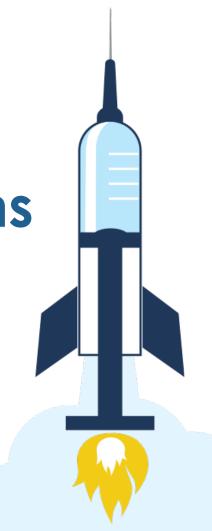
Boost Office Hours: Enhanced Barrier Precautions

Swati Gaur, MD, MBA, CMD, AGSF Northeast Georgia Health System Alliant Health Solutions

Erica Umeakunne, MSN, MPH, APRN, CICAlliant Health Solutions

April 25, 2024







About Alliant Health Solutions



Swati Gaur, MD, MBA, CMD, AGSF Medical Director of the Year 2022

ASSOCIATE CHIEF MEDICAL OFFICER, RAINMAKERS SOLUTIONS MEDICAL DIRECTOR, ALLIANT HEALTH SOLUTIONS SENIOR MEDICAL DIRECTOR, POST-ACUTE CARE, NORTHEAST GEORGIA MEDICAL CENTER

- Past chair of an Infection Advisory Committee during the COVID-19 pandemic
- Created and issued guidance to a COVID-19 task force
- National and international speaker on infection prevention and control issues in nursing homes
- Board certified in internal medicine, geriatrics, and hospice and
- palliative medicine
- Masters in business administration from Georgia Institute of Technology



Erica Umeakunne, MSN, MPH, APRN, CIC

INFECTION PREVENTION SPECIALIST

Erica is an adult gerontology nurse practitioner and infection preventionist with experience in primary care, critical care, health care administration and public health.

She was previously the interim hospital epidemiology director for a large Atlanta health care system and a nurse consultant in the Centers for Disease Control and Prevention's (CDC) Division of Healthcare Quality Promotion. At the CDC, she served as an infection prevention and control (IPC) subject matter expert for domestic and international IPC initiatives and emergency responses, including Ebola outbreaks and, most recently, the COVID-19 pandemic.

Erica enjoys reading, traveling, family time and outdoor activities.

Erica.Umeakunne@allianthealth.org

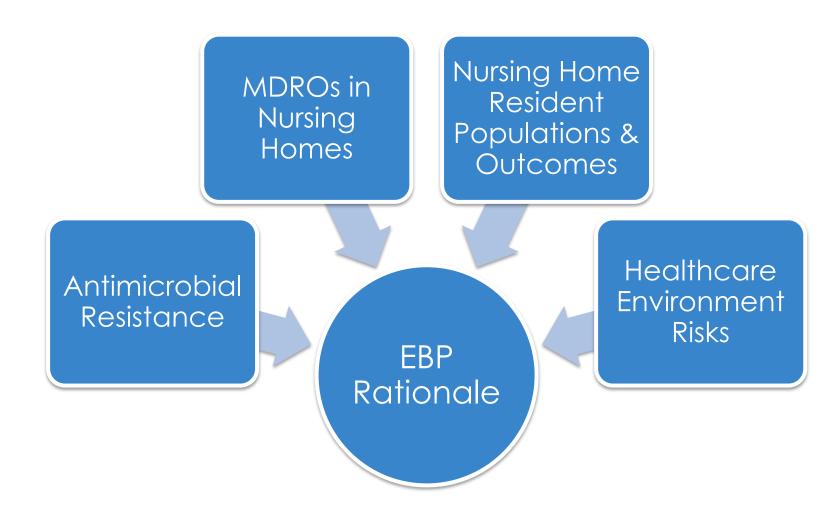


Objectives

- Summarize antimicrobial resistance and its impact on nursing homes
- Review the rationale and science behind enhanced barrier precautions (EBP)
- Discuss how to implement EBP as a strategy to prevent and control multi-drug resistant organism (MDRO) transmission in nursing facilities using clinical scenarios
- Share Alliant Health Solutions quality improvement resources to support infection prevention and control (IPC) activities



Make It Make Sense! The Why Behind Enhanced Barrier Precautions (EBP)





Antimicrobial Resistance

- Occurs when germs like bacteria and fungi develop the ability to defeat the drugs designed to kill them
 - Germs are not killed and continue to grow
 - Resistant infections difficult, and sometimes impossible, to treat
 - Lose the ability to treat infections
 - Require the use of second- and third-line treatments
 - Serious side effects
 - Prolong care and recovery
- An urgent global public health threat
 - Associated with nearly five million deaths in 2019
 - In the United States, more than 2.8 million antimicrobialresistant infections each year



