with a CC-approved agent.



***Protective eyewear*** is indicated as described in the section entitled "Standard/Universal Precautions."

***Personal Protective Equipment removal***

*For an isolation room with an anteroom*

PPE removed in the anteroom of the isolation room before exiting the room.

*For an isolation room without an anteroom*

All PPE, except particulate respirators, removed immediately prior to leaving the room following the procedure described in "Personal Protective Equipment Use." Particulate respirator removed in the hallway after closing room door.

Hand hygiene is required after removal of PPE.

**6. Ancillary Patient Services** (e.g. Escort, Diagnostic Radiology, Nuclear Medicine, Surgery, etc.) must be notified before a patient on isolation precautions is transported to ensure that staff is prepared for the patient's arrival. Contact with staff, visitors and other patients must be minimized. Contact HES for additional patient activity guidelines.

***Patient Transport*** should be restricted to essential purposes only.

During transport of a patient with:

*Tuberculosis (TB), laryngeal or pulmonary, confirmed or suspected:*

- Patient must wear a closely fitted surgical mask.
- A private elevator is indicated.

*Multi-Drug Resistant Tuberculosis (MDR-TB), laryngeal or pulmonary, confirmed or suspected*

- Patient must wear a closely fitted surgical mask.
- Personnel must wear particulate respirator masks or powered air purifying respirators (N-95 or PAPR) during transport.
- A private elevator is indicated.

***Nutrition Department*** must wear a particulate respirator or powered air purifying respirator (N-95 or PAPR) when delivering and removing meal trays from the patient room. *(continued on next page)*

# AFB Isolation

*continued from preceding page*

**7. Patient care equipment**
***Blood pressure cuffs*** must be disinfected with a CC-approved disinfectant before use on another patient.

***Contaminated reusable equipment*** (electronic thermometers, blood pressure equipment etc.) should be dedicated to a single patient for the duration of isolation. Equipment must be disinfected with a CC-approved disinfectant before use on another patient.

***Portable monitoring instruments*** (EKG, ECHO, X-RAY equipment etc.) may be used in the patient's room. Any equipment surfaces contaminated with secretions, blood, body fluid or other infectious materials must be disinfected with a CC-approved disinfectant prior to removal from the patient's room.

***Stethoscopes*** must be disinfected with a CC-approved disinfectant before use on another patient.

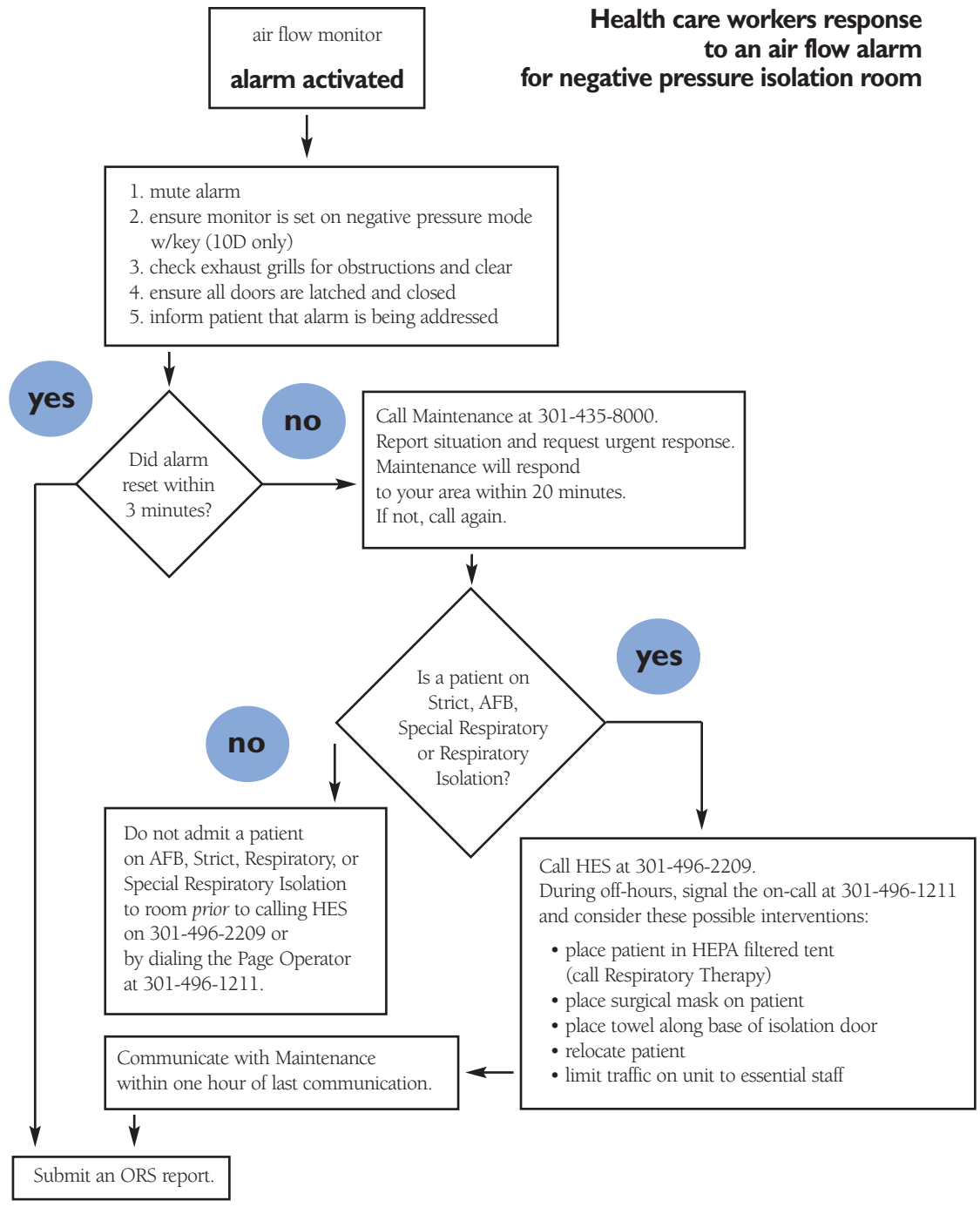
***Wheelchairs and stretchers*** are cleaned after every transport of a patient on isolation precautions. The Ambulatory Care Service cleans wheelchairs according to policy.

Refer to "Sterilization and Disinfection" or "Standard/ Universal Precautions" for more information.

**8. Waste and disposable patient care equipment**
Waste should be discarded inside the room. Disposable patient care equipment should not be reused and should be discarded inside the room. All trash or waste from the patient room should be placed in an MPW (medical pathological waste) box. The box should be placed outside the door of the patient's room (or in the anteroom) and have a lid (provided by the Housekeeping and Fabric Care Department staff). Housekeeping and Fabric Care Department staff will label, seal and dispose of the box.

***Urine and feces*** should be handled with caution by health care workers to avoid accidental spills. Regardless of disposal method, use personal protective equipment as appropriate for the situation (e.g., protective eyewear [safety goggles], gloves, mask or disposable gown).

**Health care workers response to an air flow alarm for negative pressure isolation room**




Refer to "Standard/Universal Precautions" for more information.

**9. Clothing and linen**
***Patient clothing*** visibly soiled with blood or other potentially infectious materials should be discarded or disinfected. Soiled patient clothing should be bagged and sent home to be laundered in hot water with detergent. Patient clothing can be laundered using the patient token operated washing machines.

***Staff clothing*** (e.g. lab coats) visibly soiled with blood, body fluids or infectious materials should be discarded or disinfected. Contaminated employee clothing may be laundered through the CC laundry services.

***Linen*** is placed in an impervious yellow laundry bag with a water soluble plastic liner.

For more information call HES.

**10. Lab specimens** Some lab specimens from patients known or suspected to have active pulmonary or laryngeal tuberculosis may present special risks to laboratory staff. Specimen transmittal sheets for microbiology specimens should be labeled "rule out TB."

**11. Environmental cleaning** of rooms should be done according to Housekeeping and Fabric Care Department policy.

**12. Recreational items**
***Books and magazines*** should be dedicated to a single patient. Books and magazines visibly soiled with blood or other potentially infectious materials should be discarded. Books and magazines used by patients on isolation should not be returned to circulation.

***Toys*** should be dedicated to a single patient. Toys should have non-porous cleanable surfaces and must be disinfected according to the Rehabilitation Medicine Department's Recreation Therapy Section policy for toy disinfection before being placed back into circulation.Toys that cannot be disinfected and returned to circulation (e.g. stuffed animals) become the property of the patient. Toys that are visibly soiled with blood or other potentially infectious materials should be discarded.

**13. Discontinuation** of these precautions will depend on final diagnosis, culture and smear results and clinical improvement. Discontinuation should occur only after consulting with HES.

Patients on AFB isolation require three negative AFB smears for discontinuation.

***Removal of isolation sign from patient's door***
Nursing should remove the isolation sign from the patient's door only after one of the following conditions has been met.

1. Pulmonary/laryngeal TB has been ruled out

**or**

2. Isolation has been discontinued; the room has been allowed to rest for one hour and then cleaned according to Housekeeping and Fabric Care Department policy.

**or**

3. A patient on isolation has been discharged or transferred, the room has been allowed to rest for one hour and the room has been cleaned according to Housekeeping and Fabric Care Department policy.

**14. Handling a deceased patient** requires the same precautions as if the patient were alive. Protective eyewear is indicated per Standard/Universal Precautions. Contact the Ambulatory Care Service Admissions staff for issues regarding access to the morgue or mortuary arrangements.

**15. Additional guidelines**
[see air flow alarm response chart above]

**Diseases requiring Respiratory Isolation**

Mycobacteria, tuberculous, pulmonary or laryngeal
Multi-Drug Resistant Tuberculosis (MDR-TB), laryngeal or pulmonary, confirmed or suspected (sputum smear positive, chest X-ray appearance strongly suggestive of current active TB)
Tuberculosis (TB), laryngeal or pulmonary, confirmed or suspected (sputum smear positive, chest X-ray appearance strongly suggestive of current active TB) ■

# Strict Isolation

Private room | Hand hygiene | Gloves | Mask | Gown

**ALL VISITORS REPORT TO THE NURSES' STATION BEFORE ENTERING ROOM**

1. **Private room** required. Keep door closed.
2. **Hand hygiene** before and after patient contact, and after removing gloves. Use an antimicrobial agent or a waterless hand antiseptic.
3. **Gloves** required for all persons entering room.
4. **Masks** required for all persons entering room.
5. **Gowns** required for direct contact with patient, contaminated items, or the environment.
6. **Patient transport** Minimize the patient's activity outside the room. Patient wears a mask, gloves, and gown when outside of room. Escort personnel wears gloves and should wash hands after patient transport.

**STANDARD/UNIVERSAL PRECAUTIONS MUST BE FOLLOWED AT ALL TIMES**

place this sign on patient's door (Rev. 10/03)

Strict isolation is designed to prevent transmission of highly contagious or virulent infections that may be spread by contact with infectious droplets and contaminated items.

**Standard/Universal Precautions are indicated at all times for all patient contact.**

**Transmission route:**
**Droplet or contact with infectious materials**

## Specifications for Strict Isolation

**1. Notify** Hospital Epidemiology Service (HES) if strict isolation is being considered.

**2. Private room** A private room is required. Door must be kept closed. Optimally, patient should be managed in a negative pressure isolation room with an anteroom. Consult HES to ensure that the patient is being placed in a private room with appropriate airflow.

**3. Hand hygiene** is required before and after patient contact, after removing personal protective equipment (PPE) and before leaving the patient's environment.

Use the sink inside the room nearest the door, wash hands for 10-15 seconds using a CC-approved soap and water. Use a paper towel to turn off the faucets and to open the door.

**or**

If hands are not visibly soiled, a CC-approved waterless hand antiseptic agent can be used. Apply enough product to cover all surfaces of the hands, fingers and nails. Rub hands together for 10-15 seconds until dry. Always handle the doorknob with a paper towel to avoid re-contaminating hands.

**4. Visitors** should report to nursing station before entering the room. Visitors should be instructed in the appropriate use and disposal of personal protective equipment (PPE). For more information, a booklet titled "Infection Control at the Clinical Center: Information for Patients and Visitors" is available from HES.

**5. Personal Protective Equipment**
***Gloves*** are required to enter the room, and for direct or indirect contact with the patient, infectious materials, or items in the patient's environment.

***Gowns*** are indicated for all persons entering the room.

***Masks*** are required for all persons entering the room or providing care to the patient.

***Protective eyewear*** is indicated as described in the section entitled "Standard/Universal Precautions."

***Personal Protective Equipment removal***

*For an isolation room with an anteroom*
PPE should be removed in the anteroom before exiting to the hallway.

*For an isolation room without an anteroom*
Remove all PPE except mask immediately prior to leaving the room following the procedure described in "Personal Protective Equipment Use." The mask should be removed immediately after leaving the room and should be discarded into the MPW (medical pathological waste) box placed outside the patient's room.

Hand hygiene is required after removal of PPE.

**6. Ancillary Patient Services** (e.g. Escort, Diagnostic Radiology, Nuclear Medicine, Surgery, etc.) must be notified before a patient on isolation precautions is transported to ensure that staff is prepared for the patient's arrival. Contact with staff, visitors and other patients must be minimized. Contact HES for additional patient activity guidelines.

***Patient Transport*** should be restricted to essential purposes only.
During transport:
- Patient transport personnel must wear gloves.
- Patient must wear a closely fitted surgical mask, gloves and gown.
- A private elevator is indicated

***Nutrition Department*** must wear gloves, disposable gowns, and surgical masks when delivering and removing meal trays from the patient's room.

**7. Patient care equipment**
***Blood pressure cuffs*** should be disposable. If a non-disposable cuff is used, it must be disinfected with a CC-approved disinfectant before use on another patient.

***Contaminated reusable equipment*** (electronic thermometers, blood pressure equipment etc.) should be dedicated to a single patient for the duration of isolation. Equipment must be disinfected with a CC-approved disinfectant before use on another patient.

***Portable monitoring instruments*** (EKG, ECHO, X-RAY equipment etc.) may be used in the patient's room. Any equipment surfaces contaminated with secretions, blood, body fluid or other infectious materials must be disinfected with a CC-approved disinfectant prior to removal from the patient's room.

***Stethoscopes*** should be disposable. If a non-disposable stethoscope is used, it must be disinfected with a CC-approved disinfectant before use on another patient.

***Wheelchairs and stretchers*** are cleaned after every transport of a patient on isolation precautions. The Ambulatory Care Service cleans wheelchairs according to policy.

Refer to "Sterilization and Disinfection" or "Standard/Universal Precautions" for more information.

**8. Waste and disposable patient care equipment**
Waste should be discarded inside the room. Disposable patient care equipment should not be reused and should be discarded inside the room. All trash or waste from the patient room should be placed in an MPW (medical pathological waste) box.

The box should be placed outside the door of the patient's room (or in the anteroom) and have a lid (provided by the Housekeeping and Fabric Care Department staff). Housekeeping and Fabric Care Department staff will label, seal and dispose of the box.

***Urine and feces*** should be handled with caution by health care workers to avoid accidental spills. Regardless of disposal method, use personal protective equipment as appropriate for the situation (e.g., protective eyewear [safety goggles], gloves, mask or disposable gown).

Refer to "Standard/Universal Precautions" for more information.

**9. Clothing and linen**
***Patient clothing*** visibly soiled with blood or other potentially infectious materials should be discarded or disinfected. Soiled patient clothing should be bagged and sent for laundering in hot water with detergent. Patient clothing can be laundered using the patient token operated washing machines

***Staff clothing*** (e.g. lab coats) visibly soiled with blood, body fluids or infectious materials should be discarded or disinfected by the Housekeeping and Fabric Care Department. Contaminated employee clothing may be laundered through the CC laundry services.

***Linen*** is placed in an impervious yellow laundry bag with a water-soluble plastic liner.

For more information call HES.

**10. Lab specimens** usually do not require special labeling.

Some disease agents may be used as biological weapons, and the transmittal sheets for microbiology specimens from patients suspected or known to harbor these disease agents should be labeled "rule out (followed by the name of the suspect or known biologic agent)." At the time of this document's printing, the category 'A' agents of bioterrorism are *Bacillus anthracis* (Anthrax), Botulinum toxin, Ebola virus infection, *Yersinia pestis* (plague), *Francisella tularensis* (Tularemia), Variola virus (smallpox), Filoviruses and Arenaviruses. *(continued on next page)*

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**11. Environmental cleaning** of rooms should be done according to Housekeeping and Fabric Care Department policy for cleaning isolation rooms.

**12. Recreational items**

***Books and magazines*** should be dedicated to a single patient. Books and magazines visibly soiled with blood or other potentially infectious materials should be discarded. Books and magazines used by patients on isolation should not be returned to circulation.

***Toys*** should be dedicated to a single patient. Toys should have non-porous cleanable surfaces and must be disinfected according to the Rehabilitation Medicine Department's Recreation Therapy Section policy for toy disinfection before being placed back into circulation.Toys that cannot be disinfected and returned to circulation (e.g. stuffed animals) become the property of the patient. Toys that are visibly soiled with blood or other potentially infectious materials should be discarded.

**13. Discontinuation** of these precautions will depend on the organism and site of colonization and/or infection. Discontinuation should occur only after consulting with HES.

***Removal of isolation sign from patient's door***

Nursing should remove the isolation sign from the patient's door only after one of the following conditions has been met.

1. The diagnosis that indicated Strict Isolation has been ruled out

**or**

2. Isolation has been discontinued and the room has been cleaned according to Housekeeping and Fabric Care Department policy regarding the cleaning of isolation rooms

**or**

3. A patient on isolation has been discharged or transferred and the room has been cleaned according to Housekeeping and Fabric Care Department policy regarding the cleaning of isolation rooms

For more information call HES.

**14. Handling a deceased patient** requires the same precautions as if the patient were alive. Protective eyewear is indicated per Standard/Universal Precautions. Contact the Ambulatory Care Service Admissions staff for issues regarding access to the morgue or mortuary arrangements.

**15. Additional guidelines**

None.

