



Indiana
Department
of
Health

HAI STEERING COMMITTEE TBP WORKGROUP PROJECT

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IP PROGRAM MANAGER

10-06-22

OUR MISSION:

To promote, protect, and improve the health and safety of all Hoosiers.

OUR VISION:

Every Hoosier reaches optimal health regardless of where they live, learn, work, or play.





Antimicrobial Stewardship
TBP Workgroup 2019-2020

HAI Steering Committee
8.20.22



Indiana
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TBP Workgroup

Workgroup Chair: Jennifer Spivey, IDOH IP Consultant

Workgroup Mentor: Nancy Adams, IDOH Regulatory QA

Acute Care IPs: Kimberley Bellessa, Sandy Benson, Sonya Mauzey (Women's Health), Emily Haines, Rhonda Blevins, Laurie Fish

Ambulatory IP: Scott Grimes

LTC-LTACH IPs: Lisa Jones, Rose Smalley, Susie Brandenburg, Victor Zindoga, Nancy Adams

Behavioral Health IPs: Scott and Jennifer

TBP Workgroup Charge

Transmission Based Precautions Across the Healthcare Continuum:

Determine what is considered the **best practice** in transmission- based precautions for antibiotic resistant organism **across the continuum of care by facility type** (skilled nursing facilities, long term care facilities, long term acute care facilities, acute care facilities, and ambulatory care recommendations).

Assess how these differences impact transitions of care. Make recommendations on how to best communicate a patient's antibiotic-resistant organism status during transitions of care, taking into consideration the standards of these different facility types.

TBP Workgroup Problem Statement

Federal regulations and best-practices related to the use of standard and transmission- based precautions for antibiotic resistant organisms differ according to facility type.

The facility type-specific differences are not universally known, and thus it is perceived that breaches in infection control practices are occurring when patients transition from one facility type to another.

Completed Workplan

- Literature search and bi-weekly meetings discussing each facility type January to March 2019
- Organism Guidance per level of care grid development- April to July 2019
- Enhanced Barrier Precautions LTC- July 2019
- Presentation to AH Steering Committee-Aug 2019
- Edits and communications to stakeholders- January 2020
- **TBP Workplan Recommendation Approval February 2020 ISDH Steering**
- March APIC Indiana Spring meeting – roll out canceled due to COVID-19
- August 2022 Approved at HAI Steering Committee to present to you Oct 2022

Infection Risk During Transitions of Care

Outcome to increase education for IDOH Transfer forms across continuum of care

- Increase risk of antibiotic resistant organism exposure-
Use IDOH Transfer forms as part of education
- Residents and patients colonized with antibiotic resistant organisms can increase risk



IDOH Transfer Form



Eric J. Holcomb
Governor
Kristina M. Box, MD, FACOG
State Health Commissioner

Inter-Facility Infection Control Transfer Form

Does the person* currently have an infection, colonization OR a history Colonization Active infection of positive culture of a multidrug-resistant organism (MDRO) or other or history potentially transmissible infectious organism?	Colonization or History (Check if Yes)	Active Infection on Treatment (Check if Yes)
Methicillin-resistant <i>Staphylococcus aureus</i> (MRSA)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
Vancomycin-resistant <i>Enterococcus</i> (VRE)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<i>Clostridioides difficile</i>	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<i>Acinetobacter</i> , multidrug-resistant	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
Enterobacteriaceae (e.g., <i>f. coli</i> , <i>Klebsiella</i> , <i>Proteus</i>) producing- Yes Extended Spectrum Beta-Lactamase (ESBL)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
Carbapenem-resistant Enterobacteriaceae (CRE)	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<i>Pseudomonas aeruginosa</i> , multidrug-resistant	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
<i>Candida auris</i>	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
COVID-19 Choose a Test Type: <input type="checkbox"/> PCR <input type="checkbox"/> POC Antigen	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
Other, specify (e.g., scabies, norovirus, influenza): <input type="text"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes

Inter-Facility Infection Control Transfer Form

This inter-facility infection control patient transfer form can assist in fostering communication during transitions of care for patients infected with MDROs, COVID-19, etc. The discharging facility should complete this transfer form and sign at the bottom after all fields are completed. Attach copies of pertinent records and latest laboratory reports to send with the patient to the receiving facility. This form has been adapted from the Centers for Disease Control and Prevention (CDC).

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Recommendations for Transmission-Based Precautions Across the Continuum of Care

For outbreaks or situations of ongoing, increased risk, use strict contact precautions.

All infection control guidelines are based on patient understanding and the cognitive ability to comply with precautions.