Multi-Drug Resistant Organisms (MDROs) in Nursing Homes

- Higher prevalence of MDROs in nursing homes (NHs) compared to hospitals
- Residents disproportionately affected by multidrug-resistant organism (MDRO) infections
 - Bacterial infections are more frequent than viral, fungal or protozoan infections in older adults and are often preceded by skin or mucosal colonization
 - Urinary tract infections, lower respiratory tract infections, gastroenteritis (including viral and bacterial etiologies), and skin and soft tissue infections are the most common infections affecting NH residents
- Estimated MDRO colonization prevalence among residents in skilled nursing facilities greater than 50%
 - Methicillin-resistant Staphylococcus aureus (MRSA)
 - Extended beta spectrum lactamase (ESBL) organisms
- Skilled nursing facilities implicated in regional outbreaks of MDROs that are classified as urgent threats
 - Carbapenem-resistant organisms
 - Carbapenem-resistant Enterobacteriaceae (CRE)
 - Candida auris

Nursing Home Residents and MDRO Risk Factors

Multiple comorbidities

Wounds

Antibiotic exposure

Indwelling devices

Increased functional dependence

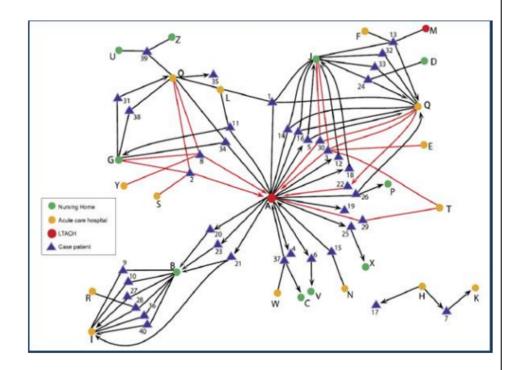
Congregate living environment





Healthcare Networks Drive MDRO Spread

- Patient movements amplify the regional burden of MDROs, especially in centers with:
 - Longer length of stay
 - Increasing acuity of care
 - Decreased staff: patient ratios
 - Gaps in infection prevention practices



Won SY et al. Clin Infect Dis. 2011;53(6):532-540.



The Large Burden of MDROs in Nursing Homes

Facility Type	Documented MDRO	Actual MDRO
Nursing Homes (n = 14)	17% irritit	58% †††††††††††
Ventilator-Capable Nursing Homes (n = 4)	20% iriniiri	76% İİİİİİİİİİ





McKinnell JA et al, Clin Infect Dis. 2019; 69(9):1566-1573



What Factors Increase the Risk of MDRO Infection or Colonization in Nursing Homes Residents?

- A. Multiple comorbidities
- B. Increased antibiotic exposure
- C. Presence of indwelling devices
- D. Increased functional dependence
- E. Wounds
- F. All the above



What Factors Increase the Risk of MDRO Infection or Colonization in Nursing Homes Residents?

Nursing Home Residents and MDRO Risk Factors

- A. Multiple comorbidities
- B. Increased antibiotic exposure
- C. Presence of indwelling devices
- D. Increased functional dependence
- E. Wounds
- F. All the above

