

INFECTION CONTROL UPDATE

All Clinical Associates

2021 Version

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Objectives

- **Review TJC National patient safety goals related to Infection Control**
 - Hand Hygiene
 - MDRO
 - HAI (CLABSI, CAUTI, SSI)
- **Hospital Acquired Infections**
 - CAUTI
 - CLABSI
 - VAE
 - C-diff
 - MRSA
- **Understand the 2 tiers of infection prevention**
 - Standard precautions
 - Transmission- based precautions
- **OSHA Bloodborne pathogens**
- **OSHA Tuberculosis (TB)**

THE JOINT COMMISSION'S NATIONAL PATIENT SAFETY GOALS

The rationale for The Joint Commission's National Patient Safety Goals is to enhance patient safety and focus on issues found in healthcare settings.

Goals related to Infection Control are established to prevent infection, these standards include:

Improved hand hygiene

Prevent infections that are difficult to treat (MDRO's)

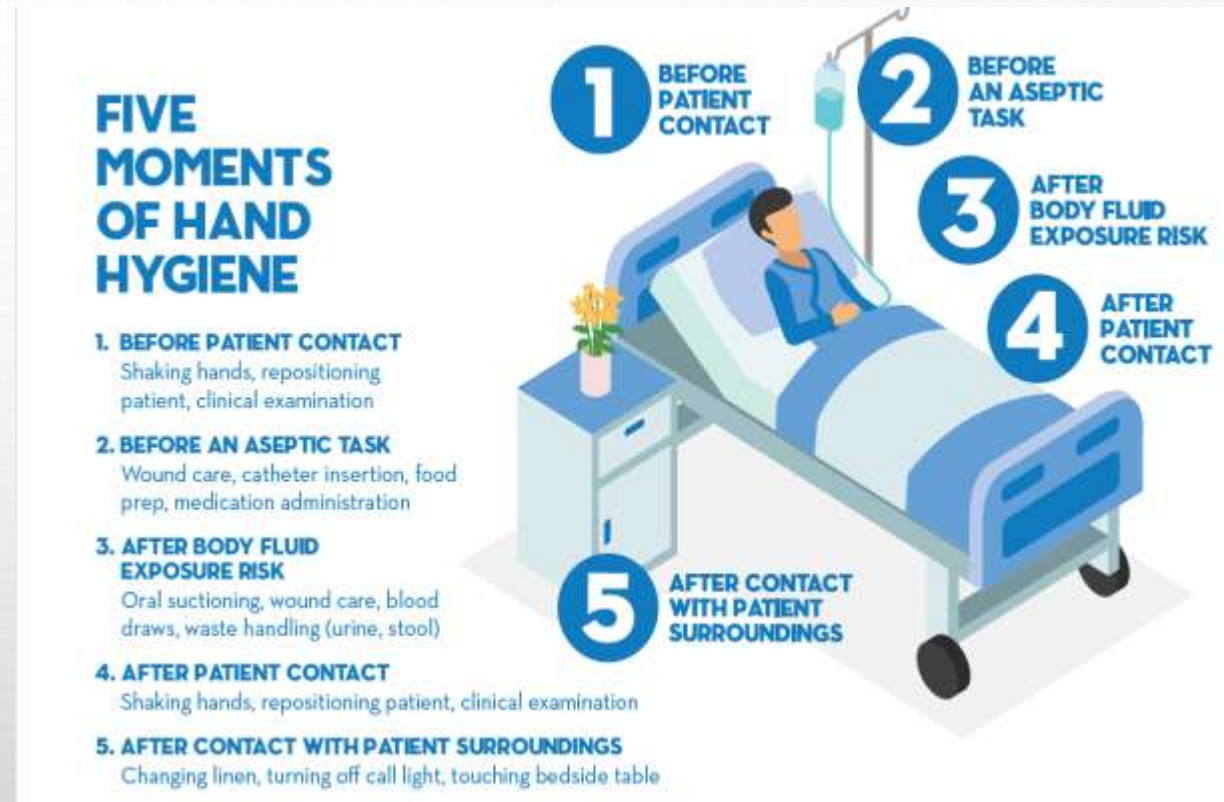
Prevent bloodstream infections caused by central lines

