

Florida Department of Health
Health Care-Associated Infection Prevention Program
HAI_Program@flhealth.gov
850-245-4401

Use this packet as a guide and resource when transferring and accepting new patients with confirmed or suspected CPO infection or colonization. This packet includes:

1. Inter-facility transfer information sheet
2. Infection control recommendations
3. CPO fact sheet
4. Isolation signage
5. My Five Moments for Hand Hygiene
6. Personal protective equipment (PPE) guidance
7. Environmental cleaning guidance
8. Containment guidance
9. Screening guidance and duration of contact precautions
10. Additional infection control resources

This patient has been identified as colonized or infected with a CPO, a type of emerging drug-resistant bacteria. Containment is necessary to prevent an outbreak.

Patient name: _____ (Last, First)	Date of birth: _____ (MM/DD/YYYY)
Discharging facility: _____	Date completed: _____ (MM/DD/YYYY)
Reporter name: _____	Contact number: _____ (XXX-XXX-XXXX)
Specimen source: _____ _____	Specimen collection date: _____ (MM/DD/YYYY)

Imipenemase metallo-β-lactamase (IMP)
carbapenemase (KPC)
New Delhi metallo-β-lactamase (NDM)
Oxacillinase carbapenemase (OXA) (specify type, e.g., 23, 24/40, 48, 58): _____
Verona integron-endcoded metallo-β-lactamase (VIM)
Other: _____

Infection: Identification during clinical testing
This infection has been treated
Treatment is ongoing
Colonization: Identification during surveillance testing

Confirmed: CPO was isolated from a body site
Under investigation: Laboratory results are pending and CPO is suspected

Notes: _____

The Florida Department of Health and the Centers for Disease Control and Prevention recommend that:

Additional recommendations include:










- If a patient cannot be placed in a private room, ensure roommates or neighbors are low risk for developing infections (e.g., immunocompetent patients, have no or few indwelling devices).
- when interacting with patient or in patient's environment.
- Refer to "My Five Moments for Hand Hygiene" from the World Health Organization on [Page 6](#).
- Ensure that high-touch surfaces such as bedrails and bedside tables are wiped
 - (e.g., blood pressure cuffs, physical therapy equipment).
 -
- - If patient is being transferred out to another facility, complete the Transfer Information Sheet on [Page 2](#) and communicate these recommendations to the receiving facility.
 - In consultation with the Florida Department of Health, periodic reassessments for the presence of CPO colonization may be conducted to inform duration of infection control measures. Patient may be removed from contact precautions following a series of negative surveillance cultures.

Fact Sheet for Health Care Personnel:

Multidrug-Resistant Organisms (MDRO)

What are MDROs?

MDROs are organisms that are resistant to multiple antibiotics. Of particular concern are carbapenem-resistant MDROs because infections from these organisms are hard to treat and associated with high mortality rates.¹ The Centers for Disease Control and Prevention classified the following organisms as current threats in the United States based on the clinical and economic impact, incidence, transmissibility, availability of effective antibiotics, and barriers to prevention.²

Carbapenem-Resistant Enterobacteriaceae	Multidrug-Resistant <i>Acinetobacter</i>	Multidrug-Resistant <i>Pseudomonas aeruginosa</i>
 9,000 resistant infections*	 7,300 resistant infections*	 6,700 resistant infections*
 600 deaths*	 500 deaths*	 440 deaths*
 Urgent threat	 Serious threat	 Serious threat

*Estimated number of infections or deaths per year

What are carbapenemases?

Carbapenemases are enzymes that enhance resistance to almost all β -lactam antibiotics, including carbapenems. Carbapenemase-producing MDROs contain mobile resistance elements that facilitate transmission of resistance to other organisms.³ The following carbapenemases have been reported in the United States:

- *Klebsiella pneumoniae* carbapenemase (KPC)
- Oxacillinase-48-type carbapenemases (OXA-48)
- New Delhi metallo- β -lactamase (NDM)
- Imipenemase (IMP) metallo- β -lactamase
- Verona integron-encoded metallo- β -lactamase (VIM)

How are MDROs transmitted?

Person-to-person — hand carriage from health care personnel

Contact with body fluids — drainage from wound, urine, stool, saliva, blood

Contaminated medical equipment — bed rails, bedside tables, IV poles, catheters

How can MDRO transmission be prevented?

Perform hand hygiene and wear appropriate personal protective equipment

Keep patients with an MDRO in a single room; cohort patients with the same MDRO if a single room is not available

Ensure effective cleaning of patient rooms and medical equipment

Promote antimicrobial stewardship

If you have additional questions, please contact the Florida Department of Health
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(p) 850-245-4401

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1. Patel G., et al. Outcomes of Carbapenem-Resistant *Klebsiella pneumoniae* Infection and the Impact of Antimicrobial and Adjunctive Therapies. *Infect Cont Hosp Ep*, 2008. 29(12):1099-1106.

2. CDC. Antibiotic Resistance Threats in the United States, 2013. Atlanta, GA: U.S. Department of Health and Human Services, CDC; 2013.

3. Gupta N., et al. Carbapenem-Resistant Enterobacteriaceae: Epidemiology and Prevention. *Clinical Infectious Diseases*, 2011. 53(1):60-67.

