

ISOLATION PRECAUTIONS AND MANAGEMENT OF MULTIDRUG-RESISTANT ORGANISMS (MDROS) IN LONG-TERM CARE FACILITIES

Evelyn Cook, RN, CIC
Associate Director

OBJECTIVES

- ▶ Review CDC Guidance Documents
- ▶ Review Standard and Transmission-based Precautions
- ▶ Discuss Precautions unique (specific) to SARS-CoV-2 (COVID-19)
- ▶ Describe how Multi-drug Resistant Organisms (MDROs) emerge
- ▶ Discuss Enhanced Barrier Precautions

GUIDANCE DOCUMENTS - LONG-TERM CARE FACILITIES

- ▶ 2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings
- ▶ Management of Multi-drug resistant organisms (2006)
- ▶ Preparing for COVID-19 in Nursing Homes
- ▶ Responding to COVID-19 in Nursing Homes
- ▶ Interim Infection Prevention and Control Recommendations for Healthcare Personnel During the Coronavirus Disease 2019 (COVID-19) Pandemic
- ▶ Discontinuation of Transmission-Based Precautions and Disposition of Patients with COVID-19 in Healthcare Settings (Interim Guidance)

FUNDAMENTAL ELEMENTS -

- ▶ Administrative support
- ▶ Adequate Infection Prevention staffing
- ▶ Good communication with clinical microbiology lab and environmental services
- ▶ A comprehensive educational program for HCPs, patients, and visitors
- ▶ Infrastructure support for surveillance, outbreak tracking, and data management

STANDARD PRECAUTIONS

*Implementation of
Standard Precautions
constitutes the primary
strategy for the
prevention of
healthcare-associated
transmission of
infectious agents among
patients and healthcare
personnel*



HAND HYGIENE

- ▶ After touching blood, body fluids, secretions, excretions, contaminated items; immediately after removing gloves; between patient contacts.



SOAP AND WATER



- When hands are visibly dirty or contaminated with proteinaceous material or are visibly soiled with blood or other body fluids, wash hands with either a nonantimicrobial soap and water or an antimicrobial soap and water



ALCOHOL BASED HAND RUB



- Put alcohol-based hand sanitizer with 60-95% alcohol in every resident room (ideally both inside and outside of the room) and other resident care and common areas (e.g., outside dining hall, in therapy gym).
- Unless hands are visibly soiled, an alcohol-based hand sanitizer is preferred over soap and water in most clinical situations.



Hand Rubbing



HAND HYGIENE PROGRAM




ADDITIONAL ELEMENTS

CDC GUIDELINE FOR HAND HYGIENE IN HEALTHCARE SETTING

- Involve staff in evaluation and selection of hand hygiene products
- Provide employees with hand lotions/creams compatible with soap and/or ABHRs
- Do not wear artificial nails when providing direct clinical care
- Provide hand hygiene education to staff
- Monitor staff adherence to recommended HH practices



STANDARD PRECAUTIONS

Component	Recommendation
Personal Protective Equipment (PPE)	
Gloves 	For touching blood, body fluids, secretions, excretions, contaminated items; for touching mucous membranes and non-intact skin
Gown 	During procedures and patient-care activities when contact of clothing/exposed skin with blood/body fluids, secretions, and excretions is anticipated
Mask, eye protection 	During procedures and patient-care activities likely to generate splashes or sprays of blood, body fluids, secretions, especially suctioning, endotracheal intubation



USE OF PERSONAL PROTECTIVE EQUIPMENT (PPE)

- Perform and maintain an inventory of PPE – monitor daily PPE use (PPE burn rate calculator)
- Make necessary PPE available where resident care is provided
- Position trash can near the exit inside the room for disposal
- Implement strategies to optimize current PPE supply – even before shortages occur



USE OF PERSONAL PROTECTIVE EQUIPMENT (PPE)

► Three overriding principals related to personal protective equipment (PPE)

- Wear PPE when the nature of the anticipated patient interaction indicates that contact with blood or body fluids may occur
- Prevent contamination of clothing and skin during the process of removing PPE
- Before leaving the resident's room, remove and discard PPE ??