### Diseases requiring Strict Isolation

Adenovirus respiratory infection in infants
Adenovirus, pneumonia
Anthrax, inhalation (pulmonary)
Bronchiolitis of unknown etiology in infants
Bronchitis, infective, of unknown etiology in infants
Bunyavirus infection
Cellulitis, draining, major
(either draining and not covered by dressing or dressing does not adequately contain drainage), Group A Streptococcal or *Staphylococcus aureus*
Coronavirus respiratory infection in infants
Croup (laryngotracheobronchitis)
Decubitus ulcer, infected, major
(either draining and not covered by dressing or dressing does not adequately contain drainage), Group A streptococcal, Multi-drug resistant organism(s), or *Staphylococcus aureus*
Diphtheria, pharyngeal
Ebola virus infection
Encephalitis or encephalomyelitis, rubella, chronic or congenital
Endometritis, group A streptococcal, major
(either draining and not covered by dressing or dressing does not adequately contain drainage)
Furunculosis, staphylococcal in newborns
Hemorrhagic fevers (Argentine, Bolivian, Bunyavirus infection, Crimean, Jamestown, Keystone, Lassa, Marburg, Prospect Hill, Puumala, Rift Valley, Seoul, Snowshoe Hare, Tahyna, Trivittatus)
Herpes simplex, mucocutaneous, disseminated or unusually severe primary infection
Herpes simplex, neonatal
Herpes simplex, pneumonia
Laryngotracheobronchitis (croup)
Lassa fever
Marburg virus disease
Parainfluenza virus respiratory infection in infants
Plague, pneumonic
Pneumonia, adenovirus
Pneumonia, Group A streptococcus
Pneumonia, Multi-drug resistant bacterial
Pneumonia, pneumococcal, penicillin-resistant *Streptococcus pneumoniae* (PRSP)
Puerperal sepsis (Group A streptococcal endometritis), massive drainage not contained by dressing
Rabies
Respiratory infectious disease, acute (if not covered elsewhere) in infants
Smallpox (Variola virus)
Staphylococcal disease (*Staphylococcus aureus*), draining lung abscess
Staphylococcal disease (*Staphylococcus aureus*), skin, major wound (either draining and not covered by dressing or dressing does not adequately contain drainage), and burn infection
Streptococcal disease (Group A streptococcus), skin, major wound (either draining and not covered by dressing or dressing does not adequately contain drainage), and burn infection
Streptococcal disease (Group A streptococcus) pneumonia
Viral disease, respiratory (if not covered elsewhere), in infants
Wound Infections, major (either draining and not covered by dressing or dressing does not adequately contain drainage), *Staphylococcus aureus* or Group A streptococcus ■

# CNS Precautions

Hand hygiene

Gloves
*if handling high-risk tissue*

**ALL VISITORS REPORT TO THE NURSES' STATION BEFORE ENTERING ROOM**

1. **Hand hygiene** before and after patient contact, and after removing gloves.
2. **Gloves** required indicated for handling high-risk tissue (brain, eye, spinal cord).
3. **Equipment** Any surface or equipment soiled with high- or low-risk tissue (brain or dura mater, cerebrospinal fluid [CSF], eye, kidney, liver, lymph node, lung, placenta, spinal cord, spleen) requires special processing.
4. **Specimens** Label all specimens with a *"CNS Precautions"* sticker.
5. **Spills** of blood, body fluids, and other infectious materials should be cleaned with an undiluted (1N) sodium hydroxide solution (use undiluted bleach if sodium hydroxide is unavailable).
6. **Patient transport** Personal protective equipment for patient or escort is not usually indicated.

**STANDARD/UNIVERSAL PRECAUTIONS MUST BE FOLLOWED AT ALL TIMES**

place this sign on patient's door (Rev. 10/03)

CNS Precautions are designed to prevent transmission of prion disease agents that can cause central nervous system infections and death. Prion disease agents are found in brain tissue (including dura mater), spinal cord tissue, and eye tissue. Transmission may occur by contact with these infected tissues. Special disinfection procedures are needed for some equipment that comes in contact with high-risk tissues.

**Standard/Universal Precautions are indicated at all times for all patient contact.**

**Transmission route: Contact with brain tissue (including dura mater), eye and spinal cord tissue.**

## Specifications for CNS (Central Nervous System) Precautions

### Background

*CNS Precautions* are designed to prevent transmission of transmissible spongiform encephalopathy caused by a proteinaceous infectious agent or prion. Prion diseases have a prolonged incubation period, do not elicit an immune response, and result in a noninflammatory pathologic process confined to the central nervous system. Once symptoms manifest, the disease may progress rapidly with the patient quickly developing high dependency needs and death occurring within one year.

Prion disease agents have an unusual resistance to conventional chemical and physical decontamination methods. Prion disease agents are not known to spread by contact from person-to-person, but transmission can occur during invasive medical procedures. Exposures to infectious materials through the use of human cadaver-derived pituitary hormones, dural and corneal grafts, and contaminated neuro-surgical instruments have caused transmission of prion disease agents. Very few body tissues and fluids are associated with transmission of prion disease agents.

Casual or clinical contact and non-invasive clinical procedures (e.g., x-ray, vital signs) do not present a risk to health care workers, family and visitors or the community.

The comparative infectivity of organs/tissue/body fluids from humans with transmissible spongiform encephalopathies are:

| *Infectivity* | *Tissue* |
|---|---|
| **High risk** | Brain (including dura mater), eye, spinal cord |
| **Low risk** | Cerebrospinal fluid (CSF), liver, lymph node, lung, kidney, placenta, spleen |
| **Very low risk** | Adipose tissue, adrenal gland, feces, gingival tissue, heart muscle, intestine, leukocytes, milk, nasal mucus, peripheral nerve, prostate, serum, skeletal muscle, tears, testis, thyroid gland, saliva, semen, serous exudates, sputum, sweat, urine, vaginal secretions, whole blood. |

If any surface or equipment is soiled with high-risk or low-risk tissue (brain or dura mater, spinal cord, eye, cerebrospinal fluid (CSF), liver, lymph node, kidney, lung, spleen, placenta):

1. Ensure patient safety.
2. Notify the Environmental Safety Officer or HES.

**Standard/Universal Precautions are indicated at all times for all patient contact.**

**1. Notify** Hospital Epidemiology Service (HES) when a patient is placed on CNS Precautions.

**2. Private room** A private room is usually not indicated. A private room is only necessary in situations in which the environment is likely to become contaminated with blood or other potentially infectious materials. For example, a private room would be indicated if the patient has poor hygiene, profuse diarrhea, fecal incontinence, or impaired judgment.

**3. Hand hygiene** is required before and after patient contact, after removing personal protective equipment (PPE) and before leaving the patient's environment.

Use the sink inside the room nearest the door, wash hands for 10-15 seconds using a CC-approved soap and water. Use a paper towel to turn off the faucets and to open the door.

**or**

If hands are not visibly soiled, a CC-approved waterless hand antiseptic agent can be used. Apply enough product to cover all surfaces of the hands, fingers and nails. Rub hands together for 10-15 seconds until dry. Always handle the doorknob with a paper towel to avoid re-contaminating hands.

**4. Visitors** do not need to follow any special precautions. For more information, a booklet titled "Infection Control at the Clinical Center: Information for Patients and Visitors" is available from HES.

**5. Personal Protective Equipment**

***Gloves*** are indicated as described in the section entitled "Standard/Universal Precautions."

***Gowns*** are indicated as described in the section entitled "Standard/Universal Precautions."

***Masks*** are indicated as described in the section entitled "Standard/Universal Precautions."

***Protective eyewear*** is indicated as described in the section entitled "Standard/Universal Precautions."

***Personal Protective Equipment removal***

*For an isolation room with an anteroom*

PPE should be removed in the anteroom before exiting to the hallway.

*For an isolation room without an anteroom*

Remove all PPE except mask immediately prior to leaving the room following the procedure described in "Personal Protective Equipment Use." The mask should be removed immediately after leaving the room and should be discarded into the MPW (medical pathological waste) box placed outside the patient's room.

Hand hygiene is required after removal of PPE.

**6. Ancillary Patient Services** (e.g. Escort, Diagnostic Radiology, Nuclear Medicine, Surgery, etc.) must be notified before a patient on isolation precautions is transported to ensure that staff is prepared for the patient's arrival. Contact with staff, visitors and other patients must be minimized. Contact HES for additional patient activity guidelines.

***Patient Transport*** outside of room should be restricted to essential purposes only.

During transport PPE is indicated per Standard/Universal Precautions.

***Nutrition Department*** does not need to wear PPE when delivering and removing meal trays from the patient's room.

**7. Patient care equipment**

***Contaminated reusable critical/semicritical patient care equipment that will enter normally sterile tissue, the vascular system, or other parts of the body through which blood will flow.***

In general, this equipment should be discarded into an MPW (medical pathological waste) box and sharp equipment should be discarded into a puncture-resistant container labeled with a "Biohazard" symbol designed specifically for this purpose (sharps container).

Approval from the Hospital Infections Committee (HIC) is required for reuse of non-disposable critical/semicritical equipment that will enter normally sterile tissue, the vascular system, or other parts of the body through which blood will flow. HIC-approval required for reusable equipment, including contaminated operating room equipment (such as EEG needles, neurologic and eye surgery instruments).

Among other criteria, HIC will review whether equipment is constructed so that cleaning procedures result in effective tissue removal. Special processing for these items is required before reuse (sterilization at 134°C degrees for at least 18 minutes in a pre-vacuum sterilizer or 121°C to 132°C for one hour in a gravity displacement sterilizer). Items that permit only low-temperature sterilization (e.g., ethylene oxide, hydrogen peroxide gas plasma) should be discarded. Flash sterilization must not be used for reprocessing.

Prior to transport to CHS patient care equipment that has been approved by the HIC for re-use should be placed in an OSHA transport tray (a CHS-issued puncture-resistant transport container which has a cover lid and which is labeled with a Biohazard symbol) found in soiled utility rooms located throughout the CC in patient care areas. A CNS Precautions sticker should be placed on the OSHA transport tray (stickers are available from HES). Under no circumstances should equipment be rinsed, wiped down or scrubbed. Reaching into an OSHA transport tray to manually handle or remove contaminated equipment is not permitted. *(continued on next page)*

# CNS (Central Nervous System) Precautions *continued from preceding page*

Contaminated reusable equipment should be physically contained to prevent environmental contamination (e.g. on a procedure tray or in an emesis basin), and safely transported to the dirty utility room in an appropriate transport container.

HIC-approved reusable equipment that is difficult to clean should be processed in a manner to retard adherence of material to the medical device (e.g. to minimize drying of tissues and body fluids on the object). Contact a CHS consultant for acceptable options. Initial decontamination should then be done by autoclaving at 134˚C degrees for 18 minutes in a pre-vacuum sterilizer (objects in liquid must have the liquid removed before sterilization), or 121˚C to 132˚C for one hour in a gravity displacement sterilizer. Following initial decontamination, the objects can be wrapped and sterilized by CC-approved procedures.

HIC-approved critical and semi-critical reusable equipment that cannot be autoclaved, such as certain electrodes, may be immersed in undiluted sodium hypochlorite (or IN sodium hydroxide) at room temperature for one hour; the immersed equipment may then be cleaned, rinsed in sterile water and subjected to routine sterilization. However, this method must be compatible with the manufacturer's recommendations because the corrosive nature of chlorine may damage some equipment.

For alternative autoclave/chemical methods for heat-resistant instruments, contact the Environmental Safety Officer or HES.

***Contaminated reusable patient care equipment that will not enter normally sterile tissue, the vascular system, or other parts of the body through which blood will flow.***

Prior to transport to CHS, patient care equipment approved by the HIC for re-use should be placed in an OSHA transport tray (a CHS-issued puncture-resistant transport container which has a cover lid and which is labeled with a "Biohazard" symbol) found in soiled utility rooms located throughout the CC in patient care areas. Under no circumstances should equipment be rinsed, wiped down or scrubbed. Reaching into an OSHA transport tray to manually handle or remove contaminated equipment is not permitted. Contaminated reusable equipment should be physically contained to prevent environmental contamination (e.g., on a procedure tray or in an emesis basin), and safely transported to the dirty utility room in an appropriate transport container.

***Sharp equipment, such as lumbar puncture needles, should be discarded into a puncture-resistant container labeled with a "Biohazard" symbol designed specifically for this purpose.***

***Urine and feces*** should be handled with caution by health care workers so as to avoid accidental spills. Health care workers use professional training and judgment to select the best method to safely dispose of biohazardous waste. Regardless of disposal method, use personal protective equipment as appropriate for the situation (e.g., protective eyewear [safety goggles], gloves, mask or disposable gown). Refer to "Standard/ Universal Precautions" for more information.

**9. Clothing and linen** Clothing does not require special handling unless soiled with high or low-infectious risk materials. Items soiled with high or low-infectious risk materials (*High:* Brain [including dura mater], eye, spinal cord. *Low:* Cerebrospinal fluid (CSF), kidney, liver, lung, lymph node, placenta, spleen) should be discarded into an MPW box.

***Patient clothing*** visibly soiled with materials not associated with prion agent transmission should be discarded or disinfected. Soiled personal clothing should be bagged and sent home to be laundered in hot water with detergent. If personal items are contaminated with extremely low or no-infectious risk materials, they should be discarded or disinfected. Materials not associated with prion agent transmission are peripheral nerve, intestine, bone marrow, whole blood, leukocytes, serum, thyroid gland, adrenal gland, heart muscle, skeletal muscle, adipose tissue, gingival tissue, prostate, testis, tears, nasal mucus, saliva, sweat, serous exudates, sputum, urine, feces, semen, vaginal secretions, and human milk.

***Staff clothing*** (e.g. lab coats visibly soiled with materials not associated with prion agent transmission should be discarded or disinfected. Contaminated employee clothing may be laundered through the Housekeeping and Fabric Care Department.

***Linen*** is placed in an impervious yellow laundry bag with a water-soluble plastic liner.

For more information call HES or refer to "Sterilization and Disinfection."

**10. Lab specimens** require special labeling. Label all specimens with a "CNS Precautions" sticker. Stickers are available from HES.

Toys soiled with high or low-infectious risk materials should be discarded into an MPW box.

Toys soiled with materials not associated with prion agent transmission (peripheral nerve, intestine, bone marrow, whole blood, leukocytes, serum, thyroid gland, adrenal gland, heart muscle, skeletal muscle, adipose tissue, gingival tissue, prostate, testis, tears, nasal mucus, saliva, sweat, serous exudates, sputum, urine, feces, semen, vaginal secretions, milk) that cannot be disinfected must be discarded. To discuss exceptions, call HES.

**13. Discontinuation** of these precautions will occur when patient is considered no longer infectious.

***Removal of isolation sign from patient's door*** can be done when isolation is discontinued, or when the patient is discharged/ transferred.

**14. Handling a deceased patient** requires the same precautions as if the patient were alive. Personal protective equipment is indicated per Standard/Universal Precautions. If the skull is open or there is CSF leakage, line the body bag with materials to absorb any fluid, and move the body in a sealed body bag. Label toe tag with a "CNS Precautions" sticker before transport to the morgue. Stickers are available from HES. Contact the Ambulatory Care Service Admissions staff for issues regarding access to the morgue or for mortuary arrangements.

**15. Additional guidelines**
Appropriate disinfection for contaminated items is critical. Please contact CHS or HES for more information.

### Diseases requiring CNS Precautions

Atypical dementia, including myoclonus and amyotrophy
Creutzfeldt-Jakob disease (CJD) (sporadic, familial, iatrogenic, variant [vCJD])
Fatal insomnia (familial, sporadic)
Gerstmann-Straussler-Scheinker syndrome (GSS)
Kuru
Neurologic syndromes, etiology unclear, but prion infection included in differential diagnosis
Prion disease
Slow virus encephalitis
Transmissible spongiform encephalopathie ■

Contaminated large patient care equipment that cannot be contained in an OSHA transport tray (e.g., bedside commode or hypothermia unit), should be cleaned of visible organic material and disinfected by the Housekeeping and Fabric Care Department before the equipment is returned to CHS.

***Blood pressure cuffs*** are handled according to Standard/Universal Precautions and must be disinfected with a CC-approved disinfectant before use on another patient.

***Contaminated reusable equipment*** (electronic thermometers, blood pressure equipment etc.) should be dedicated to a single patient for the duration of isolation. Equipment must be disinfected with a CC-approved disinfectant before use on another patient.

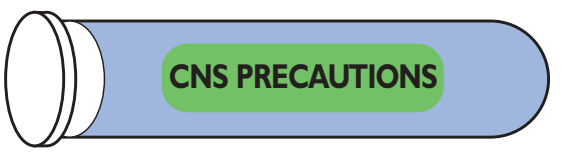
***Portable monitoring instruments*** (EKG, ECHO, X-RAY equipment etc.) may be used in the patient's room. Any equipment surfaces contaminated with secretions, blood, body fluid or other infectious materials must be disinfected with a CC-approved disinfectant prior to removal from the patient's room. Refer to "Sterilization and Disinfection" for more information.

***Stethoscopes*** are handled according to Standard/ Universal Precautions and must be disinfected using a CC-approved disinfectant before use on another patient.

***Wheelchairs and stretchers*** are cleaned after every transport of a patient on isolation precautions. The Ambulatory Care Service cleans wheelchairs according to policy.

Refer to "Sterilization and Disinfection" or "Standard/ Universal Precautions" for more information.

**8. Waste and disposable patient care equipment**
Waste should be discarded inside the room. Disposable patient care equipment should not be reused and should be discarded inside the room. All trash or waste from the patient room should be placed in an MPW (medical pathological waste) box. The box should be placed outside the door of the patient's room (or in the anteroom) and have a lid (provided by the Housekeeping and Fabric Care Department staff). Housekeeping and Fabric Care Department staff will label, seal and dispose of the box.




***Tissue*** requires special handling. Formalin and glutaraldehyde-fixed tissue retain infectivity for indefinite periods and should be considered infectious until, or unless, treated with formic acid.

Treatment with formic acid reduces infectivity to negligible levels. Specimens must be labeled with a "CNS Precautions" sticker, segregated from other autopsy and biopsy tissue, and processed by a laboratory experienced in handling this type of material. Stickers are available from HES.

**11. Environmental cleaning** of rooms should be done according to Housekeeping and Fabric Care Department policy for cleaning isolation rooms.