Contact Precautions

IN ADDITION TO STANDARD PRECAUTIONS



All family and visitors:

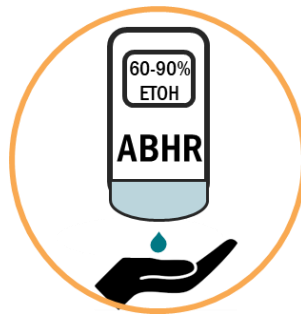
Please report to nurses station or see staff
BEFORE entering room

****ANTES de entrar los visitantes deben presentarse a la estación de enfermeras****

Everyone **MUST:**

Perform hand hygiene

With alcohol-based hand rub (ABHR) or soap and water before entering and exiting



Wear gown

Before entering and remove upon exiting



Wear gloves

Before entering and remove upon exiting



Todos **DEBEN:**

Realizar higiene de manos

Con un desinfectante para manos a base de alcohol (ABHR) o agua y jabón antes de entrar o salir

Usar bata

Antes de entrar y retirar al salir

Usar guantes

Antes de entrar y retirar al salir

Enhanced Barrier Precautions

IN ADDITION TO STANDARD PRECAUTIONS



All family and visitors:

Please report to nurses station or see staff
BEFORE entering room

ANTES de entrar los visitantes deben presentarse a la estación de enfermeras

Everyone **MUST:** Perform hand hygiene

With alcohol-based hand
rub (ABHR) or soap and water
before entering and exiting



Todos **DEBEN:** Realizar higiene de manos

Con un desinfectante para manos a
base de alcohol (ABHR) o agua y
jabón antes de entrar o salir

Wear gown and gloves

For the following high-contact
resident care activities:

- Dressing
- Bathing/showering
- Transferring
- Changing linens
- Providing hygiene
- Changing briefs/assisting with toileting
- Device care or use (central line, urinary catheter, feeding tube, tracheostomy)
- Wound care



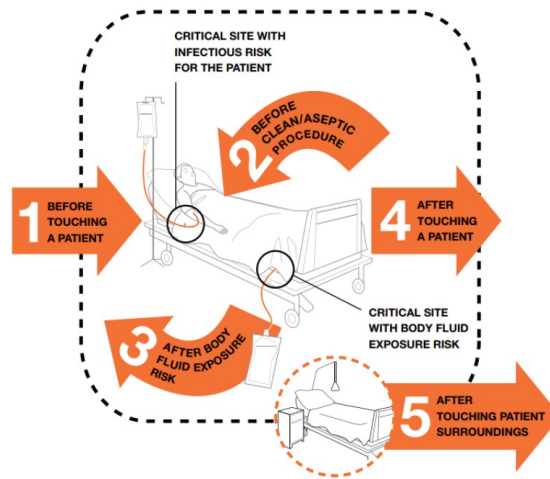
Usar bata y guantes

Cuando este realizando cuidado
de alto contacto, incluyendo las
siguiente actividades:

- Vestimiento
- Bañar/duchar
- Transferencia
- Cambio de ropa de cama
- Higiene
- Cambio de calsones/ayudar con labor de baño
- Cuidado o uso del dispositivo (línea central, cateter urinario, tubo de alimentacion, traquetomia)
- Cuido de heridas



My Five Moments for Hand Hygiene



OPPORTUNITY	INDICATION	EXAMPLE(S)
1. Before touching a patient	<p>When? Clean hands before touching a patient when approaching him/her</p> <p>Why? To protect against harmful germs carried on hands</p>	<p>A health care personnel (HCP) or environmental services staff, etc. entering the room to provide patient care or clean patient room.</p> <p>Note: If the patient is on any type of transmission-based precaution (e.g., contact, airborne, droplet) this step should be performed before donning any PPE.</p>
2. Before clean/aseptic procedure	<p>When? Clean hands immediately before performing a clean/aseptic procedure</p> <p>Why? To protect against harmful germs, including the patient's own from entering his/her body</p>	<p>A HCP is already in the room and is preparing to conduct a procedure. For instance, cleaning a tracheostomy, providing urinary catheter care, entering a central venous catheter, etc.</p>
3. After body fluid exposure risk	<p>When? Clean hands immediately after an exposure risk to body fluids AND after glove removal (between tasks)</p> <p>Why? To protect oneself and the health care environment from harmful patient germs</p>	<p>A HCP is draining and measuring urine from the patient's urinary catheter bag and then proceeds to give the patient her/her medication.</p>
4. After touching a patient	<p>When? Clean hands after touching a patient and his/her immediate surroundings, when leaving the patient's side</p> <p>Why? To protect oneself and the health care environment from harmful patient germs</p>	<p>A HCP exiting a patient room after administering medication and moving the patient bedside table.</p> <p>Note: If the patient is on contact precautions for <i>Clostridioides difficile</i> the HCP MUST use soap and water as the method for hand hygiene.</p>
5. After touching patient surroundings	<p>When? Clean hands after touching any object or furniture in the patient's immediate surroundings, when leaving the room—even if the patient HAS NOT been touched</p> <p>Why? To protect oneself and the health care environment from harmful patient germs</p>	<p>A HCP exiting a patient room after silencing an alarm on the patient's IV pole.</p> <p>An environmental services employee completing a daily clean in a patient room.</p> <p>Note: If the patient is on contact precautions for <i>Clostridioides difficile</i> the HCP MUST use soap and water as the method for hand hygiene.</p>

Source: World Health Organization. My 5 moments for hand hygiene. Geneva, Switzerland: World Health Organization. www.who.int/infection-prevention/campaigns/clean-hands/5moments/en/

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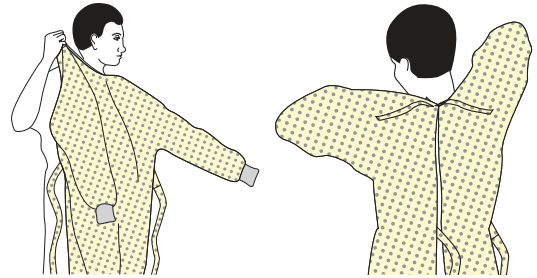


SEQUENCE FOR **PUTTING ON** PERSONAL PROTECTIVE EQUIPMENT (PPE)