SPICE

STRATEGIES TO OPTIMIZE PPE

- **Extended use** - practice of wearing the same PPE for the care of more than one resident without removing
 - Respirators, facemask and eye protection
 - Discard if soiled, damaged, hard to breathe or see thru
 - Do not touch – if so immediately use HH
 - Leave patient care area if removed
 - If implemented for gowns the same gown should not be worn when caring for different residents unless it is the care of residents with confirmed COVID-19 who are cohorted in the same area of the facility (and they are not known to have any co-infections)

SPICE

STRATEGIES TO OPTIMIZE PPE

► **Limited re-use** – practice of using the same PPE by one HCP for multiple encounters with different residents but removing it after each encounter

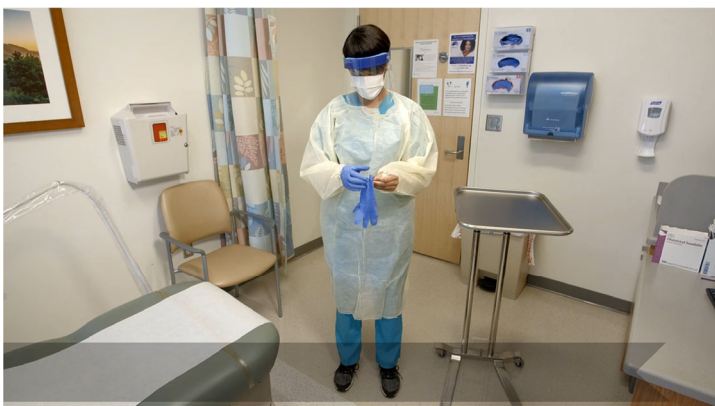
- Face mask – not all can be re-used – ones with elastic ear hooks may be more suitable and eye protection
- N 95 respirator – Limit the number of times the same respirator is reused.
 - No more than five uses per device – issue each HCP a minimum of 5, each to be used on a particular day, stored in a breathable bag until the next week
 - Not shared by multiple HCP
 - Discard after aerosol generating procedure
 - Consider using cleanable face shield over the N95 to reduce surface contamination
- Cloth isolation gowns

SPICE

SAFE WORK PRACTICES (PPE USE)

- ✓ Keep hands away from face
- ✓ Work from clean to dirty
- ✓ Limit surfaces touched
- ✓ Change when torn or heavily contaminated
- ✓ Perform hand hygiene

SPICE



SPICE

Component	Recommendation
Soiled equipment	Handle in a manner that prevents transfer of microorganisms to others and to the environment; wear gloves if visibly contaminated; perform hand hygiene
Environmental Control	Develop procedures for routine care, cleaning, and disinfection of environmental surfaces, especially frequently touched surfaces in patient-care areas
Laundry	Handle in a manner that prevents transfer of microorganisms to others and to the environment
Needles and sharps	Do not recap, bend, break, or hand-manipulate used needles; if recapping is required, use a one-handed scoop technique only; use safety features when available; place used sharps in puncture-resistant container
Patient Resuscitation	Use mouthpiece, resuscitation bag, other ventilation devices to prevent contact with mouth and oral secretions

SPICE

Component	Recommendation
Patient placement	Prioritize for <u>single-patient room</u> if patient is at <i>increased risk of transmission, is likely to contaminate the environment, does not maintain appropriate hygiene, or is at increased risk of acquiring infection or developing adverse outcome following infection.</i>
Respiratory hygiene/cough etiquette (source containment of infectious respiratory secretions in symptomatic patients, beginning at initial point of encounter)	Instruct symptomatic persons to cover mouth/nose when sneezing/coughing; use tissues and dispose in no-touch receptacle; observe hand hygiene after soiling of hands with respiratory secretions; wear surgical mask if tolerated or maintain spatial separation, >3 feet if possible.