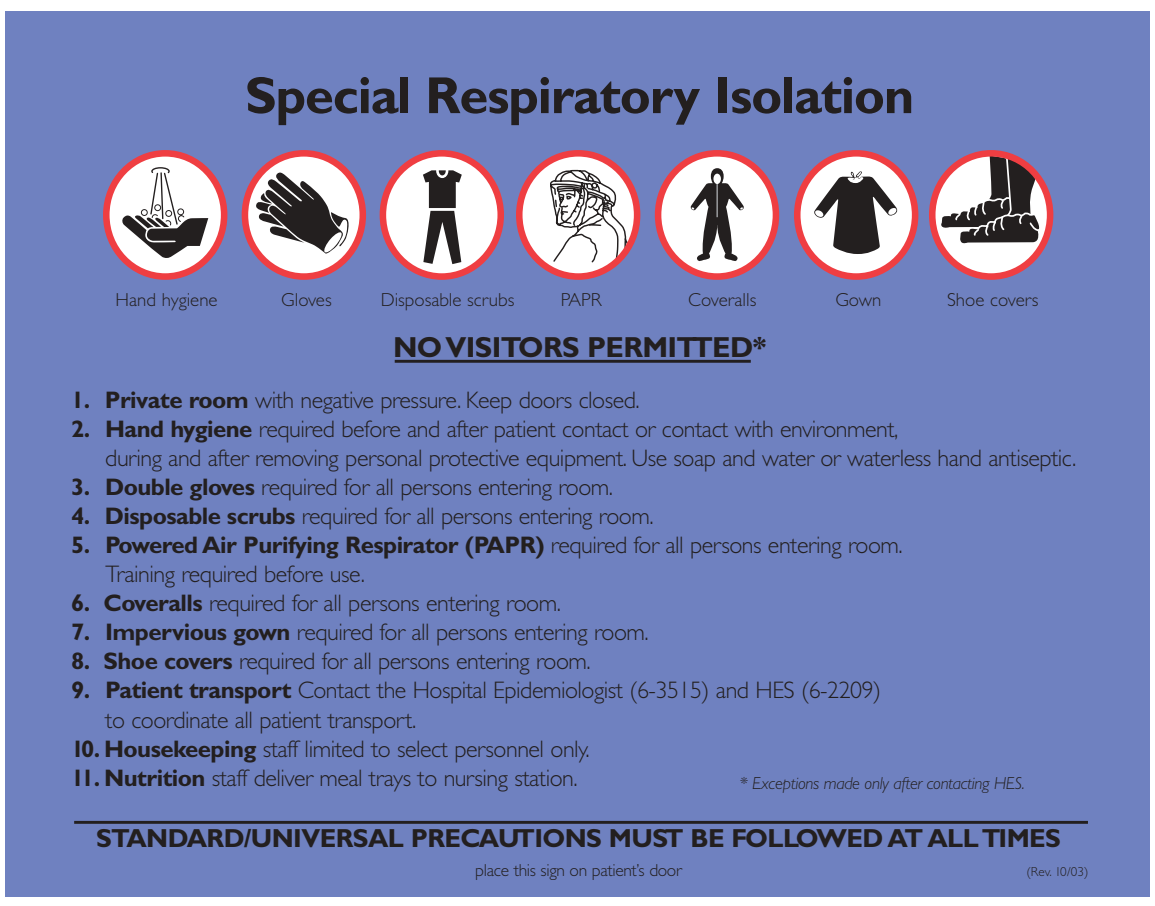
Environmental surfaces contaminated with high-risk or low-risk tissues (*High:* Brain [including dura mater], eye, spinal cord. *Low:* Cerebrospinal fluid (CSF), kidney, liver, lung, lymph node, placenta, spleen) should be cleaned with a CC-approved disinfectant. Clinical laboratories may consider using disposable cover sheets on work surfaces to minimize environmental contamination.

Contact the Environmental Safety Officer or HES to discuss alternative disinfectants.

**12. Recreational items**
Items brought into the patient's room do not require special handling unless soiled with high or low-infectious risk materials (*High:* Brain [including dura mater], eye, spinal cord. *Low:* Cerebrospinal fluid (CSF), kidney, liver, lung, lymph node, placenta, spleen). Items soiled with high or low-infectious risk materials must be discarded into an MPW box.

***Books and magazines*** should be dedicated to a single patient. Books and magazines visibly soiled with materials not associated with prion agent transmission should be discarded. Books and magazines used by patients on isolation should not be returned to circulation.

***Toys*** should be dedicated to a single patient. Toys should have non-porous cleanable surfaces and must be disinfected according to the Rehabilitation Medicine Department's Recreation Therapy Section policy for toy cleaning and disinfection before being placed back into circulation.




Special respiratory isolation is designed to prevent transmission of infectious respiratory diseases whose transmission is not yet defined but may include direct contact with respiratory and other infectious secretions, contact with fomites contaminated with these secretions, and inhalation of infectious airborne particles.

**Standard/Universal Precautions are indicated at all times for all patient contact.**

**Transmission route: Airborne, contact with infectious materials and contaminated items**

## Specifications for Special Respiratory Isolation

**1. Immediately notify** the Hospital Epidemiologist (or his designee) and the Hospital Epidemiology Service (HES) if a patient with possible/probable SARS is to be admitted, or if Special Respiratory Isolation is being considered for a patient in the CC.

| | |
|---|---|
| *Hospital Epidemiologist* | Office: 301-496-3515<br>Home: 301-871-9370<br>Cell: 240-602-8375 |
| *Hospital Epidemiology Service* | Office: 301-496-2209<br>Evening/weekend page: 301-496-1211 |

**2. Private room** with an anteroom and monitored negative pressure is required. Doors must be kept closed. Open only one door at a time. Never have both doors open simultaneously.

**3. Hand hygiene** is required before and after every patient or equipment contact, after removing gloves and other personal protective equipment, and before leaving the patient's environment.

If hands are not visibly soiled, use the waterless antiseptic agent (alcohol-based, hand hygiene product mounted on the wall of the anteroom and outside each patient room). Dispense one full pump depression into the palm of one hand then distribute over all hand and wrist surfaces, including fingertips and nails, and allow to dry (15-25 seconds). If hands are visibly soiled, wash hands and wrists with soap and water using the sink inside the anteroom. After hand washing, a paper towel should be used to turn off the faucets to avoid re-contamination of the hands. Follow hand washing with an application of the waterless antiseptic agent as described above. Use of this product will afford an extra measure of protection. Use a paper towel to handle the doorknob when exiting the room to avoid re-contaminating hands. After exiting the anteroom, hands should be decontaminated one final time with the waterless antiseptic agent.

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

**All staff entering these isolation rooms, or caring for these patients, must be familiar with the procedure for donning/removing PPE.**

Contact HES for training in PPE procedures.

Consultants (e.g. Psychiatry, Surgery, etc.) must adhere to these PPE requirements with the exception of wearing disposable scrubs. Consultants may wear disposable coveralls over regular hospital attire. Coveralls are used once by Consultants then discarded.

***Disposable scrubs*** are required for all persons entering the room. Consultants may wear regular hospital attire. Scrubs are worn for an entire shift then discarded.

***Double gloves*** are required for all persons entering the room, for direct or indirect contact with the patient, infectious materials, or items in the patient's environment.

***Disposable coveralls*** are required for all persons entering the room. Coveralls are dedicated to a single health care worker, hung in the anteroom when not in use and discarded at the end of each shift. Coveralls should be discarded immediately if visibly contaminated with blood, body fluids or other infectious materials. Coveralls should be discarded immediately if contamination is suspected but not visible.

***Disposable gowns*** are required for all persons entering the room. Gowns are worn once then discarded.

***Shoe covers*** are required for all persons entering the room. Shoe covers are worn once then discarded.

***Respiratory protection*** A Powered Air Purifying Respirator (PAPR) is required for all persons entering the room or providing care to the patient. Two models are available (with and without cape) and provide equal protection. PAPRs are dedicated to a single health care worker, hung in the anteroom when not in use and discarded at the end of each shift. The PAPR should be discarded immediately if visibly contaminated with blood, body fluids or other infectious materials. The PAPR should be discarded immediately if contamination is suspected but not visible. Contact the CC Safety Officer for PAPR training.

***Protective eyewear*** is not indicated since a PAPR will be worn for all patient contact.

***Personal protective equipment removal*** Contact HES for additional information.

**5. Ancillary Patient Services,** in general, (Admissions, Escort, Spiritual Ministry, Social Work, Surgery etc.) will not interact directly with these patients. Such individuals should not enter the isolation room. Alternative arrangements will be made on a case-by-case basis after consultation with the Hospital Epidemiologist.

**Patient transport outside of the isolation room is restricted.**

**In the event that the patient must be transported, all movements will be coordinated by the hospital epidemiologist or his designee.**

In the event the patient must be transported within the hospital, the Hospital Epidemiologist must first be notified. The Hospital Epidemiology Service will coordinate communication between the primary patient care providers and the staff of the area to which the patient is being moved. This communication is essential to assure that the area/department is fully prepared to receive the patient and to manage the patient appropriately. Patients will be transported on a stretcher in a bed isolation unit. Any and all tests/studies performed on these patients should be conducted in negative pressure rooms. Staff conducting studies must adhere to all guidelines for isolation, including wearing gloves, gowns, coveralls, shoe covers, and a PAPR. During transport and during the procedure the patient should wear a surgical mask and impervious gown, and remain in the bed isolation unit (if possible). A private elevator (D wing, Elevator 15) should be used for patient transport. The elevator operator must not be present. The patient should be escorted directly into the procedure/examination room. Patients and personnel not involved in the procedure should be removed from the surrounding area prior to patient transport. Thorough cleaning of the testing area should be performed once the patient has left.

**6. Nutrition Department** should deliver tray to nursing station. Nutrition staff should not enter the isolation room. Disposable trays, cutlery and dishes will be used. Meal orders will be taken by telephone.

**7. No visitors** are permitted. The Hospital Epidemiologist (or his designee) will grant exceptions in the event that visitors are considered crucial to patient care, on a case-by-case basis in consultation with the patient's physician.

**8. Lab specimens** will be labeled with a "Special Respiratory Isolation" label available from Hospital Epidemiology Service. Specimens (e.g. nasopharyngeal washes, etc.) will be collected in the patient's negative pressure isolation room whenever possible with the clinician/technician wearing full PPE. Retrieval, transport, and processing of these specimens should be carefully coordinated with the laboratory senior staff and study investigators. All specimen container surfaces are wiped with EPA-approved, mycobactericidal disinfectant and labeled before placing in a plastic specimen bag. All specimens are double-bagged, with the transmittal sheet placed in the outer bag pocket. Specimens will be processed according to DLM, DTM, or NCI LP procedures.

**9. Disposable patient care equipment** should not be reused and should be discarded in the trash can inside the patient's room. All waste from the isolation room will be placed in an autoclave bag, sealed with autoclave tape and labeled with the date, location and isolation category. Specially trained housekeeping staff will perform pick-up, transport and processing of waste.

**10. Patient care equipment** Reusable patient care equipment should be dedicated to a single patient whenever possible for the duration of isolation. This equipment will be cleaned and disinfected after use and stored appropriately. Only EPA-approved, myco-bactericidal disinfectants are used for equipment cleaning.

***Refer to the Housekeeping and Fabric Care Department procedures for cleaning patient care equipment.***

***Stethoscopes*** should be disposable and dedicated to a single patient for the period of isolation. If a non-disposable stethoscope is used it should be dedicated to a single patient for the period of isolation and discarded or disinfected using a EPA-approved, mycobactericidal disinfectant when patient is discharged. Stethoscopes must be disinfected with an EPA-approved, mycobactericidal disinfectant immediately before each use.

***Blood pressure cuffs*** should be disposable and dedicated to a single patient for the period of isolation. If a non-disposable blood pressure cuff is used, it should be dedicated for the period of isolation and discarded or disinfected using an EPA-approved, mycobactericidal disinfectant when patient is discharged.

***Other contaminated reusable equipment*** (electronic thermometers, etc.) should be dedicated to a single patient for the period of isolation. Equipment must be disinfected using an EPA-approved, mycobactericidal disinfectant before use on another patient.

***Portable monitoring instruments*** (EKG, ECHO, X-RAY equipment etc.) should be dedicated to a single patient for the duration of isolation whenever possible. All surfaces of equipment must be disinfected using an EPA-approved, mycobactericidal disinfectant before use on another patient. Cart wheels are cleaned by rolling cart over a chux soaked with EPA-approved, mycobactericidal disinfectant.

***Wheelchairs and stretchers*** are thoroughly cleaned using an EPA-approved, mycobactericidal disinfectant after every transport of a patient on isolation.

**11. Waste** is placed in an autoclave bag and labeled with an isolation label. Waste will be autoclaved and then placed in an MPW box. Specially trained housekeeping staff will perform pick-up, transport and processing of waste. *(continued on next page)*

 *continued from preceding page*

**12. Environmental cleaning** Only EPA-approved, mycobactericidal disinfectants are used for environmental cleaning.

Housekeeping will perform routine environmental cleaning of isolation rooms with specially trained staff a minimum of twice per shift. Isolation anterooms will be cleaned on a more frequent schedule. When a patient is discharged, or isolation is discontinued, the room will remain undisturbed for 12 hours. After this rest period, housekeeping staff will perform terminal cleaning while wearing full PPE (including disposable scrubs, disposable coveralls, gloves, gowns, shoe covers and a PAPR). Only disposable cleaning supplies will be used. All cleaning supplies will be discarded upon completion of the cleaning procedure.

**13. Clothing**
***Patient clothing*** will be placed in an autoclave bag at the time of admission. Patient clothing will be autoclaved and then sent for laundering. Patient will wear hospital provided attire. Soiled personal clothing must not be sent home for laundering.

***Staff*** must not wear their personal clothing (except consultants who may wear regular hospital attire) and must change into ***disposable scrubs*** at the beginning of each shift

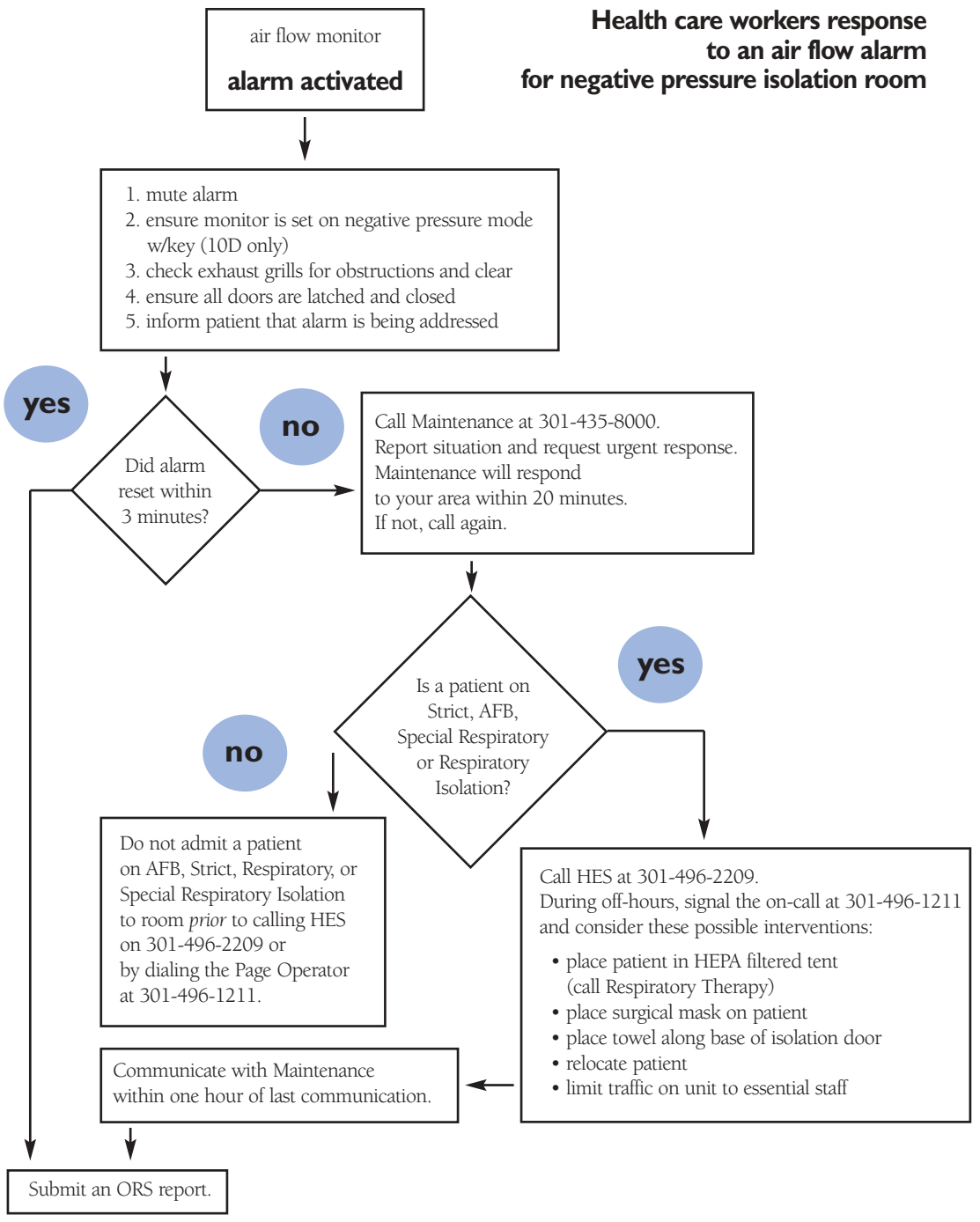
**14. Recreational items** (books, magazines) must be dedicated to a single patient and discarded into the patient's trash can after use. Use of any other recreational items must be coordinated with the Hospital Epidemiologist.

**15. Soiled linen** is placed in an autoclave bag and labeled with an isolation label. Linens will be autoclaved and then sent for laundering. Specially trained housekeeping staff will perform pick-up, transport and processing of linen.

**16. Urine and feces** should be handled with caution by health care workers to avoid accidental spills or exposures. These materials may contain substantial quantities of infectious virus. Discard urine and feces in the patient room via the toilet.

**17. Handling a deceased patient** requires the same precautions as if the patient were alive. Disposable scrubs or coveralls, gowns, gloves, shoe covers and a PAPR should be worn. All efforts will be made to reduce aerosols generated during autopsy procedures.

**Health care workers response to an air flow alarm for negative pressure isolation room**




The Admissions Department and Hospital Epidemiology Service must be notified before funeral home arrangements are made.

**18. Isolation may be discontinued** only after approval by the Hospital Epidemiologist or his designee.

**19. Additional guidelines** Consent forms are placed in an autoclave bag after signing and transported to the Department of Laboratory Medicine for autoclaving by HES staff.

**Diseases requiring Special Respiratory Isolation**

SARS Coronavirus (SARS-CoV)
Severe Acute Respiratory Syndrome (SARS)
Undiagnosed respiratory disease resulting from bioterrorism ■

## Essential transport information

- Patient transport is restricted to essential purposes only.
- Contact with staff, visitors and other patients must be minimized.
- Isolated patients are transported by private elevator.
- Patients must be escorted directly into a procedure/examination room and must not be seated in any reception/waiting area.
- Contact Hospital Epidemiology Service (HES) for additional patient movement and activity guidelines.

**Ancillary patient services** (e.g. Escort, Diagnostic Radiology, Nuclear Medicine, Surgery, etc.) must be notified before a patient on isolation precautions is transported to ensure that staff is prepared for the patient's arrival.

Wheelchairs and stretchers are cleaned after every transport of a patient on isolation precautions. Ambulatory Care Services cleans this equipment according to policy.

## Instructions for transporting patients by isolation category

**1. Standard/Universal Precautions**

- Applies to all patients at all times.
- Transport personnel should know the location of personal protective equipment (PPE) in the event of unanticipated need.

**2. Contact Isolation**

- Patient transport personnel wear gloves. Patient does not wear gloves.
- Patient may travel outside the room with supervision as directed by the nursing staff. Consult with HES for questions regarding patient ambulating outside their room.

**3. Respiratory Isolation**

- Patient wears a closely fitted surgical mask.

**4. AFB (Acid Fast Bacilli) Isolation**

- Contact HES for appropriate transportation routes.
- Patient should wear a closely fitted surgical mask.
- When patient has multi-drug resistant Tuberculosis (TB) transport personnel and elevator operator must wear a particulate respirator (N-95, or PAPR). Training for use of a particulate respirator arranged by calling the Environmental Safety Office.

**5. Strict Isolation**

- Patient transport personnel wear gloves. Patient wears a disposable isolation gown and a mask.

