**PURPOSE:**

The purpose of the following policy is to prevent transmission of Multidrug Resistant Organism (MDRO) to susceptible persons and to establish guidelines for the management of patients with Methicillin Resistant Staphylococcus Aureus (MRSA), Vancomycin Resistant Enterococci (VRE), Multidrug Resistant Gram Negative Organisms (including E. coli, Klebsiella spp., Pseudomonas spp., etc.) and Carbapenemase-Producing Carbapenem-Resistant Organisms (CP-CRO).

**PROCEDURES:**

**Responsibility and Accountability**

1. The Infection Prevention and Control (IPC) Team will receive a daily update from microbiology with all patients newly identified with a significant organism.
   1. Patients identified with MRSA, VRE, MDRO, or CP-CRO will be flagged on their patient record under Problems and Diagnosis.

**Isolation Precautions for MRSA, VRE, and/or MDROs:**

1. MRSA:
   1. Use Standard Precautions for patients who are colonized with only MRSA (no-active infection). Use Contact Precautions for patients known or suspected to have an active infection with MRSA or Combined Droplet Precautions for patients with an active infection from an artificial airway (e.g. trach, ET tube).
2. VRE and other MDROs:
   1. Use Contact Precautions when admitting patients known or suspected to have an active infection and/or colonized. Perform hand hygiene consistent with the WHO 5 moments (See IC 212 Hand Hygiene)
   2. Gown and gloves are required when entering a patient room
   3. If the patient tests positive from an artificial airway (i.e. trach, ET tube) then they will be placed in Combined-Droplet Precautions.
   4. Perform hand hygiene consistent with the WHO 5 moments
   5. Gown, gloves, and mask required when entering a patient’s room

**Cohorting and Discontinuation of isolation**

1. Provide private room if available
2. Cohort with similarly colonized/infected patient unless another infection is present.
3. When several cases occur on the same unit, consider cohorting patient care personnel.
4. **Discontinuation of isolation** requires cultures from the original site of colonization or infection if applicable.
   1. Isolation may be discontinued after three (3) negative cultures at least 7 days apart, after antibiotic treatments have been stopped for > 1 week.
   2. If a positive culture is collected from a sterile body site, blood, wound that has since resolved or the site is no longer accessible (ie. decannulated trach, extubated) patient can be de-isolated once they have been off antibiotics for 7 days without the need for a negative culture.
   3. If a patient is on prophylactic antibiotics that do not target the MDRO organism (i.e. oncology patients on three times weekly dosing of prophylactic Bactrim), they may be tested and de-isolated if cultures are negative.
5. The Infection Prevention and Control team should be consulted, if needed, prior to removing the patient from isolation.

**Carbapenemase-Producing Carbapenem Resistant Organisms (CP-CRO)**

1. CP-CRO is defined as a Carbapenem-Resistant Organism that tests positive for a Carbapenemase gene (KPC, NDM, VIM, IMp, or OXA-48). CP-CRO positive patients will be identified in the patient’s medical record in the blue banner bar.
2. Place patient in single patient room. No shared bathrooms will be permitted.
3. Patients will be placed in Enhanced Contact Precautions. Strict hand hygiene and PPE compliance must be followed for CP-CRO patients.
   1. Perform hand hygiene consistent with the WHO 5 moments
   2. Gown and gloves are required when entering a patient’s room
4. If the patient tests positive from an artificial airway (i.e. trach, ET tube) then they will be placed in Enhanced Combined-Droplet precautions. Strict hand hygiene and PPE compliance must be followed for CP-CRO patients.
   1. Perform hand hygiene consistent with the WHO 5 moments
   2. Gown, gloves, and mask required when entering a patient’s room
   3. During the index admission, 1:1 nursing care is required for patients with CP-CRO. Other staff rounding or consulting on patients with CP-CRO, including medical teams, PT/OT/Speech/Expressive Arts, Radiology, Expressive Arts, EVS should attempt to visit these patients last if possible.
      1. When possible, Respiratory Care Practitioners who are assigned to CP-CRO patients should be paired with lower acuity, less invasive patients.
      2. When possible, PT/OT/Speech/Expressive Arts therapists should visit patients with CP-CRO at the end of their day. Therapy should be limited to the patient room when possible.
      3. Other staff rounding or consulting on patients with CP-CRO, including medical teams, Radiology, EVS should attempt to visit these patients last if possible.