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

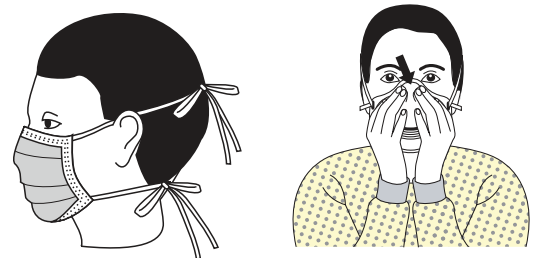
1. GOWN

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



2. MASK OR RESPIRATOR

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



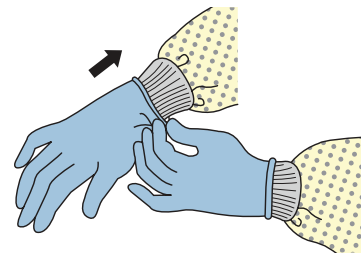
3. GOGGLES OR FACE SHIELD

- Place over face and eyes and adjust to fit



4. GLOVES

- Extend to cover wrist of isolation gown



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

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



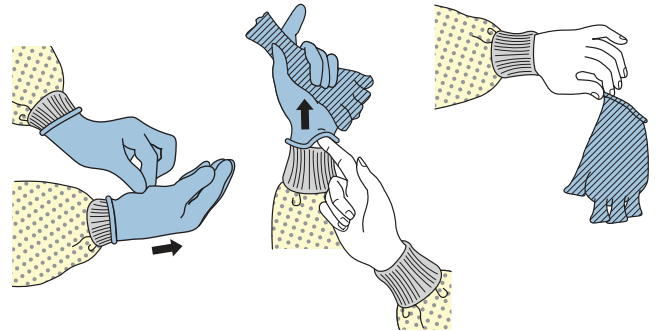
HOW TO SAFELY REMOVE PERSONAL PROTECTIVE EQUIPMENT (PPE)

EXAMPLE 1

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

1. GLOVES

- Outside of gloves are contaminated!
- If your hands get contaminated during glove removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Using a gloved hand, grasp the palm area of the other gloved hand and peel off first glove
- Hold removed glove in gloved hand
- Slide fingers of ungloved hand under remaining glove at wrist and peel off second glove over first glove
- Discard gloves in a waste container



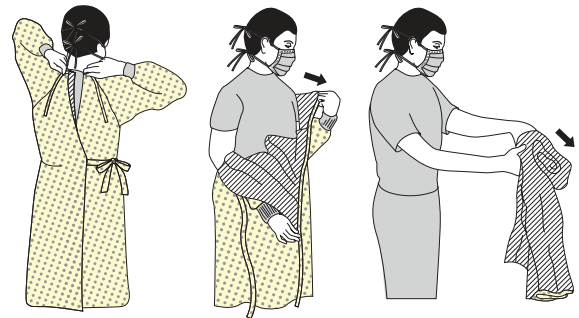
2. GOGGLES OR FACE SHIELD

- Outside of goggles or face shield are contaminated!
- If your hands get contaminated during goggle or face shield removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Remove goggles or face shield from the back by lifting head band or ear pieces
- If the item is reusable, place in designated receptacle for reprocessing. Otherwise, discard in a waste container



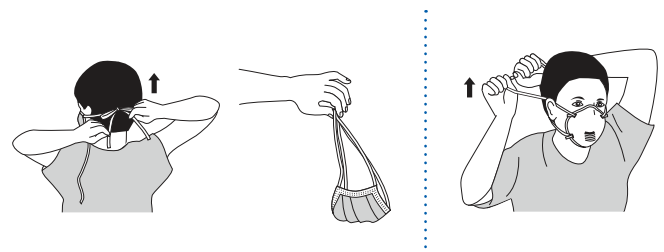
3. GOWN

- Gown front and sleeves are contaminated!
- If your hands get contaminated during gown removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Unfasten gown ties, taking care that sleeves don't contact your body when reaching for ties
- Pull gown away from neck and shoulders, touching inside of gown only
- Turn gown inside out
- Fold or roll into a bundle and discard in a waste container

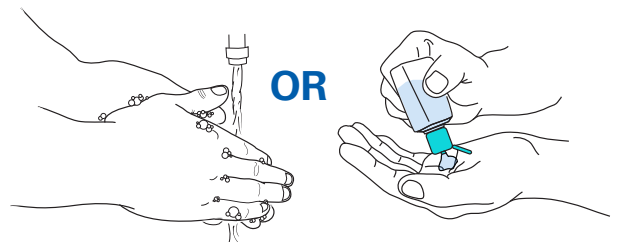


4. MASK OR RESPIRATOR

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



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



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



Environmental Services (EVS) Education:

MULTIDRUG-RESISTANT ORGANISMS (MDROs)

Why is it important to combat MDROs?

MDROs can survive on surfaces for hours to months if those surfaces are not properly cleaned and disinfected.



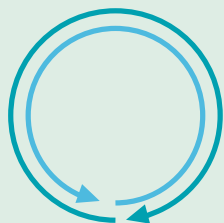
Creating policies and procedures to ensure a systematic approach

- Increase the frequency of cleaning, particularly for high-touch surfaces (e.g., bedrails, overbed table).
- Use single-use disposable noncritical equipment or dedicate equipment to one patient.
- Re-educate EVS staff on cleaning specific for MDROs.
- Audit adherence of cleaning to the facility's environmental cleaning policies.
- Consider designating specific EVS staff to the affected patient care unit.

Before cleaning, perform hand hygiene and don gloves. Change gloves throughout the task and perform hand hygiene in-between. EVS staff should don additional PPE based on Patient isolation status.



The clean should start from one point in the room and move in a clockwise or counter clockwise motion to ensure no items in the rooms are missed.



Clean from the least soiled to most soiled and from physically high to physically low areas. End around the patient bed.

Use an Environmental Protection Agency (EPA) registered disinfectant to clean floors in critical areas such as isolation rooms.

Adhere to the contact time of each disinfectant to ensure the product is given enough time to adequately disinfect the surface being treated.



Change privacy curtains routinely, if they become soiled, and after the patient is discharged, transferred, or taken off of precautions.