**6. CNS (Central Nervous System) Precautions**

- No special personal protective equipment indicated.

**7. Special Respiratory Isolation**

- Contact Hospital Epidemiologist/HES prior to transportation.
- Contact HES for appropriate transportation routes.
- Patient transported in the bed isolation unit.
- Escort service and elevator operator not present. ■

### Transportation guidelines quick reference: PPE used when transporting patients on isolation

| *Isolation Precaution* | *Transporter PPE* | *Patient PPE* | *Elevator Operator PPE* |
|---|---|---|---|
| Contact Isolation | Gloves | [1] | None |
| Respiratory Isolation | Gloves | Closely fitted surgical mask | None |
| AFB Isolation | Mask [2] | Closely fitted surgical mask | [2] |
| Strict Isolation | Gloves | Closely fitted surgical mask<br>Gown | None |
| CNS Precautions | None | None | None |
| Special Respiratory Isolation | Double gloves<br>Disposable scrub<br>Impervious gown<br>Shoe covers<br>Coveralls<br>PAPR | Closely fitted surgical mask<br>Gowns<br>[3] | Operator not be present during transport |

[1] Patient may need gloves and gown (e.g. crusted/Norwegian scabies). Contact HES.
[2] N-95/PAPR worn by transport staff and elevator operator when patient has multi-drug resistant TB.
[3] Patient transported in bed isolation unit

# Respiratory Virus Management

## Overview

Respiratory viruses are associated with increased morbidity and mortality, especially among immunocompromised persons. The Clinical Center's (CC) respiratory virus management program is designed to prevent transmission of respiratory viruses from person to person.

The framework of the CC respiratory virus management strategy is based on the epidemiology of the following respiratory viruses: adenovirus, influenza (A and B), parainfluenza (types 1, 2 and 3), and respiratory syncytial virus. These are summarized in the following table.

### Respiratory viruses identified in the Clinical Center

| | *Adenovirus* | *Influenza (A, B)* | *Parainfluenza (Types 1, 2, 3)* | *Respiratory Syncytial Virus (RSV)* |
|---|---|---|---|---|
| **Clinical Presentation** | • Common cold symptoms, pharyngitis, fever, otitis media, tonsillitis, keratoconjunctivitis<br>.<br>• Pneumonia, meningitis and encephalitis can occur. | • Sudden onset fever, often with chills or rigors, headache. malaise, myalgias, and nonproductive cough<br>• Children may have only mild upper respiratory tract infection or febrile illness with few respiratory signs.<br>• Very young children may exhibit a sepsis-like picture, croup or pneumonia. | • Major cause of laryngotracheobronchitis (croup), but also frequently result in upper respiratory tract infection, pneumonia, or bronchiolitis.<br>• Infections can be particularly severe and persistent in immunocompromised persons, a special problem for patients receiving BMT or PBSCT. | • Causes acute respiratory illness in all ages.<br>• An important cause of bronchiolitis and pneumonia in infants, very young children, and immunocompromised persons.<br>• Manifests in children and adults as an upper respiratory tract infection, occasionally with bronchitis. |
| **Epidemiology** | • Infection in infants and children occur at any age.<br>• Transmission occurs through contact with droplets, person-to-person contact, and contact with contaminated articles.<br>• Incidence increases in late winter, spring and early summer<br>• Most communicable first few days of acute illness, but persistent and intermittent shedding can occur for months.<br>• Asymptomatic infection common.<br>• Reinfection can occur. | • Infection can occur at any age.<br>• Highly contagious.<br>• Transmission is person-to-person by inhalation of small particle aerosols, direct contact, or contact with contaminated articles.<br>• Epidemics usually occur during winter months.<br>• Circulating strains of influenza change year to year, so reinfection may occur.<br>• Persons are most infectious 24 hours before onset of symptoms and during acute symptomatic period. Viral shedding ends 7 days after onset of illness, but can be prolonged in young children and immunocompromised persons. | • Primary infection with types 1 and 2 usually occurs by six years of age. Primary infection with type 3 usally occurs by two years of age.<br>• Transmission is person-to-person by direct contact, contact with respiratory droplets and contaminated articles.<br>• Infection can be sporadic or epidemic. Incidence of types 1 and 2 increases in the fall; type 3 is more common in spring and summer.<br>• Reinfection can occur, and are usually mild in healthy persons.<br>• Viral shedding can persist up to three weeks or more in healthy persons. Severe lower respiratory tract infection with prolonged vius shedding, can occur in immunocompromised persons. | • Initial infection usually occurs by two years of age.<br>• Transmission is by direct or close contact with contaminated secretions/droplets, contaminated articles, and unwashed hands<br>• Epidemics usually occur during the winter and early spring. |
| **Incubation** | • 2 to 14 days | • 1 to 3 days | • 2 to 6 days | • 2 to 8 days |
| **Treatment** | • Supportive | • Amantadine and rimantadine approved for influenza A in adults.<br>• Amantadine is approved for children at least one year old.<br>• Zanamivir approved for influenza A and B in persons 12 years or older.<br>• Oseltamivir approved for persons 18 years or older. | • Supportive | • Supportive<br>• Ribavirin has been used |
| **Vaccine/ Prophylaxis** | • None | • Vaccine can help prevent influenza. A different vaccine is developed every year depending on the type of influenza that is predicted to be in the community.<br>• Annual vaccination is offered free to NIH employees every fall through through Occupational Medicine Service (OMS).<br>• Amantadine or oseltamivir are considered for prophylaxis after exposure to influenza A or B. | • None | • None<br>• RSV-IVIG and palivizumab approved for children younger than 24 months. |

## Elements of the Respiratory Virus Management Program

### 1. Patients

Patients can serve as a reservoir for respiratory viruses that may spread to other patients, staff, and visitors.

Hand hygiene is the single most important method to prevent the spread of respiratory virus infection.

Influenza vaccine should be discussed with patients and offered if there are no contraindications.

***Patient Symptom Assessment and Actions***

Patients are assessed for symptoms of respiratory infection by a clinician (nurse, nurse practitioner, physician assistant or physician). In addition, high-risk patients, such as hematopoietic stem cell transplant recipients, are encouraged to self-monitor and to report symptoms to their health care team. Outpatients are assessed for symptoms of respiratory infection at each outpatient visit. Inpatients assessed upon admission and at least once each shift.
A single sign or symptom of respiratory infection may require additional infection control measures to supplement Standard/Universal Precautions.

### Patient Symptom Assessment and Actions

| *Symptoms of respiratory infection may include:* | *Action to take if a single sign or symptom is present (and action is clinically warranted):* |
|---|---|
| • cough<br>• scratchy or sore throat<br>• body aches<br>• congestion<br>• nasal discharge<br>• otitis media<br>• extreme fatigue or malaise | • Place a mask on the patient and isolate them.<br>• Obtain an order for a "respiratory virus panel" in MIS/CRIS.<br>• Check the Department of Laboratory Medicine website for specimen requirements.<br>• Obtain a MIS/CRIS physician's order to begin Respiratory Isolation.<br>• Notify the Critical Care Therapy and Respiratory Care Section through the page operator to obtain the nasopharyngeal (NP) wash/swab culture. |

***Isolation***

When a patient presents with respiratory signs or symptoms, isolation should be implemented immediately. The patient is kept on respiratory isolation until they are no longer considered contagious.

For questions about isolation for pediatric patients, contact the on-call pediatrician via the page operator.

When a nasopharyngeal swab/wash culture for a "respiratory virus panel" is obtained, isolation is indicated for empiric management and should be in place while waiting for laboratory results. Isolation is maintained until final culture results are available and not discontinued based on negative rapid results.

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### Patient isolation guidelines questions & answers

| *Question* | *Answer* |
|---|---|
| Where can the patient go while on isolation? | Activity restrictions are enforced and include: no playroom, day room, solarium, lounge, or 14th floor privileges; no travel to the Children's Inn, Family lodge or cafeteria; no contact with other patients; travel to necessary appointments in a private elevator. If the patient goes for a test or procedure, he/she will be escorted directly to the testing area examination room and then directly back to his/her room (or to the next test or procedure). Patients on Respiratory Isolation will wear surgical masks when outside their room. Facial tissue should always be available for the patient's use. |
| When is isolation discontinued? | Isolation may be discontinued when the patient's respiratory symptoms significantly improve.<br><br>For immunocompetent patients, plan to discontinue isolation after 3 weeks even if patient maintains baseline symptoms. Hospital Epidemiology Service (HES) will identify exceptions and assist with discontinuation.<br><br>For immunocompromised patients, discontinue isolation only after consulting with either HES or the Infectious Disease Consult Service. |
| Under what circumstances is isolation continued for longer than 3 weeks? | Isolation is continued for new or worsening symptoms, and for immunocompromised patients who continue to have positive respiratory virus cultures.<br><br>Immunocompromised patients may have positive respiratory virus cultures when their respiratory symptoms have improved or when no respiratory symptoms are present.<br><br>Positive respiratory virus culture results in this setting indicate a chronic carrier state with a low level of viral shedding and risk for transmission. Isolation may be maintained for these immunocompromised patients until respiratory virus cultures are negative. HES and the Infectious Disease Consult Service will assess and make isolation recommendations. |
| When should repeat cultures be sent for patients on respiratory isolation? | Cultures may be repeated every 7 to 10 days for clinical guidance. |
| Could isolation be reinstated for a patient after it has been discontinued? | Yes. If a patient's symptoms reappear or baseline symptoms worsen the patient should be re-isolated and the appropriate cultures submitted. Follow the above steps for the management of a positive respiratory virus result. |
| Where is more information available on respiratory virus isolation guidelines? | Resources for more information include:<br>• The CC Pediatric Care Program "Respiratory Virus Management" brochure<br>• The CC Pediatric Care Program website<br>• HES website or staff |

## 2. Family and Visitors

Family and visitors can serve as reservoir for respiratory viruses that may spread to patients and staff.

Hand hygiene is the single most important method to prevent the spread of respiratory virus infection.

Family and visitors should be informed about influenza vaccine and encouraged to discuss vaccine with their primary care physician or community health clinic.

Family and visitors with respiratory symptoms should avoid visiting the CC until symptoms have resolved.

### Patient specimen result and isolation

| *Respiratory virus specimen result* | *Isolation management* |
|---|---|
| Negative rapid test | Maintain isolation |
| Negative rapid test and negative two-day shell vial culture result | Discontinue isolation after symptoms improve |
| Rapid test positive for RSV or Influenza A | Maintain isolation |
| 1-day or 2-day culture result positive | Maintain isolation |

### Family and visitor issues questions & answers

| *Question* | *Answer* |
|---|---|
| Are the activities of well family members of isolated patients restricted? | Activities of family members who do not have cold or flu symptoms are not restricted.<br><br>Family members are responsible for immediately reporting to nursing staff any symptoms of flu or a cold.<br><br>Family members who do not have symptoms of respiratory virus infection can stay at the Children's Inn or Family Lodge while the patient is on isolation. |
| Do family/visitors have to wear PPE (mask, gloves, etc.)? | Yes, they should wear PPE as indicated for the isolation category.<br><br>All family members/visitors should practice careful hand washing before and after touching the patient and after leaving the patient's room. |
| What should family/visitors do if they develop cold or flu-like symptoms? | Family members/visitors with cold or flu symptoms should not come to the CC until the symptoms are gone.<br><br>If family/visitors develop symptoms they should immediately notify the patient's nurse or physician.<br><br>Family members with symptoms may not stay at the Children's Inn or Family Lodge. Other arrangements will be made until they are no longer considered infectious. HES should be consulted for exceptions. |

## 3. Staff

Staff can serve as a reservoir for respiratory virus that may spread to other staff and patients.

Hand hygiene is the single most important method to prevent the spread of respiratory virus infection.

Annual influenza vaccine is recommended and encouraged for all health care workers. It is available free to all NIH staff from OMS every fall.

Staff with symptoms of a respiratory infection should do the following:

- Off-duty staff with symptoms should consult with their supervisor by phone to determine fitness for duty.
- On-duty staff that develop symptoms should ensure patient safety, inform their supervisor that symptoms have developed and mutually determine fitness for duty.
- Staff who become ill as a result of an exposure to a patient with a respiratory infection will be evaluated by OMS and provided with prophylaxis when appropriate. *(continued on next page)*

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## Staff issues questions & answers

| *Question* | *Answer* |
|---|---|
| Is the influenza vaccine available to staff? | OMS provides influenza vaccine to NIH employees every fall through walk-in clinics and worksite vaccination. The schedules are published in the CC News, NIH Record, on the NIH website, via email and on patient care units.<br><br>Non-NIH employees are encouraged to contact their primary care physician or community public health department for information about vaccination. |
| What is the management for staff with symptoms of respiratory infection? | Staff with mild symptoms of respiratory infection (mild congestion, occasional nasal discharge, rare cough or sneeze, mild sore throat) may work if they wear a mask (changed frequently, approximately every 30 minutes, and for each new patient contact) and perform appropriate hand hygiene.<br><br>Staff with moderate or severe cold or flu-like symptoms (heavy nasal congestion or discharge, fever, moderate or severe cough, body aches, myalgia, extreme fatigue, or moderate or severe sore throat) should develop a mutually agreeable strategy with their supervisor to stay away from CC until symptoms abate.<br><br>Off-duty staff with symptoms of respiratory infection should consult with their supervisor before reporting to work to determine fitness for duty.<br><br>Flu vaccine is recommended for unvaccinated symptomatic staff once symptoms abate.<br><br>On-duty staff that develop symptoms should ensure patient safety, place a mask on themselves, inform their supervisor of illness and mutually determine fitness for duty.<br><br>Staff who become ill as a result of an exposure to a patient with a respiratory infection should be evaluated by OMS and will be provided with prophylaxis when appropriate. Staff should avoid patient contact pending OMS evaluation. Symptomatic staff confirmed by OMS to have a respiratory infection with moderate or severe cold or flu-like symptoms should communicate with their supervisor and develop a mutually agreeable strategy to stay away from CC until symptoms abate. |
| What is considered an exposure to influenza? | Exposure to influenza is defined as either:<br>• contact of five minutes or longer and within 3 feet of an infected person without wearing a mask and/or direct contact with secretions from respiratory tract of infected person or items contaminated with these secretions without wearing gloves and performing proper hand hygiene or,<br><br>• contact of five minutes or longer and within 3 feet of an infected person without wearing working in a patient care unit, clinic or ancillary care area without wearing a mask where a non-isolated infected person stayed for an hour or more. |
| How are staff who may be incubating the influenza virus, after a known exposure, managed? | • Asymptomatic staff that have had an exposure to influenza (regardless of immunization status) should call OMS and make an appointment for evaluation. If symptoms develop within one to three days, the guidelines for symptomatic staff are followed.<br><br>• Flu vaccine is recommended for unvaccinated symptomatic staff once symptoms abate. |
| Can staff receive FluMist™? | Shedding of attenuated virus from healthy vaccinated individuals has been documented and the period of shedding may last as long as 21 days. These weakened strains of virus usually do not cause illness in healthy individuals, however, there is a possibility that they may replicate and cause disease in immunocompromised persons. For the safety of our patients, the vaccine will not be available to NIH staff. Direct patient care providers are discouraged from receiving the intranasal live attenuated influenza virus vaccine elsewhere. Direct patient care providers who receive FluMist™ will be reassigned for 21 days and must report to OMS prior to returning to work. ■ |

# Pediatric Infection Control

The Clinical Center (CC) strives to minimize the risk of infection for patients, visitors and staff and to maintain a safe environment. Special consideration is given to pediatric-aged patients and visitors. The infection management strategy extends to families in temporary residence at the Children's Inn or Family Lodge. The Children's Inn at NIH provides housing to pediatric patients and their families. The Family Lodge will provide housing for the families and loved ones of adult patients.

This management strategy is based on assessment for infection, colonization or immunization with live virus vaccine. Isolation procedures for pediatric patients with suspected or known communicable conditions include recommendations for management of the patients' household contacts, and re-location of isolated patients from the Children's Inn or Family Lodge to alternate housing.

The Pediatric Care Program follows the CC Infection Control Program Guidelines (refer to specific isolation category, "Respiratory Virus Management Strategy," and "Isolation Precautions Appropriate for Infectious Syndromes").

For questions about pediatric infection management you can reach a CC Pediatrician or Hospital Epidemiology Service (HES) through the Page Operator.

## Patient assessment for communicable conditions

Pediatric patients are routinely assessed by their medical team for signs or symptoms of infectious or communicable conditions.

### The Children's Inn and Family Lodge

Patient's who are on isolation precautions for suspected or known communicable conditions may not be housed at the Children's Inn or Family Lodge. The CC Pediatrician, HES and the patient's medical team determine management strategies on a case-by-case basis for the patients and household contacts or care providers. Any patient, family member or visitor who has, or has been exposed to a communicable condition may not enter the Children's Inn or Family Lodge until they are no longer infectious, for everyone's safety. Alternative housing arrangements are made for CC pediatric patients and their families who are restricted from the Children's Inn or Family Lodge.

## Visitor assessment for communicable conditions

Pediatric visitors are routinely assessed by a nurse for signs or symptoms of communicable conditions. Pediatric visitors or patient siblings are not allowed in the playrooms or other public areas until they have been screened. A health screening tool is available for the medical team to facilitate comprehensive assessment of communicable conditions. This tool is available by contacting the pediatric unit nurse manager.

