

Enhanced Barrier Precautions for Nursing Homes

November 16, 2022

Objectives

1

Define Enhanced
Barrier Precautions

2

Describe when to
implement
Enhanced Barrier
Precautions

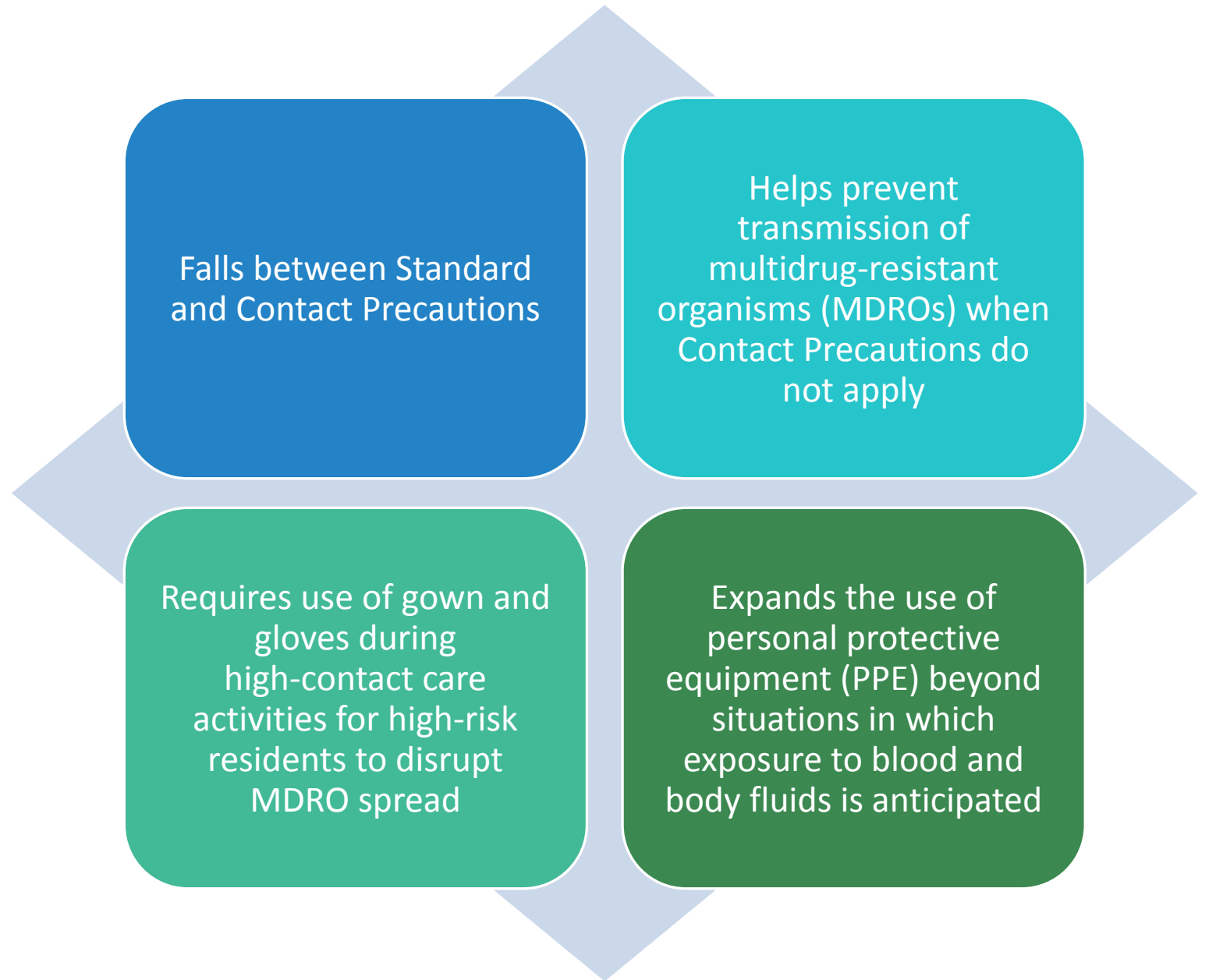
3

Discuss the
differences between
Enhanced Barrier
and Contact
Precautions

4

Describe
communication
process when
transferring a resident
on Enhanced Barrier
Precautions

Enhanced Barrier Precautions: **WHAT** are they?