Multiple comorbidities

Wounds

Antibiotic exposure

Indwelling devices

Increased functional dependence

Congregate living environment

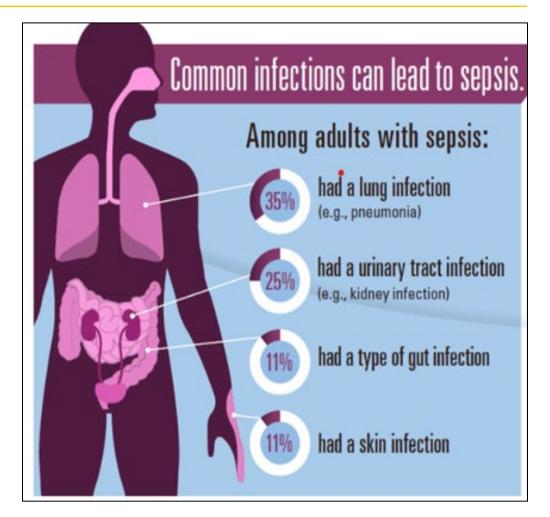
Hospitalizations



Sepsis and MDROs

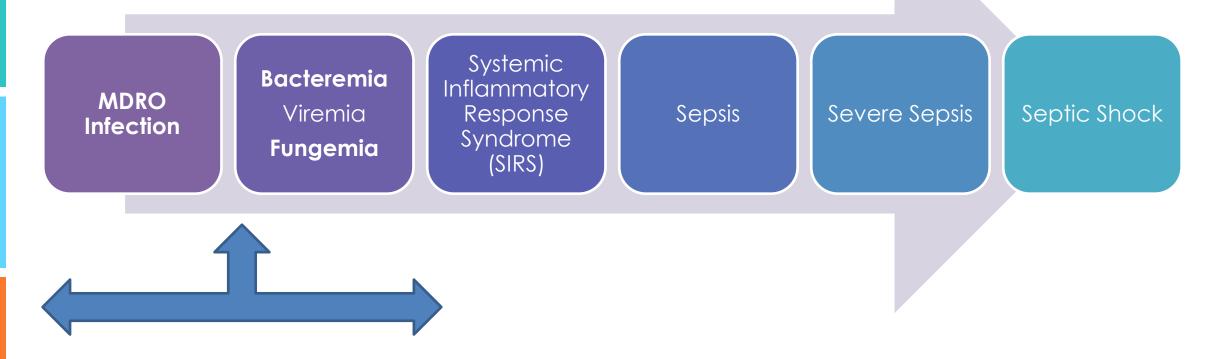
- Sepsis, or the infection causing sepsis, starts before a patient goes to the hospital in nearly 87% of cases
- Risk factors:
 - Adults 65 or older
 - People with weakened immune systems
 - People with chronic medical conditions, such as diabetes, lung disease, cancer, and kidney disease
 - People with recent severe illness or hospitalization, including due to severe COVID-19
- Urinary tract infections, lower respiratory tract infections, gastroenteritis (including viral and bacterial etiologies), and skin and soft tissue infections are the most common infections affecting NH residents

Cassone, M., & Mody, L. (2015). Colonization with multi-drug resistant organisms in nursing homes: Scope, importance, and management. *Current geriatrics reports*, 4(1), 87–95. https://doi.org/10.1007/s13670-015-0120-2





Sepsis and MDROs: Clinical Progression



Difficulty treating MDRO infection due to antimicrobial resistance

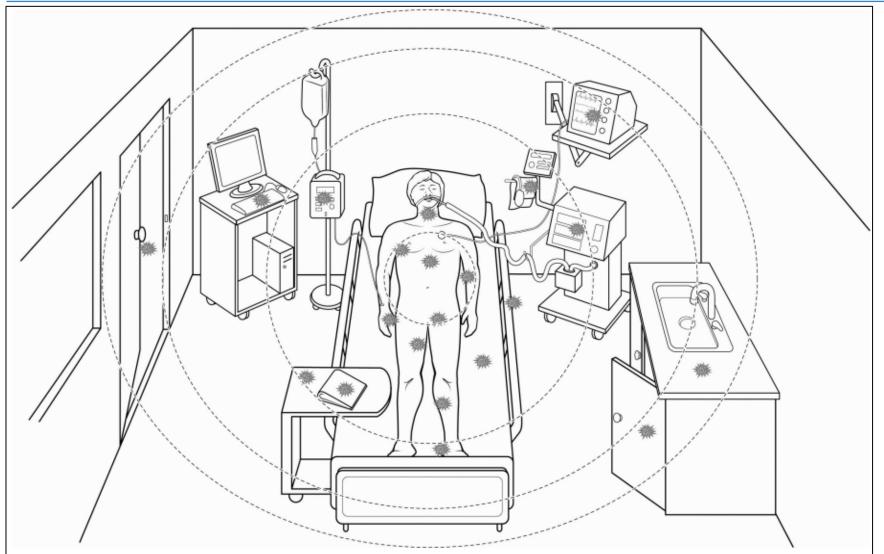


MRDO Infection-Related and Sepsis Risk Factors in NH Residents

Underlying MRDO Colonization Delayed diagnosis & identification of infection Limited or lack of timely diagnostic testing Prolonged empirical antibiotic therapy Intolerance and interactions involving specific classes of antibiotics Healthcare personnel (HCP) transmission