### The Health Screening Tool for Pediatric Visitors (overview)

- Assesses for symptoms within the last seven days of cough, diarrhea, eye infection/drainage, fever, rash, runny nose, sore throat, vomiting.
- Assesses for exposure to chickenpox, head lice, measles, mumps, whooping cough, or scabies within the last six weeks.
- Solicits information on immunizations within the last six weeks.
- Provides guidelines for the allowance or exclusion of pediatric visitation due to infectious exposure, diagnosis of infection or immunization (shot or liquid) within the last six weeks.
- Serves as a reminder for nursing staff to instruct the patient's parent/caregiver to inform the nurse if the visitor develops any new symptoms or has any exposures within a few days of each CC visit. Frequent visitors should be re-screened if any symptoms develop.
- Additional information can be obtained by calling HES or the CC Pediatrician via the Page Operator. ■

### Pediatric visitation guidelines: exposed visitors

| *Disease or Condition* | *If a pediatric visitor has been* **exposed** *to this disease, should this child be allowed to visit?* | *When can the child be allowed to visit?* |
|---|---|---|
| **Chickenpox** | Yes, if visitor is immune (history of chickenpox or chickenpox vaccine).<br>No, if visitor is susceptible and exposure was 10-21 days ago. Call HES. | When exposure is more than 21 days ago and chickenpox has not developed |
| **Nonpolio Enterovirus (e.g., coxsackieviruses, echoviruses)** | Yes, if particular attention is given to hand washing and personal hygiene. Call HES. | |
| **Head Lice** | Yes, if visitor has received effective treatment.<br>Yes, if patient has history of exposure to this visitor. Restrict visitor activity to patient's room. Notify patient's physician. Call HES.<br>No, if treatment is not given, and patient has no history of exposure to this visitor. | Anytime after effective treatment, or if visual examination by medical/nursing staff identifies no nits or lice |
| **Measles** | Yes, if visitor is immune (history of measles or measles vaccine. Measles vaccination within 72 hours of exposure is protective.)<br>No, if visitor is susceptible and exposure occurred 1-21 days ago. Call HES. | When exposure is more than 21 days ago and measles has not developed |
| **Mumps** | Yes, if visitor is immune (history of mumps or mumps vaccine).<br>No, if visitor is susceptible and exposure was 1-26 days ago. Call HES. | When exposure is more than 26 days ago and mumps has not developed |
| **Pertussis (whooping cough)** | Yes, if visitor is immune (received at least 4 doses of pertussis vaccine).<br>No, if visitor is susceptible and exposure was 6-20 days ago. Call HES. | When exposure is more than 20 days ago and cough has not developed |
| **Scabies** | Yes, if significant exposure occurred more than 6 weeks ago and itching has not developed.<br>No, if visitor or visitor's parent/caregiver report itching. | After treatment for scabies is completed |

### Pediatric visitation guidelines: infected visitors

| *Disease or Condition* | *If a pediatric visitor has been* **diagnosed** *with this disease, should this child be allowed to visit?* | *When can the child be allowed to visit?* |
|---|---|---|
| **Chickenpox** | No. Call HES. | When lesions are crusted and no new lesions are present |
| **Nonpolio Enterovirus (e.g., coxsackieviruses, echoviruses)** | No, if visitor has acute symptoms (hemorrhagic conjunctivitis,blisters in the mouth with drooling, or has weeping lesions on the hands.) | Anytime after resolution of the symptoms<br>Particular attention should be given to hand washing and personal hygiene since prolonged viral shedding can occur. |
| **Head Lice** | Yes, if patient has history of exposure to this visitor. Restrict visitor activity to patient's room. Call HES.<br>No, if patient has no history of exposure to this visitor. | Anytime after effective treatment |
| **Measles** | No. Call HES. | Four days after rash appear. |
| **Mumps** | No. Call HES. | Nine days after onset of illnes. |
| **Pertussis (whooping cough)** | No. Call HES. | Five days after effective treatment |
| **Pinworms** | Yes, if patient has history of exposure to this visitor Restrict visitor activity to patient's room. Emphasize hand hygiene. Call HES.<br>No, if patient has no history of exposure to this visitor. | After effective treatment |
| **Ringworm** | Yes, if lesion can be covered.<br>Yes, after effective treatment has begun and the visitor's parent/caregiver reports the lesion is shrinking.<br>No, if lesion cannot be covered. | After effective treatment has begun and the visitor's parent/caregiver reports the lesion is shrinking |
| **Rubella** | No. Call HES. | Four days after rash appear. |
| **Scabies** | Yes, if patient has history of exposure to this visitor. Restrict visitor activity to patient's room. Call HES.<br>No, if patient has no history of exposure to this visitor. | After effective treatment |
| **Streptococcal sore throat** | Yes, 24 hours after effective treatment has begun. | 24 hours after effective treatment has begun |
| **Active Tuberculosis** | No. Call HES. | *(Pediatric Infection Control continued on next page)* |

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## Pediatric visitation guidelines: recently (within 6 weeks) immunized visitors

| *Immunization for:* | *If a pediatric visitor has received this immunization, should this child be allowed to visit?* | *When can the child be allowed to visit?* |
|---|---|---|
| **Chickenpox (live viral vaccine)** | Yes, if visitor has no vaccine-related rash.<br><br>No, if visitor has vaccine-related rash. | When vaccine-related rash is resolved |
| **DTaP (or DPT)** | Yes | |
| **Haemophilus influenzae type b conjugate** | Yes | |
| **Hepatitis A** | Yes | |
| **Hepatitis B** | Yes | |
| **Influenza** | Yes, if visitor has received the flu shot.<br><br>No, if visitor has received FluMist.™ | 21 days after receiving FluMist™ |
| **MMR** | Yes | |
| **Poliomyelitis –oral (OPV) (Live viral vaccine)** | Yes, if patient has history of poliomyelitis immunization. Emphasize hand hygiene.<br><br>No, if visitor has diarrhea. | If diarrhea resolved |
| **Poliomyelitis – injection (IPV)** | Yes | |

The diseases and conditions listed at right shall be reported to the local health officer immediately by telephone or within 48 hours of diagnosis or suspected diagnosis. Patient's age, gender, address and date of onset required. Contact the Hospital Epidemiology Service staff at 301-496–2209 to facilitate reporting.

Report immediately by telephone.

Acquired Immunodeficiency Syndrome
Amebiasis
Animal Bites
Anthrax
Botulism
Brucellosis
Chancroid
Cholera
Cryptosporidiosis
Diptheria
*E. coli* 0157:H7
Encephalitis
Gonococcal Infection
*Haemophilus influenzae* type B
Hepatitis, all types and undetermined
Human Immunodeficiency Virus
Kawasaki Disease
Legionellosis
Leprosy
Leptospirosis
Lyme Disease
Malaria
Measles
Meningitis (specify etiology)
Meningococcal Infection
Monkeypox
Mumps (Parotitis)
Mycobacteriosis, Atypical
Pertussis
Pertussis Vaccine Adverse Reactions
Plague
Poliomyelitis
Psittacosis
Rabies
Rocky Mountain Spotted Fever
Rubella (German measles)
Rubella Syndrome, Congenital
Severe Acute Respiratory Syndrome (SARS)
Salmonellosis
Septicemia (newborns)
Shingellosis
Smallpox
Syphilis
Tetanus
Trichinosis
Tuberculosis
Tularemia
Typhoid Fever
West Nile Virus

## Other reportable diseases and conditions

- a single case of a disease of known or unknown etiology that may be a danger to public health
- unusual manifestation(s) of a communicable disease
- an outbreak of a disease of known or unknown etiology is reportable immediately by telephone ■

# Sterilization and Disinfection

## Background

Reusable CC patient care equipment is processed for reuse in the Central Hospital Supply (CHS) section of the Materials Management Department unless otherwise approved by the Hospital Infections Committee. Information on chemical properties, potential health effects, safety considerations and first aid procedures for agents used for decontamination, disinfection and sterilization are available from CHS or from the Safety Officer. Material Safety Data Sheets (MSDS) are maintained in CHS, Department of Anesthesia and Surgical Services (DASS) and in the Safety Office in compliance with CFR Hazard Communication Standard 1910.1200

## Definitions

***Cleaning:*** detergents or enzymatic cleansers and water are used with friction to remove visible organic and inorganic material. Cleaning is the first step in disinfection and sterilization procedures.

***Decontamination:*** a physical or chemical process that reduces the number of microorganisms on any inanimate object to render that objects safe for handling.

***Disinfection:*** a process that eliminates all recognized pathogenic microorganisms but not necessarily all microbial forms, e.g. bacterial spores.

***High-level:*** a process that kills all microorganisms except for large numbers of bacterial spores.

***Intermediate-level:*** a process that kills mycobacteria, vegetative bacteria, most viruses, and most fungi but may not kill bacterial spores.

***Low-level:*** a process that kills most vegetative bacteria, some fungi, and some viruses.

***Equipment:*** medical devices or instruments used for patient care

- ***Critical:*** items that enter normally sterile tissues or the vascular system. (sterilization)
- ***Semicritical:*** items that come in contact with mucous membranes or nonintact skin. (high-level or intermediate-level disinfection)
- ***Noncritical:*** items that come in contact with intact skin but not mucous membranes. (low-level disinfection)

***Germicide:*** an agent that destroys microorganisms

***Sanitizer:*** an agent that reduces microbial contamination to safe levels

***Sporicide:*** an agent that kills bacterial spores

***Sterilization:*** the complete elimination or destruction of all forms of microbial life including spores

***Tuberculocide:*** an agent that kills *Mycobacterium tuberculosis*

***Vegetative:*** bacteria which are actively growing and metabolizing. Some bacteria have the ability to convert to spores when the environment can no longer support active growth.

## General guidelines for sterilization and disinfection

- Follow the manufacturer's recommendations for processing all patient care equipment to ensure that processing will not alter the physical integrity or function of the equipment.
- Equipment must be thoroughly cleaned to remove organic debris before disinfection or sterilization.
- Disposable equipment should be dedicated for use by a single patient.
- Single use equipment should not be reused.
- Most equipment that requires sterilization or high-level disinfection is processed by CHS. Departments that have been authorized to process equipment within their department, such as the DASS and Department of Radiology, must have their sterilization and disinfection policies approved by the Hospital Infections Committee.
- Departments with autoclaves used for processing patient care equipment must be enrolled in the biological indicator monitoring program. Contact HES for additional information.
- Equipment from patients on CNS Precautions may require special handling and processing. Contact HES.
- Occupational Safety and Health Administration (OSHA) requires that blood spills be disinfected with an Environmental Protection Agency (EPA) agent registered as tuberculocidal

### General guidelines for sterilization and disinfection

| *Category* | *Example* | *Required processing* | *Methods* | *Comments* |
|---|---|---|---|---|
| **Critical** | Surgical instruments<br>Implants<br>Scalpels<br>Needles | Sterilization | Ethylene oxide gas<br>Heat sterilization<br>Peracetic acid (buffered) | Pre-cleaning necessary<br>Prescribed contact time required |
| **Semicritical** | Respiratory therapy and anesthesia equipment<br>Endoscopes<br>Bronchoscopes<br>Laryngoscope blades<br>Diaphragm rings | High-level disinfection | Cidex OPA (orthophthalaldehyde)<br>Peracetic acid (buffered)<br>Wet pasteurization | Pre-cleaning necessary<br>Contact time reduced compared with sterilization |
| **Noncritical** | Stethoscopes<br>Blood pressure cuffs<br>Bedrails<br>Over-the-bed tables<br>Crutches<br>IV poles<br>Wheelchairs | Intermediate-level disinfection | Ethyl or isopropyl alcohol (70%-90%)<br>Iodophor germicidal detergent solution<br>Quaternary ammonium germicidal detergent solution<br>Sodium hypochlorite (bleach) (1:10) | Clean environmental surfaces on a regular basis<br>Clean immediately when visibly soiled or after spills |
| | Examination tables<br>Patient furniture<br>Floors<br>Toys | Low-level disinfection | Ethyl or isopropyl alcohol (70%-90%)<br>Quaternary ammonium germicidal detergent solution<br>Sodium hypochlorite (bleach) (1:10) | Clean environmental surfaces on a regular basis<br>Clean immediately when visibly soiled or after spills |

### Sterilization and disinfection of Clinical Center reusable equipment

*Modified from Rutala, WA and Weber, DJ. Cleaning, Disinfection and Sterilization APIC Text of Infection Control and Epidemiology 2000.*

| | *Critical* | *Semicritical* | *Some semicritical and noncritical* | *Noncritical* |
|---|---|---|---|---|
| | | **Disinfection level** | | |
| **Equipment description** | Sterilization | High | Intermediate | Low |
| **Smooth, hard surfaces** | • Heat<br>• Ethylene oxide<br>• Cidex OPA (orthophthalaldehyde)<br>• Peracetic acid | • Cidex OPA (orthophthalaldehyde)<br>• Sodium hypochlorite<br>• Peracetic acid<br>• Wet pasteurization | • Sodium hypochlorite<br>• Ethyl or isopropyl alcohol<br>• Iodophor germicidal detergent | • Sodium hypochlorite<br>• Ethyl or isopropyl alcohol<br>• Iodophor germicidal detergent<br>• Quaternary ammonium germicidal detergent |
| **Rubber tubing and catheters** | • Heat<br>• Ethylene oxide<br>• Peracetic acid | • Cidex OPA (orthophthalaldehyde)<br>• Sodium hypochlorite<br>• Peracetic acid<br>• Wet pasteurization | | |
| **Polyethylene tubing and catheters** | • Heat<br>• Ethylene oxide<br>• Peracetic acid<br>• Cidex OPA (orthophthalaldehyde) | • Cidex OPA (orthophthalaldehyde)<br>• Sodium hypochlorite<br>• Peracetic acid<br>• Wet pasteurization | | |
| **Lensed instruments** | • Ethylene oxide<br>• Peracetic acid | • Cidex OPA (orthophthalaldehyde)<br>• Peracetic acid | | |
| **Hinged instruments** | • Heat<br>• Ethylene oxide<br>• Peracetic acid | • Cidex OPA (orthophthalaldehyde)<br>• Sodium hypochlorite<br>• Peracetic acid<br>• Wet pasteurization | | |

Note:

- Ensure material compatibility, disinfectants may corrode or damage certain materials
- Refer to manufacturers directions for exposure times
- Remove air bubbles and completely fill tubing and lumens to ensure that disinfectant contacts all surfaces
- Daily chemical testing for Cidex OPA is required

## Procedures for cleaning blood, body fluids and other infectious materials

Don gloves and other appropriate personal protective equipment before cleaning spills of blood, body fluids or other Infectious materials.

**Remove visible waste materials contaminated by the spill**

- Discard sharps in a sharps container
- Discard non-sharps in an MPW (medical pathological waste) box
- Disinfect reusable equipment

**Small spills ≤ 20 ml**

- Remove visible fluid with a paper towel or other absorbent material
- Apply CC-approved tuberculocidal disinfectant
- Allow area to remain wet for 10 minutes
- Use an absorbent material to remove spill
- Discard clean up materials in an MPW box

**Large spills ≥ 20 ml**

- Close the spill area to traffic
- Do not cover with an absorbent material
- Call Housekeeping to clean the spill area according to policy ■

# Alphabetical List of Selected Infections and Conditions

**Isolation Precautions Appropriate for Infectious Syndromes**
**Standard/Universal Precautions required at all times for all patients**

| *Disease* | *Supplemental isolation* | *Isolation duration* | *Comments* |
|---|---|---|---|
| **Acquired Immunodeficiency Syndrome** | None | | HES will report case to appropriate health department. |
| **Actinomycosis,** all lesions | None | | |
| **Adenovirus infection:** | | | |
| Keratoconjunctivitis, epidemic | Contact | Duration of illness | Viral shedding may persist from conjunctiva for seven to ten days. |
| Respiratory, infants | Strict | Duration of illness | Virus may be present in the stool or urine after the virus is no longer in the upper respiratory tract. Viral shedding may extend isolation beyond duration of disease. Isolation duration will be determined by HES and the medical team. |
| Respiratory, young children and immunocompromised patients | Respiratory | Duration of illness | |
| Respiratory, immunocompetent adults | None | | |
| **Amebiasis (entamoeba infection):** | | | Notify HES of any known or suspected case. HES will report case to appropriate health department. |
| Asymptomatic | None | | |
| Dysentery (diarrhea) | Contact | Duration of illness | |
| Liver abscess or extraintestinal (if stool negative) | None | | |
| **Anthrax (*Bacillus anthracis*):** | | | Notify HES of any known or suspected case. Specimen transmittal sheets for microbiology specimens should be labeled "rule out anthrax". HES will report case to appropriate health department. This disease could be an agent of bioterrorism. Refer to the CC Emergency Management Plan for more information. |
| Cutaneous | None | | |
| Inhalation (pulmonary) | Strict | Duration of illness | |
| Intestinal | None | | |
| **Arthritis, infectious** (bacterial, fungal, mycobacterial, viral, parasitic) | None | | If lesions are open and draining see specific pathogen. |
| **Arthropod-borne viral fevers:** Arboviral Diseases such as: dengue, yellow fever, Colorado tick fever, West Nile virus, etc. | None | | Notify HES of any known or suspected case. Specimen transmittal sheets for microbiology specimens should be labeled "rule out Arthropod-borne viral fevers" or refer to specific pathogen. HES will report case to appropriate health department. This disease could be an agent of bioterrorism. Refer to the CC Emergency Management Plan for more information. |
| **Ascariasis** | None | | |
| **Aspergillosis** | None | | |
| **Atypical dementia** | CNS Precautions | Duration of hospitalization | Notify HES of any known or suspected case or for sterilization and disinfection questions. Use caution when handling high risk tissue (brain, eye and spinal cord). Label all lab specimens with a "CNS Precautions" sticker (available from HES). |
| ***Bacillus anthracis*** | | | See Anthrax |
| **Babesiosis** | None | | |
| **BK Virus** | None | | |
| **Blastomycosis** | None | | |
| **Botulism** | None | | Notify HES of any known or suspected case. HES will report case to appropriate health department. This disease could be an agent of bioterrorism. Refer to the CC Emergency Management Plan for more information. |
| **Brill-Zinsser disease (BZD)** | None | | BZD occurs as a recrudescence of previous infection with *Rickettsia prowazekii.* |
| **Bronchiolitis or Bronchitis,** etiology unknown: | | | Various etiologic agents, such as respiratory syncytial virus, parainfluenza viruses, adenoviruses, and influenza viruses, have been associated with this syndrome. |
| Infants | Strict | Duration of illness | |
| Young children and immunocompromised patients | Respiratory | Duration of illness | |
| Immunocompetent adults | None | | |
| **Brucellosis,** systemic or with draining lesions | None | | Notify HES of any known or suspected case. Specimen transmittal sheets for microbiology specimens should be labeled "rule out brucellosis." HES will report case to appropriate health department. This disease could be an agent of bioterrorism. Refer to the CC Emergency Management Plan for more information. |
| ***Burkholderia cepacia*** Cycstic Fibrosis Patients | Contact | Until discontinued by HES. | Notify HES immediately of any known or suspected case. Specimen transmittal sheets for microbiology specimens should be labeled "rule out *B. cepacia.*"<br><br>Isolation is maintained until the following **negative** cultures are obtained: two culture negative BAL's or 1 culture negative BAL and 2 negative sputum cultures. Specimens should be collected on different days following the discontinuation of effective antibiotic therapy. |
| ***Burkholderia pseudomallei*** | | | See Melioidosis |
| **Bunyavirus infection** | Strict | Duration of illness | See Hemorrhagic fever |
| **Campylobacter gastroenteritis** | Contact | Duration of illness | |
| **Candidiasis,** including mucocutaneous | None | | |
| **Capillariasis** | None | | |
| **Carbuncle, Staphylococcal** | None | | |
| **Cat-scratch disease** | None | | |
| **Cellulitis:** | | | |
| Draining, limited or minor, all | None | | |
| Draining, major, Group A Streptococcal or *Staphylococcus aureus* | Strict | Duration of illness | Limited or minor: dressing covers and adequately contains drainage<br>Major: draining and either not covered by dressing or the dressing does not adequately contain drainage |
| Intact skin, group A streptococcal | None | | |
| Intact skin, other | None | | |
| **Chagas disease (American trypanosomiasis)** | None | | Etiologic agent is *Trypanosoma cruzi.* |
| **Chancroid (soft chancre)** | None | | Notify HES of any known or suspected case. HES will report case to appropriate health department. |
| **Chickenpox (varicella)** | Respiratory | Until all lesions are crusted | Place a "Do Not Enter This Room Unless You Are Certain You Have Had Chickenpox" sign on the patient's door.<br><br>Notify HES for all known or suspected cases. Immune persons (positive serologic titer, history of chickenpox or vaccination for chickenpox) are not susceptible to chickenpox. Susceptible persons are discouraged from entering the room. Contact HES for questions.<br><br>Lesions are considered infectious.<br><br>The secondary presentation of chickenpox is called shingles or herpes zoster. For more information see "Herpes zoster." |