*Contact
Precautions:*
WHEN do
they apply?

- All residents infected or colonized with an 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
 - On units or in facilities where ongoing transmission is documented or suspected
- Other infections/conditions as outlined in CDC's Guideline for Isolation Precautions Appendix A (e.g., *C. difficile*, scabies)

Enhanced Barrier Precautions: **WHO** do they apply to?

- All residents with *any of the following*:
 - Infection or colonization with a MDRO *when Contact Precautions do not apply*.
 - Update from prior guidance: this used to apply to only certain MDROs
 - Wounds and/or indwelling medical devices (e.g., central line, urinary catheter, feeding tube, tracheostomy, endotracheal tube) *regardless of MDRO colonization status*
 - Update from prior guidance: this used to only apply when a resident with a wound/device resided on a unit or wing where a resident known to be infected or colonized with a novel or targeted MDRO resides.

Wounds: Which Type of Precautions?

Standard Precautions

- Shorter-lasting wounds, such as skin breaks or skin tears, that can be covered with a Band-Aid or similar dressing

Enhanced Barrier Precautions

- Per CDC: “Any skin opening requiring a dressing”
- Generally chronic wounds
- Examples include: pressure ulcers, unhealed surgical wounds, diabetic foot ulcers, chronic venous stasis ulcers

Contact Precautions

- Wounds that cannot be covered or contained due to size and/or amount of drainage

Comparing Enhanced Barrier Precautions to Contact Precautions

Enhanced Barrier Precautions

- MDRO infection or colonization **WITHOUT** acute diarrhea or draining wounds or other sites of secretion/excretion that cannot be covered or contained
- On unit or in facility where ongoing MDRO transmission is **NOT** documented or suspected
- Have a wound that requires a dressing, regardless of MDRO status
- Have an indwelling medical device (e.g., central line, urinary catheter), regardless of MDRO status

Contact Precautions

- Have MDRO infection or colonization with acute diarrhea, draining wound(s) that cannot be contained, or other sites of secretion/excretion that cannot be covered or contained
- On unit or in facility where ongoing MDRO transmission is documented or suspected
- Have other condition or infection where Contact Precautions is recommended (e.g., *C. difficile*, norovirus)

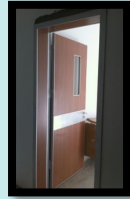
Enhanced Barrier Precautions

VS

Contact Precautions

**Applies Only to Nursing
Homes**

**Resident NOT
Isolated to Room**



During High-Contact Resident Care Activities



Hand Hygiene



**Environmental
Cleaning**



**Standard
Precautions**



**Applies to All Healthcare
Settings**

**Resident
Isolated to Room**



Upon Room Entry Every Time



Hand Hygiene



**Environmental
Cleaning**



**Standard
Precautions**



What type of MDROs are eligible for Enhanced Barrier Precautions?

Pan-resistant organisms

Carbapenemase-producing Enterobacterales

Carbapenemase-producing *Pseudomonas* spp.

Carbapenemase-producing *Acinetobacter baumannii*

Candida auris

Methicillin-resistant *Staphylococcus aureus*

Vancomycin-resistant *Enterococcus*

ESBL-producing Enterobacterales

Multidrug-resistant *Pseudomonas aeruginosa*

Drug-resistant *Streptococcus pneumoniae*

EBP in Practice: Scenario 1, Q1

You are currently working at XYZ Nursing and Rehab Facility and Mr. Alex Jones, a 79-year-old male is being admitted to your facility from a local hospital. Mr. Jones has no history of MDROs, has a right great toe non-healing ulcer that cultured positive for *Pseudomonas aeruginosa* during his hospital stay. He received a 14-day course of antibiotics and the wound shows no signs of infection. Wound care orders are in place for daily dressing changes.

