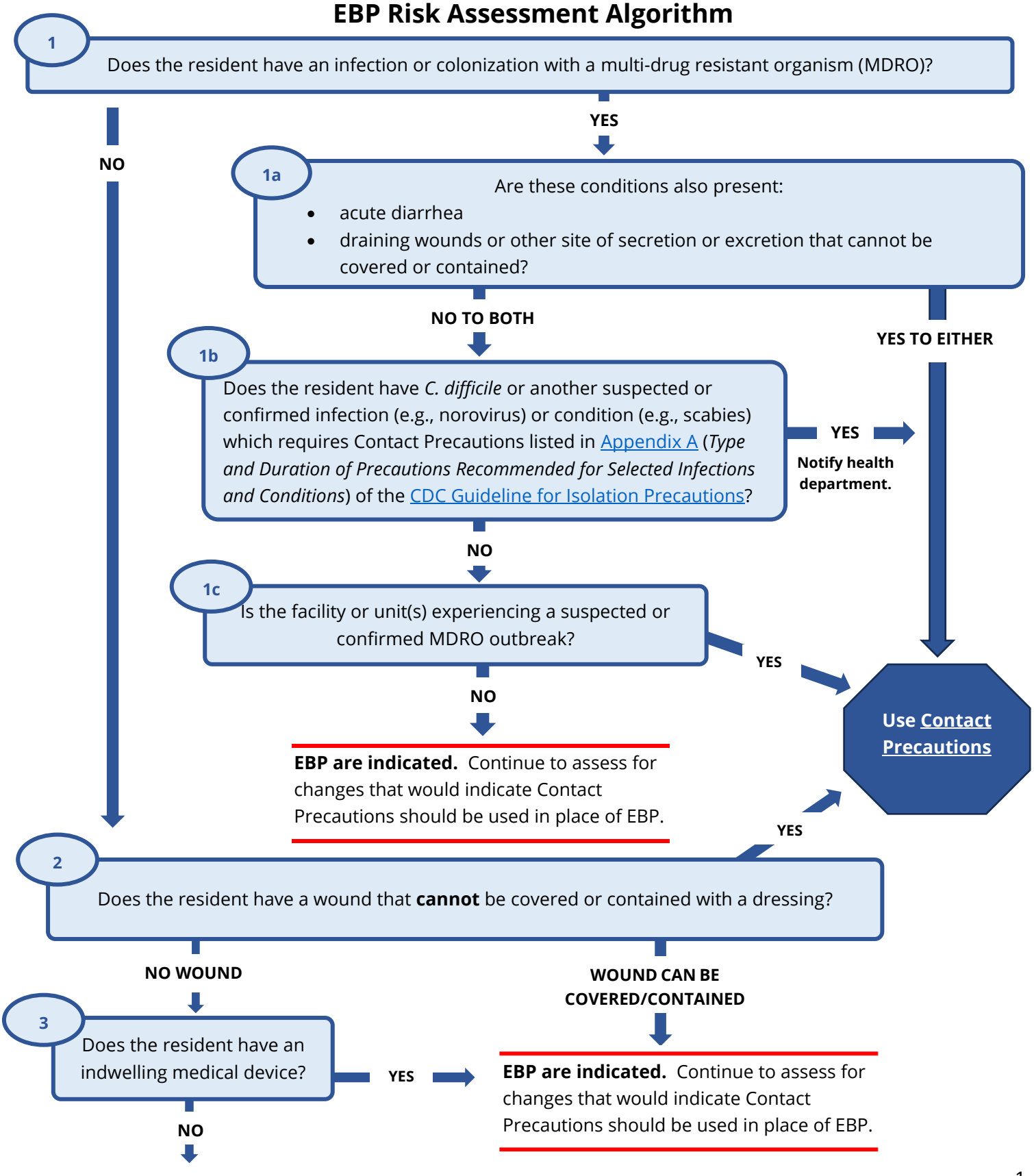
Enhanced Barrier Precautions in Nursing Homes

Oct. 17, 2024

EBP Risk Assessment Algorithm



Adapted from: Virginia Department of Health's Enhanced-Barrier-Precautions-in-Nursing Homes-Algorithm-2022_FINAL.pdf

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Enhanced Barrier Precautions (EBP) are designed to reduce the spread of multidrug-resistant organisms (MDROs) in nursing homes by targeted gown and glove use during high-contact care activities.