Prevent infections after surgery

Prevent urinary tract infections caused by catheters

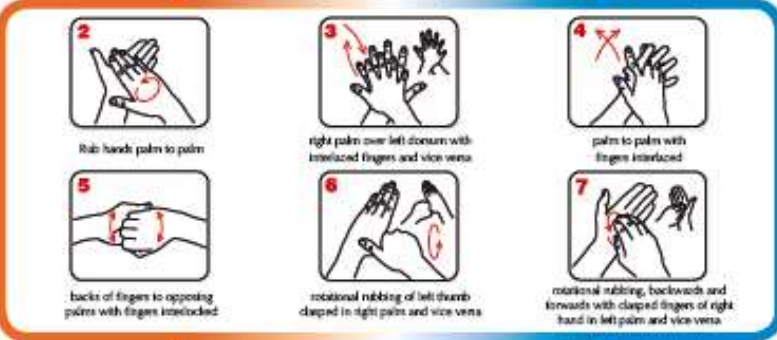
5 MOMENTS OF HAND HYGIENE

- HAND HYGIENE IS ONE OF THE MOST IMPORTANT FACTORS IN PREVENTING THE SPREAD OF INFECTION. TO MINIMIZE THE RISK OF SPREADING INFECTION, THE WORLD HEALTH ORGANIZATION (WHO) HAS IDENTIFIED 5 KEY MOMENTS FOR HAND HYGIENE. THIS APPROACH RECOMMENDS HEALTH-CARE WORKERS CLEAN THEIR HANDS:
 - BEFORE TOUCHING A PATIENT
 - BEFORE ASEPTIC PROCEDURES (FOLEY CARE, PREPARING FOOD, MEDICATION ADMINISTRATION)
 - AFTER CONTACT WITH BODY FLUIDS
 - AFTER TOUCHING A PATIENT
 - AFTER TOUCHING A PATIENT'S SURROUNDINGS



**HAND HYGIENE MONITORING IS DONE
ROUTINELY AT ALL FACILITIES**

How to handrub? WITH ALCOHOL-BASED FORMULATION



20-30 sec



How to handwash? WITH SOAP AND WATER



40-60 sec



HAND HYGIENE – WHEN/HOW

- HAND HYGIENE IS PERFORMED WITH **EITHER** FACILITY PROVIDED SOAP AND WATER **OR** ABHR (ALCOHOL BASED HAND RUB).
- ONLY USE SOAP AND WATER FOR THE FOLLOWING:**
 - AFTER USING THE RESTROOM, BEFORE EATING, WHEN HANDS ARE VISIBLY SOILED
- SOAP AND WATER HAND WASH**
 - WET HANDS WITH WATER.
 - APPLY SOAP.
 - RUB HANDS TOGETHER, COVERING ALL SURFACES, FOCUSING ON FINGERTIPS AND FINGERNAILS
 - RINSE UNDER RUNNING WATER AND DRY WITH DISPOSABLE TOWEL.
 - USE THE TOWEL TO TURN OFF THE FAUCET.
- ALCOHOL HAND RUB**
 - APPLY ADEQUATE AMOUNT OF FACILITY PROVIDED ALCOHOL HAND RUB TO PALM OF ONE HAND.
 - RUB HANDS TOGETHER, COVERING ALL SURFACES, FOCUSING ON THE FINGERTIPS AND FINGERNAILS, UNTIL DRY.
- HAND SENSITIVITY:**
 - IF AN ASSOCIATE EXPERIENCES A HAND SKIN SENSITIVITY OF AN UNKNOWN CAUSE, THE ASSOCIATE SHOULD REPORT THIS TO THEIR SUPERVISOR AND BE EVALUATED BY ASSOCIATE HEALTH FOR DIRECTION.