What type of precautions would Mr. Jones require?

EBP in Practice: Scenario 1, Q1 Answer

What type of precautions would Mr. Jones require?

*a) Enhanced Barrier
Precautions*

Due to the open toe wound with a dressing he would meet the definition of a wound and should be on EBP.

Enhanced Barrier Precautions at a Glance



No private room required

Gowns and gloves are worn for high-contact resident care activities

Hand hygiene upon entering and exiting room

Residents are not restricted to their room

Intended to be used for the entire length of resident's stay in the facility (or until wounds heal / device removed)

EBP Personal Protective Equipment (PPE)



Wear gloves and gown
prior to the high-contact
care activity



Change PPE before caring
for another resident



Use eye/face protection if
performing activity with
risk of splash or spray (part
of Standard Precautions)

What Are High-Contact Resident Care Activities?

Dressing

Bathing/
showering

Transferring

Providing hygiene

Changing linens

Changing briefs
or assisting with
toileting

Device care or
use

Wound care

EBP in Practice: Scenario 1, Q2

Mr. Jones, the resident on EBP, has been admitted for 10 days and his toe ulcer is improving, but it has affected his gait. Physical therapy has been consulted to determine what type of service may benefit him.

John, the physical therapist, will be going into Mr. Jones's room to meet with him and his family to fill out an extensive medical history form.

What type of PPE should John use during his visit?

EBP in Practice: Scenario 1, Q2 Answer

What type of PPE should John use during his visit?

- a) No PPE would be required since no direct resident contact will occur.*

EBP in Practice: Scenario 1, Q3

After completing the assessment form, John will be evaluating and directly assisting Mr. Jones while he performs a series of exercises for the physical therapy treatment plan.

Does John need to wear PPE for his evaluation?

EBP in Practice: Scenario 1, Q3 Answer

Does John need to wear PPE for his evaluation?

- a) Yes, due to the direct resident contact that will occur during the evaluation process, this would be considered a high-contact resident care activity*

EBP in Practice: Scenario 1, Q4

What type of PPE would be required for EBP?



EBP in Practice: Scenario 1, Q4 Answer

What type of PPE would be required for EBP?

- a) Gloves and gown.*
- Standard precautions may also be needed, based on other risks that exist. Utilize additional PPE, such as a mask for coughing or eye/face protection for likelihood of splash or spray, as needed.*



EBP in Practice: Scenario 1, Q5

Mr. Jones is requesting to attend bingo in the activity room along with multiple other residents.

Due to the need for EBP, can Mr. Jones attend bingo?



EBP in Practice: Scenario 1, Q5 Answer

Due to the need for EBP, can Mr. Jones attend bingo?

- a) Yes, EBP does not require the resident to be restricted to their room or limited from participation in group activities.*

EBP in Practice: Scenario 1, Q6

Should healthcare personnel wear PPE when assisting Mr. Jones with his bingo card?