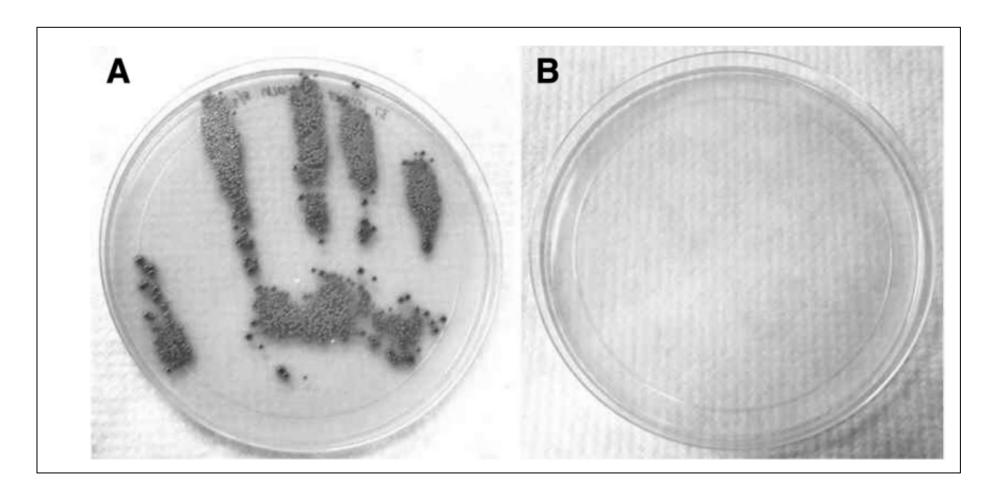


MDRO Bioburden in a Patient/Resident Room and Environment



Lin, M. Y., & Hayden, M. K. (2010). Methicillin-resistant Staphylococcus aureus and vancomycin-resistant enterococcus: Recognition and prevention in intensive care units. Critical Care Medicine, 38, \$335-\$344.

MDROs and Hand Contamination



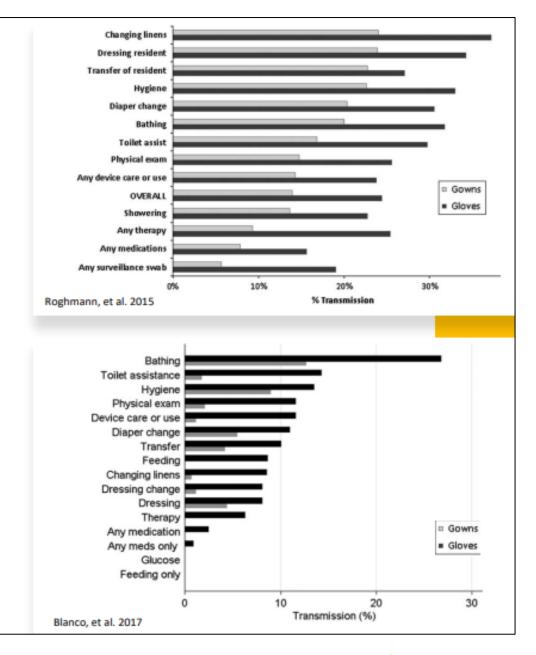
Lin, M. Y., & Hayden, M. K. (2010). Methicillin-resistant Staphylococcus aureus and vancomycin-resistant enterococcus: Recognition and prevention in intensive care units. *Critical Care Medicine*, 38, \$335-\$344.



MDRO Transmission Occurs Often During High-Contact Resident Care Activities

Highest risk activities for MDRO transmission

- Dressing resident
- Bathing/showering
- Transferring
- Providing hygiene
- Changing linens
- Diaper change/toilet assist
- Device care or use





Enhanced Barrier Precautions

- Enhanced Barrier Precautions (EBP) are an infection control intervention designed to reduce transmission of resistant organisms that employ targeted gown and glove use during high-contact resident care activities.
- EBP may be indicated (when contact precautions do not otherwise apply) for residents with any of the following:
 - Wounds or indwelling medical devices, regardless of MDRO colonization status
 - Infection or colonization with an MDRO
- Effective implementation of EBP requires staff training on the proper use of personal protective equipment (PPE) and the availability of PPE and hand hygiene supplies at the point of care.



