

Enhanced Barrier Precautions in Nursing Homes Algorithm

The purpose of this algorithm is to outline when to use and how to implement **enhanced barrier precautions (EBP)**.

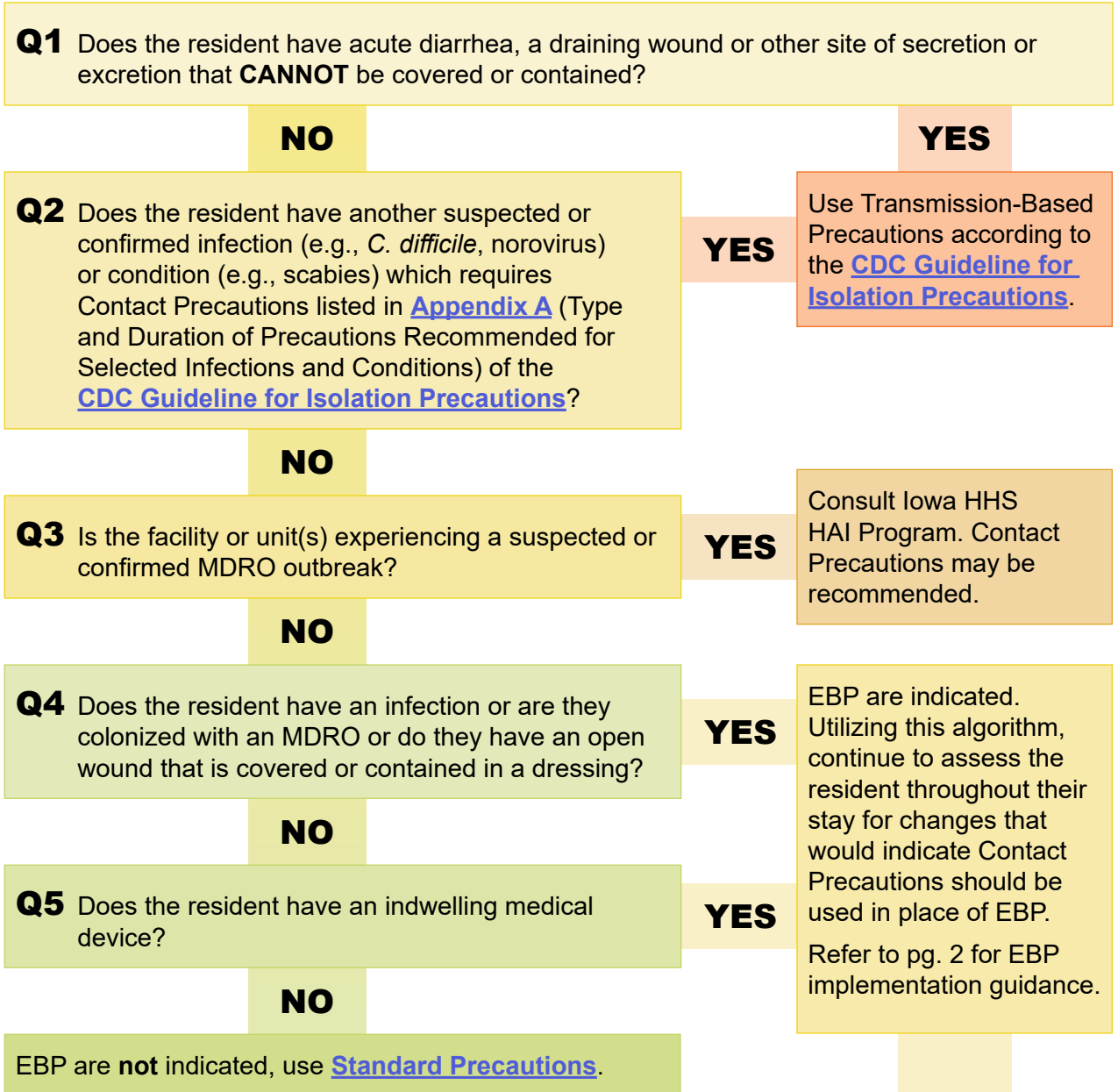
EBP are indicated for the following residents who have:

- Wounds or indwelling medical devices, regardless of multidrug-resistant organism (MDRO) colonization status
- Infection or colonization with an MDRO - when Contact Precautions do not otherwise apply

Use the EBP risk assessment questions 1-5 to determine whether EBP may apply to an individual resident. If a resident meets criteria for EBP, refer to pg. 2 for the implementation steps.