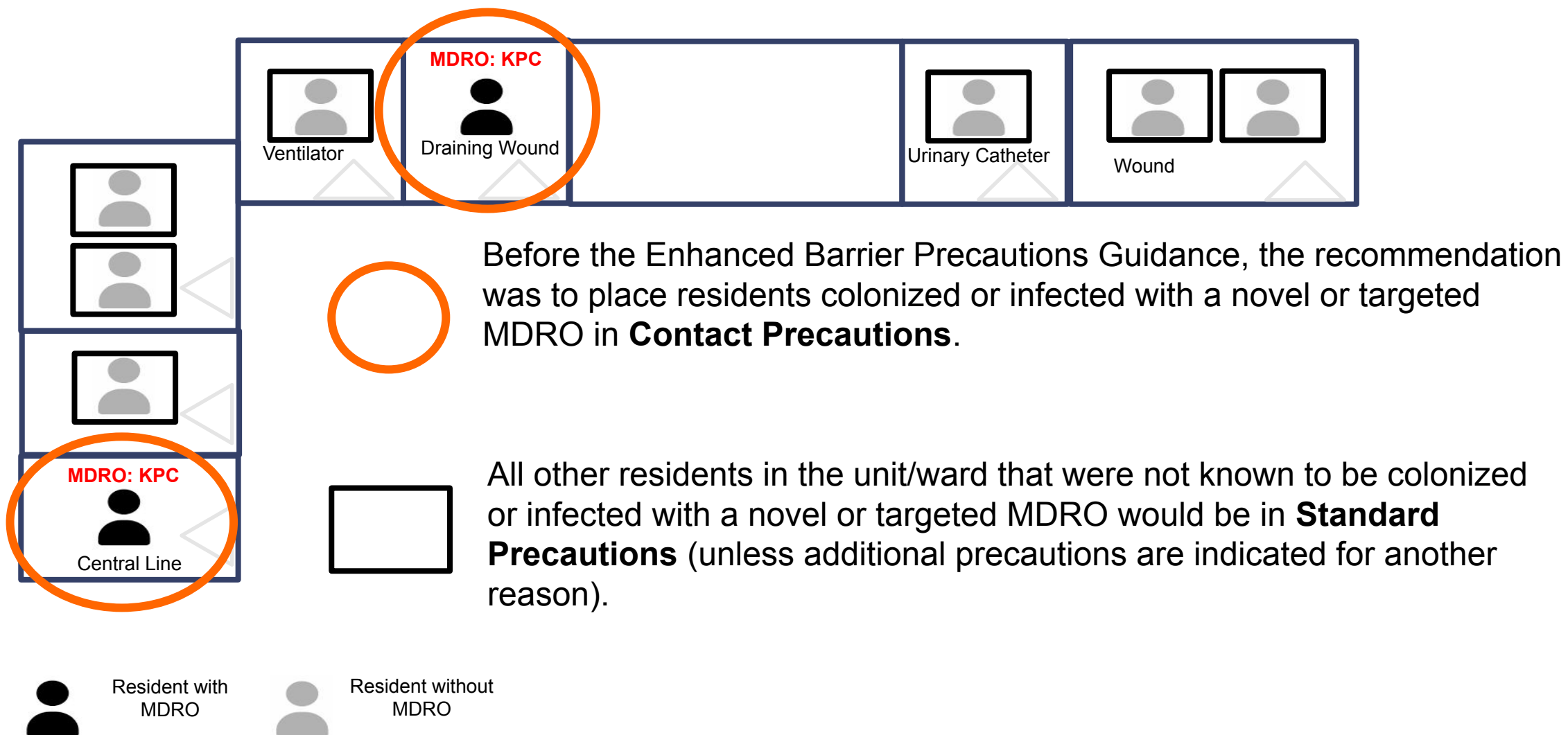


EBP in Practice: Scenario 1, Q6 Answer

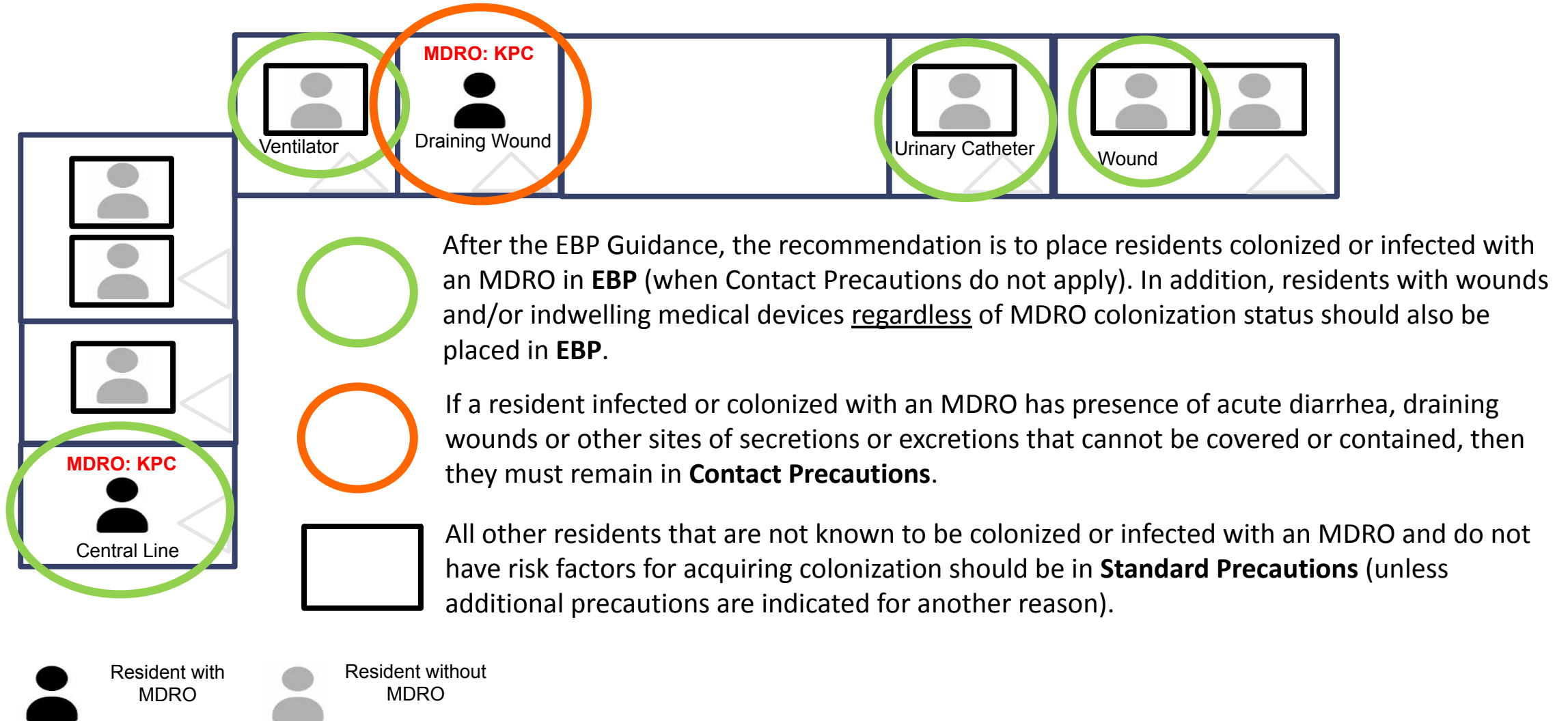
Should healthcare personnel wear PPE when assisting Mr. Jones with his bingo card?

- a) No, PPE is only necessary when performing high contact care activities. There is no need for PPE when minimal contact is expected. All HCP should practice hand hygiene as a part of Standard Precautions when contact is occurring between multiple residents.*

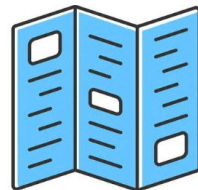
Example Scenario Before EBP Guidance



Example Scenario After EBP Guidance



Enhanced Barrier Precautions Implementation Steps



Post 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 gown and gloves

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, prior to exit of the room or before providing care for another resident in the same room

Incorporate periodic monitoring and assessment of adherence to determine the need for additional training and education

Provide education to residents and visitors

Discontinuing Enhanced Barrier Precautions

- Continue to reassess need for EBP throughout resident's stay

Examples when to transition EBP to Contact Precautions:



For MDRO indication, if resident develops diarrhea or unit/facility experiences MDRO outbreak

If a new infection (e.g., norovirus, *C. difficile*) or condition (e.g., scabies) arises that requires Contact Precautions

Examples when EBP can be discontinued (if no other indications for EBP):



For wound indication, if wound heals

For indwelling device indication, if device is removed

EBP in Practice: Scenario 1, Q7

Two months after admission to the facility, Mr. Jones's wound has healed with no open areas noted.