DEPARTMENT OF HEALTH & HUMAN SERVICES Centers for Medicare & Medicaid Services 7500 Security Boulevard, Mail Stop C2-21-16 Baltimore, Maryland 21244-1850



Center for Clinical Standards and Quality/Quality, Safety & Oversight Group

Ref: QSO-24-08-NH

DATE: March 20, 2024

TO: State Survey Agency Directors

FROM: Director, Quality, Safety & Oversight Group (QSOG)

SUBJECT: Enhanced Barrier Precautions in Nursing Homes

Memorandum Summary

- CMS is issuing new guidance for State Survey Agencies and long term care (LTC)
 facilities on the use of enhanced barrier precautions (EBP) to align with nationally
 accepted standards.
- EBP recommendations now include use of EBP for residents with chronic wounds or indwelling medical devices during high-contact resident care activities regardless of their multidrug-resistant organism status.
- The new guidance related to EBP is being incorporated into F880 Infection Prevention and Control.

CMS Memo: Enhanced Barrier Precautions in Nursing Homes



Table 1: Implementing Contact versus Enhanced Barrier Precautions

This table only applies to MDROs, not all pathogens that may require use of transmission-based precautions.

Resident Status	Contact Precautions Use EBP		
Infected or colonized with any MDRO and has secretions or excretions that are unable to be covered or contained.	Yes	No	
Infected or colonized with a CDC-targeted MDRO without a wound, indwelling medical device or secretions or excretions that are unable to be covered or contained.	No Yes		
Infected or colonized with a non-CDC targeted MDRO without a wound, indwelling medical device, or secretions or excretions that are unable to be covered or contained.	No	At the discretion of the facility	
Has a wound or indwelling medical device, and secretions or excretions that are unable to be covered or contained and are not known to be infected or colonized with any MDRO.	Yes, unless/until a specific organism is identified.	Yes, if they do not meet the criteria for contact precautions.	
Has a wound or indwelling medical device, without secretions or excretions that are unable to be covered or contained and are not known to be infected or colonized with any MDRO.	No	Yes	

Examples of secretions or excretions include wound drainage, fecal incontinence or diarrhea, or other discharges from the body that cannot be contained and pose an increased potential for extensive environmental contamination and risk of transmission of a pathogen.

CMS Memo: Enhanced Barrier Precautions in Nursing Homes



Enhanced Barrier Precautions (EBP): Guidance for Nursing Homes to Prevent MDRO Spread



Implementation of PPE in Nursing Homes to Prevent Spread of Novel or Targeted MDROs https://www.cdc.gov/hai/containment/PPE-Nursing-Homes.html



Precautions	Applies to	PPE used for these situations	Required PPE	Room restriction
Standard Precautions	All residents	Any potential exposure to: Blood Body fluids Mucous membranes Non-intact skin Potentially contaminated environmental surfaces or equipment	Depending on anticipated exposure: gloves, gown, facemask or eye protection (Change PPE before caring for another resident)	None
Enhanced Barrier Precautions	 All residents with any of the following: Infection or colonization with an MDRO when Contact Precautions do not otherwise apply Wounds and/or indwelling medical devices (e.g., central line, urinary catheter, feeding tube, tracheostomy/ventilator) regardless of MDRO colonization status 	During high-contact resident care activities: Dressing Bathing/showering Transferring Providing hygiene 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	Gloves and gown prior to the high-contact care activity (Change PPE before caring for another resident) (Face protection may also be needed if performing activity with risk of splash or spray)	None
Contact Precautions	 All residents infected or colonized with a MDRO in any of the following situations: Presence of acute diarrhea, draining wounds or other sites of secretions or excretions that are unable to be covered or contained For a limited time period, as determined in consultation with public health authorities, on units or in facilities during the investigation of a suspected or confirmed MDRO outbreak When otherwise directed by public health authorities All residents who have another infection (e.g., C. difficile, norovirus, scabies) or condition for which Contact Precautions is recommended in Appendix A (Type and Duration of Precautions Recommended for Selected Infections and Conditions) of the CDC Guideline for Isolation Precautions. 	Any room entry	Gloves and gown (Don before room entry, doff before room exit; change before caring for another resident) (Face protection may also be needed if performing activity with risk of splash or spray)	Yes, except for medically necessary care

Implementation of Personal Protective Equipment (PPE) Uses in Nursing Homes to Prevent the Spread of Multi-Drug Resistant Organisms (MDROs):

Summary of Personal Protective Equipment (PPE) Use and Room Restriction When Caring for Residents in Nursing Homes



Enhanced Barrier Precautions: Best Practices & Steps to Implementation

Post clear signage on the door or wall outside the resident's room indicating type of Precautions & required PPE Make PPE, including gowns and gloves, available immediately outside of the resident room Ensure access to alcohol-based hand rub in every resident room (ideally both inside and outside of the room) Position a trash can inside the resident room and near the exit for discarding PPE after removal Incorporate periodic monitoring and assessment of adherence Provide education to staff, residents, and visitors



Mr. Jones has an active decubitus infection with carbapenem-resistant Acinetobacter baumannii (CRA) and requires assistance with his daily activities of care, especially dressing, bathing and toileting. His wound is not draining and remains covered. Does Mr. Jones meet the criteria for the use of enhanced barrier precautions?