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**Isolation Precautions Appropriate for Infectious Syndromes**
**Standard/Universal Precautions required at all times for all patients**

| *Disease* | *Supplemental isolation* | *Isolation duration* | *Comments* |
|---|---|---|---|
| **Chiggers (mites)** | None | | |
| ***Chlamydia psittaci*** (psittacosis) (all body sites) | None | | |
| ***Chlamydia trachomatis:*** | | | |
| Conjunctivitis (trachoma) | None | | |
| Genital (lymphogranuloma venereum, nongonococcal urethritis) | None | | |
| Respiratory (neonatal pneumonia) | None | | |
| **Cholera *(Vibrio cholerae)*** | Contact | Duration of illness | Notify HES of any known or suspected case. Specimen transmittal sheets for microbiology specimens should be labeled "rule out *Vibrio cholerae*." HES will report case to appropriate health department. This disease could be an agent of bioterrorism. Refer to the CC Emergency Management Plan for more information. |
| **Chromoblastomycosis (chromomycosis)** | None | | |
| **Chronic Epstein-Barr syndrome** | None | | |
| **Clonorchiasis** | None | | |
| ***Clostridium botulinum*** | None | | Notify HES of any known or suspected case. HES will report case to appropriate health department. |
| ***Clostridium difficile:*** | | | |
| Enterocolitis or gastroenteritis | Contact | Duration of illness | Submit no more than one specimen per patient per week for *Clostridium difficile* toxin assay. Until diarrhea is resolved for two days after appropriate therapy is started. |
| Toxin assay positive | None | | |
| ***Clostridium perfringens:*** | | | |
| Food poisoning | None | | |
| Gas gangrene | None | | |
| **Coccidioidomycosis** *Coccidioides immitis* (San Joaquin Valley fever) | None | | Lab specimens to the CC Department of Laboratory's Microbiology Section from patients known or suspected to have coccidioidomycosis (San Joaquin Valley fever) have a potential for laboratory transmission Specimen transmittal sheets for microbiology specimens should be labeled "rule out *cocci*." |
| **Coccidiosis Gastroenteritis** *(Isospora spp.)* | Contact | | |
| **Colitis:** Antibiotic-associated and pseudomembranous | Contact | Duration of illness | See *Clostridium difficile* |
| **Colorado tick fever** | None | | |
| **Common cold:** | | | Rhinoviruses are more frequently associated with the common cold and are generally mild in adults. Severe infections may occur in infants, young children and immunocompromised. Other etiologic agents, may also cause the common cold. |
| Infants, young children, and immunocompromised patients | Respiratory | Duration of illness | |
| Immunocompetent adults | None | | |
| **Condyloma acuminatum (genital warts, venereal warts)** | None | | Avoid direct contact with lesions. Surgical resection creates aerosol of infectious agent. Protective eyewear and mask indicated during surgical resection |
| **Congenital rubella** | | | See rubella |
| **Conjunctivitis:** | | | |
| Acute bacterial (pink eye) | None | | |
| Chlamydia (trachoma) | None | | |
| Epidemic (adenovirus keratoconjunctivitis) | Contact | Duration of illness | In keratoconjunctivitis, viral shedding from conjunctiva may persist for seven to ten days. Hand hygiene and disinfection of ophthalmic instruments should be emphasized. |
| Gonococcal | None | | |
| *Haemophilus influenza* | Contact | Duration of illness | |
| Viral and etiology unknown (such as acute hemorrhagic and "swimming pool conjunctivitis") | Contact | Duration of illness | |
| **Coronavirus infection, respiratory:** | | | |
| Infants | Strict | Duration of illness | |
| Young children and immunocompromised patients | Respiratory | Duration of illness | |
| Immunocompetent adults | None | | |
| Severe Acute Respiratory Syndrome | Special Respiratory | | See SARS |
| **Coxiella infection (Q fever) *(Coxiella burnetti)*** | None | | See Q fever (coxiella) |
| **Coxsackie virus disease (pharyngitis, stomatitis)** | Respiratory | Duration of illness | Transmission can occur from aerosol droplet spread, direct contact with nose and throat discharges and feces of symptomatic or asymptomatic patients. Viral shedding from GI tract can persist for several weeks. Hand hygiene should be emphasized. |
| **Creutzfeldt-Jakob disease (CJD) (sporadic, familial, iatrogenic, variant [vCJD])** | CNS Precautions | Duration of illness | Notify HES of any known or suspected case or for sterilization and disinfection questions. Use caution when handling high risk tissue (brain, eye and spinal cord). Label all lab specimens with a "CNS Precautions" sticker (available from HES). |
| **Croup (laryngotracheobronchitis)** | Strict | Duration of illness | If specific pathogen is identified, refer to specific pathogen. |
| **Cryptococcosis** | None | | |
| **Cryptosporidiosis:** | | | |
| Asymptomatic | None | | |
| Gastroenteritis | Contact | Duration of illness | |
| **Cutaneous larva migrans (creeping eruption)** | None | | |
| **Cysticercosis** | None | | |
| **Cytomegalovirus infection (CMV)** | None | | There is a theoretical risk for transmission of CMV to susceptible pregnant health care workers. They are encouraged, as always, to practice good hand hygiene and Standard/Universal Precautions. |
| **Decubitus ulcer, infected:** | | | |
| Minor | None | | Minor: dressing covers and adequately contains drainage, or infected area is very small |
| Major: | | | Major: either draining and not covered by dressing or dressing does not adequately contain drainage |
| Bacterial, not listed elsewhere | Contact | Duration of illness | |
| Group A streptococcal or multiply-resistant organism(s), or *Staphylococcus aureus* | Strict | Duration of illness | |
| **Delta virus infection (hepatitis D virus, HDV)** | None | | See Hepatitis, Hepatitis D virus, HDV |

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**Isolation Precautions Appropriate for Infectious Syndromes**
**Standard/Universal Precautions required at all times for all patients**

| *Disease* | *Supplemental isolation* | *Isolation duration* | *Comments* |
|---|---|---|---|
| **Dengue fever** | None | | Notify HES of any known or suspected case. Specimen transmittal sheets for microbiology specimens should be labeled "rule out dengue fever." HES will report case to appropriate health department. This disease could be an agent of bioterrorism. Refer to the CC Emergency Management Plan for more information. |
| **Dermatophytosis (ringworm)** | None | | |
| **Diarrhea, acute** | | See Gastroenteritis | |
| ***Dientamoeba fragilis:*** Asymptomatic or gastroenteritis | None | | |
| **Diphtheria:** | | | Notify HES of any known or suspected case. HES will report case to appropriate health department. |
| Cutaneous | Contact | Until discontinued by HES | Typical discontinuation criteria include: two cultures from skin lesions, taken at least 24 hours apart after cessation of antimicrobial therapy are negative for *Corynebacterium diphtheriae*. Where culture is impractical, discontinue isolation after 14 days of appropriate antibiotic therapy. |
| Pharyngeal | Strict | Until discontinued by HES | Typical discontinuation criteria include: two cultures from both nasopharynx and throat taken at least 24 hours apart after cessation of antimicrobial therapy are negative for Corynebacterium diphtheriae. Where culture is is impractical, discontinue isolation after 14 days of appropriate antibiotic therapy. |
| **Diphyllobothriasis (fish tapeworm)** | None | | |
| **Dirofilariasis** | None | | |
| **Donovanosis (granuloma inguinale)** | None | | |
| **Dwarf tapeworm** | | | See Hymenolepiasis |
| **Dysentery,** etiology uncertain | Contact | Duration of illness | When possible, refer to specific pathogen. |
| **Eastern Equine encephalitis (EEE)** | None | | Notify HES of any known or suspected case. Specimen transmittal sheets for microbiology specimens should be labeled "rule out Eastern Equine encephalitis." HES will report case to appropriate health department. This disease could be an agent of bioterrorism. Refer to the CC Emergency Management Plan for more information. |
| **Ebola virus infection (*Filoviradae* infection)** | Strict | Duration of illness | Notify HES of any known or suspected case. Specimen transmittal sheets for microbiology specimens should be labeled "rule out ebola." HES will report case to appropriate health department. This disease could be an agent of bioterrorism. Refer to the CC Emergency Management Plan for more information. |
| **Echinococcosis (hydatidosis)** | None | | |
| **Echovirus disease** | Contact | For seven days after onset | |
| ***Edwardsiella tarda:*** **asymptomatic or gastroenteritis** | None | | |
| **Empyema** | None | | Refer to specific pathogen. |
| **Encephalitis, arboviral** (California, Eastern Equine [EEE], Powassan virus, St. Louis, Western Equine [WEE], Venezuelan Equine [VEE], West Nile Viral encephalitides (*Alphavirus* genus) | None | | Notify HES of any known or suspected case. Specimen transmittal sheets for microbiology specimens should be labeled "rule out Arbovirus." HES will report case to appropriate health department. Some of these diseases could be agents of bioterrorism. Refer to the CC Emergency Management Plan for more information. |
| **Encephalitis or encephalomyelitis:** | | | Notify HES of any known or suspected case. HES will report case to appropriate health department. |
| Etiology unknown, infectious agent suspected | Contact | Duration of illness or until infectious etiology is excluded | Although specific pathogens can include enteroviruses, arthropodborne viruses, and herpes simplex, precautions for enteroviruses are generally indicated until a definitive diagnosis can be made. |
| Herpes B Virus (Simian B disease, *Herpesvirus simiae)* | None | | Person-to-person transmission has been documented only rarely. Human disease is most frequently acquired by monkey bites or exposure of bare skin to infected monkey saliva or monkey tissue cultures. Because of the theoretical risk for transmission, exercise particular caution when handling monkey saliva and performing wound care for monkey bites. Report all monkey bites immediately to the Occupational Medical Service. |
| Prion-associated Slow virus encephalitis (e.g., possible etiologies: Creutzfeldt-Jakob disease (CJD) (sporadic, familial, iatrogenic, variant [vCJD]), Fatal insomnia (familial, sporadic), Gerstmann-Straussler Scheinker syndrome (GSS), Kuru, Neurologic syndromes, etiology unclear with prion infection included in differential diagnosis, Prion disease, transmissible spongiform encephalopathies) | CNS Precautions | Duration of illness | Notify HES of any known or suspected case or for sterilization and disinfection questions. Use caution when handling high risk tissue, (brain, eye and spinal cord). Label all lab specimens with a "CNS Precautions" sticker (available from HES). |
| Progressive Multifocal Leukoencephalopathy (PML) (JC virus, SV-40) | None | | |
| **Encephalitis or encephalomyelitis:** Rubella, acute or chronic, congenital | Strict | Duration of illness | Notify HES of any known or suspected case. HES will report case to appropriate health department. Be sure to place "Pregnant Women Do Not Enter Room" sign on patient's door. Respiratory secretions should be considered infectious. Susceptible persons are discouraged from entering the room. Contact HES for questions. |
| Subacute sclerosing panencephalitis (SSPE) | None | | |
| **Endocarditis, infective** | None | | Refer to specific pathogen. |
| **Endometritis:** Group A streptococcal: Minor | None | | Minor: dressing covers and adequately contains drainage, or infected area is very small |
| Major | Strict | Duration of illness | Major: either draining and not covered by dressing or dressing does not adequately contain drainage |
| Other | None | | |
| **Endophthalmitis** | None | | |
| **Entamoeba infection** | | | See Amebiasis |
| **Enterobiasis (pinworm disease, oxyuriasis)** | None | | Patients are encouraged to use good personal hygiene. |

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**Isolation Precautions Appropriate for Infectious Syndromes**
**Standard/Universal Precautions required at all times for all patients**

| *Disease* | *Supplemental isolation* | *Isolation duration* | *Comments* |
|---|---|---|---|
| **Enterocolitis** | | | See Gastroenteritis |
| **Enteroviral infection** | Contact | Duration of illness | |
| **Epididymitis** | None | | |
| **Epiglottitis,** ***Haemophilus influenzae*** | Respiratory | For 24 hours after start of effective therapy | |
| **Epstein-Barr virus infection,** including infectious mononucleosis | None | | |
| **Erysipelas** | None | | |
| **Erysipelothrix infection (erysipeloid, fisherman's finger):** Draining or Non-draining | None | | |
| **Erythema migrans (EM) (Lyme disease)** | None | | |
| **Erythema infectiosum (Fifth disease)** | | | See Parvovirus B19 |
| ***Escherichia coli*** **diarrhea or gasteoenteritis** | Contact | Duration of illness | |
| **Espundia (Leishmaniasis)** | None | | |
| **Exanthem, cutaneous** (etiology unknown, infection suspected) | Contact | Duration of illness | Notify HES of any known or suspected case. Additional precautions may be indicated. |
| **Exanthem subitum (Roseola infantum, HHV-6 infection, sixth disease)** | None | | |
| **Extended spectrum beta-lactam producing organism:** colonization or infection (ESBL) | Contact | Duration of organism presence | Notify HES of any known or suspected case. Additional precautions may be indicated. A negative culture from each positive site following the discontinuation of effective therapy is required to discontinue isolation. Specimen transmittal sheets for microbiology specimens should be labeled "rule out ESBL." |
| **Fascioliasis** | None | | |
| **Fatal insomnia** (familial, sporadic) | CNS Precautions | Duration of illness | Notify HES of any known or suspected case or for sterilization and disinfection questions. Use caution when handling high risk tissue (brain, eye and spinal cord). Label all lab specimens with a "CNS Precautions" sticker (available from HES). |
| **Fifth disease (erythema infectiosum)** | | | See Parvovirus B-19 |
| ***Filoviradae*** **infection** | Strict | Duration of illness | See Ebola virus infection |
| **Filariasis** | None | | |
| **Folliculitis:** | | | |
| Staphylococcal or streptococcal | Contact | Duration of illness | |
| Other | None | | |
| **Food Poisoning:** | | | |
| *Bacillus cereus* | None | | |
| Botulism | None | | |
| *Clostridium perfringens* | None | | |
| Etiology unknown | Contact | Duration of illness | Notify HES of any known or suspected case. HES will report case to appropriate health department. |
| Salmonellosis | Contact | Duration of illness | Notify HES of any known or suspected case. HES will report case to appropriate health department. |
| Staphylococcal | None | | |
| *Vibrio parahaemelyticus* | None | | |
| ***Francisella tularensis*** | None | | See Tularemia (draining lesion or pulmonary) |
| **Furunculosis – staphylococcal:** | | | |
| Newborns | Strict | Duration of illness | |
| Others | Contact | Duration of illness | |
| **Gangrene,** gas gangrene (due to any bacteria) | None | | |
| **Gastroenteritis:** | | | |
| Adenovirus | | | See Adenovirus |
| Aeromonas species | None | | |
| Anthrax, intestinal | None | | Notify HES of any known or suspected case. Specimen transmittal sheets for microbiology specimens should be labeled "rule out anthrax." HES will report case to appropriate health department. This disease could be an agent of bioterrorism. Refer to the CC Emergency Management Plan for more information. |
| Campylobacter species | Contact | Duration of illness | |
| *Clostridium difficile* | Contact | Duration of illness | Until diarrhea is resolved for two days after appropriate therapy is started. Submit no more than one specimen per patient per week for *Clostridium difficile* toxin assay. |
| Diarrhea, acute (Communicable etiology suspected) | Contact | Duration of illness | When possible, refer to specific pathogens. |
| Coccidiosis species | Contact | Duration of illness | |
| *Cyclospora cayetanensis* | None | | |
| Cryptosporidium species | Contact | Duration of illness | |
| *Dientamoeba fragilis* | None | | |
| Dysentery (etiology uncertain) | Contact | Duration of illness | When possible, refer to specific pathogens. |
| *Edwardsiella tarda* | None | | |
| *Escherichia coli* | Contact | Duration of illness | |
| *Giardia lamblia* | Contact | Duration of illness | |
| Hymenolepiasis (dwarf tapeworm) | Contact | Duration of illness | |
| Isosporiasis | Contact | Duration of illness | |
| Microsporida | Contact | Duration of illness | Until diarrhea is resolved for two days |
| Norwalk agent | Contact | Duration of illness | |
| Rotavirus | Contact | Duration of illness | Duration of illness or seven days after onset, whichever is less |
| *Salmonella species* | Contact | Duration of illness | Notify HES of any known or suspected case. HES will report case to appropriate health department. |
| *Shigella species* | Contact | Duration of illness | Notify HES of any known or suspected case. HES will report case to appropriate health department. Maintain isolation until three consecutive stool cultures are negative, following discontinuation of effective antimicrobial therapy. |