On subsequent admissions, efforts should be made to cohort nursing care for these patients.

1. Discontinuation **of isolation**: Isolation will be maintained for CP-CRO-positive patients indefinitely. Exceptions may be made by the Infection Prevention and Control team on a case by case basis.

When a CP-CRO positive patient is discharged or transferred, the patient’s room should be terminally cleaned and treated with the Xenex UV disinfection system. Transport and other equipment used for CP-CRO patients should be thoroughly cleaned and disinfected with hospital-approved disinfectant before being used for other patients.

1. **Cleaning for patients with MDROs:**
2. During routine housekeeping activities, room is to be cleaned applying strict Isolation techniques. Mops, rags, and bucket must be disinfected prior to reuse.
3. Terminal cleaning with hospital-approved disinfectants with emphasis on bathroom and bedside environment should be done after a patient’s discharge and prior to new admission. (Refer to IC policy # 716 and attachments)

**Ambulatory Care Guidelines for patients with MDROs:**

Patients Colonized with and/or Infected with MRSA, VRE, MDRO and/or CP-CRO in the Ambulatory Setting

1. In ambulatory settings, Standard Precautions will suffice for patients known to be colonized or infected with drug resistant organisms, making sure that gloves and gown are used for contact with uncontrolled secretions, pressure ulcers, draining wounds, stool incontinence and direct contact with ostomy tubes and bags.
2. The only exception is for patients with known CP-CRO colonization or infection. Healthcare providers should wear gown and gloves when caring for known CP-CRO patients in ambulatory settings. These patients should be scheduled for the last appointment of the clinic when possible. The patient’s room and equipment should be terminally cleaned after the appointment.

**Patient Care Equipment**

1. Whenever possible, dedicate the use of non-critical patient-care equipment to a single patient. If use of common equipment or items (i.e.: blood glucose testing kit, stethoscope, sphygmomanometer) is unavoidable, use them first with uninfected
2. Adequately clean and disinfect equipment after use on patients.
3. Discard all items soiled with infected material (i.e. feces) in plain plastic bags. Do not use red bags unless material is saturated with bloody fluid.
4. ALWAYS carry linen, food trays, and trash away from uniform, to avoid contamination.
5. Empty bedpans, urinals, urine/stool collection receptacles VERY carefully.
6. Never throw soiled linen or diapers on the floor.

**ATTACHMENTS**

1. [IC – 825.1 Antibiotic Resistant Organisms](https://secure.compliance360.com/ext/V2kkm-ngicm-ytn00mThtw==)
2. [IC – 825.2 Vancomycin-Resistant Enterococci (VRE) Fact Sheet-English](https://secure.compliance360.com/ext/bNy3CRgi1Zoi3XyEne43bA==)
3. [IC – 825.3 Vancomycin-Resistant Enterococci (VRE) Fact Sheet-Spanish](https://secure.compliance360.com/ext/k6k3FzSTrbXLMNsI10nhlA==)
4. [IC – 825.4 MRSA fact sheet-English](https://secure.compliance360.com/ext/mxn8anY66plMHNireadtkg==)
5. [IC – 825.5 MRSA Fact sheet-Spanish](https://secure.compliance360.com/ext/4lK6_LRRKfSpyAwpbVY1ig==)
6. [IC – 825.6 VRE Questions and Answers for Staff](https://secure.compliance360.com/ext/Zety0JOmUsTK00ruAd7CuQ==)

**REFERENCES:**

1. CDC-HICPAC: Management of Multidrug-Resistant Organisms in Healthcare Settings, 2006.
2. APIC Text of Infection Control and Epidemiology. Chapter 93: Staphylococci; Chapter 76: Enterococci; Chapter 75: Enterobacteriaceae; Chapter 29: Isolation Precautions, 2014.
3. CDC, National Center for Emerging and Zoonotic Infectious Diseases. Facility Guidance for Control of Carbapenem-resistant Enterobacteriaceae (CRE). 2015 CRE Toolkit.
4. Banach et al. (2018). Duration of Contact Precautions for Acute-Care Settings (SHEA Expert Guidance). *Infection Control and Hospital Epidemiology* 39 (2): 127-144.

**POLICY OWNER:**

*Director, Accreditation & Licensing, Infection Prevention, and Emergency Management*