WHO acknowledges the Filipino Unversitarios de Saens (FUS), in particular the members of the Infection Control Programme, for their active participation in developing this material.



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WHO 5 MOMENTS OF HAND HYGIENE

Watch the following video

Available at <https://youtu.be/b7yxifhY3pM>

HAND HYGIENE POLICY REVIEW

POLICY HR-ER-05

- FINGERNAILS MUST BE NEAT AND TRIMMED. IF POLISH IS USED, IT MUST BE CONSERVATIVE AND WELL MAINTAINED.
- LENGTH OF FINGERNAILS SHOULD BE LESS THAN ¼ INCH IN LENGTH AND NOT INTERFERE WITH JOB DUTIES.
- ASSOCIATES WHO PERFORM DIRECT PATIENT CARE, PREPARE FOOD OR STERILE ITEMS MUST HAVE NATURAL FINGERNAILS (I.E. NATURAL FINGERNAILS WITHOUT AN ARTIFICIAL COVERING OTHER THAN FINGERNAIL POLISH. NO ACRYLIC NAILS OR NAIL TIPS.)

POLICY INF-CNTRL - C-02

- PROVIDE PATIENT WITH OPPORTUNITIES TO PERFORM HAND HYGIENE (BEFORE EATING, TOILETING, BEFORE LEAVING THEIR ROOM)



MULTI DRUG RESISTANT ORGANISM (MDRO) NPSG.07.03.01

THESE ARE RESISTANT GERMS WHICH ARE NOT EASILY TREATED BY THE USUAL ANTIBIOTICS, MEANING WE HAVE REDUCED OPTIONS FOR TREATMENT.

- **EXAMPLES INCLUDE:**

- MRSA (METHICILLIN RESISTANT STAPHYLOCOCCUS AUREUS)
- VRE (VANCOMYCIN RESISTANT ENTEROCOCCUS)
- ESBL (EXTENDED SPECTRUM BETA-LACTAMASES)
- CRE (CARBAPENEM-RESISTANT ENTEROBACTERIACEAE)

MDROS ARE INCREASING IN THE COMMUNITY AND IN HEALTHCARE SETTINGS.

- *SPREAD OF THESE GERMS* **CAN BE CONTROLLED** WITH:

- CONTACT AND STANDARD PRECAUTIONS (ISOLATION)
- CONSISTENT HAND HYGIENE
- DISINFECTION OF EQUIPMENT
- GOOD HOUSEKEEPING PRACTICES



HOSPITAL ACQUIRED INFECTION (HAI)

- HOSPITAL ACQUIRED INFECTIONS (HAI) ARE INFECTIONS THAT ARE **NOT PRESENT** UPON ADMISSION.

EXAMPLES OF REPORTABLE HOSPITAL ACQUIRED INFECTIONS INCLUDE:

- CENTRAL LINE ASSOCIATED BLOODSTREAM INFECTIONS (CLABSI)
- CATHETER ASSOCIATED URINARY TRACT INFECTION (CAUTI)
- VENTILATOR ASSOCIATED EVENTS (VAE) – ICU ONLY
- CLOSTRIDIODES DIFFICILE (C-DIFF)
- METHICILLIN RESISTANT STAPH AUREUS BLOOD STREAM INFECTION (MRSA)



DEVICE RELATED INFECTIONS

PREVENTION IS KEY: REMOVE A DEVICE AS SOON AS IT IS NO LONGER NEEDED AND CONSIDER ALTERNATIVES. THE SOONER A DEVICE IS REMOVED, THE LESS LIKELY THE CHANCE OF INFECTION.

CAUTI BUNDLE

Maintain the 6 C's

Consider alternatives like external devices (purewick, condom cath)

Connect with a securement device

Keep it **clean**, keep it **closed**

Call for a bladder scan before foley irrigation

Culture only when an indication is clear to avoid treating possibly colonization

DEVICE RELATED INFECTIONS

PREVENTION IS KEY: REMOVE A DEVICE AS SOON AS IT IS NO LONGER NEEDED AND CONSIDER ALTERNATIVES. THE SOONER A DEVICE IS REMOVED, THE LESS LIKELY THE CHANCE OF INFECTION.