If you have additional questions, please contact the Florida Department of Health, Health Care-Associated Infection Prevention Program at:
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Florida
HEALTH

EVS Cleaning Checklist

1. HEALTH CARE ZONE

- ☐ Door knobs
- ☐ Light switches
- ☐ Window sills
- ☐ Sharps container
- ☐ Soap dispenser
- ☐ Paper towel dispenser
- ☐ Counter surface area
- ☐ Handwashing sink in patient room
- ☐ Faucet appliance/handles
- ☐ Sink perimeter/surface area
- ☐ Inside sink basin
- ☐ Patient closet
- ☐ Stationary computer designated in patient room
- ☐ Visitor chair or couch

2. PATIENT ZONE

- ☐ Bed controls
- ☐ Bed-side railings
- ☐ Bedside table
- ☐ Bedside commode
- ☐ Blood pressure cuff
- ☐ Call light/television control
- ☐ IV pole
- ☐ Monitoring equipment
- ☐ Telephone

3. BATHROOM

SINK ZONE

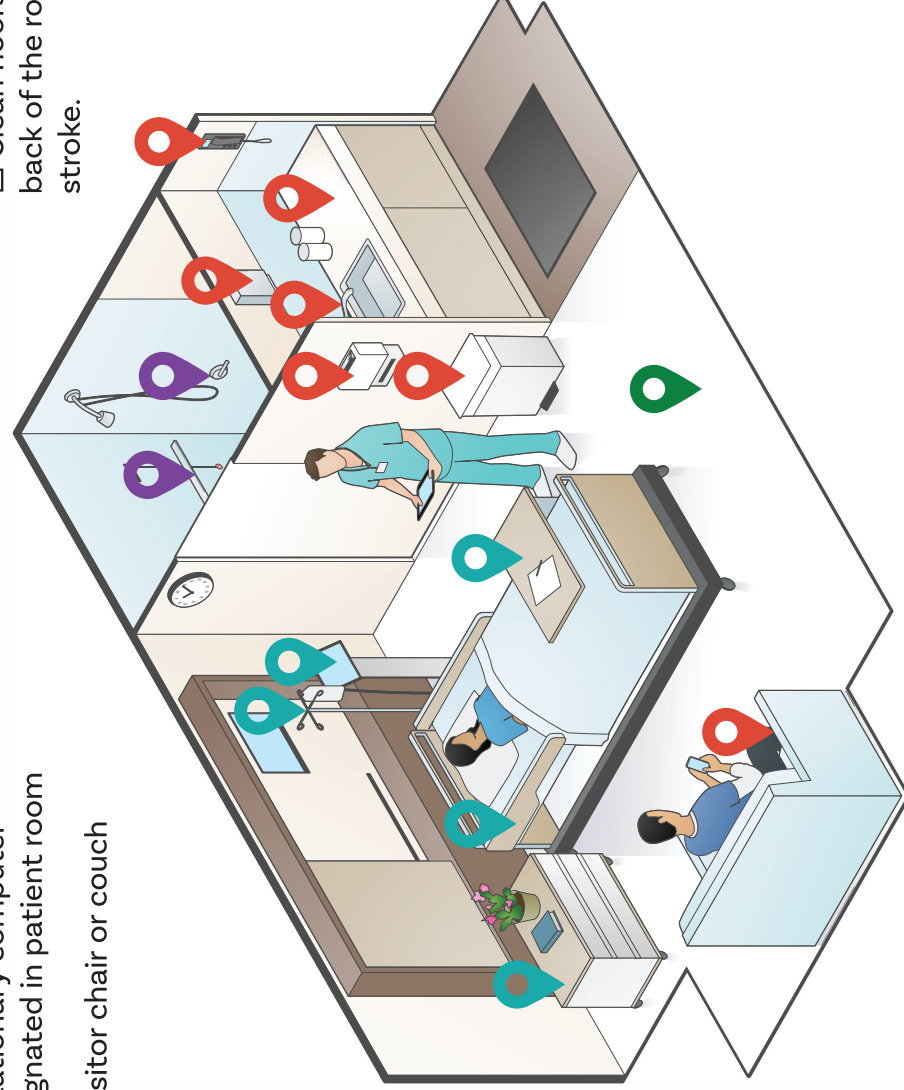
- ☐ Mirror
- ☐ Paper towel dispenser
- ☐ Soap dispenser
- ☐ Light switches
- ☐ Door knob
- ☐ Sink perimeter
- ☐ Sink basin
- ☐ Stop with drain and discard cleaning cloth

SHOWER ZONE

TOILET ZONE

4. FLOORS

- ☐ Clean floors last. Start in the back of the room using the “S” stroke.



Recommendations for MDRO Containment by Tier

Descriptions	Resistance Mechanisms and Organisms		
	Tier 1 Never or very rarely identified in the United States; pan-resistant organisms with the potential for wider spread in a region	Tier 2 Not regularly found in a region	Tier 3 Regularly found in a region but not endemic
Health Care Investigation			
Review the patient's health care exposures prior to and after the positive culture	Always	Always	Always
Contact Investigation¹			
Screening of health care facility roommates	Always	Always	Always
Broader screening of health care contacts ²	Always ³	Sometimes ⁴	Sometimes
Prospective lab surveillance ⁵	Always	Always	Always
Retrospective lab surveillance ⁶	Always	Always	Sometimes
Household contact screening	Sometimes	Rarely	Rarely
Environmental sampling	Sometimes	Rarely	Rarely
Health care personnel screening	Sometimes	Rarely	Rarely
Evaluate potential spread to facilities that regularly share patients with the index facility ⁷	Sometimes	Sometimes	Rarely
Infection Control Measures			
Prompt notification of health care providers and patients	Always	Always	Always
Implementation of appropriate transmission-based precautions	Always	Always	Always
Clear communication of patient MDRO status with transferring facilities	Always	Always	Always
site infection control assessment with observations of practice (i.e. Infection Control Assessment and Response (ICAR))	Always	Always	Sometimes

¹ For Tier 1 and 2 organisms/mechanisms, health care exposures and contacts over the preceding 30 days should be investigated unless information is available about the time the organism was most likely acquired. This includes any health care facility where the patient had an overnight stay during that time period. In some investigations, outpatient facilities and emergency departments might also be included. For Tier 3 organisms, investigation of health care exposures and health care contacts is generally limited to the current and sometimes prior admission.