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**Isolation Precautions Appropriate for Infectious Syndromes**
**Standard/Universal Precautions required at all times for all patients**

| *Disease* | *Supplemental isolation* | *Isolation duration* | *Comments* |
|---|---|---|---|
| **Gastroenteritis (cont.):** | | | |
| Staphylococcus | Contact | Duration of illness | |
| Trichinellosis (Trichiniasis, Trichinosis, Trichinella species) | None | | |
| Unknown etiology | Contact | Duration of illness | |
| *Vibrio parahaemolyticus* | Contact | Duration of illness | |
| Viral | Contact | Duration of illness | |
| *Yersinia enterocolitica* | Contact | Duration of illness | |
| **Genital warts (condyloma acuminatum, venereal warts)** | None | | Protective eyewear and mask indicated for procedures that may create aerosols |
| **German measles (rubella)** | Respiratory | For seven days after onset of rash | Notify HES of any known or suspected case. HES will report case to appropriate health department.<br><br>Place a "Pregnant Women Do Not Enter Room" sign on patient's door. Susceptible persons are discouraged from entering the room. Contact HES for questions. Lesions are considered infectious. |
| **Gerstmann-Straussler-Scheinker syndrome (GSS)** | CNS Precautions | Duration of illness | Notify HES of any known or suspected case or for sterilization and disinfection questions. Use caution when handling high risk tissue (brain, eye and spinal cord). Label all lab specimens with a "CNS Precautions" sticker (available from HES). |
| **Giardiasis:** | | | |
| Gastroenteritis symptomatic | Contact | Duration of illness | |
| Gastroenteritis asymptomatic | None | | |
| **Glanders (*Pseudomonas mallei*)** | None | | Additional precautions may be indicated if used as an agent of bioterrorism. |
| **Gonococcal infections:** | | | Notify HES of any known or suspected case. HES will report case to appropriate health department. |
| Arthritis | None | | |
| Ophthalmia neonatorum (gonorrheal ophthalmia, acute conjunctivitis of the newborn) | None | | |
| Tenosynovitis | None | | |
| Disseminated | None | | |
| **Gonorrhea** | None | | Notify HES of any known or suspected case. HES will report case to appropriate health department. |
| **Granulocytopenia** | None | | Protective isolation is not indicated. |
| **Granuloma inguinale** (donovanosis, granuloma venereum) | None | | |
| **Guillain-Barré syndrome** | None | | |
| **Hand, foot and mouth disease (HFMD)** (enterovirus including polioviruses, coxsackieviruses ,and echoviruses) | Contact | For seven days after onset of symptoms | Several different viruses cause HFMD. The most common cause is coxsackievirus A16. |
| **Hantavirus (Sin Nombre Virus)** | None | | Notify HES of any known or suspected case. Specimen transmittal sheets for microbiology specimens should be labeled "rule out hantavirus." HES will report case to appropriate health department. This disease could be an agent of bioterrorism. Refer to the CC Emergency Management Plan for more information. |
| **Hemorrhagic Fever Viruses** (HFVs, Hemorrhagic fevers) (Argentine, Bolivian, Bunyavirus infection, Congo hemorrhagic fever, Crimean, Ebola, Jamestown, Keystone, Kyasanur Forest disease, Lassa, Marburg, New World Areaviridea [includes Machupo, Junin, Guanarito, Sabis, Crimean], Prospect Hill, Puumala, Seoul, Snowshoe Hare, Tahyna, Trivittatus) | Strict | Duration of illness | Notify HES of any known or suspected case. Specimen transmittal sheets for microbiology specimens should be labeled "rule out Hemorrhage Fever Virus." HES will report case to appropriate health department. Some HFVs can be potential agents of bioterrorism. Refer to the CC Emergency Management Plan for more information. |
| **Hemorrhagic Fever Viruses** (HFVs, Hemorrhagic fevers) (Dengue, Hantavirus [Sin nombre virus], Omsk hemorrhagic fever, Rift Valley fever, Yellow fever) | None | | Notify HES of any known or suspected case. Specimen transmittal sheets for microbiology specimens should be labeled "rule out Hemorrhage Fever Virus." HES will report case to appropriate health department. Some HFVs can be potential agents of bioterrorism. Refer to the CC Emergency Management Plan for more information. |
| **Hepatitis, viral:** | | | Notify HES of any known or suspected case. HES will report case to appropriate health department. |
| Hepatitis A virus (HAV) (Type A, "infectious" hepatitis, Hepatitis A virus) | Contact | Until discontinued by HES | Hepatitis A virus is most infective before jaundice and symptoms appear.<br><br>Maintain precautions in infants and children <3 years of age for duration of hospitalization; in children 3 to 14 years of age, and in immuno-compromised patients until 2 weeks after onset of symptoms; and in immunocompetent adults, until 1 week after onset of symptoms. |
| Hepatitis B virus (HBV) including acute infection or chronic carriage | None | | All health care personnel who have potential occupational exposure to blood or other infectious materials should be immunized with the hepatitis B vaccine. |
| Hepatitis C virus (HCV) | None | | |
| Hepatitis D virus (HDV) (delta virus) | None | | Hepatitis B vaccine may prevent hepatitis D virus infection in persons not yet infected with hepatitis B virus. |
| Hepatitis E virus (HEV) | Contact | Duration of illness | Etiologic agent of enterically transmitted non-A, non-B hepatitis Rare in industrialized countries |
| Hepatitis G virus (HGV) | None | | |
| Hepatitis type unspecified | Contact | Duration of illness | Isolation can be discontinued when Hepatitis A is excluded or seven days after onset of jaundice and if diarrhea is not present. |
| **Herpangina** | Contact | For seven days after onset of rash | |
| **Herpes B virus (Simian B disease, *Herpesvirus simiae*)** | None | | Person-to-person transmission has been documented only rarely. Human disease is most frequently acquired by monkey bites or exposure of bare skin to infected monkey saliva or monkey tissue cultures. Because of the theoretical risk for transmission, exercise particular caution when handling monkey saliva and performing wound care for monkey bites. Report all monkey bites immediately to the Occupational Medical Service. |
| **Herpes simplex:** | | | |
| Encephalitis | None | | |
| Mucocutaneous: | | | |
| disseminated or unusually severe primary infection | Strict | Duration of illness | |
| recurrent (skin, oral, genital) | None | | |

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**Isolation Precautions Appropriate for Infectious Syndromes**
**Standard/Universal Precautions required at all times for all patients**

| *Disease* | *Supplemental isolation* | *Isolation duration* | *Comments* |
|---|---|---|---|
| **Herpes simplex:** | | | |
| Neonatal | Strict | Duration of illness | |
| Pneumonia | Strict | Duration of illness | |
| **Herpes zoster (shingles, varicella-zoster):** | | | |
| Disseminated | Respiratory | Until all lesions are crusted | Place a "Do Not Enter This Room Unless You Are Certain You Have Had Chickenpox" sign on the patient's door. Notify HES for all known or suspected cases. The primary presentation of shingles is called chickenpox or varicella zoster. For more information, see Chickenpox. Chickenpox is more contagious than herpes zoster. |
| Localized in immunocompromised patient | Respiratory | Until all lesions are crusted | Immune persons (positive serologic titer, history of chickenpox or vaccination for chickenpox) are not susceptible to chickenpox. Susceptible persons are discouraged from entering the room. Contact HES for questions. Lesions are considered infectious. Localized lesions in immunocompromised patients can become disseminated. HES and/or Infectious Disease Consult Service will assess need for a negative pressure isolation room or a higher isolation level on a case-by-case basis. |
| Localized in immunocompetent patient | None | | |
| ***Herpesvirus simiae*** | None | | See Herpes B virus |
| **Herpesvirus Type 6 (HHV-6, human herpesvirus type 6, roseola infantum)** | None | | |
| **Herpesvirus Type 7 (HHV-7)** | None | | |
| **Herpesvirus Type 8 (HHV-8, Kaposi sarcoma-associated herpesvirus)** | None | | |
| **Histoplasmosis** at any site | None | | |
| **HIV infection (Human immunodeficiency virus, HIV-1, HIV-2, AIDS)** | None | | HES will report case to appropriate health department. |
| **Hookworm disease** | None | | |
| **Hordeolum (sty)** | None | | |
| **Human herpesviruses (HHV)** | | | See specific pathogen |
| **Human papillomavirus (HPV)** | None | | Protective eyewear and mask indicated for procedures that may create aerosols |
| **Human T-cell lymphotropic virus (HTLV I, II)** | None | | |
| **Hydatid disease (echinococcosis)** | None | | |
| **Hydradenitis suppurativa** | None | | |
| **Hymenolepiasis (dwarf tapeworm):** | | | |
| Asymptomatic | None | | |
| Gastroenteritis symptoms present | Contact | Duration of illness | |
| **Immunocompromised status** | None | | Protective Isolation not indicated |
| **Impetigo** | None | | |
| **Infectious mononucleosis** | None | | |
| **Influenza** | Respiratory | Duration of illness | During flu season (fall and winter) visitors and employees with upper respiratory infections should not come to the hospital. Annual flu vaccine is recommended for all health care workers. Vaccination is available free to NIH employees from OMS. Viral shedding may extend isolation beyond duration of disease. Isolation duration will be determined by HES and the medical team. |
| **Isosporiasis (coccidiosis):** | | | See Cryptosporidiosis |
| Asymptomatic | None | | |
| Gastroenteritis | Contact | Duration of illness | |
| **Jakob-Creutzfeldt disease** | | | See Creutzfeldt-Jakob disease |
| **JC Virus** | None | | |
| **Laryngeal papilloma** | None | | Protective eyewear and mask indicated for procedures that may create aerosols |
| **Kala azar (leishmaniasis)** | None | | |
| **Kaposi sarcoma-associated herpesvirus (Herpesvirus Type 8, HHV-8)** | None | | |
| **Kawasaki disease (mucocutaneous lymph node syndrome)** | None | | Notify HES of any case. HES will report case to appropriate health department. |
| **Keratoconjunctivitis:** Infective or Epidemic (adenovirus) | Contact | Duration of illness | See Adenovirus |
| **Kuru** | CNS Precautions | Duration of hospitalization | Notify HES of any known or suspected case or for sterilization and disinfection questions. Use caution when handling high risk tissue (brain, eye and spinal cord). Label all lab specimens with a "CNS Precautions" sticker (available from HES). |
| **Kyasanur Forest disease** | Strict | Duration of illness | See Hemorrhagic Fever Viruses |
| **Laryngotracheobronchitis (croup)** | Strict | Duration of illness | If specific pathogen is identified, refer to specific pathogen. |
| **Lassa fever** | Strict | Duration of illness | See Hemorrhagic Fever Viruses |
| **Legionnaires' disease (legionellosis)** | None | | Notify HES of any known or suspected case. HES will report case to appropriate health department. |
| **Leishmaniasis** | None | | |
| **Leprosy** | None | | Notify HES of any known or suspected case. HES will report case to appropriate health department. |
| **Leptospirosis** | None | | Notify HES of any known or suspected case. HES will report case to appropriate health department. |
| **Lice** (pediculosis, Pediculus humanus capitis, Pediculus humanus corporis, phthiriasis, Phthirus pubis) | Contact | For 24 hours after start of effective therapy | Clothing and bedding can be disinfected by machine washing or drying, using hot cycles (131°F for 20 minutes). Dry cleaning or simply storing clothing in plastic bags for about two weeks is also effective. Disinfect combs and brushes by soaking in hot water for ten minutes or washing with a pediculicide shampoo is recommended. |
| **Listeriosis** | None | | |
| **Loa loa (loaiasis)** | None | | |
| **Lyme disease** | None | | Notify HES of any known or suspected case. HES will report case to appropriate health department. |
| **Lymphangitis** | None | | |
| **Lymphocytic choriomeningitis virus (LCM)** | None | | Laboratory workers, particularly those handling mice or hamsters, have an increased risk of infection. Report all injuries from laboratory mice or hamsters immediately to the OMS. |

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**Isolation Precautions Appropriate for Infectious Syndromes**
**Standard/Universal Precautions required at all times for all patients**

| *Disease* | *Supplemental isolation* | *Isolation duration* | *Comments* |
|---|---|---|---|
| **Lymphogranuloma venereum** | None | | |
| **Madura foot (maduromycosis)** | None | | |
| **Malaria** | None | | Notify HES of any known or suspected case. HES will report case to appropriate health department. |
| **Malta Fever** | None | | |
| **Marburg virus disease** | Strict | Duration of illness | See Hemorrhagic Fever Viruses |
| **Mastoiditis** | None | | No additional isolation indicated unless drainage is present<br>If drainage is present, see section specific for pathogen isolated |
| **Measles (rubeola)** | Respiratory | Until discontinued by HES | Notify HES of any known or suspected case. HES will report case to appropriate health department.<br><br>Susceptible persons are discouraged from entering the room. Contact HES for questions.<br><br>Health care workers born after 1950 must have proof of immunity. For measles vaccine, call OMS, to make an appointment. HES and/or Infectious Disease Consult Service will assess need for a negative pressure isolation room or a higher isolation level on a case-by-case basis.<br><br>Maintain isolation for four days after start of rash, except in immuno-compromised patients, with whom precautions should be maintained for duration of illness. |
| **Mediastinitis** | None | | Notify HES of any known or suspected case.<br>Additional precautions may be indicated. |
| **Melioidosis (*Burkholderia pseudomallei*)** | None | | Notify HES of any known or suspected case. Specimen transmittal sheets for microbiology specimens should be labeled "rule out melioidosis."<br>HES will report case to appropriate health department.<br>Additional precautions may be indicated if used as an agent of bioterrorism.<br>Refer to the CC Emergency Management Plan for more information. |
| **Meningitis:** | | | Notify HES of any known or suspected case.<br>HES will report case to appropriate health department. |
| Aseptic (nonbacterial or viral) | Contact | | Enteroviruses are the most common cause of aseptic meningitis. |
| Bacterial, gram-negative enteric, in neonates | None | | |
| Bacterial, unknown cause | Respiratory | Until meningo-coccal meningitis ruled out | |
| Fungal | None | | |
| *Haemophilus influenzae,* known or suspected | Respiratory | For 24 hours after start of effective therapy | |
| Herpes B virus (Simian B disease, *Herpesvirus simiae* disease) | None | | See Herpes B virus |
| *Neisseria meningitidis* (meningococcal), known or suspected | Respiratory | For 24 hours after start of effective therapy | |
| Pneumococcal | None | | |
| Tuberculosis: Multi-drug resistant or sensitive | None | | Notify HES of any known or suspected case. HES will report case to appropriate health department. For more information, see Tuberculosis. |
| Other diagnosed bacterial | None | | |
| **Meningococcal pneumonia** | Respiratory | For 24 hours after start of effective therapy | |
| **Meningococcemia** | Respiratory | For 24 hours after start of effective therapy | |
| **Methicillin-resistant *Staphylococcus aureus*** (MRSA, Oxacillin-resistant *Staphylococcus aureus,* ORSA) | Contact | Until discontinued by HES. | See Oxacillin-resistant *Staphylococcus aureus,* ORSA |
| **Microspordia** (Enterocolitis or gasteroenteritis) | Contact | Until diarrhea is resolved for two days | |
| **Molluscum contagiosum** | None | | |
| **Mucormycosis** | None | | |
| **Multi-drug resistant tuberculosis (MDR-TB)** | AFB | | Notify HES of any known or suspected case. HES will report case to appropriate health department. For more information, see Tuberculosis. |
| **Multi-drug resistant organisms** (non-tuberculosis), infection or colonization | Contact | Until discontinued by HES | Notify HES of infection or colonization with highly-resistant organisms. |
| **Mumps (infectious parotitis)** | Respiratory | For nine days after onset of swelling | Notify HES of any known or suspected case. HES will report case to appropriate health department. |
| **Murine typhus (endemic typhus)** | None | | |
| **Mycetoma** | None | | |
| **Mycobacteria, nontuberculous (Mycobacteriosis)** Atypical (including MAI, M. *avium-intracellulare, M. gordonae)* | None | | |
| Pulmonary | None | | |
| Wound | None | | |
| **Mycobacteria, tuberculous** | | | See Tuberculosis |
| **Mycoplasma respiratory infection** | Respiratory | Duration of illness | |
| **Myiasis** | None | | |
| **Myocarditis** (etiology unknown or infection suspected) | None | | |
| **Necrotizing enterocolitis** | None | | |
| **Neurologic syndromes,** (etiology unknown, prion disease, slow virus infection, included in differential diagnosis | CNS Precautions | Duration of illness | Notify HES of any known or suspected case or for sterilization and disinfection questions. Use caution when handling high risk tissue (brain, eye and spinal cord). Label all lab specimens with a "CNS Precautions" sticker (available from HES). |
| **Neutropenia** | None | | Protective isolation is not indicated. |
| **New World Arenaviridea** (includes Machupo, Junin, Guanarito, Sabia, Crimean) | Strict | Duration of illness | See Hemorrhagic Fever Viruses |

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**Isolation Precautions Appropriate for Infectious Syndromes**
**Standard/Universal Precautions required at all times for all patients**

| *Disease* | *Supplemental isolation* | *Isolation duration* | *Comments* |
|---|---|---|---|
| **Nocardiosis,** draining lesions or other | None | | |
| **Norwalk agent gastroenteritis** | Contact | Duration of illness | |
| **Norwegian scabies** | | | See scabies |
| **Omsk hemorrhagic fever** | None | | See Hemorrhagic Fever Viruses |
| **Onchocerciasis (river blindness)** | None | | |
| **Opisthorchiasis** | None | | |
| **Orchitis, bacterial** | None | | |
| **Orf** | None | | |
| **Osteomyelitis** | None | | If drainage is present additional isolation may be indicated, see section for specific pathogen. |
| **Otitis externa, media** | None | | If drainage is present additional isolation may be indicated, see section for specific pathogen. |
| **Oxacillin-Resistant *Staphylococcus aureus* (ORSA, Methicillin-Resistant *Staphylococcus aureus*, MRSA):** colonization or infection | Contact | Until discontinued by HES | Notify HES immediately of any known or suspected case. Specimen transmittal sheets for microbiology specimens should be labeled "rule out ORSA."<br><br>Isolation is maintained until all of the following negative cultures are obtained. 1) anterior nares (left and right); 2) any wound; 3) other previously positive sites. Two sets of cultures from each site should be sent at least 48 hours apart following the discontinuation of effective antibiotic therapy. |
| **Pancytopenia** | None | | Protective isolation is not indicated. |
| **Papillomavirus infection (warts)** | None | | |
| **Paracoccidioidomycosis (South American blastomycosis)** | None | | |
| **Paragonimiasis** | None | | |
| **Parainfluenza:** | | | Viral shedding may extend isolation beyond duration of disease. Isolation duration will be determined by HES and the medical team. |
| Infants | Strict | Duration of illness | |
| Young children, immunocompromised patients, immunocompetent adults | Respiratory | Duration of illness | |
| **Parvovirus B19:** | | | |
| Acute (erythema infectiosum, fifth disease) | None | | In people with rash-illness alone, greatest period of communicability is before onset of rash. |
| Aplastic Crisis | Respiratory | Duration of illness or seven days after onset | Place a "Pregnant Women Do Not Enter Room" sign on the patient's door. Notify HES for all known or suspected cases. Respiratory secretions should be considered infectious. HES and/or Infectious Disease Consult Service will assess need for a negative pressure isolation room or a higher isolation level on a case-by-case basis. |
| Chronic immunocompromised patients | Respiratory | Duration of illness | Viral shedding may extend isolation beyond duration of disease. Isolation duration will be determined by HES and the medical team. |
| **Pediculosis (lice)** including: *Pediculus humanus capitis*<br>*Pediculus humanus corporis* | Contact | For 24 hours after start of effective therapy | See Lice |
| **Pelvic inflammatory disease (PID)** | None | | |
| **Pericarditis,** infectious etiology suspected | Contact | Duration of illness | |
| **Pertussis (whooping cough)** | Respiratory | For seven days after start of effective therapy | Notify HES of any case. HES will report case to appropriate health department. |
| **Phaeohyphomycosis** | None | | |
| **Pharyngitis,** infectious etiology suspected | None | | |
| **Phthiriasis** ***Phthirus pubis*** | | | See lice or pediculosis |
| **Pinworm infection (enterobiasis, oxyuriasis)** | None | | See enterobiasis |
| **Plague:** *Yersinia pestis* | | | |
| Bubonic | None | | |
| Pneumonic | Strict | For three days after start of effective therapy | Notify HES of any known or suspected case. Specimen transmittal sheets for microbiology specimens should be labeled "rule out plague." HES will report case to appropriate health department. This disease could be an agent of bioterrorism. Refer to the CC Emergency Management Plan for more information. |
| **Pleurodynia** | Contact | For seven days after onset | |
| **Pneumonia:** | | | |
| Adenovirus | Strict | Duration of illness | Viral shedding may extend isolation beyond duration of disease. Isolation duration will be determined by HES and the medical team. |
| Bacterial not listed elsewhere (including gram-negative bacterial) | None | | |
| *Burkholderia cepacia* in patients with cystic fibrosis, colonization or infection | Contact | Duration of organism presence | Persons with cystic fibrosis may elect to wear a mask when within three feet of a colonized or infected patient. |
| Chlamydia ***Chlamydia psittaci*** or *Chlamydia trachomatis* | None | | |
| Fungal | None | | |
| Hantavirus | None | | See Hantavirus |
| *Haemophilus influenzae:* Infants, young children, and immunocompromised patients | Respiratory | For 24 hours after start of effective therapy | |
| Immunocompetent adults | None | | |
| *Herpes simplex* | Strict | Duration of illness | |
| Legionella | None | | Notify HES of any known or suspected case. HES will report case to appropriate health department. |
| Meningococcal | Respiratory | For 24 hours after start of effective therapy | |
| Multi-drug resistant bacterial | Strict | Until discontinued by HES | Notify HES of any known or suspected case of infection or colonization. Some Multi-drug resistant bacterial pneumonias may not require Strict isolation (see Oxacillin Resistant Staphylococcus aureus [ORSA]). |
| Mycoplasma | Respiratory | Duration of illness | |