CLASBI BUNDLE

Change dressing every 7 days and prn. Keep the site clean, dry, intact. Application of CHG daily.

Line necessity assessment daily

Apply port protectors

Biopatch Change every 7 days and prn with dressing changes

Scrub site with chloraprep during dressing changes

Initial and date all central line dressings and tubing.

DEVICE RELATED INFECTIONS

PREVENTION IS KEY: REMOVE A DEVICE AS SOON AS IT IS NO LONGER NEEDED AND CONSIDER ALTERNATIVES. THE SOONER A DEVICE IS REMOVED, THE LESS LIKELY THE CHANCE OF INFECTION.

VAP BUNDLE

- Spontaneous Awakening Trial bid
- Spontaneous breathing trial daily
- RASS every 1-2 hours
- HOB elevation 30 degrees
- Ng/Og insertion to low wall suction
- Oral care every 2 hours
- Sputum culture
- Arterial blood gas 30 min after intubation

SURGICAL SITE INFECTIONS

(SSI)NPSG.07.05.01

SURGICAL SITE PREVENTION PRACTICES INCLUDE:

- PROPHYLACTIC ANTIBIOTIC GIVEN WITHIN ONE HOUR PRIOR TO SURGICAL INCISION (CORRECT ANTIBIOTIC SELECTION)
- PROPHYLACTIC ANTIBIOTIC DISCONTINUED WITHIN 24 HOURS AFTER SURGERY [48 HRS. FOR CABG/CARDIAC CASES]
- HAIR REMOVAL THROUGH CLIPPING NOT SHAVING
- MAINTAINING PERI-OPERATIVE NORMAL BODY TEMP
- CONTROLLING POST-OP BLOOD GLUCOSE IN CARDIAC SURGERY PATIENTS
- REMOVING THE URINARY CATHETER ON POST OP DAY 1 OR 2
- CHG APPLICATION

CLOSTRIDIoidES DIFFICILE (C-DIFFICILE)

- **SPORE-FORMING BACTERIA.** SYMPTOMS INCLUDE WATERY DIARRHEA, FEVER, LOSS OF APPETITE, NAUSEA, AND ABDOMINAL PAIN.
- TRANSMISSION OCCURS VIA FECES. ANY SURFACE THAT BECOMES CONTAMINATED WITH FECES MAY SERVE AS A RESERVOIR FOR THE C-DIFFICILE SPORES (TOILETS, COUNTER TOPS, BED RAILS, CALL LIGHTS). **CAN LAST FOR MONTHS ON SURFACES.**
- CAN ALSO BE TRANSFERRED TO PATIENTS VIA THE HANDS OF HEALTHCARE PERSONNEL WHO HAVE TOUCHED A CONTAMINATED SURFACE.
- COMMON CAUSE OF ANTIBIOTIC ASSOCIATED DIARRHEA, CAN BE PREVENTED BY USING INFECTION CONTROL RECOMMENDATIONS AND APPROPRIATE ANTIBIOTIC USE.
- REQUIRES CONTACT ISOLATION – CLEAN AND DISINFECT EQUIPMENT WITH **BLEACH** PRODUCTS.



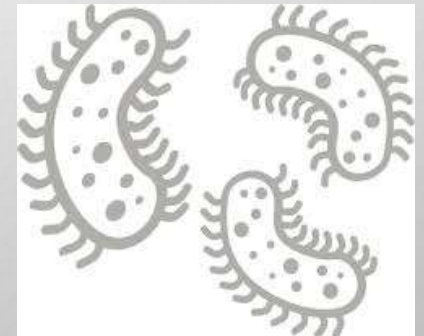
C-DIFFICILE: ISOLATION & TESTING PROTOCOL

The purpose of this protocol is early identification, isolation, and treatment to decrease the transmission of C difficile infections.