Can Mr. Jones be removed from EBP?

EBP in Practice: Scenario 1, Q7 Answer

Can Mr. Jones be removed from EBP?

- a) Yes, he no longer meets the EBP wound criteria, has no history of MDROs, and no invasive devices.*

With removal of EBP, it should also be evaluated whether Mr. Jones has any other conditions that may warrant transmission-based precautions. At this point, he does not.

EBP in Practice: Scenario 1, Q8

Mr. Jones will remain at your facility due to his declining mental status. On month 3 of his stay, he begins having frequent loose stools. Norovirus is suspected due to four other residents with similar symptoms.

What type of precautions should Mr. Jones be placed on?

EBP in Practice: Scenario 1, Q8 Answer

What type of precautions should Mr. Jones be placed on?

- a) Contact isolation per CDC guidelines should be used in the presence of acute diarrhea, draining wounds or secretions that cannot be covered or contained. EBP is not to be used in place of Contact Precautions.*

EBP in Practice: Scenario 1, Q9

Mr. Jones's diarrhea resolves, and he is feeling improved, so Contact Precautions are discontinued.

Approximately one week later, he develops urinary retention and a Foley catheter is placed.

Does Mr. Jones need to be placed on any type of precautions at this point? If so, for how long?

EBP in Practice: Scenario 1, Q9 Answer

Does Mr. Jones need to be placed on any type of precautions? If so, for how long?

- a) Due to the new invasive device (i.e., Foley), Mr. Jones should be placed back on enhanced barrier precautions. EBP should be maintained until his Foley catheter is removed.*

Communication

If transferring a resident to another facility:

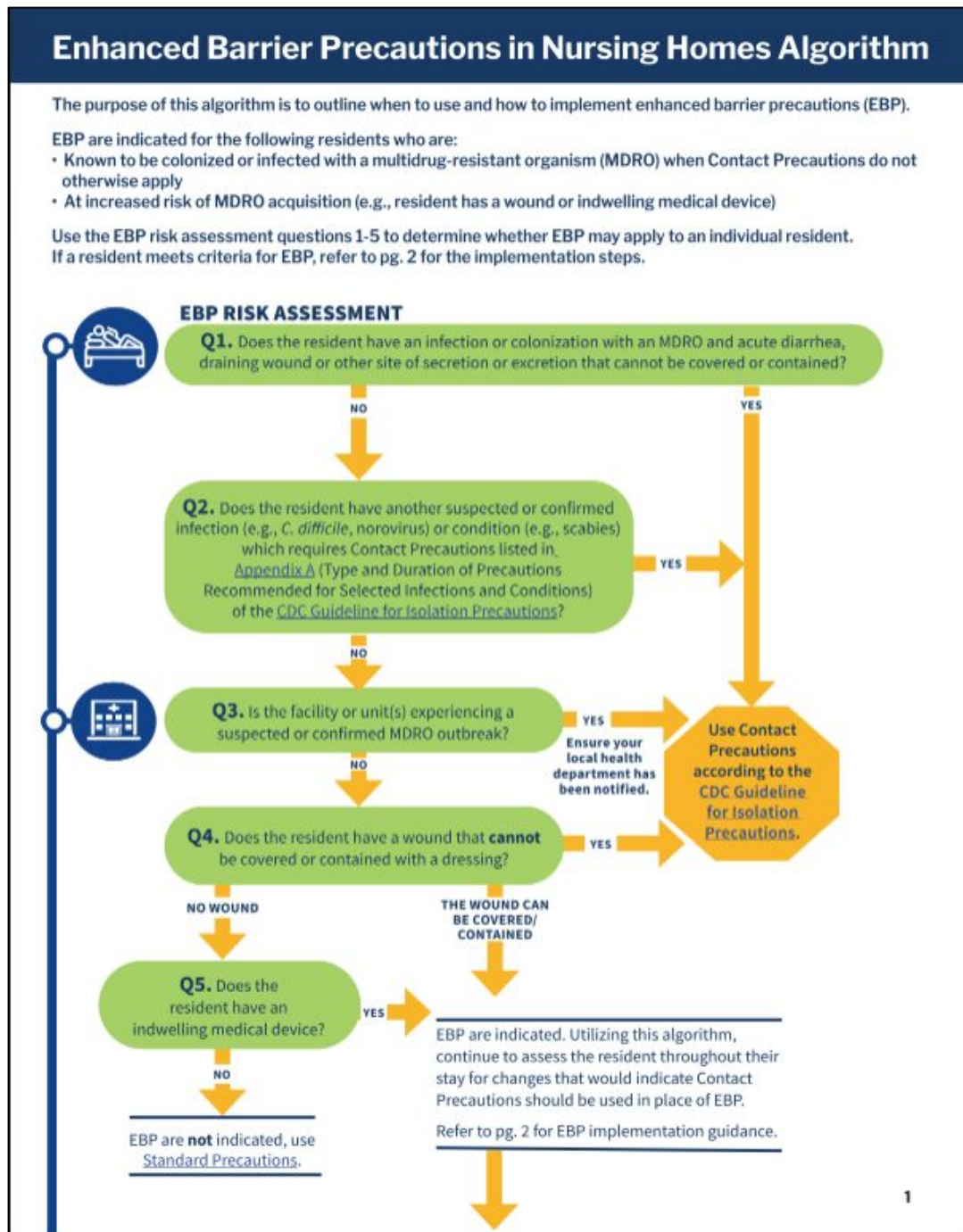
- Share
 - MDRO status and specific information about the MDRO
 - Presence of wounds and/or indwelling medical devices
 - Type of precautions, if any
 - Rooming needs, such as a private room