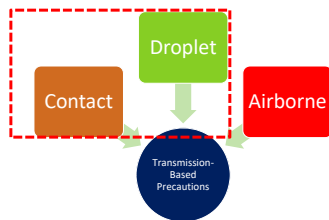
SPICE

Component	Recommendation
Safe Injection Practices	Apply to the use of needles, cannulas that replace needles, and, where applicable intravenous delivery systems <ul style="list-style-type: none"> • Use aseptic technique • Needles, cannulae and syringes are sterile, single-use items • Use single-dose vials for parenteral medications whenever possible • Do not administer medications from single-dose vials or ampules to multiple patients • Do not keep multidose vials in the immediate patient treatment area • Do not use bags or bottles of IV solution as a common source of supply for multiple patients
Special Lumbar Procedures	Wear a surgical mask when placing a catheter or injecting material into the spinal canal or subdural space

SPICE

TRANSMISSION BASED PRECAUTIONS

Transmission-Based Precautions are for patients who are known or suspected to be infected or colonized with infectious agents, including certain epidemiologically important pathogens, and are used when the route(s) of transmission are not completely interrupted using Standard Precautions alone.



SPICE

CONTACT PRECAUTIONS

Visitors must report to Nursing Station before entering.

- ☒ Perform hand hygiene before entering and before leaving room.
- ☒ Wear gloves when entering room or cubicle, and when touching patient's intact skin, surfaces, or articles in close proximity
- ☒ Wear gown when entering room or cubicle and whenever anticipating that clothing will touch patient items or potentially contaminated environmental surfaces.
- ☒ Use patient-dedicated or single-use disposable shared equipment or clean and disinfect shared equipment (BP cuff, thermometers) between patients.

PRECAUCIONES DE CONTACTO

Los visitantes deben presentarse primero al puesto de enfermería antes de entrar. Lávese las manos. Póngase guantes al entrar al cuarto.

Private room or Cohort
Gown and gloves prior to entry
Hand hygiene
Dedicate equipment
Disinfect shared equipment

SPICE

CONTACT PRECAUTIONS

Los visitantes deben presentarse primero al puesto de enfermería antes de entrar. Lávese las manos. Póngase guantes al entrar al cuarto.

SPECIAL ENTERIC

- ☒ Perform hand hygiene before entering room AND wash hands with **soap and water** before leaving room. Lávese las manos con agua y jabón.
- ☒ Wear gloves when entering room or cubicle, and whenever touching the patient's intact skin, surfaces, or articles in close proximity.
- ☒ Wear gown when entering room or cubicle and whenever anticipating that clothing will touch patient items or potentially contaminated environmental surfaces.
- ☒ Use patient-dedicated or single-use disposable shared equipment or clean and disinfect shared equipment (BP cuff, thermometers) between patients.

PRECAUCIONES DE CONTACTO

Los visitantes deben presentarse primero al puesto de enfermería antes de entrar. Lávese las manos. Póngase guantes al entrar al cuarto.

C. difficile and Norovirus

SPICE

CONDITIONS OR DISEASES POTENTIALLY REQUIRING CONTACT PRECAUTIONS

Disease/Condition	Duration of Isolation
Antibiotic Resistant Bacteria – MRSA, VRE, ESBL-E.coli, etc.	Until symptoms resolve
Clostridium difficile (C. diff)	24-48 hours after symptoms resolve
Norovirus	48 hours after symptoms resolve
Scabies and Lice	24 hours after treatment started
Viral Conjunctivitis (pink eye)	Until symptoms resolve

SPICE

Surgical mask prior to entry

No special ventilation

Private room or Cohort

Hand hygiene

Residents use mask outside of room



DROPLET PRECAUTIONS

Visitors must report to Nursing Station before entering.

- ☒ Perform hand hygiene before entering and before leaving room
- ☒ Wear mask when entering room
Visitors and health care workers
- ☒ Dietary may not enter
No debe entrar el dietista

PRECAUCIONES DE GOTAS DIMINUTAS

Los visitantes deben presentarse primero al puesto de enfermería antes de entrar. Lávese las manos. Póngase máscara al entrar al cuarto. No debe entrar el dietista.