² This may include targeted screening of contacts at highest risk for acquisition or unit point prevalence surveys.

³ If the MDRO is a novel organism for which data on the frequency and modes of transmission are not known, or if the index patient was not on contact precautions during their entire stay in a health care facility, then additional screening (beyond roommates) is recommended. Broader screening, including patients on the same ward as the index patient or patients who shared health care personnel, might be particularly important for detecting novel MDROs when data on the frequency and modes of transmission are lacking.

⁴ If the index patient was not on contact precautions during their entire stay in a health care facility, then broader screening (beyond roommates) is recommended. Screening can initially be limited to the contacts at highest risk for acquisition, such as those still admitted who overlapped on the same ward as the index patient and who have a risk factor for MDRO acquisition (e.g., bedbound, high levels of care, receipt of antibiotics, or mechanical ventilation). Alternatively, facilities may choose to screen entire units using point prevalence surveys.

⁵ Prospective surveillance of clinical cultures should be conducted for three months after the last identified case.

⁶ Conduct a laboratory lookback covering at least six months prior to identification of index case.

⁷ A public health investigation should also be initiated at health care facilities known to regularly share patients with health care facilities where transmission has occurred, such as post-acute care facilities. At a minimum, this should include notification of the facility and a request to retrospectively and prospectively evaluate clinical cultures for the phenotype of interest. This could also include admission screening of patients at the facility (e.g., transfers from the index facility) or point prevalence surveys of high-risk patients or units.

Reference: CDC, Interim Guidance for a Public Health Response to Contain Novel or Targeted Multidrug-resistant Organisms

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Colonization Screening and Isolation Guidance for Multidrug-Resistant Organisms (MDROs) in Acute Care Settings

Organism	Contact Precautions Discontinuation Criteria	Comments
<i>Candida auris</i> (<i>C. auris</i>)	<ul style="list-style-type: none"> The Centers for Disease Control and Prevention (CDC) currently recommends continuing contact precautions (CP) for the entire duration of the patient's stay in the facility.³ CDC does not recommend routine reassessments for <i>C. auris</i> colonization.³ Reassessment of colonization may be considered in consultation with the Florida Department of Health. Reassessment should not be performed for 3 months after last positive result for <i>C. auris</i>.³ 	Evidence suggests that patients remain colonized for many months, perhaps indefinitely even after acute infection (if present) has been treated and resolved. ³
Multidrug - Resistant <i>Enterobacteriaceae</i> (MDR-E) and Carbapenemase Producing Organisms (CPOs)	<ul style="list-style-type: none"> At least 6 months have elapsed since last positive culture, and: <ul style="list-style-type: none"> Two (2) consecutive negative swab samples, at least one week apart.^{1*} No evidence of ongoing transmission or draining wounds that cannot be contained by dressings.² 	Maintain CP for duration of index hospital stay. ¹ Certain extensively drug-resistant <i>Enterobacteriaceae</i> have no or limited treatment options, which makes the impact of even a single transmission event significant. ¹
Vancomycin-Resistant Enterococci (VRE)	<ul style="list-style-type: none"> Three (3) consecutive negative cultures, at least one week apart.^{1*} No evidence of ongoing transmission or draining wounds that cannot be contained by dressings.² 	Hospitals should consider extending CP for patients who are highly immunosuppressed, receiving broad spectrum systemic antimicrobial therapy without VRE activity, receiving care in high-risk units (e.g., burn units, etc.), or receiving care at institutions with high rates of VRE infection. ¹
Methicillin-Resistant <i>Staphylococcus aureus</i> (MRSA)	<ul style="list-style-type: none"> Three (3) consecutive negative screening cultures, at least one week apart.^{1*} No evidence of ongoing transmission or draining wounds that cannot be contained by dressings.² 	Evidence indicates that most patients will remain negative for MRSA colonization if they have 3 consecutive negative weekly surveillance cultures. ¹
<i>Clostridioides difficile</i> (<i>C. diff</i>)	<ul style="list-style-type: none"> At least 48 hours after care and resolution of diarrhea.^{1*} 	Hospitals should consider extending CP through the duration of hospitalization if they have elevated rates of <i>C. diff</i> in their facility. ¹

*No indication of clinical infection that is currently producing symptoms and/or broad-spectrum antibiotic use that may select for this organism

¹Banach, D.B., et al. (2018). Duration of contact precautions for acute-care settings. www.shea-online.org/index.php/journal-news/website-highlights/560-shea-expert-guidance-duration-of-contact-precautions-for-acute-care-settings

²Centers for Disease Control and Prevention. (2007). Type and Duration of Precautions Recommended for Selected Infections and Conditions. www.cdc.gov/infectioncontrol/guidelines/isolation/appendix/type-duration-precautions.html

³Centers for Disease Control and Prevention. (2020). Infection and Prevention Control for *Candida auris*. www.cdc.gov/fungal/candida-auris/c-auris-infection-control.html

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Colonization Screening and Isolation Guidance for Multidrug-Resistant Organisms (MDROs) in Long-Term Care Settings