If receiving a resident from another facility:

- Ask
 - About MDRO status
 - If unfamiliar with MDRO, ask questions
 - About presence of wounds and/or indwelling medical devices
 - If resident is on precautions of any kind
 - Rooming needs, such as a private room

VDH EBP Algorithm

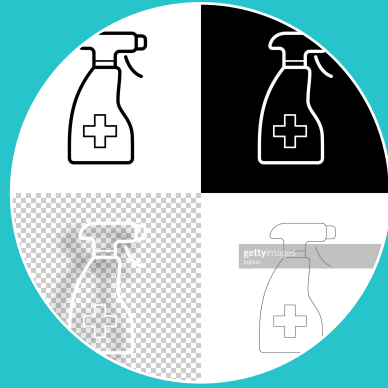
https://www.vdh.virginia.gov/content/uploads/sites/174/2022/10/Enhanced-Barrier-Precautions-in-Nursing-Homes-Algorithm-2022_FINAL.pdf



In Summary: How to Be Successful



Hand Hygiene



Environmental
Cleaning and
Disinfection



Enhanced
Barrier
Precautions



Auditing



Communication



References and Resources

CDC

- Antibiotic Resistance Threats in the United States, 2019:
<https://www.cdc.gov/drugresistance/pdf/threats-report/2019-ar-threats-report-508.pdf>
- Implementation of Personal Protective Equipment in Nursing Homes to Prevent Spread of Multidrug-Resistant Organisms: <https://www.cdc.gov/hai/containment/PPE-Nursing-Homes.html>
 - EBP sign: <https://www.cdc.gov/hai/pdfs/containment/enhanced-barrier-precautions-sign-P.pdf>
 - Frequently Asked Questions About EBP in Nursing Homes:
<https://www.cdc.gov/hai/containment/faqs.html>
- Management of Multidrug-Resistant Organisms in Healthcare Settings, 2006:
<https://www.cdc.gov/infectioncontrol/pdf/guidelines/mdro-guidelines.pdf>