- STAFF SHOULD INITIATE THE CDIFF ORDER PANEL WHEN A PATIENT HAS 3 OR MORE **UNEXPECTED** DIARRHEA STOOLS (BRISTOL STOOL CHART TYPE 6 OR 7)
- THE CDIFF ORDER PANEL INCLUDES AN ORDER FOR TESTING AND AN AUTOMATIC CONTACT ISOLATION ORDER.

** ORDERING PROTOCOL IS **ONLY TO BE USED DURING THE FIRST TWO DAYS OF A PATIENTS' ADMISSION.**

BEYOND 48 HOURS THE RN WILL NO LONGER BE ABLE TO ENTER THE ORDER.
THE PHYSICIAN MUST ENTER THE ORDER.



INFECTION CONTROL PRECAUTIONS

TO PREVENT THE SPREAD OF INFECTION IN HEALTHCARE, THERE ARE 2 TIERS OF RECOMMENDED PRECAUTIONS: **STANDARD PRECAUTIONS** AND **TRANSMISSION-BASED PRECAUTIONS**.

Standard Precautions are used for all patient care.

Common sense practices and personal protective equipment use that protect healthcare providers from infection and prevent the spread of infection from patient to patient. This includes:

- Hand Hygiene
- PPE
- cough etiquette
- cleaning and disinfection of equipment
- handling of soiled linens
- safe injection practices
- sharps and waste handling

Transmission-Based Precautions are used in addition to Standard Precautions.

For patients who may be infected or colonized with certain infectious agents for which additional precautions are needed to prevent infection transmission.

We follow CDC Guidelines for Isolation Precautions:

- Airborne Precautions
- Contact Precautions
- Droplet Precautions

PERSONAL PROTECTIVE EQUIPMENT (PPE)

- PPE IS DESIGNED TO PROTECT THE SKIN, EYES, MUCOUS MEMBRANES, AIRWAYS, AND CLOTHING FROM CONTACT WITH INFECTIOUS AGENTS
- SELECTION OF PPE IS MADE BASED ON THE TASKS BEING PERFORMED AND ANTICIPATED LEVEL OF EXPOSURE
- PPE INCLUDES:
 - GLOVES
 - FLUID RESISTANT GOWNS
 - RESPIRATOR DEVICES
 - PROTECTIVE EYEWEAR
 - MASKS



PPE GLOVES/ GOWN/ GOGGLES

GLOVES: ANTICIPATED TOUCHING OF MUCOUS MEMBRANES OR NONINTACT SKIN OF A PATIENT OR ANY PATIENT BLOOD, BODY FLUIDS, SECRETIONS, OR EXCRETIONS

- INDIRECT CONTACT TO BLOOD OR BODY FLUIDS
- WHEN HANDLING OR TOUCHING EQUIPMENT OR ENVIRONMENTAL SURFACES THAT HAVE BEEN CONTAMINATED.

GOWNS: WHEN ANTICIPATED PATIENT CARE ACTIVITIES IN WHICH EXPOSED SKIN OR CLOTHING ARE LIKELY TO BE EXPOSED TO ANY PATIENT BLOOD, BODY FLUIDS, SECRETIONS, OR EXCRETIONS.

Goggles/face shields:

The OSHA Bloodborne Pathogen Standard requires face and eye protection when there is potential for splashing, spraying or splattering of blood or other body fluid onto facial mucous membranes.

- Use to protect the eyes and face from sprays of respiratory secretions, blood, or body fluids. ***Eyeglasses are not considered acceptable eye protection (use a face shield in addition to glasses instead of goggles).***

Barrier masks/barrier masks with shields:

- With any anticipated spray of blood or body fluids (respiratory secretions or patients with poor cough etiquette).