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**Isolation Precautions Appropriate for Infectious Syndromes**
**Standard/Universal Precautions required at all times for all patients**

| *Disease* | *Supplemental isolation* | *Isolation duration* | *Comments* |
|---|---|---|---|
| **Pneumonia (cont.):** | | | |
| Oxacillin Resistant *Staphylococcus aureus* (ORSA, MRSA) | Contact | Until discontinued by HES | See Oxacillin-resistant *Staphylococcus aureus* |
| Pneumococcal *(Streptococcus pneumoniae):* | | | HES and/or Infectious Disease Consult Service will assess need for isolation on a case-by-case basis. |
| penicillin sensitive | None | | |
| penicillin resistant (PRSP) | Strict | Until discontinued by HES | |
| *Pneumocystis carinii* (*Pneumocystis jiroveci,* PCP) | None | | |
| *Staphylococcus aureus* | None | | |
| Streptococcus, Group A | Strict | For 48 hours after start of effective therapy | |
| *(Streptococcus pyogynes)* | | | |
| Streptococcus, pneumococcal | | | See Pneumonia, pneumococcal |
| **Pneumonia:** | | | |
| Tuberculosis (TB), including Multi-Drug | AFB | Duration of illness | See Tuberculosis |
| Viral not listed elsewhere: | | | |
| Infants, young children, and immunocompromised patients | Respiratory | Duration of illness | See specific pathogen isolated |
| Immunocompetent adults | None | | |
| **Poliomyelitis** | Contact | For seven days after onset | Notify HES of any known or suspected case. HES will report case to appropriate health department. |
| **Prion disease,** known or suspected | CNS Precautions | Duration of illness | Notify HES of any known or suspected case or for sterilization and disinfection questions. Use caution when handling high risk tissue (brain, eye and spinal cord). Label all lab specimens with a "CNS Precautions" sticker (available from HES). |
| **Progressive multifocal leukoencephalopathy (PML)** | None | | |
| **Prostatitis** | None | | |
| **Protothecosis** | None | | |
| **Pseudoallescheriasis** | None | | |
| ***Pseudomonas mallei* (glanders)** | None | | Additional precautions may be indicated if used as an agent of bioterrorism. |
| **Psittacosis (ornithosis)** | None | | Notify HES of any known or suspected case. HES will report case to appropriate health department. |
| **Pyoderma:** | | | |
| Streptococcal or staphylococcal | None | | |
| Other | None | | |
| **Q fever (coxiella)** | None | | Notify HES of any known or suspected case. Specimen transmittal sheets for microbiology specimens should be labeled "rule out Q fever." HES will report case to appropriate health department. This disease could be an agent of bioterrorism. Refer to the CC Emergency Management Plan for more information. |
| **Rabies** | Strict | Duration of illness | Notify HES of any known or suspected case. HES will report case to appropriate health department. |
| **Rat-bite fever** (*Streptobacillus moniliformis* disease, *Spirillum minus* disease | None | | |
| **Relapsing fever (borreliosis)** | None | | |
| **Resistant bacterial infection or colonization** | | | See multi-drug resistant organisms |
| **Respiratory infectious disease, acute** (if not covered elsewhere): | | | |
| Infants | Strict | Duration of illness | |
| Young children, and immmunocompromised patients | Respiratory | Duration of illness | |
| Immunocompetent adults | None | | |
| **Respiratory syncytial virus (RSV) infection** | Respiratory | Duration of illness | Virus can survive in the environment and on unwashed hands for an extended amount of time. Viral shedding may extend isolation beyond duration of disease. Isolation duration will be determined by HES and the medical team. |
| **Respiratory viruses** | | | See specific pathogen |
| **Retrovirus infection (HIV-1, HIV-2, HTLV-I, HTLV-II)** | None | | HES will report case to appropriate health department. |
| **Reyes Syndrome** | None | | |
| **Rheumatic fever** | None | | |
| ***Rhodococcus equi*** | None | | |
| **Rhinovirus infection, respiratory:** | | | |
| Infants, young children, and immunocompromised patients | Respiratory | Duration of illness | |
| Immunocompetent adults | None | | |
| **Rickettsial fevers, tickborne (Rocky Mountain spotted fever, tickborne typhus fever)** | None | | |
| **Rickettsialpox (vesicular rickettsiosis)** | None | | |
| **Rift Valley fever** | None | | See Hemorrhagic Fever Viruses |
| **Ringworm** (dermatophytosis, dermatomycosis, tinea) | None | | |
| **Ritter's disease** (staphylococcal scalded skin syndrome) | None | | Notify HES of any known or suspected case. Additional precautions may be indicated. |
| **Rocky Mountain spotted fever** | None | | Notify HES of any known or suspected case. HES will report case to appropriate health department. |
| **Roseola infantum** (exanthem subitum, HHV-6 infection, sixth disease) | None | | |
| **Rotavirus infection** gastroenteritis | Contact | Duration of illness or seven days after onset, whichever is less | |

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**Isolation Precautions Appropriate for Infectious Syndromes**
**Standard/Universal Precautions required at all times for all patients**

| *Disease* | *Supplemental isolation* | *Isolation duration* | *Comments* |
|---|---|---|---|
| **Rubella:** | | | Place a "Pregnant Women Do Not Enter Room" sign on the patient's door. |
| Acute ("German measles") | Respiratory | For seven days after onset of rash | Notify HES for all known or suspected cases. HES will report case to appropriate health department. |
| Congenital | Respiratory | Duration of hospitalization | Susceptible persons are discouraged from entering the room. Contact HES for questions.<br><br>Respiratory secretions should be considered infectious. |
| **Rubeola (measles)** | | | See Measles |
| **Salmonellosis** | Contact | Duration of illness | Notify HES of any known or suspected case. HES will report case to appropriate health department. |
| **Salpingitis, salpingo-oophoritis** | None | | |
| **SARS (Severe Acute Respiratory Syndrome)** | Special Respiratory | Until discontinued by HES | Notify HES immediately of any known or suspected case. HES will report case to appropriate health department. |
| **Scabies:** | | | |
| Crusted (Norwegian, extensive) | Contact | Until discontinued by HES | Notify HES of any known or suspected case. Staff and visitors should wear disposable gowns and gloves when caring for the patient or handling the patient's clothes or bed linens. Caution patient not to share clothing, towels, or bed linens.<br><br>Isolation maintained until the patient has had negative skin scrapings for three consecutive days after effective therapy. |
| Typical | Contact | For 24 hours after start of effective therapy | Notify HES of any known or suspected case. Caution patient not to share clothing, towels, or bed linens. |
| **Scalded skin syndrome, staphylococcal** (Ritter's disease) | None | | Contact HES, as additional isolation may be indicated. |
| **Scarlet fever** | Respiratory | For 24 hours after start of effective therapy | |
| **Schistosomiasis (bilharziasis)** | None | | |
| **Severe Acute Respiratory Syndrome (SARS)** | Special Respiratory | | See SARS |
| **Shigellosis** | Contact | Until discontinued by HES | Notify HES of any known or suspected case. HES will report to appropriate health department.<br><br>Maintain isolation until three consecutive stool cultures are negative, following discontinuation of effective antimicrobial therapy. |
| **Shingles** | | | See Herpes zoster |
| **Simian B disease** | | | See Herpes B virus |
| **Sin Nombre Virus** | None | | See Hantavirus |
| **Sinusitis** | None | | |
| **Slow virus encephalitis** | | | See Encephalitis or encephalomyelitis, slow virus |
| **Smallpox (variola)** | Strict | Duration of illness | Notify HES of any known or suspected case. Specimen transmittal sheets for microbiology specimens should be labeled "rule out smallpox." HES will report case to appropriate health department. This disease could be an agent of bioterrorism. Refer to the CC Emergency Management Plan for more information. |
| ***Spirillum minus* disease (rat-bite fever)** | None | | |
| **Sporotrichosis** | None | | |
| **Sprue, tropical** | None | | |
| **Staphylococcal disease (*Staphylococcus aureus*):** | | | |
| Decubitus ulcer, | | | |
| Minor | None | | Minor: dressing covers and adequately contains drainage, or infected area is very small |
| Major | Strict | Duration of illness | Major: either draining and not covered by dressing or dressing does not adequately contain drainage |
| Draining lung abscess | Strict | For 48 hours after start of effective therapy | |
| Enterocolitis (food poisoning) | None | | |
| Oxacillin-Resistant *Staphylococcus aureus* (ORSA, Methicillin-Resistant *Staphylococcus aureus*, MRSA) | Contact | Until discontinued by HES | See Oxacillin-Resistant *Staphylococcus aureus* or Methicillin-Resistant *Staphylococcus aureus*. |
| Pneumonia | None | | Notify HES of any known or suspected case. Additional precautions may be indicated. |
| Scalded skin syndrome (Ritter's disease) | None | | |
| Skin, wound, and burn infection: | | | |
| Minor | None | | Minor: dressing covers and adequately contains drainage, or infected area is very small |
| Major | Strict | Duration of illness | Major: either draining and not covered by dressing or dressing does not adequately contain drainage |
| Toxic shock syndrome | None | | |
| Vancomycin-intermediate *Staphylococcus aureus* (VISA): Colonization or infection | Contact | Until discontinued by HES | Notify HES of any known or suspected case. Additional precautions may be indicated. |
| Vancomycin-resistant *Staphylococcus aureus* (VRSA): Colonization or infection | Contact | Until discontinued by HES | Notify HES of any known or suspected case. Additional precautions may be indicated. |
| ***Stenotrophomonas maltaphilia*** (colonization or infection) | None | | |
| ***Streptobacillus moniliformis* disease (rat-bite fever)** | None | | |
| **Streptococcal disease (Group A streptococcus):** | | | |
| Endometritis: | | | |
| Minor | None | | Minor: dressing covers and adequately contains drainage, or infected area is very small |
| Major | Strict | Duration of illness | Major: either draining and not covered by dressing or dressing does not adequately contain drainage |
| Erysipelas | None | | |
| Pharyngitis: | | | |
| Infants, young children, and immunocompromised patients | Respiratory | For 24 hours after start of effective therapy | |
| Immunocompetent patients | None | | |
| Pneumonia | Strict | For 24 hours after start of effective therapy | |

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**Isolation Precautions Appropriate for Infectious Syndromes**
**Standard/Universal Precautions required at all times for all patients**

| *Disease* | *Supplemental isolation* | *Isolation duration* | *Comments* |
|---|---|---|---|
| **Streptococcal disease (cont.) (Group A streptococcus):** | | | |
| Scarlet fever | Respiratory | For 24 hours after start of effective therapy | |
| Skin, wound/burn infection: | | | |
| Minor | None | | Minor: dressing covers and adequately contains drainage, or infected area is very small |
| Major | Strict | For 24 hours after start of effective therapy | Major: either draining and not covered by dressing or dressing does not adequately contain drainage |
| **Streptococcal disease (Group B streptococcus)** | None | | |
| **Strongyloidiasis** | None | | |
| **Sty (hordeolum)** | None | | |
| **Subacute sclerosing panencephalitis (SSPE)** | None | | |
| **Swimmer's itch** | None | | |
| **Syphilis:** | | | |
| Primary | None | | Notify HES of any known or suspected case. HES will report case to appropriate health department. |
| Secondary | Contact | For duration of rash | |
| Tertiary (latent) | None | | |
| **Tapeworm disease** | | | |
| *Hymenolepis* nana | None | | |
| *Taenia solium* (pork) (taeniasis) | None | | |
| Other | None | | |
| **Tetanus** | None | | Notify HES of any known or suspected case. HES will report case to appropriate health department. |
| **Thrush (oral candidiasis)** | None | | |
| **Tick paralysis** | None | | |
| **Tinea** (fungus infection, dermatophytosis, dermatomycosis, ringworm) | None | | |
| **Toxic shock syndrome** | None | | |
| **Toxocariasis** | None | | |
| **Toxoplasmosis** | None | | |
| **Trachoma** | None | | |
| **Transient aplastic Crisis** | | | See Parvovirus B19 |
| **Transmissible spongiform encephalopathies** | CNS Precautions | Duration of illness | Notify HES of any known or suspected case or for sterilization and disinfection questions. Use caution when handling high risk tissue (brain, eye and spinal cord). Label all lab specimens with a "CNS Precautions" sticker (available from HES). |
| **Trench mouth (Vincent's angina)** | None | | |
| **Trichinosis (Trichinellosis, Trichiniasis)** | None | | Notify HES of any known or suspected case. HES will report case to appropriate health department. |
| **Trichuriasis (whipworm disease)** | None | | Notify HES of any known or suspected case. HES will report case to appropriate health department. |
| **Trypanosomiasis** | None | | |
| **Tuberculosis (TB), including Multi-Drug Resistant Tuberculosis (MDR-TB):** | | | Notify HES immediately of any known or suspected case. Additional precautions may be indicated. HES will report case to appropriate health department. Also notify the Microbiology Service of any case. |
| Extrapulmonary, draining lesion (including scrofula) | None | | |
| Extrapulmonary, meningitis | None | | |
| Laryngeal or pulmonary, confirmed or suspected (sputum smear positive, chest X-ray appearance strongly suggestive of current active TB) | AFB | Until discontinued by HES | Appropriate respiratory protection must be worn (PAPR or N-95). Training is needed prior to using particulate respirator masks; call the CC Environmental Safety Officer if training is needed. |
| Miliary, disseminated | None | | |
| Pott's disease | None | | |
| PPD skin-test positive with no evidence of current pulmonary disease | None | | |
| **Tularemia** (draining lesion or pulmonary) *(Francisella tularensis)* | None | | Notify HES of any known or suspected case. Specimen transmittal sheets for microbiology specimens should be labeled "rule out tularemia." HES will report case to appropriate health department. Additional precautions may be indicated if used as an agent of bioterrorism. Refer to the CC Emergency Management Plan for more information. |
| **Typhoid fever *(Salmonella typhi)*** | Contact | Duration of illness | Notify HES of any case. HES will report case to appropriate health department. |
| **Typhus, endemic and epidemic** | None | | |
| **Urethritis,** Gonococcal and nongonococcal | None | | |
| **Urinary tract infection** (including pyelonephritis) | None | | Notify HES If infection is caused by a multi-drug resistant organism. Additional precautions may be indicated. |
| **Vaccinnia** | Contact | | Contact HES for additional information. |
| **Vagabond's disease** | | | See Pediculosis |
| **Vaginitis, purulent** | None | | |
| **Vancomycin-intermediate *Staphylococcus aureus*** (VISA) (colonization or infection) | Contact | Until discontinued by HES | Notify HES of any known or suspected case. Additional precautions may be indicated. |
| **Vancomycin-resistant *Staphylococcus aureus*** (VRSA) (colonization or infection) | Contact | Until discontinued by HES | Notify HES of any known or suspected case. Additional precautions may be indicated. |
| **Vancomycin-resistant enterococcus** (VRE) (colonization or infection) | Contact | Duration of organism presence | Notify HES of any known or suspected case. Additional precautions may be indicated. Maintain isolation until three cultures (stool and any previously positive sites) are negative, following discontinuation of effective antimicrobial therapy and at least one week apart. Specimen transmittal sheets for microbiology specimens should be labeled "rule out VRE." Submit no more than one specimen per patient per week for isolation discontinuation purposes. |

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**Isolation Precautions Appropriate for Infectious Syndromes**
**Standard/Universal Precautions required at all times for all patients**

| *Disease* | *Supplemental isolation* | *Isolation duration* | *Comments* |
|---|---|---|---|
| **Varicella (chickenpox)** | Respiratory | Until all lesions are crusted | See Chickenpox |
| **Variola (smallpox)** | Strict | Duration of illness | See Smallpox |
| **Venereal warts (*Condyloma acuminatum*, genital warts)** | None | | Protective eyewear and mask indicated for procedures that may create aerosols |
| **Venezuelan equine encephalitis** (VEE) | None | | Notify HES of any known or suspected case. Specimen transmittal sheets for microbiology specimens should be labeled "rule out VEE." HES will report case to appropriate health department. This disease could be an agent of bioterrorism. Refer to the CC Emergency Management Plan for more information. |
| ***Vibrio parahaemolyticus* gastroenteritis** | Contact | Duration of illness | |
| **Vincent's angina (trench mouth)** | None | | |
| **Viral disease:** | | | |
| Pericarditis, myocarditis, or meningitis | Contact | Duration of illness | Enteroviruses frequently cause these infections. |
| Respiratory (if not covered elsewhere): | | | |
| Infants | Strict | Duration of illness | See specific pathogens for more information |
| Young children, and immunocompromised patients | Respiratory | Duration of illness | |
| Immunocompetent adults | None | | |
| **Viral encephalitides** | None | | See encephalitis |
| **(*Alphavirus* genus) Visceral larval migrans** | None | | |
| **Warts, viral: *Condyloma acuminatum*** (genital warts, venereal warts), human papillomavirus (HPV), laryngeal papillomas, Papilloma venereum, Verruca vulgaris | None | | Protective eyewear and mask indicated for procedures that may create aerosols |
| **West Nile Virus** | None | | Notify HES of any known or suspected case. Specimen transmittal sheets for microbiology specimens should be labeled "rule out West Nile Virus." HES will report case to appropriate health department. |
| **Whipple's disease** | None | | |
| **Western equine encephalitis (WEE)** | None | | See encephalitis |
| **Whooping cough (pertussis)** | Respiratory | | See pertussis |
| **Wound infections** | | | See specific pathogen |
| **Yellow fever** | None | | Notify HES of any known or suspected case. Specimen transmittal sheets for microbiology specimens should be labeled "rule out Yellow fever." HES will report case to appropriate health department. This disease could be an agent of bioterrorism. Refer to the CC Emergency Management Plan for more information. |
| ***Yersinia pestis*** | | | See Plague, Pneumonic |
| ***Yersinia enterocolitica* gastroenteritis** | Contact | Duration of illness | |
| **Zoster (varicella-zoster, shingles)** | | | See Chickenpox for primary presentation<br>See Shingles for secondary presentation |
| **Zygomycosis (phycomycosis, mucormycosis)** | None | | |