HD 5028 Rev. 12/06

CONDITIONS OR DISEASES REQUIRING DROPLET PRECAUTIONS

Disease/Condition	Duration of Isolation
Seasonal Influenza	Review the CDC seasonal guidance: for 2016-2017 Droplet Precautions should be implemented for residents with suspected or confirmed influenza for 7 days after illness onset or until 24 hours after the resolution of fever and respiratory symptoms, whichever is longer, while a resident is in a health care facility.
Pandemic influenza	Droplet precautions for 5 days from onset of symptoms
Meningococcal Diseases: meningitis, pneumonia	For 24 hours after treatment has started
MRSA pneumonia	For duration of illness (also use Contact Precautions)
Strep Throat	For 24 hours after treatment has started
Rhinovirus (cold)	For duration of illness

Private room only

[Room requires Negative airflow pressure](#)

Doors must remain closed

Everyone must wear an N-95 respirator

Limit the movement and transport of the Resident

Hand hygiene before and after



AIRBORNE INFECTION ISOLATION PRECAUTIONS

Visitors must report to Nursing Station before entering.

- ☒ Perform hand hygiene before entering and before leaving room
- ☒ Wear N95 respirator when entering room
Visitors see nurse for instruction on proper use.
- ☒ Keep door closed
- ☒ Dietary may not enter
No debe entrar el dietista

PRECAUCIONES AMBIENTALES

Los visitantes deben presentarse primero al puesto de enfermería antes de entrar. Lávese las manos. Póngase máscara N95 con filtro al entrar al cuarto. Mantenga la puerta cerrada. No debe entrar el dietista.

TUBERCULOSIS

Facility does not have a dedicated negative pressure room:

- ▶ Transfer resident to a facility capable of managing and evaluating resident
- ▶ Be sure policy is included in your plan

Facility does have negative pressure room:

- ▶ Follow Airborne Precautions

CHICKENPOX AND SHINGLES

Disease/Condition	Type and Duration of Isolation
Chickenpox (varicella)	Airborne and Contact until lesions are dry and crusted
Shingles (Herpes zoster. Varicella zoster)	
Localize in patient with intact immune system with lesions that can be contained/covered	Standard Precautions
Disseminated disease in any patient	Airborne and Contact precautions for duration of illness
Localized disease in immunocompromised patient until disseminated infection ruled out	Airborne and Contact precautions for duration of illness

Non-immune healthcare personnel should not care for residents with Chickenpox or Shingles

WHEN TO DISCONTINUE TBP PRECAUTIONS

- ▶ Resume Standard Precautions once high-risk exposures or active symptoms have discontinued

- ▶ Refer to Appendix A in the 2007 Isolation Guidelines

Type and Duration of Precautions Recommended for Selected Infections and Conditions¹

Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings (2007)

Appendix A Updates [September 2018]

Changes: Updates and clarifications made to the table in Appendix A: Type and Duration of Precautions Recommended for Selected Infections and Conditions.

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

A

Infection/Condition	Type of Precaution	Duration of Precaution	Precautions/Comments
Abscess Draining, major	Contact + Standard	Duration of illness	Until drainage stops or can be contained by dressing.

SARS-COV-2 (COVID-19)

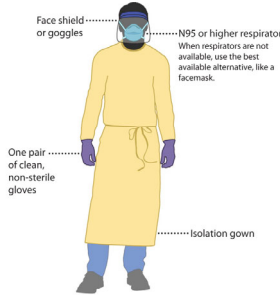
- Designated unit- separate floor, wing, or cluster of rooms
- Designated staff- work only on the unit,
 - Ideally have a restroom, break room
 - Restrict ancillary staff (dietary)
 - EVS to work only on unit
- Signage
- Assign dedicated resident care equipment
- Use EPA-registered disinfectant (List N) for disinfecting high touch surfaces