References and Resources

VDH

- Enhanced barrier precautions resources:
<https://www.vdh.virginia.gov/haiar/ip/ipc-by-healthcare-setting/>
 - EBP in Nursing Homes Algorithm:
https://www.vdh.virginia.gov/content/uploads/sites/174/2022/10/Enhanced-Barrier-Precautions-in-Nursing-Homes-Algorithm-2022_FINAL.pdf
 - EBP FAQs:
https://www.vdh.virginia.gov/content/uploads/sites/174/2022/10/FAQ-about-EBP_July-2022-Updates-1.pdf

Questions?

hai@vdh.virginia.gov



HAI&AR

Healthcare-Associated Infections &
Antimicrobial Resistance Program

VDH VIRGINIA
DEPARTMENT
OF HEALTH

Additional Case Studies

Case Scenario 2

EBP in Practice: Scenario 2, Q1

Ms. Alice Smith is a resident in your memory care unit. She recently had a fall and required admission to acute care. Upon admission to the hospital, a MRSA surveillance nares screening returned positive. She was placed on Contact Precautions during her hospital stay. Ms. Smith is now being readmitted to memory care.

Will Ms. Smith require Contact Precautions for the MRSA colonization?

EBP in Practice: Scenario 2, Q1

Will Ms. Smith require Contact Precautions upon readmission?

- a. No. Acute care facilities use Contact Precautions to manage patients with active infection or colonization with MRSA and other MDROs. EBP are used specifically in the nursing home environment.*

EBP in Practice: Scenario 2, Q2

For Ms. Smith's MRSA nares colonization, when will you be able to discontinue EBP?

EBP in Practice: Scenario 2, Q2

For Ms. Smith's MRSA nares colonization, when will you be able to discontinue EBP?

- a) Because of her history of MDRO colonization, EBP will be used for the duration of Ms. Smith's stay. EBP addresses the continued risk of transmission from MDRO colonization which can persist for long periods of time and result in spread within a facility.*

EBP in Practice: Scenario 2, Q3

Ms. Smith refuses to remain in her room during the day and is frequently found walking in the hallways. She also likes to sit with several other residents in the area around the nursing station.

Due to her history of MDRO and the need for EBP, what other steps should be taken to prevent the spread of MDRO in your facility?

EBP in Practice: Scenario 2, Q3

Due to her history of MDRO and the need for EBP, what other steps should be taken to prevent the spread of MDRO in your facility?

- a) Good hand hygiene practices by the staff and frequent cleaning of high touch surfaces should remain a priority in all communal living areas. MDRO colonization status of residents is not always known, and infection prevention interventions should be used for all residents.*

EBP in Practice: Scenario 2, Q4

Ms. Smith has not been eating or drinking well the past two days. When the nurse checks her temperature, it is elevated. A urine culture is obtained and shows a significant growth of MRSA. She is diagnosed with a UTI and antibiotic treatment is begun.

What precautions should Ms. Smith now be placed on?

EBP in Practice: Scenario 2, Q4

What precautions should Ms. Smith now be placed on?

- a) Ms. Smith should remain on EBP. The presence of an active infection does not require a change to Contact Precautions in most cases (unless there is a change in the presence of a wound that cannot be contained, uncontrolled drainage, an indwelling medical device, or infectious diarrhea).*

EBP in Practice: Scenario 2, Q5

Ms. Smith has been incontinent due to her urinary frequency and is wearing adult diapers.

Would EBP be necessary if a healthcare worker will be helping dress Ms. Smith but not removing the diapers and thus have no exposure to the MDRO source (the urine)?

EBP in Practice: Scenario 2, Q5

Would EBP be necessary if a healthcare worker will be helping dress Ms. Smith but not removing the diapers and thus have no exposure to the MDRO source (the urine)?

- a) For EBP, it is not the site of the organism that determines when PPE is required. It is the activity that determines when PPE should be used. Dressing Ms. Smith would be considered a high-contact resident care activity and require use of a gown and gloves.*