Organism	Contact Precautions Discontinuation Criteria	Comments
<i>Candida auris</i> (<i>C. auris</i>)	<ul style="list-style-type: none"> The Centers for Disease Control and Prevention (CDC) currently recommends continuing contact precautions (CP) or enhanced barrier precautions (EBP), depending on the situation, for the entire duration of the patient's stay in the facility. CDC does not recommend routine reassessments for <i>C. auris</i> colonization. Reassessment of colonization may be considered in consultation with the Florida Department of Health. Reassessment should not be performed for 3 months after last positive result for <i>C. auris</i>.³ 	Evidence suggests that patients remain colonized for many months, perhaps indefinitely even after acute infection (if present) has been treated and resolves. ²
Multidrug-Resistant <i>Enterobacteriaceae</i> (MDR-E) and Carbapenemase-Producing Organisms (CPOs)	<p>When there is no evidence of:</p> <ul style="list-style-type: none"> Ongoing transmission, Acute diarrhea, or Draining wounds or other sites of secretions/excretions that are unable to be covered or contained.^{5,6} 	For ill residents (e.g., dependent on health care personnel for health care and activities of daily living, ventilator-dependent, etc.) and for residents whose infected secretions or drainage cannot be contained, use CP or EBP, depending on the situation, in addition to standard precautions. ⁴
Vancomycin-Resistant <i>Enterococci</i> (VRE)	<p>When there is no evidence of:</p> <ul style="list-style-type: none"> Ongoing transmission, or Draining wounds or other sites of secretions/excretions that are unable to be covered or contained.^{5,6} 	For ill residents (e.g., dependent on health care personnel for health care and activities of daily living, ventilator-dependent, etc.) and for residents whose infected secretions or drainage cannot be contained, use CP or EBP, depending on the situation, in addition to standard precautions. ⁴
Methicillin-Resistant <i>Staphylococcus aureus</i> (MRSA)	<p>When there is no evidence of:</p> <ul style="list-style-type: none"> Ongoing transmission, or Draining wounds or other sites of secretions/excretions that are unable to be covered or contained.^{5,6} 	For ill residents (e.g., dependent on health care personnel for health care and activities of daily living, ventilator-dependent, etc.) and for residents whose infected secretions or drainage cannot be contained, use CP or EBP, depending on the situation, in addition to standard precautions. ⁴
<i>Clostridioides difficile</i> (<i>C. diff</i>)	<ul style="list-style-type: none"> 48 hours after resolution of diarrhea.^{1,3} 	<p>The presence of acute diarrhea due to <i>C. diff</i> infections can increase the risk of transmission due to health care personnel hand contamination.^{1,3}</p> <p>Place residents with suspected <i>C. diff</i> and more than three (3) diarrheal stools in presumptive CP while awaiting test results.^{1,3}</p>

¹Clostridium difficile Infection and Pseudomembranous Colitis. APIC Text, text.apic.org/toc/healthcare-associated-pathogens-and-diseases/clostridium-difficile-infection-and-pseudomembranous-colitis

²Infection Prevention and Control for *Candida auris* | *Candida auris* | Fungal Diseases | CDC, Centers for Disease Control and Prevention, www.cdc.gov/fungal/candida-auris/c-auris-infection-control.html

³Long-Term Care. APIC text, text.apic.org/toc/infection-prevention-for-practice-settings-and-service-specific-patient-care-areas/long-term-care

⁴Multidrug-resistant Organisms (MDRO) Management [Summary of Recommendations] LTCF | www.cdc.gov/infectioncontrol/guidelines/mdro/index.html

⁵Smith, Philip W, et al. "SHEA/APIC Guidelines: Infection Prevention and Control in the Long-Term Care Facility, July 2008. Infection Control and Hospital Epidemiology, U.S. National Library of Medicine, Sept. 2008, ncbi.nlm.nih.gov/pmc/articles/PMC3319407/

⁶Type and Duration of Precautions Recommended for Selected Infections and Conditions | Multidrug-resistant organisms (MDROs) Infection or Colonization | CDC, Centers for Disease Control and Prevention, www.cdc.gov/infectioncontrol/guidelines/isolation/appendix/type-duration-precautions.html

Patient and Family Education:

Multidrug-Resistant Organisms (MDRO)

What is an MDRO?

A germ that is not killed by the drugs meant to treat them

How do MDROs spread?



Hands of health care workers, visitors, or family members



Body fluids — drainage from wounds, urine, stool, saliva, blood



Dirty objects or surfaces — bed rails, bedside tables, medical equipment

How can the spread of MDROs be prevented?

Washing hands after touching body fluids or dirty surfaces



OR



1. Wet hands



2. Apply soap



3. Press firmly and rub hands for 20 seconds



4. Rinse



5. Use towel to dry hands and turn off water

Use hand sanitizer (ABHR) and rub hands together until dry

Stopping the spread of germs



Patients may be placed on contact precautions to control the spread of germs.

Medical staff will advise if a patient is on any type of precautions and visitors will be instructed to wear protective gear such as gowns, gloves, or masks.

Cleaning the environment



Keep the patient's room and everything around the patient clean and tidy.

Medical staff will clean the patient's room daily using an approved product.

If you have additional questions, please contact the Florida Department of Health Health Care-Associated Infection Prevention Program at: (e) HAI_Program@FLHealth.gov
(p) 850-245-4401

Prepared February 2, 2019



Educación para el paciente y familiares:

Organismos Resistentes a Múltiples Medicamentos (MDRO)

¿Qué es un MDRO?

Un germen que no es eliminado por los medicamentos destinados a tratarlos

¿Cómo se propagan los MDRO?



Manos de los trabajadores de la salud, visitantes o miembros de la familia



Fluidos corporales — drenaje de heridas, orina, heces, saliva, sangre



Objetos o superficies sucias — barandas, mesas de noche, equipos médicos

¿Cómo se puede prevenir la propagación de MDROs?

Lavarse las manos después de tocar fluidos corporales o superficies sucias



0



Use desinfectante para manos (ABHR) y frote las manos hasta que se sequen

1. Moje las manos

2. Aplique jabón

3. Presiona firmemente y frota las manos durante 20 segundos

4. Enjuague

5. Use una toalla para secarse las manos y apague el agua

Deteniendo la propagación de gérmenes.



