

UNDERSTANDING ENHANCED BARRIER PRECAUTIONS: GUIDANCE FROM CDC

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OVERVIEW

- ▶ Discuss communicable disease reporting requirements specific to CRE and *Candida auris*
- ▶ Discuss Public Health response to identified novel or targeted MDROs
 - ▶ Containment Strategy
 - ▶ Containment Tiers
- ▶ Present an overview of current recommended precautions
- ▶ Discuss new approach called “Enhanced Barrier Precautions”

Healthcare-associated Infections

CDC > Healthcare-associated Infections (HAI) > Containment Strategy



Home Healthcare-associated Infections (HAI)

HAI Data +

Types of Infections +

Diseases and Organisms +

Preventing HAIs +

Containment Strategy -

What Can Be Done

Implementation of Personal Protective Equipment (PPE) in Nursing Homes to Prevent Spread of Novel or Targeted Multidrug-resistant Organisms (MDROs)

Note: This Interim Guidance was updated on 07/26/2019 to clarify its current intended use as part of a Containment Response¹. Future updates are anticipated to address potential for application of this approach outside of a Containment Response.

On This Page

Description of Existing Precautions

Description of New Precautions

<https://www.cdc.gov/hai/containment/PPE-Nursing-Homes.html>

WHAT WE KNOW

- ▶ Contact precautions creates challenges for nursing homes trying to balance the use of PPE and room restriction with residents' quality of life
- ▶ Contact precautions implemented only when residents are infected with an MDRO
- ▶ MDRO colonization can persist for long periods of time (e.g., months) and result in silent transmission
- ▶ Organisms that are pan-resistant or have novel mechanisms of resistance are emerging

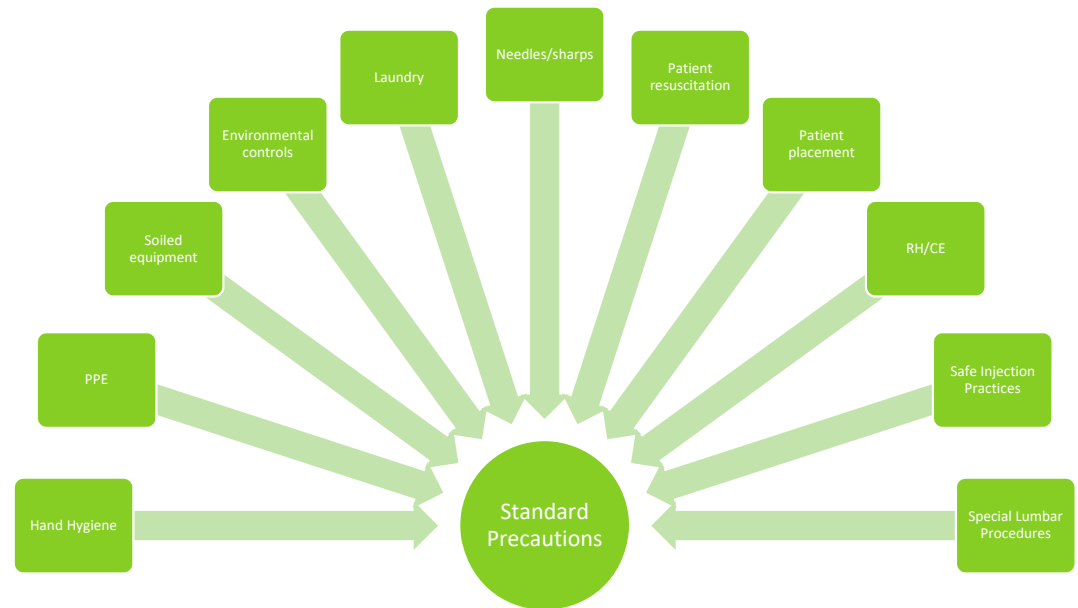


Colonization VS Infection?