**The use of gloves does not replace the need for hand hygiene!
Hand hygiene should always be performed immediately after gloves are removed.**

N95 AND PAPR HOOD

N95 RESPIRATORS:

- HCW'S MUST BE "FIT TESTED" ANNUALLY FOR PROPER FIT AND TO RECEIVE INSTRUCTIONS PRIOR TO THE USE OF THE RESPIRATOR
- A "USER SEAL CHECK" MUST BE PERFORMED EACH TIME AN N95 RESPIRATOR IS USED, (MASK IS ONLY EFFECTIVE IF THERE IS A TIGHT SEAL AROUND THE NOSE AND MOUTH)

PAPR (HOOD):

- HCW'S WHO ARE NOT CANDIDATES FOR FIT TESTING OR HAVE LIMITED CONTACT WITH TB PATIENTS WILL BE TRAINED TO USE A PAPR INSTEAD OF A RESPIRATOR.
- HCW WITH FACIAL HAIR CANNOT BE APPROPRIATELY FITTED TO AN N95 RESPIRATOR AND MUST USE A PAPR AND HOOD INSTEAD
- THE PAPR AND HOOD ARE AVAILABLE FROM CENTRAL SUPPLY.
- HOODS MAY BE KEPT FOR RE-USE BY THE SAME PERSON; THEY ARE TO BE MARKED WITH THE ASSOCIATE NAME AND STORED IN A PAPER BAG. THEY ARE NOT TO BE SHARED.

TRANSMISSION- BASED PRECAUTIONS



TRANSMISSION-BASED PRECAUTIONS (ISOLATION) ARE USED FOR PATIENTS WHO ARE KNOWN OR SUSPECTED, TO BE INFECTED OR COLONIZED, WITH INFECTIOUS PATHOGENS. THESE PATHOGENS REQUIRE ADDITIONAL CONTROL PRACTICES USED IN ADDITION TO STANDARD PRECAUTIONS TO PREVENT TRANSMISSION.

ST. ELIZABETH'S ISOLATION PRECAUTIONS ARE BASED ON THE CDC GUIDELINES FOR ISOLATION

- AIRBORNE PRECAUTIONS
- CONTACT PRECAUTIONS
- DROPLET PRECAUTIONS

FOR ALL ISOLATIONS:

- USE DEDICATED OR DISPOSABLE EQUIPMENT WHEN AVAILABLE
- CLEAN AND DISINFECT ALL REUSABLE EQUIPMENT
- TAKE ONLY NECESSARY SUPPLIES INTO THE PATIENT'S ROOM
- LIMIT TRANSPORT TO MEDICALLY NECESSARY PURPOSES ONLY

Contact Isolation



Patient should *not* visit public areas: cafeteria or gift shop.

STAFF AND VISITOR INSTRUCTIONS:

1. **CLEAN HANDS:** Upon entry and exit of patient room.
2. **SAFE ZONE:** No PPE required when entering the room to visualize the patient or to have minimal conversation or observation of the patient.
3. **GOWN & GLOVES:** Must be worn to go beyond the *Safe Zone*: when entering patient's environment (approaching patient, touching any item, surface, or piece of equipment). Place used gown in soiled laundry.
4. **EQUIPMENT:** Clean and disinfect reusable equipment upon removal from room or send to Central Supply for processing.



Infections are spread through touch with infectious particles from patients or items/surfaces in the patient environment.

Examples of conditions requiring this isolation include:

- **Resistant bacteria: MRSA, VRE, Pseudomonas, ESBL** and all other **MDRO's, C-difficile**
- **Wounds with drainage that can't be contained with a dressing**
- **Bed Bugs/Lice – until controlled**

Private room recommended

Gown and Gloves are **required** to enter the room beyond the **Safe Zone** & should be removed before exiting room

Disinfect all equipment before use on another patient.

Patient should perform hand hygiene and be placed in clean gown before transport.

Instruct the patient/family on isolation. **Visitors should follow contact precautions to help prevent transference of pathogens to guests.**

Droplet Precautions



Patient should *not* visit public areas: cafeteria or gift shop.

MASK: Wear a surgical mask to enter room.



EQUIPMENT: Clean and disinfect reusable equipment upon removal from room or send to Central Supply for processing.

VISITORS: Wash hands or use hand sanitizer upon entering and leaving the room. Wear surgical mask to enter the room.