Los pacientes pueden tomar precauciones de contacto para controlar la propagación de gérmenes.

El personal médico le dirá si un paciente toma algún tipo de precaución y se recomendará a los visitantes que usen indumentaria protectora, como batas, guantes o máscaras.

Limpiando el medio ambiente



Mantenga limpia y ordenada la habitación del paciente y todo lo que la rodea.

El personal médico limpiará la habitación del paciente diariamente con un producto aprobado.

Si tiene preguntas adicionales, comuníquese con el Departamento de Salud de Florida
Programa de prevención de infecciones asociadas a la atención médica en:

(e) HAI_Program@FLHealth.gov (p) 850-245-4401

Preparado en febrero 2, 2019



Edikasyon Pasyan ak Fanmi:

Multidrug-Resistant Organisms (MDRO)

Ki sa MDRO ye?

Yon jèm ou mikwòb ki pa mouri Lé yo trete li avèk médikaman yo itilize pou trété yo

Ki jan MDROs difizé?



Men travayè ki bay swen, vizité, oswa manm fanmi an



Likid kò — drénaj ki soti nan blésé, pise, pou pou, kraché, san



Objè oswa sifas sal — ray kabann, tab bò kote kabann lan, ékipman médikal

Kijan yo ka anpéché pwopagasyon MDRO yo?

Lave men ou leu ou fin manyen likid kò ou sifas sal



OSWA

Sèvi ak

dezenfektan pou men (ABHR), fwote men nou jouk sèk



1. Mouye men



2. Aplike savon



3. Peze fèm epi fwote men ou pou 20 segonn



4. Rense



5. Sèvi ak sèvyèt pou seche men epi fèmèn dlo a avèk li tou

Nou ka sispann gaye mikwòb yo



Yo ka mété pasyan an sou kontak prekosyon pou kontwolé pwopagasyon jèm yo.

Anplwaye médikal la ka konseye yon pasyan si pasyan an sou nenpòt prekosyon epi yo ka enstwi vizité mété pwoteksyon sou yo tankou wòb, gan, ou mask.

Netwayaj anviwònman an



Kenbe chanm pasyan an ak tout bagay alantou pasyan an pwòp.

Anplwaye médikal la ap netwaye chanm pasyan an chak jou avèk yon pwodwi apwouve.

Si ou gen lòt kesyon, tanpri kontakte Dépatman Santé Florid la Pwogram Swen Santé Asosye Prevansyon Enfeksyon nan:

(e) HAI_Program@FLHealth.gov

(p) 850-245-4401

Prepare March 25, 2019



Resistance Genes

Your test result had the following resistance gene(s):

Imipenemase metallo- β -lactamase (IMP)

Klebsiella pneumoniae carbapenemase (KPC)

New Delhi metallo- β -lactamase (NDM)

Oxacillinase-48-type carbapenemase (OXA)

Verona integron-encoded metallo- β -lactamase (VIM)

What is a resistance gene?

A resistance gene is a tool that some germs use to stop a drug from killing it. This gene is made by the germ and can be passed to other germs. For more information, visit the Centers for Disease Control and Prevention webpage about resistance genes (www.cdc.gov/hai/organisms/cre/index.html).

What is the difference between colonization and infection?

Colonization means that you have the germ in your gut, but the germ is not making you sick. You can still pass the germ to others even if you are not sick. Infection means that you have symptoms, such as fever (feel hot), diarrhea (watery stool), or fatigue (feel tired). If you are carrying the germ, you might get sick. You are more likely to become sick if you have long health care stays, medical tools under your skin (such as catheters or ventilators), a recent transplant, or had long courses of antibiotics, or were in an intensive care unit.

Do I need treatment?

Your health care provider will tell you if you need treatment. If the germ is not making you sick (colonization), you do not need treatment. Taking drugs could make the problem worse and increase the time you carry these germs in your gut.

How long will I have this germ?

We do not know how long you will carry this germ. Many people carry these germs and often these germs go away. Your health care provider might ask for another test later to see if the germ is gone.

Can I pass this germ to my family or visitors?

No. Healthy people are not likely to get this germ. You may pass this germ to others that have long health care stays, medical tools under their skin, a recent transplant, or had long courses of antibiotics, or were in an intensive care unit.

If you have additional questions, please contact the Florida Department of Health
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Point-Prevalence Screening for CPOs

What is a point-prevalence screening (PPS)?

A PPS is a surveillance method that involves swabbing the rectum to test for carbapenemase-producing organisms (CPO).¹ A PPS is performed after a patient/resident within a facility is identified as being colonized or infected with a CPO to determine if other patients/residents are colonized.

Who should be screened?

The extent of screening is dependent on several factors including, but not limited to, the organism, length of contact precautions, and use of shared spaces.² Best practice is to aim for a 100% collection rate to ensure silent acquisition is not occurring in the facility. The Health Care-Associated Infection (HAI) Prevention Program can help you determine who should be screened.

Do patients/residents need to provide consent?

Yes. As with other laboratory specimens, all patients/residents will need to provide consent or assent. Please note that this is a public health response to a serious infection and public health concern, not a research study. Per the Centers for Medicare and Medicaid Services, verbal consent is required for this type of response. The HAI Prevention Program can provide you with a template consent form and script if your policies require written consent.

How are PPS specimens collected?

CPOs are carried in the gut in stool. You will need to designate a staff member or resource to collect the specimens. The Antibiotic Resistance Laboratory Network (ARLN) in Tennessee will provide cotton tip swabs, shipping containers, and free FedEx shipping for rectal specimen collection.³

How long will it take to receive results?

You will receive preliminary laboratory results within 2–10 days after screening. The ARLN will fax you the final results.

What should I do if a positive result is identified?

Place the patient/resident in a single room. If a single room is not available, cohort patients/residents with the same multidrug-resistant organism. Place the patient/resident on contact precautions and notify and train their clinical care team, including housekeepers, on the containment of this organism.⁴

How many PPS rounds will be conducted?