EBP Risk Assessment













Enhanced Barrier Precautions Implementation

A private room is not required and the resident can participate in group activities.* EBP should be maintained for the entire resident's stay or until

1. Wound(s) have healed;
2. Indwelling medical devices are no longer present.

In addition to following Standard Precautions, gowns and gloves should be worn during the following high-contact resident care activities while in the resident's room:

- | | |
|---|---|
|  Dressing |  Changing linens |
|  Bathing/showering |  Changing briefs or assisting with toileting |
|  Transferring |  Device care or use |
|  Providing hygiene |  Wound care |

* Residents on EBPs may share rooms with other residents; however, facilities with capacity to offer single-person rooms (if available) or create roommate pairs based on MDRO colonization may choose to do so. If there are multiple residents with a novel or targeted MDRO in the same facility, consider cohorting them together in one wing or unit to decrease the direct movement of healthcare personnel from colonized or infected residents to those who are not known to be colonized. Single-person rooms (if available) should be prioritized for residents who have acute infection with a communicable disease (such as influenza, SARS-CoV-2, hepatitis A) or for residents placed on Contact Precautions for presence of acute diarrhea, draining wounds, or other sites of secretions or excretions that are unable to be covered or contained.



Steps to Implementation

With implementation, it is critical to ensure that staff have awareness of the facility's expectations about hand hygiene and gown/glove use, initial and refresher training, and access to appropriate supplies. To accomplish this:

1. Post a visual cue on the door or wall outside of the resident room indicating residents placed under EBP.
 - ▶ To help maintain a home-like environment facilities may be creative (e.g., subtle) with visual cues to alert staff when EBP use is necessary, as long as staff are aware of which residents require the use of EBP prior to providing high-contact care activities.
2. Facilities should ensure PPE, including gowns, gloves, eye/face protection (if performing activity with risk of splash or spray), and alcohol-based hand rub are readily accessible to staff.
 - ▶ Placement of supplies which may include placement near or outside the resident's room can be determined at the discretion of the facility. PPE for enhanced barrier precautions is only necessary when performing high-contact care activities and may not need to be donned prior to entering the resident's room.

For example, staff entering the resident's room to answer a call light, converse with a resident, or provide medications who do not engage in a high-contact resident care activity would likely not need to employ EBP while interacting with the resident.

3. Do not wear the same gown and gloves for the care of more than one resident or reuse the gown and gloves for the same resident.
4. 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.

5. Incorporate periodic monitoring and assessment of adherence to recommended infection prevention practices, such as hand hygiene and PPE use, to determine the need for additional training and education.
6. Provide education to residents and visitors.
7. Use an EPA-approved hospital grade disinfectant when cleaning reusable or shared equipment and environmental surfaces in the resident's room and other high touch surfaces.
8. Use an EPA-approved hospital grade disinfectant when cleaning reusable or shared equipment and environmental surfaces in the resident's room and other high touch surfaces.



Definitions

Indwelling medical device: An indwelling medical device provides a direct pathway for pathogens in the environment to enter the body and cause infection. Examples include, but are not limited to: central lines (including hemodialysis catheters), indwelling urinary catheters, feeding tubes, tracheostomy tubes, and endotracheal tubes. They do NOT apply to peripheral IVs, dialysis shunts, AV fistulas, PortaCaths, pacemakers, or vascular stents.

Multidrug-resistant organisms (MDROs): MDROs (multidrug-resistant or drug-resistant) are bacteria that are resistant to one or more classes of antimicrobial agents. The MDROs that are applicable for the use of EBP should be based on local epidemiology and, at a minimum, resistant organisms targeted by CDC and other epidemiologically important MDROs.

Examples of MDROs targeted by CDC include: pan-resistant organisms, carbapenemase-producing carbapenem-resistant Enterobacterales, carbapenemase-producing carbapenem-resistant *Pseudomonas* spp., carbapenemase-producing carbapenem-resistant *Acinetobacter baumannii*, *Candida auris*.

Additional epidemiologically important MDROs may include, but are not limited to: methicillin-resistant *Staphylococcus aureus* (MRSA), extended spectrum beta-lactamase (ESBL)-producing organisms, vancomycin-resistant Enterococci (VRE), multidrug-resistant *Pseudomonas aeruginosa*, drug-resistant *Streptococcus pneumoniae*.

Providing hygiene: Providing hygiene refers to practices such as brushing teeth, combing hair, and shaving. Many of the high-contact resident care activities listed in the guidance are commonly bundled as part of morning and evening care for the resident rather than occurring as multiple isolated interactions with the resident throughout the day.

Wound: Any skin opening requiring a dressing such as for chronic wounds (e.g., pressure ulcers, diabetic foot ulcers, unhealed surgical wounds, and chronic venous stasis ulcers). This does not include shorter-lasting wounds, such as skin breaks or skin tears covered with a Band-Aid or similar dressing.

REFERENCES

CDC. (2022). Implementation of Personal Protective Equipment (PPE) Use in Nursing Homes to Prevent Spread of Multidrug-resistant Organisms (MDROs). <https://www.cdc.gov/hai/pdfs/containment/PPE-Nursing-Homes-H.pdf>
CDC. (2023). PPE in Nursing Homes. <https://www.cdc.gov/hai/containment/PPE-Nursing-Homes.html>

QUESTIONS? For technical assistance on implementing EBP contact the Iowa HHS HAI Program at hai-ar@idph.iowa.gov. For regulatory and EBP enforcement questions contact the Iowa Department of Inspections, Appeals, and Licensing (DIAL) at vicki.worth@dia.iowa.gov.

This material was adapted with permission from the Virginia Department of Health.