Organism (alphabetical)	Facility Type							
	Acute Care	Acute Care Specialty Hospital	LTC-SNF	LTAC	vSNF	Ambulatory Clinic	Rehab	Behavioral Health, inpatient
C Diff ^a	C+	C+	C+	C+	C+	C+	C+	C+
<i>Candida auris</i>, infection	C^	C^	C^	C^	C^	C^	C^	C^
<i>Candida auris</i>, colonization	C^	C^	EBP^	C^	EBP^	V^	V^	V^
CRE, infection	C+	C+	C+	C+	C+	V+	V+	V+
CRE, colonization	C	C	V	C	V	V	V	V
CPO and pan-resistant, infection	C+	C+	C+	C+	C+	V+	V+	V+
CPO and pan-resistant, colonization	C	C	EBP	C	EBP	V	V	V
ESBL, infection	C+	V*	V+	C+	V+	V+	V+	V+
ESBL, colonization	V*	V*	V	C	V	V	V	V
MRSA or VRE, infection	V*	C+	V+	C+	V+	V+	V+	V+
MRSA or VRE, colonization	V*	V*	V	C	V	V	V	V

^a Also for large incontinence of unknown organism.

+ sporicidal agent, * if risk assessment and horizontal measures dictate within the institution (based on CDC guidance)

^ List P or Bleach Based Product

C - contact precautions, EBP – enhanced barrier precautions, V – standard-to-contact precaution (based on level of ADLs)



Example of *C. auris*

Organism (alphabetical)	Facility Type							
	Acute Care	Acute Care Specialty Hospital	LTC-SNF	LTAC	vSNF	Ambulatory Clinic	Rehab	Behavioral Health, inpatient
C Diff ^a	C+	C+	C+	C+	C+	+C+	+C+	+C+
Candida auris, infection	C^	C^	C^	C^	C^	+C^	+C^	+C^
Candida auris, colonization	C^	C^	EBP^	C^	EBP^	+V^	+V^	+V^

^a Also for large incontinence of unknown organism.

+ sporicidal agent, * if risk assessment and horizontal measures dictate within the institution (based on CDC guidance)

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Note: EBP is for LTC only- SNFs- All other facility types use a reiteration of standard precautions or enhanced precautions maybe by facility type. CDC recommends for all contact, droplet or airborne, EBP for LTC colonization.

Note: LIST P product may be what you are using but check the label as the times may differ for *C. auris* disinfection as it is a hardy organism – i.e. Kill claim may say 1 min for the wipe for product use and 5 min for *C. auris*

What are Enhanced Barrier Precautions?

- Use of gown and gloves during high-contact resident care activities
- No private room required
- Residents can participate in group activities
- Intended to be used for resident's entire length of stay



STOP **ENHANCED BARRIER PRECAUTIONS** **STOP**
EVERYONE MUST:



Clean their hands, including before entering and when leaving the room.

PROVIDERS AND STAFF MUST ALSO:



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

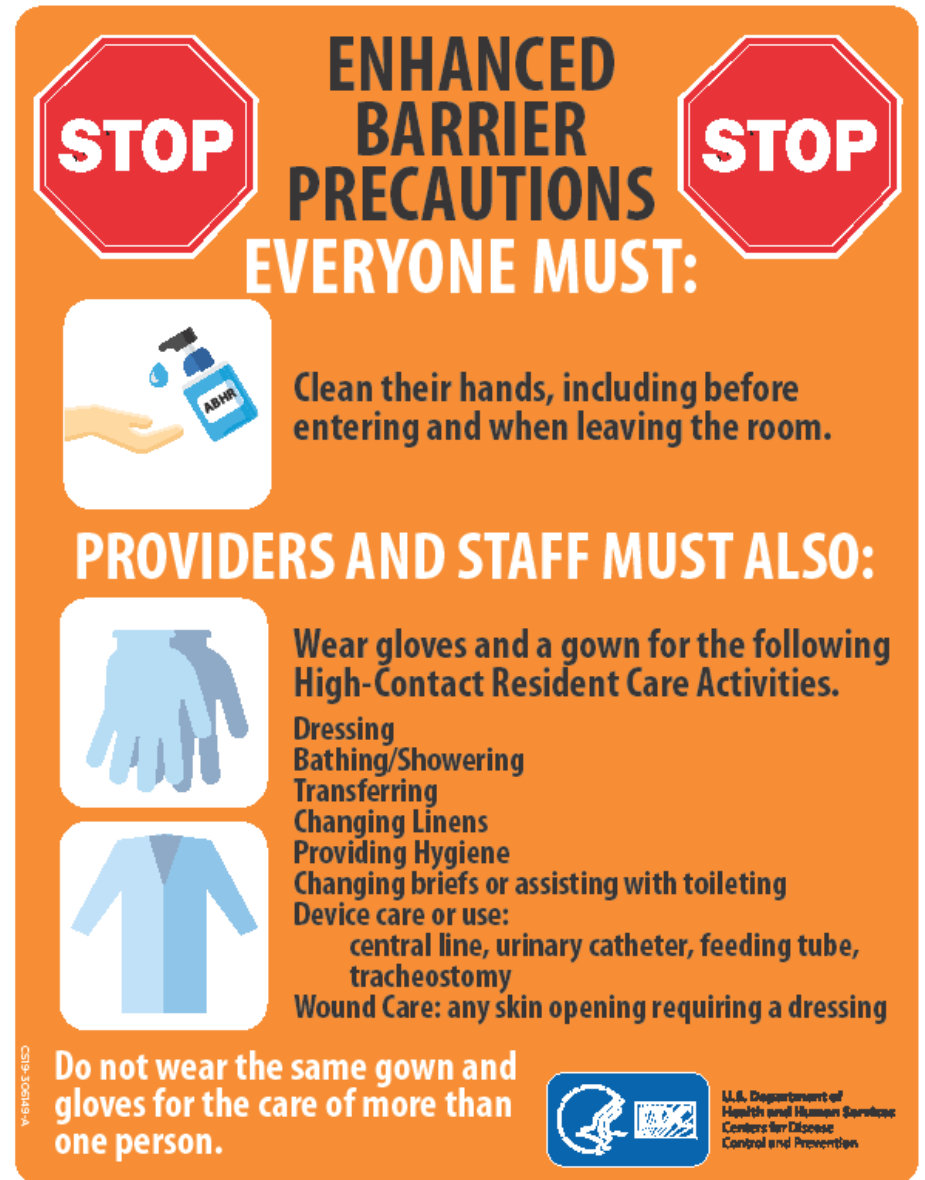
Do not wear the same gown and gloves for the care of more than one person.




U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

Who does EBP apply to:


- LTC residents in congregate care live in facilities and this is a way to protect them long term for MDROs and Novel Pathogens.
- Healthcare levels of resident care indicate whether gown and glove are required upon entry to the room or activity.
- July 2019, novel pathogens colonization and outbreak controls
- July 2022, CDC added EBP are indicated for nursing home 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
 - EBP is not limited to outbreaks or specific MDROs
 - IDOH is not actively surveying these updated changes as CMS has not mandated them at this point.




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Changing briefs or assisting with toileting
Device care or use:
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Wound Care: any skin opening requiring a dressing

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

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Organism Definitions

Acronyms and Abbreviations

CRE = Carbapenem-Resistant Enterobacterales

CPO = Carbapenem Producing Organism

ESBL = Extended Spectrum Beta-Lactamase

MRSA = Methicillin-Resistant *Staphylococcus aureus*

Pan Res = Pan-Resistant Organism

VRE = Vancomycin-Resistant Enterococci

CRE

By definition, these organisms are (1) part of the Enterobacterales family and (2) resistant to at least one carbapenem.

- Examples of Enterobacteriaceae: *E. coli*, *Klebsiella* sp., *Enterobacter* sp. *Proteus* sp., etc.
- Examples of carbapenem antibiotics: Meropenem, Ertapenem, Imipenem, Doripenem, etc.

CPO

By definition, these organisms (1) have the ability to produce a carbapenemase.

- Carbapenemase genes can be identified by laboratory tests such as the Carba-R. Your results would specify which gene was detected (KPC, NDM, VIM, IMP, OXA, etc.).
- Carbapenemase production can be identified by laboratory tests like CarbaNP or mCIM. Your result would specify if the isolate was positive or negative for carbapenemase production.
- The term CPO includes organisms such as CP-CRE*, carbapenemase producing *Pseudomonas* sp, and carbapenemase producing *Acinetobacter* sp.
*Indiana State Department of Health Reportable Communicable Disease and Condition

ESBL

By definition, these organisms (1) have the ability to produce an ESBL.

- ESBL production can be determined from various laboratory tests. The most common genes responsible for ESBL are TEM, SHV, and CTX-M.
- In the United States, unless tested by PCR, ESBL is only reportable for *E. coli*, *K. pneumoniae*, *K. oxytoca*, or *P. mirabilis*. Some laboratories use ceftriaxone resistance as a surrogate.

MRSA

By definition, these organisms are (1) identified as *Staphylococcus aureus* and (2) resistant to a methicillin surrogate antibiotic (*i.e.* oxacillin, cefoxitin) or positive for the *mecA* gene.