A. Yes

B. No



Mr. Jones has an active decubitus infection with carbapenem-resistant Acinetobacter baumannii (CRA) and requires assistance with his daily activities of care, especially dressing, bathing and toileting. His wound is not draining and remains covered. Does Mr. Jones meet the criteria for the use of enhanced barrier precautions?

- ✓ History of infection or colonization with a targeted MDRO
- ✓ Wound is not draining and covered
- Enhanced barrier precautions indicated

A. Yes

B. No



Our therapy department is working with a resident on EBP who is scheduled to walk in the hallway. The Restorative Nursing Aide has to wear a gown and gloves when holding only the resident's gait belt.

- A. True
- B. False



Our therapy department is working with a resident on EBP who is scheduled to walk in the hallway. The Restorative Nursing Aide has to wear a gown and gloves when holding only the resident's gait belt.

A. True

B. False

- ✓ Enhanced Barrier Precautions should be followed when performing transfers and assisting during bathing in a shared/common shower room and when working with residents **in the therapy gym**, specifically when anticipating close physical contact while assisting with transfers and mobility.
- Therapists should wear gowns and gloves when working with residents on Enhanced Barrier Precautions in the therapy gym or in the resident's room if they anticipate close physical contact while assisting with transfers, mobility, or any high-contact activity. The facility can encourage care that involves high-contact activities to be done in the therapy gym or resident's room.
- ✓ Ambulating a resident with a gait belt does not appear to be a high-contact activity, based on the guidance.
- Preparing the resident in their room for ambulation would be considered a high-contact activity, and EBP should be used during this time.
 - ✓ Once this has been completed, gowns and gloves should be removed, and hand hygiene performed before leaving the resident's room to begin ambulation in the hallway.



Can personal protective equipment (PPE) be stored inside a resident room? The verbiage in the QSO does not indicate this, but I am hearing a lot about other facilities implementing this.

How are you storing personal protective equipment (PPE) in your facility?

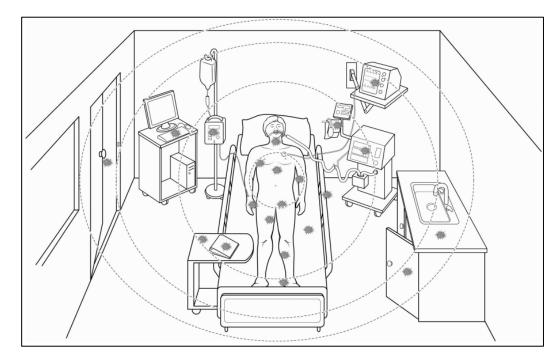
- A. Storing PPE in the hallway
- B. Storing PPE in the resident's room
- C. Telling staff to grab PPE from the supply area and carry it into the room
- D. We are still trying to figure it out!

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- B. Storing PPE in the resident's room
- C. Telling staff to grab PPE from the supply area and carry it into room
- D. We are still trying to figure it out!

✓ Best Practice: CDC guidance states that gowns and gloves should be available outside each resident room, and alcoholbased hand rub should be available for every resident room (ideally both inside and outside of the room).



Storing PPE in the resident's room increases the likelihood of MDRO contamination

Can an "orange dot" be placed next to a resident's name outside the door to identify them as having EBP, or is this a dignity issue? QSO states that this can be a "subtle" identification.

- A. True
- B. False

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A. True

B. False

CMS gives the facility discretion on how to communicate to staff which residents require the use of EBP... but wait!

We have some factors to consider!

Can an "orange dot" be placed next to a resident's name outside the door to identify them as having EBP, or is this a dignity issue? QSO states that this can be a "subtle" identification.