TRANSPORT: Patient wears surgical mask for transport.

DO NOT REMOVE THE SIGN- EVS To Remove Sign After UV Light Treatment At Discharge.

Transmission occurs primarily through coughing, when respiratory droplets are spread onto the facial mucous membranes of a susceptible person. These droplets do not remain suspended in the air and generally fall within a 3-6-foot range.

Private room recommended; no special ventilation is required.

Staff wears a surgical mask to enter the room.

Examples of diseases requiring this isolation include:

Seasonal Influenza

Meningitis- bacterial

Mumps, Pertussis, Rubella (German measles)

Educate the **patient** about isolation, **cough etiquette**, hand hygiene, and to wear a *surgical mask* when out of the room. **A patient in droplet precautions should not visit public areas such as cafeteria or gift shop.**

Visitors should wear surgical mask while in the room.

Patients with respiratory illness or cough should be taught cough etiquette. Provide tissues and cover the nose/mouth with tissues or sleeve when coughing or sneezing. Properly dispose of the tissue and perform hand hygiene. Patients who cannot comply should wear a surgical mask whenever they are out of their room or during encounters with associates.

Airborne Precautions



Patient should *not* visit public areas: cafeteria or gift shop.
ROOM DOOR MUST BE KEPT CLOSED

MASK: Staff wears an N95 Respirator or PAPR.



EQUIPMENT: Clean and disinfect reusable equipment upon removal from room or send to Central Supply for processing.

VISITORS: Wash hands or use hand sanitizer upon entering and leaving the room. Wear surgical mask to enter the room.

TRANSPORT: Patient wears surgical mask for transport.

DO NOT REMOVE THE SIGN- EVS To Remove Sign After UV Light Treatment At Discharge.

2/20/19

For questions regarding Isolation please call the INFECTION CONTROL OFFICE
Edgewood 301-2155 Florence 212-4399 Fort Thomas 572-3688

Acquired by inhalation of infectious particles.

A negative pressure, 100% exhaust room is required.

Staff wear an N95 or PAPR hood to enter the room. Must be fit tested annually by associate Health.

Requires isolation:

Pulmonary tuberculosis

Measles (rubeola)

Chickenpox (varicella)

Disseminated shingles

COVID-19

Requires airborne and contact isolation

Educate the **patient** about isolation, cough etiquette, and hand hygiene. Limit transport to medical necessity only. If a patient must leave the room for medical necessity, the patient is to wear a surgical mask. A patient in airborne precautions should not visit public areas such as cafeteria or gift shop.

COVID-19 PRECAUTIONS



PATIENT CANNOT LEAVE ROOM & DOOR MUST REMAIN CLOSED

N95 MASK and EYE PROTECTION (goggles or face shield): Staff

must wear a N95 Respirator or PAPR, and goggles or face shield in place before entering room

*Follow current guidelines for mask management - N95 mask or PAPR required for any aerosol generating procedures (specimen collection, nebulizers, intubation, etc.).

GOWN & GLOVES: Must be worn when entering patient's room

EQUIPMENT: Clean and disinfect reusable equipment upon removal from room or send to Central Supply for re-processing.

TRANSPORT: Patient must wear surgical mask for transport.

DO NOT REMOVE THE SIGN- EVS To Remove Sign After UV Light Treatment at Discharge.

3/18/20

For questions regarding Isolation please call the INFECTION CONTROL OFFICE
Edgewood 301-2155 Florence 212-4399 Fort Thomas 572-368

COVID-19 is a respiratory illness similar to the flu. Symptomatic/suspected/confirmed cases of COVID-19 should be placed into airborne **AND** contact isolation.

A private negative pressure, 100% exhaust room is required.

Staff must wear an N95/PAPR hood to enter the room.

Educate the patient about isolation, cough etiquette, and hand hygiene. Patients should also be encouraged to wear a mask.

Visitation per hospital policy

Limit transport to medical necessity. If transport is necessary- instruct/assist patient to wear a mask.

Patients should not visit public areas such as the cafeteria or gift shop.