Initially, one PPS will be conducted. If the initial PPS identifies additional cases, then PPS rounds will typically be conducted bi-weekly until two consecutive rounds of PPS have resulted in no new positives. If there was extensive transmission, two additional monthly PPS will be conducted to ensure organism transmission was halted.

Resources

1. Florida Health Multidrug-Resistant Organisms (MDRO) Fact Sheet
2. Centers for Disease Control and Prevention (CDC) Interim Guidance for a Public Health Response to Contain Novel or Targeted MDROs
3. Florida Health Specimen Collection and Shipping Procedures
4. CDC Facility Guidance for Control of Carbapenem-Resistant Enterobacteriaceae (CRE) Toolkit

If you have additional questions, please contact the Florida Department of Health
Health Care-Associated Infection Prevention Program at: (e) HAI_Program@flhealth.gov
(p) 850-245-4401

Prepared June 11, 2019



Screening Tests

What is a screening test and why is it being done?

A screening test is used to see if patients have a certain germ. In this case, a patient with a multidrug-resistant organism (MDRO) was found in your region. An MDRO is a germ that is not killed by antibiotics. The Florida Department of Health has requested screening patients at this facility to make sure this germ has not spread.

How is the screening test taken?

A rectal swab is used for the screening test. The patient's clinical care team will tell the patient the steps before collecting the screening test.

Will it hurt?

No, it is a painless and non-invasive test. A person from the patient's clinical care team will collect the test.

When will the test results come back?

Medical staff will tell the patient their results within 2-10 days after screening.

What happens if the test result is positive?

If the patient has an MDRO, medical staff will tell the patient and may need to change medical treatment. To stop the spread to others, the patient will be put on contact precautions, which is a private room, and visitors may be told to wear gloves, gowns, or masks.

How long will the patient have an MDRO?

It is not known how long patients will have an MDRO. Make sure to tell medical staff that the patient has a history of an MDRO each time the patient goes to a health care facility.

If you have additional questions, please contact the Florida Department of Health
Health Care-Associated Infection Prevention Program at: (e) HAI_Program@FLHealth.gov
(p) 850-245-4401

Prepared February 2, 2019



Educación al paciente y familia:

Pruebas de detección

¿Qué es una prueba de detección y por qué se realiza?

Se usa una prueba de detección para ver si los pacientes tienen un determinado germen. En este caso, se encontró un paciente con un organismo resistente a múltiples fármacos (MDRO) en su región. Un MDRO es un germen que no es eliminado por los antibióticos. El Departamento de Salud de Florida ha solicitado exámenes de detección en este centro para asegurarse de que este germen no se haya propagado.

¿Cómo se realiza la prueba de detección?

Se utiliza un hisopo rectal para la prueba de detección. El equipo de atención clínica del paciente le informará los pasos antes de realizar la prueba de detección.

¿Dolerá?

No, es una prueba indolora y no invasiva. Una persona del equipo de atención clínica del paciente recogerá la prueba.

¿Cuándo volverán los resultados de la prueba?

El personal médico le informará al paciente sus resultados dentro de 2 a 10 días después de la selección.

¿Qué pasa si el resultado de la prueba es positivo?

Si el paciente tiene un MDRO, el personal médico le informará al paciente y es posible que deba cambiar el tratamiento médico. Para detener la propagación a otros, el paciente tomará las precauciones de contacto, que es una habitación privada, y se les puede pedir a los visitantes que usen guantes, batas o máscaras.

¿Cuánto tiempo tendrá el paciente un MDRO?

No se sabe cuánto tiempo los pacientes tendrán un MDRO. Asegúrese de informar al personal médico que el paciente tiene un historial de un MDRO cada vez que va a un centro de atención médica.

Si tiene preguntas adicionales, comuníquese con el Departamento de Salud de Florida
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Preparado en febrero 2, 2019



Tès Depistaj

Ki sa ki se yon tès depistaj epi poukisa pou tès la fèt?

Yo itilize yon tès depistaj pou wè si pasyan yo gen yon sèten jém ou mikwób (multidrug-resistant organism [MDRO]). Yon MDRO se yon jém ki pa mouri avék antibyotik. Nan ka sa, yo te jwenn yon pasyan nan rejyon ou ki gen yon MDRO. Dépatman Santé Florid te mande pasyan tès depistaj nan etablisman sa pou asire ke jém sa pa te gaye.

Kijan yo fè tès depistaj?

Yo itilize yon prelevman rektal pou tès depistaj la. Ekip swen klinik pasyan an ap di pasyan an etap sa yo anvan yo kolekte tès la.

Èske li fè mal?

Non, li se yon tès san doulè. Yon moun ki nan pati ékip swen klinik pasyan an ap kolekte tès la.

Kilè rezilta tès yo ap retounen?

Anplwaye médikal la ap di pasyan an rezilta yo nan 2-10 jou apré tès depistaj la fèt.

Kisa ki ap pase si rezilta tès la pozitif?

Si pasyan an gen yon MDRO, pèsonèl médikal la ap di pasyan an epi yo ka bezwen chanje tretman médikal. Pou sispann MDRO gaye nan lòt moun, yo pral mété pasyan an sou kontak prekosyon, ki se yon chanm prive, épi vizité ka oblijé mété gan, rob oswa mask.

Konbyen tan pasyan an ka gen yon MDRO?

Pa gen okenn fason pou konnen konbyen tan pasyan yo pral genyen yon MDRO. Asire ou pou ou di pèsonèl médikal yo ke pasyan an gen yon istwa avék MDRO chak fwa pasyan an ale nan yon etablisman swen santé.

Si ou gen lòt kesyon, tanpri kontakte Dépatman Santé Florid la Pwogram Swen Santé
Asosye Prevansyon Enfeksyon nan: (e) HAI_Program@FLHealth.gov
(p) 850-245-4401