A. True

- B. False
- ✓ Will this be an effective method to communicate EBP to residents, visitors, family, and vendors?
- ✓ How are you validating that everyone knows this means the resident is on EBP?
- ✓ Is a "dot" easy to miss?
- ✓ Best Practice:
 - ✓ CDC recommends that a facility posts clear signage on the door or wall outside of the resident room indicating the type of Precautions and required PPE (e.g., gown and gloves). For Enhanced Barrier Precautions, signage should also clearly indicate the high-contact resident care activities that require the use of gowns and gloves. You should also provide education to residents and visitors.



Everyone Must:



Clean hands when entering and leaving room

Doctors and Staff Must:

Wear gloves and a gown for the following High-Contact Resident Care Activities:



- Dressing
- Bathing/Showering
- Transferring
- Changing Linens
- Providing Hygiene
- Changing briefs or assisting with toileting
- Device care or use: central line, urinary catheter, feeding tube, tracheostomy
- Wound Care: any skin opening requiring a dressing

Do not wear the same gown and gloves for the care of more than one person.



Mrs. Smith was transferred to our facility on 4/4/2024. She has a history of congestive heart failure, diabetes type II, high blood pressure, and a recent multi-drug resistant *Pseudomonas aeruginosa* decubitus infection. The staff has been using enhanced barrier precautions since Mrs. Smith's return from the hospital. However, the night shift nurse reports that Mrs. Smith has had three loose stools within the last eight hours, accompanied by abdominal pain.

Based on this report and the acute changes noted, staff should transition and implement contact precautions.

- A. True
- B. False



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Based on this report and the acute changes noted, staff should transition and implement contact precautions.

- A. True
- B. False

- ✓ Presence of acute diarrhea
- Clinical evaluation indicated to rule out
 C. diff infection
- ✓ Contact precautions are INDICATED



EBP Resources

Resources from CDC

- CDC Implementation of Enhanced Barrier Precautions (Guidance)
- <u>Centers for Disease Control and Prevention (CDC) Implementation and Use of Enhanced Barrier Precautions</u> (Continuing education webinar)
 - o <u>Slides</u>
- CDC Frequently Asked Questions (FAQs) for Enhanced Barrier Precautions
- CDC Enhanced Barrier Precautions Letter to Nursing Home Residents, Families, Friends, and Volunteers
- CDC Enhanced Barrier Precautions Letter to Nursing Home Staff
- Considerations for Use of Enhanced Barrier Precautions in Skilled Nursing Facilities

Resources from Alliant Health Solutions

- Infection Control Webpage
- Alliant Health Solutions: Enhanced Barrier Precautions Webinar
- EBP Bite-sized learning
- Enhanced Barrier Precautions Family/Resident Education
- Enhanced Barrier Precautions Sign



Nursing Home and Partnership for Community Health:

CMS 12th SOW GOALS



OPIOID UTILIZATION AND MISUSE

Promote opioid best practices

Reduce opioid adverse drug events in all settings



PATIENT SAFETY

Reduce hospitalizations due to c. diff

Reduce adverse drug events

Reduce facility acquired infections



CHRONIC DISEASE SELF-MANAGEMENT

Increase instances of adequately diagnosed and controlled hypertension

Increase use of cardiac rehabilitation programs

Reduce instances of uncontrolled diabetes

Identify patients at highrisk for kidney disease and improve outcomes



CARE COORDINATION

Convene community coalitions

Reduce avoidable readmissions, admissions to hospitals and preventable emergency department visits

Identify and promote optimal care for super utilizers



COVID-19

Support nursing homes by establishing a safe visitor policy and cohort plan

Provide virtual events to support infection control and prevention

Support nursing homes and community coalitions with emergency preparedness plans



IMMUNIZATION

Increase influenza, pneumococcal, and COVID-19 vaccination rates



TRAINING

Encourage completion of infection control and prevention trainings by front line clinical and management staff



Thank You for Your Time! Contact the AHS Patient Safety Team patientsafety@allianthealth.org



Amy Ward, MS, BSN, RN, CIC, FAPIC Patient Safety Manager amy.ward@AlliantHealth.org 678.527.3653



Dr. Paula St. Hill, DrPH, MPH, CIC, A-IPC Technical Advisor, Infection Prevention paula.sthill@AlliantHealth.org 678.527.3619



Donald Chitanda, MPH, CIC, LTC-CIP Technical Advisor, Infection Prevention donald.chitanda@allianthealth.org 678.527.3651



Erica Umeakunne, MSN, MPH, APRN, CIC Infection Prevention Specialist erica.umeakunne@AlliantHealth.org







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AlliantQIO

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