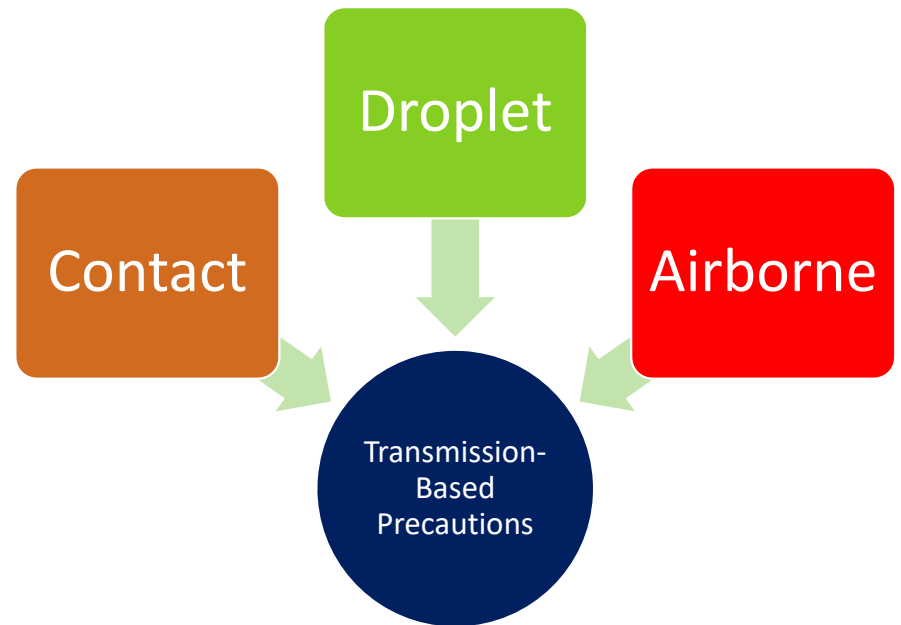
STANDARD PRECAUTIONS

Implementation of Standard Precautions constitutes the primary strategy for the prevention of healthcare-associated transmission of infectious agents among patients and healthcare personnel



TRANSMISSION BASED PRECAUTIONS

Transmission-Based Precautions are for patients who are known or suspected to be infected or colonized with infectious agents, including certain epidemiologically important pathogens, and are used when the route(s) of transmission are not completely interrupted using Standard Precautions alone.



2006 CDC MDRO GUIDELINES

PRECAUTIONS IN LONG-TERM CARE

V.A.5.c.ii.1 “For relatively healthy residents (e.g., mainly independent) follow Standard Precautions making sure that gloves and gowns are used for contact with uncontrolled secretions, pressure ulcers, draining wound, stool incontinence, and ostomy tubes/bags.”

V.A.5.c.ii.2. For ill residents (e.g., those totally dependent upon healthcare personnel for healthcare and activities of daily living...) and for those residents whose infected secretions or drainage cannot be contained, use Contact Precautions, in addition to Standard Precautions.”

V.A.5.c.iii. For MDRO colonized or infected patients without draining wounds, diarrhea, or uncontrolled secretions, establish ranges of permitted ambulation, socialization, and use of common areas based on their risk to other patients and on the ability of the colonized or infected patients to observe proper hand hygiene and other recommended precautions to contain secretions and excretions.

SPICE RECOMMENDATIONS

RESIDENT CHARACTERISTICS

Component	Recommendation
Personal Protective Equipment (PPE)	
Gloves	For touching blood, body fluids, secretions, excretions, contaminated items; for touching mucous membranes and non-intact skin
Gown	During procedures and patient-care activities when contact of clothing/exposed skin with blood/body fluids, secretions, and excretions is anticipated
Mask, eye protection	During procedures and patient-care activities likely to generate splashes or sprays of blood, body fluids, secretions, especially suctioning, endotracheal intubation