<https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2-covid-19>

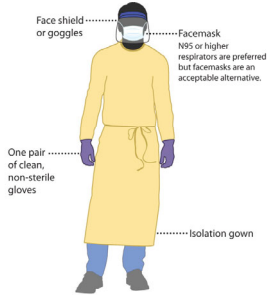


COVID-19 Personal Protective Equipment (PPE) for Healthcare Personnel

Preferred PPE – Use N95 or Higher Respirator



Acceptable Alternative PPE – Use Facemask



[cdc.gov/COVID19](https://www.cdc.gov/COVID19)



DISCONTINUATION OF TRANSMISSION-BASED PRECAUTIONS:

COVID-19 IN HEALTHCARE SETTINGS (INTERIM GUIDANCE)

- A test-based strategy is no longer recommended (except as noted below) because, in the majority of cases, it results in prolonged isolation of patients who continue to shed detectable SARS-CoV-2 RNA but are no longer infectious.
- Symptom-Based Strategy (*mild – moderate illness- not severely immunocompromised*):
 - At least 10 days have passed since symptoms first appeared AND
 - At least 24 hours since last fever (off fever-reducing medications AND
 - Symptoms have improved
- Symptom-Based Strategy (*severe – critical illness- severely immunocompromised*):
 - Same as above but time extended to 10-20 days
- Asymptomatic:
 - At least 10 days have passed since the date of their first positive test

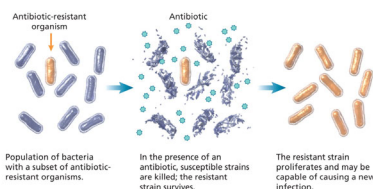


MANAGEMENT OF MULTI-DRUG RESISTANT ORGANISMS 2006



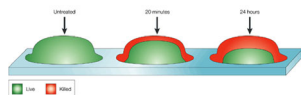
MULTI-DRUG ORGANISM DEVELOPMENT IN HEALTHCARE SETTINGS

Antibiotic pressure:



Device utilization

A thin coating containing biologically active agents, which coats the surface of structures such as the inner surfaces of catheter, tube, or other implanted or indwelling device.



MDROS SPREAD IN HEALTHCARE SETTINGS

- Resident to resident transmission via healthcare provider's hands
- Environmental/equipment contamination

X marks the location where VRE was isolated in the room



Image from Abstract: The risk of hand and glove contamination after contact with a VRE + patient environment. Hayden M, ICAAC, 2001, Chicago, IL.



KEY MDRO PREVENTION STRATEGIES

- ▶ Assessing hand hygiene practices
- ▶ Quickly reporting MDRO lab results
- ▶ Implementing Contact Precautions
- ▶ Recognizing previously colonized residents
- ▶ Strategically place residents based on MDRO risk factors
- ▶ Careful device utilization
- ▶ Antibiotic stewardship
- ▶ Inter-facility communication



PRECAUTIONS IN LTCF CDC SAYS...

V.A.5.c.ii.1 "For relatively healthy residents (e.g., mainly independent) follow Standard Precautions making sure that gloves and gowns are used for contact with uncontrolled secretions, pressure ulcers, draining wound, stool incontinence, and ostomy tubes/bags."

V.A.5.c.ii.2. For ill residents (e.g., those totally dependent upon healthcare personnel for healthcare and activities of daily living...) and for those residents whose infected secretions or drainage cannot be contained, use Contact Precautions, in addition to Standard Precautions."

V.A.5.c.iii. For MDRO colonized or infected patients without draining wounds, diarrhea, or uncontrolled secretions, establish ranges of permitted ambulation, socialization, and use of common areas based on their risk to other patients and on the ability of the colonized or infected patients to observe proper hand hygiene and other recommended precautions to contain secretions and excretions.