Pan-Resistant Organism

For the purposes of this guidance, pan-resistant organisms should be defined as an organism that is (1) not susceptible (resistant or intermediate) to all antimicrobials tested and (2) that testing has included antimicrobials from at least three drug classes.

VRE

vancomycin (it is *expected* that they are resistant to vancomycin) and they should not be considered MDROs.

Multidrug Resistant Organisms (MDRO)

Common Acronyms and Phrases

AR	Antibiotic Resistance
ARLN	Antibiotic Resistant Laboratory Network
APIC	Association for Professionals in Infection Control and Epidemiology
AS	Antibiotic Stewardship
AST	Antibiotic Susceptibility Testing
<i>C. auris</i>	<i>Candida auris</i>
CAUTI	Catheter Associated Urinary Tract Infection
CDI or <i>C. diff</i>	<i>Clostridioides difficile</i> infection
CDR	Communicable Disease Rule
CLABSI	Central Line Associated Blood Stream Infection
cIAI	Complicated Intra-abdominal Infection
CLIA	Clinical Laboratory Standards Institute
CMS	Centers for Medicare and Medicaid Services
CP-CRE	Carbapenemase Producing – Carbapenem Resistant <i>Enterobacteriaceae</i>
CP-CRPA	Carbapenemase Producing – Carbapenem Resistant <i>Pseudomonas aeruginosa</i>
CR-AB	Carbapenem-Resistant <i>Acinetobacter baumannii</i>
CRE	Carbapenem-Resistant <i>Enterobacteriaceae</i>
CRPA	Carbapenem-Resistant <i>Pseudomonas aeruginosa</i>
cUTI	Complicated Urinary Tract Infection
DOD	Department of Defense
ELR	Electronic Laboratory Report
ESBL	Extended Spectrum Beta-Lactamase
FDA	Food and Drug Administration
HAI	Healthcare-Associated Infection
HAP	Healthcare Associated Pneumonia
Id	Identification
ID	Infectious Disease
IMP	Imipenemase
KPC	<i>Klebsiella pneumoniae</i> Carbapenemase



RISK Assessment Template for use from APIC National

INSTRUCTIONS

Each facility should perform a risk assessment to determine if isolation precautions can be modified for patients that have a history/colonization of a multi-drug resistant organism (MDRO). The risk assessment elements have been integrated into a Yes/No questionnaire as detailed below. Upon completion, a report of findings should be considered and presented to your local Infection Control Committee for review and adoption.

DEFINITIONS

Any shaded area within the risk assessment does not require an action plan. However, the answer of each question is taken into consideration when determining the need to remove or continue isolation for colonized or known history of an MDRO.

Any question that has a “*” mark requires an action plan if the answer is “NO”.

A question that has a “**” mark does not require an individual action plan by the facility if it is currently not in place as a standardized process will be created for system wide adoption.

INTERPRETATION OF RESULTS

After the completion of the risk assessment, it is recommended that the decision to remove or continue contact transmission based precautions for colonized or known history of an MDRO be established based on the following results:

- Remove Contact Precautions: if < 7 questions are answered as “NO”
- Continue Contact Precautions: if ≥ 7 questions are answered as “NO”



Each facility may conduct a follow up risk assessment upon completion of action plans if ≥ 7 questions were answered as “NO” in order to remove contact precautions for MDRO history or colonization.

Resources for Enhanced Barrier Precautions

- Implementation of Personal Protective Equipment (PPE) Use in Nursing Homes to Prevent Spread of Multidrug-resistant Organisms (MDROs) <https://www.cdc.gov/hai/containment/PPE-Nursing-Homes.html>
- Frequently Asked Questions (FAQs) about Enhanced Barrier Precautions in Nursing Homes <https://www.cdc.gov/hai/containment/faqs.html>
- Considerations for Use of Enhanced Barrier Precautions in Skilled Nursing Facilities <https://www.cdc.gov/hicpac/workgroup/EnhancedBarrierPrecautions.html?msclkid=39038417aed311ec8c868e1e03c50297>
- Enhanced Barrier Precautions Letter to Nursing Home Residents, Families, Friends, and Volunteers <https://www.cdc.gov/hai/pdfs/containment/Letter-Nursing-Home-Residents-Families-Friends.pdf>
- Enhanced Barrier Precautions Letter to Nursing Home Staff <https://www.cdc.gov/hai/pdfs/containment/Letter-Nursing-Home-Staff.pdf>

Workgroup handouts products

These items will be posted on APIC IN Fall Conference site:

- Organism TBP Chart
- Organism Definitions and Acronyms
- Risk Assessment Template
- Transfer Form
- TBP Workgroup SBAR

Questions?

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