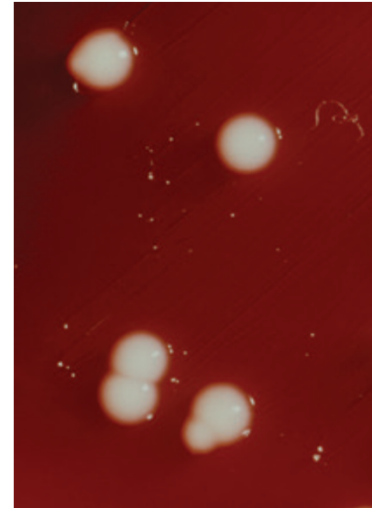
▶ Five C's

- ▶ Cognitive function (understands directions)
- ▶ Cooperative (willing and able to follow directions)
- ▶ Continent (of urine or stool)
- ▶ Contained (secretions, excretions, or wounds)
- ▶ Cleanliness (capacity for personal hygiene)

Kellar M. APIC Infection Connection. Fall 2010 ed.

WHAT ABOUT CARBAPENEM-RESISTANT *ENTEROBACTERIACEAE* (CRE)?

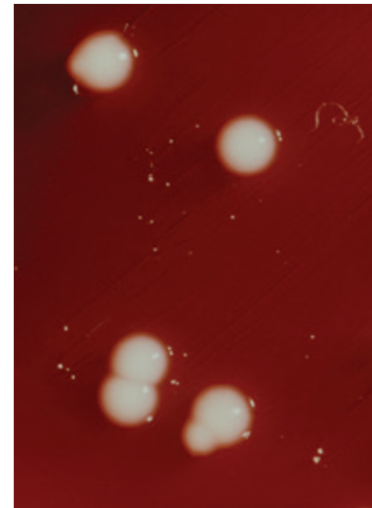
- ▶ In lower-acuity post-acute care settings (e.g., non-ventilator units of skilled nursing facilities, rehabilitation facilities), the use of Contact Precautions is more challenging and should be guided by the potential risk that residents will serve as a source for additional transmission based on their functional and clinical status and the type of care activity that is being performed.



*Facility Guidance for Control of Carbapenem-resistant Enterobacteriaceae (CRE):
November 2015 Update-CRE Toolkit; CDC*

WHAT ABOUT CARBAPENEM-RESISTANT *ENTEROBACTERIACEAE* (CRE)?

- ▶ Examples of when gowns and/or gloves might be used include the following:
 - ▶ Bathing residents
 - ▶ Assisting residents with toileting
 - ▶ Changing residents' briefs
 - ▶ Changing a wound dressing
 - ▶ Manipulating patient devices (e.g., urinary catheter)



*Facility Guidance for Control of Carbapenem-resistant Enterobacteriaceae (CRE):
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WHY CHANGE?

- ▶ “Focusing only on residents with active infection fails to address the continued risk of transmission from residents with MDRO colonization, which can persist for long periods of time (e.g., months), and result in the silent spread of MDROs”.
- ▶ “With the need for an effective response to the detection of serious antibiotic resistance threats, there is growing evidence that current implementation of Contact precautions in nursing homes is not adequate for prevention of MDRO transmission”.

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► What this guidance DOES NOT do:

- Does not replace existing guidance regarding use of contact precautions for other pathogens (e.g., *Clostridioides difficile*, norovirus)
- Does not provide guidance for acute care or long-term acute care (LTACs)

► What this guidance DOES do:

- Does provide guidance for PPE use and room restriction in nursing homes for preventing transmission of novel or targeted MDROs, including as part of a public health containment response

NOVEL OR TARGETED MDROS ARE DEFINED AS:

JULY 2019

- ▶ Pan-resistant organisms:
 - ▶ Resistant to all current antibacterial agents *Acinetobacter*, *Klebsiella pneumonia*, *pseudomonas aeruginosa*
- ▶ Carbapenemase-producing Enterobacteriaceae
- ▶ Carbapenemase-producing *Pseudomonas* spp.
- ▶ Carbapenemase-producing *Acinetobacter baumannii* and
- ▶ *Candida auris*