HICPAC, Management of MDROs in healthcare settings, 2006



CONTACT PRECAUTIONS IN LTCF WHAT WE KNOW

- ▶ Contact precautions creates challenges for nursing homes trying to balance the use of PPE and room restriction with residents' quality of life
- ▶ Contact precautions implemented only when residents are infected with an MDRO
- ▶ MDRO colonization can persist for long periods of time (e.g., months) and result in silent transmission
- ▶ Organisms that are pan-resistant or have novel mechanisms of resistance are emerging



Colonization VS Infection?



SPICE RECOMMENDATIONS RESIDENT CHARACTERISTICS

Component	Recommendation
Personal Protective Equipment (PPE)	
Gloves	For touching blood, body fluids, secretions, excretions, contaminated items; for touching mucous membranes and non-intact skin
Gown	During procedures and patient-care activities when contact of clothing/exposed skin with blood/body fluids, secretions, and excretions is anticipated
Mask, eye protection	During procedures and patient-care activities likely to generate splashes or sprays of blood, body fluids, secretions, especially suctioning, endotracheal intubation

▶ Five C's

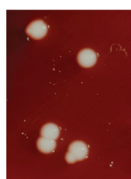
- ▶ Cognitive function (understands directions)
- ▶ Cooperative (willing and able to follow directions)
- ▶ Continent (of urine or stool)
- ▶ Contained (secretions, excretions, or wounds)
- ▶ Cleanliness (capacity for personal hygiene)

Kellar M. APIC Infection Connection. Fall 2010 ed.



WHAT ABOUT CARBAPENEM-RESISTANT ENTEROBACTERIACEAE (CRE)?

- ▶ In lower-acuity post-acute care settings (e.g., non-ventilator units of skilled nursing facilities, rehabilitation facilities), the use of Contact Precautions is more challenging and should be guided by the potential risk that residents will serve as a source for additional transmission based on their functional and clinical status and the type of care activity that is being performed.



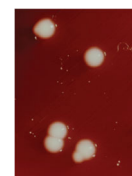
Facility Guidance for Control of Carbapenem-resistant Enterobacteriaceae (CRE): November 2015 Update-CRE Toolkit; CDC



WHAT ABOUT CARBAPENEM-RESISTANT ENTEROBACTERIACEAE (CRE)?

- ▶ Examples of when gowns and/or gloves might be used include the following:

- ▶ Bathing residents
- ▶ Assisting residents with toileting
- ▶ Changing residents' briefs
- ▶ Changing a wound dressing
- ▶ Manipulating patient devices (e.g., urinary catheter)



Facility Guidance for Control of Carbapenem-resistant Enterobacteriaceae (CRE): November 2015 Update-CRE Toolkit; CDC



ENHANCED BARRIER PRECAUTIONS WHY ?

- ▶ “Focusing only on residents with active infection fails to address the continued risk of transmission from residents with MDRO colonization, which can persist for long periods of time (e.g., months), and result in the silent spread of MDROs”.
- ▶ “With the need for an effective response to the detection of serious antibiotic resistance threats, there is growing evidence that current implementation of Contact precautions in nursing homes is not adequate for prevention of MDRO transmission”.



spice.unc.edu/lwcwebinars

▶ What this guidance DOES NOT do:

- ▶ Does not replace existing guidance regarding use of contact precautions for other pathogens (e.g., *Clostridioides difficile*, norovirus)
- ▶ Does not provide guidance for acute care or long-term acute care (LTACs)

▶ What this guidance DOES do:

- ▶ Does provide guidance for PPE use and room restriction in nursing homes for preventing transmission of novel or targeted MDROs, including as part of a public health containment response



NOVEL OR TARGETED MDROS ARE DEFINED AS: JULY 2019

- ▶ Pan-resistant organisms:
 - ▶ Resistant to all current antibacterial agents *Acinetobacter*, *Klebsiella pneumoniae*, *Pseudomonas aeruginosa*
- ▶ Carbapenemase-producing Enterobacteriaceae
- ▶ Carbapenemase-producing *Pseudomonas* spp.
- ▶ Carbapenemase-producing *Acinetobacter baumannii* and
- ▶ *Candida auris*