EBP are indicated for ALL residents who are:

- Known to be colonized or infected with an MDRO, *when Contact Precautions (CP) do not otherwise apply*
- At increased risk for getting an MDRO, such as residents with wounds and/or indwelling medical devices

Implementation of Enhanced Barrier Precautions

In addition to Standard Precautions, gowns and gloves should be worn during "high-contact" 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, trach/ventilator
- Wound care: any skin opening requiring a dressing

Steps:

- ☐ Ensure staff have been trained on appropriate hand hygiene and gown/glove use.
- ☐ Post clear signage outside the resident's room indicating type of precautions, required PPE and high-contact care activities that require use of gown and gloves.
- ☐ Make PPE readily available outside resident room. Face protection may be needed if there's a risk for splash or spray (e.g., irrigating wounds).
- ☐ Do not wear the same gown or gloves for the care of more than one resident or reuse the gown and gloves for the same resident.
- ☐ Ensure access to alcohol-based hand rubs (ideally inside and outside of rooms).
- ☐ Position trash can inside room and near exit for discarding PPE after removal, prior to exit or before providing care for another resident in the same room.
- ☐ Incorporate periodic monitoring and audits to determine need for additional training and education.
- ☐ Provide education to residents and visitors.

Note:

- ☐ A private room is not required, and the resident can participate in group activities.
- ☐ EBP should be maintained for the entire resident's stay (for those with known MDROs) or until wounds have healed and/or indwelling devices are no longer present (for those with no known MDRO).
- ☐ *Transferring (*In general, excludes transfers to common areas such as dining or activity room where contact is anticipated to be shorter in duration. See full description in FAQ #25 and #26.)*

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Targeted MDROs of Most Concern

- ☐ **Pan-resistant organisms:** Organisms that are intermediate or resistant to ALL antibiotics.
- ☐ **Carbapenem-resistant Enterobacterales (CRE)**: Gram-negative bacteria like *E. coli*, *Enterobacter spp.* and *Klebsiella* spp. Carbapenems are last-line antibiotics used to treat serious MDRO infections. These include: Doripenem, Ertapenem, Imipenem and Meropenem.
    - Carbapenemase-producing CRE (CP-CRE): A subset of CRE that produces an enzyme that breaks down antibiotics and can spread between different bacteria. Commonly called by the type of gene it carries, e.g., KPC, NDM, VIM, IMP, OXA-48-type.
- ☐ **Carbapenem-resistant *Pseudomonas aeruginosa* (CRPA)**: A common cause of infections in healthcare settings. They are particularly dangerous for those with chronic lung diseases. Carbapenems are last-line antibiotics used to treat serious MDRO infections. These include: Doripenem, Ertapenem, Imipenem and Meropenem. Some CRPA are resistant to all antibiotics.
    - Carbapenemase-producing CRPA (CP-CRPA): Less common in the US, these can produce an enzyme that breaks down antibiotics and can spread between different bacteria. Commonly called by the type of gene it carries, e.g., VIM, KPC, NDM, IMP, GES.
- ☐ **Carbapenem-resistant *Acinetobacter baumannii* (CRAB)**: An opportunistic pathogen that can cause many types of infections. Carbapenems are last-line antibiotics used to treat serious MDRO infections. These include: Doripenem, Ertapenem, Imipenem and Meropenem. Some CRAB are resistant to all antibiotics.
    - Carbapenemase-producing CRAB (CP-CRAB): Most CRAB in the US produce these enzymes which can spread rapidly and is frequently associated with outbreaks. Commonly called by the type of gene it carries, e.g., OXA-23-CRAB or NDM-CRAB.
- ☐ ***Candida auris*:** A type of yeast, causing a serious global threat due to increased cases of patients infected or colonized. It can cause severe illness and spread within healthcare settings. It is often resistant to anti-fungal medications making it very hard to treat.

Additionally Important MDROs

- ☐ ESBL-Producing Enterobacterales (e.g., *Escherichia coli*, *Klebsiella* spp., *Enterobacter* spp., etc.)
- ☐ Methicillin-resistant *Staphylococcus aureus* (MRSA)
- ☐ Vancomycin-resistant *Staphylococcus aureus* (VRSA)
- ☐ Vancomycin-resistant *Enterococci* (VRE)

Resources

https://www.cdc.gov/long-term-care-facilities/hcp/prevent-mdro/PPE.html

https://www.cdc.gov/long-term-care-facilities/hcp/prevent-mdro/faqs.html

https://www.cdc.gov/infection-control/hcp/isolation-precautions/index.html

https://www.cdc.gov/healthcare-associated-infections/media/pdfs/CRE-handout-V7-508.pdf

https://www.cdc.gov/healthcare-associated-infections/media/pdfs/CRPA-handout-V7-508.pdf

https://www.cdc.gov/healthcare-associated-infections/media/pdfs/CRAB-handout-V7-508.pdf

https://www.cdc.gov/candida-auris/index.html

https://www.cms.gov/files/document/qso-24-08-nh.pdf

https://www.vdh.virginia.gov/haiar/icprecautions/