ENHANCED BARRIER PRECAUTIONS (EBP)



- ▶ Expands the use of PPE beyond situations in which exposure to blood and body fluids is anticipated (i.e. Standard Precautions)
- ▶ Refers to the use of gown and gloves during high-contact resident care activities that provide opportunities for transfer of MDROs to staff hands and clothing

ENHANCED BARRIER PRECAUTIONS

- ▶ Applies to **ALL** residents with **ANY of the following:**
 - ▶ Wounds and/or indwelling medical devices (e.g., central lines, urinary catheter, feeding tube, tracheostomy/ventilator) **REGARDLESS** of MDRO colonization status (*when a novel or targeted MDRO has been identified on the unit*)
 - ▶ Infection **OR** colonization with a novel or targeted MDRO when *Contact Precautions do not apply*
 - ▶ Facilities may consider applying EBP to residents infected or colonized with other epidemiologically-important MDROs based on facility policy (MRSA, VRE for example)
- ▶ Gown and gloves prior to the high contact care activity (cannot reuse gown and change between residents)
- ▶ No room restriction

ENHANCED BARRIER PRECAUTIONS

- ▶ Examples of high-contact resident care activities requiring gown and glove use:
 - ▶ Dressing
 - ▶ Bathing/showering
 - ▶ Transferring
 - ▶ Providing hygiene (focused on am and pm care)
 - ▶ Changing linens
 - ▶ Changing briefs or assisting with toileting
 - ▶ Device care or use; central line, urinary catheter, feeding tube, tracheostomy/ventilator
 - ▶ Wound care: any skin opening requiring a dressing

SUMMARY

▶ Contact Precautions:

- ▶ All residents with an MDRO when there is acute diarrhea, draining wounds or other sites of secretions/excretions that cannot be contained or covered
- ▶ On units or in facilities where ongoing transmission is documented or suspected
- ▶ *C. difficile* infection
- ▶ Norovirus
- ▶ Shingles when resident is immunocompromised, and vesicles cannot be covered
- ▶ Other conditions as noted in Appendix A- Type and Duration of Precautions Recommended For Selected Infections and Conditions

▶ Gown and gloves upon ANY room entry

▶ Room restriction except for medically necessary care



SUMMARY



▶ Enhanced Barrier Precautions:

- ▶ Intended to provide guidance for PPE use and room restriction in nursing homes for preventing transmission of novel or targeted MDROs, including as part of a public health containment response

▶ Contact or Enhanced Barrier Precautions:

- ▶ Post clear signage on the door or wall outside the room
- ▶ Make PPE available immediately outside the room
- ▶ Ensure access to alcohol-based hand rub in every resident room (ideally inside and outside)
- ▶ Trash can available for PPE disposal
- ▶ Periodic monitoring and assessment of compliance
- ▶ Provide education to residents, family and visitors
- ▶ Adherence to other measures including hand hygiene, environmental cleaning and cleaning, disinfection of medical devices

IMPLEMENTATION QUESTIONS

- ▶ How long should EBP be maintained on units with AR colonized or at-risk residents?
 - ▶ EBP was intended to be a long-term strategy for gown/glove use during care of residents to be followed for the duration of a resident's stay in a facility given the prolonged, potentially life-long risk of remaining colonized with certain AR pathogens
 - ▶ A transition back to Standard Precautions might be appropriate for residents placed in EBP solely because of the presence of a wound or indwelling medical device if/when those exposures are gone
- ▶ Should nursing homes apply EBP for MDROs like MRSA, VRE or ESBL?
 - ▶ The decision to use EBP for these organisms should be based on the prevalence of the MDRO in the facility/region. CDC will be working with HICPAC and nursing home partners to understand the application of EBP outside of AR Containment

AR Containment webinar series: Implementation of PPE in Nursing Homes to Prevent Spread of Novel or Targeted MDROs
Nimalie D. Stone, MD, MS; September 3rd, 2019