ENHANCED BARRIER PRECAUTIONS (EBP)



- ▶ Expands the use of PPE beyond situations in which exposure to blood and body fluids is anticipated (i.e. Standard Precautions)
- ▶ Refers to the use of gown and gloves during high-contact resident care activities that provide opportunities for transfer of MDROs to staff hands and clothing



ENHANCED BARRIER PRECAUTIONS

- ▶ Applies to **ALL** residents with **ANY of the following**:
 - ▶ Wounds and/or indwelling medical devices (e.g., central lines, urinary catheter, feeding tube, tracheostomy/ventilator) **REGARDLESS** of MDRO colonization status (when a novel or targeted MDRO has been identified on the unit)
 - ▶ Infection **OR** colonization with a novel or targeted MDRO when Contact Precautions do not apply
 - ▶ Facilities may consider applying EBP to residents infected or colonized with other epidemiologically-important MDROs based on facility policy (MRSA, VRE for example)
- ▶ Gown and gloves prior to the high contact care activity (cannot reuse gown and change between residents)
- ▶ No room restriction



ENHANCED BARRIER PRECAUTIONS

- ▶ Examples of high-contact resident care activities requiring gown and glove use:
 - ▶ Dressing
 - ▶ Bathing/showering
 - ▶ Transferring
 - ▶ Providing hygiene (focused on am and pm care)
 - ▶ 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



IMPLEMENTATION QUESTIONS

- ▶ How long should EBP be maintained on units with AR colonized or at-risk residents?
 - ▶ EBP was intended to be a long-term strategy for gown/glove use during care of residents to be followed for the duration of a resident's stay in a facility given the prolonged, potentially life-long risk of remaining colonized with certain AR pathogens
 - ▶ A transition back to Standard Precautions might be appropriate for residents placed in EBP solely because of the presence of a wound or indwelling medical device if/when those exposures are gone
- ▶ Should nursing homes apply EBP for MDROs like MRSA, VRE or ESBL?
 - ▶ The decision to use EBP for these organisms should be based on the prevalence of the MDRO in the facility/region. CDC will be working with HICPAC and nursing home partners to understand the application of EBP outside of AR Containment

AR Containment webinar series: Implementation of PPE in Nursing Homes to Prevent Spread of Novel or Targeted MDROs
Nimalie D. Stone, MD, MS; September 3rd, 2019



CONTACT PRECAUTIONS



- ▶ Contact Precautions:
 - ▶ All residents with an MDRO when there is acute diarrhea, draining wounds or other sites of secretions/excretions that cannot be contained or covered
 - ▶ On units or in facilities where ongoing transmission is documented or suspected
 - ▶ *C. difficile* infection
 - ▶ Norovirus
 - ▶ Shingles when resident is immunocompromised, and vesicles cannot be covered
 - ▶ Other conditions as noted in Appendix A- Type and Duration of Precautions Recommended For Selected Infections and Conditions
- ▶ Gown and gloves upon ANY room entry
- ▶ Room restriction except for medically necessary care



SUMMARY



- ▶ Contact **OR** Enhanced Barrier Precautions:
 - ▶ Post clear signage on the door or wall outside the room
 - ▶ Make PPE available immediately outside the room
 - ▶ Ensure access to alcohol-based hand rub in every resident room (ideally inside and outside)
 - ▶ Trash can available for PPE disposal
 - ▶ Periodic monitoring and assessment of compliance
 - ▶ Provide education to residents, family and visitors
 - ▶ Adherence to other measures including hand hygiene, environmental cleaning and cleaning, disinfection of medical devices



PLACEMENT OF RESIDENTS BASED ON RISK FACTORS

- ▶ Avoid placing 2 high-risk residents together
- ▶ Safer to cohort low-risk and high-risk residents
- ▶ Don't change stable room assignments based on culture results unless it poses new risk
 - ▶ Long-term Roommates have already shared organisms in the past (even if you just learned about it)

