

Infection Prevention and Control Measures for Common Infections in LTC Facilities

Abstract

This handbook lists the frequently encountered infections in long-term care facilities, their common causative agents, and the suggested levels of precaution.

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Contents

Contents
Points of Contact for This Document4
Table of changes5
infection Prevention and Control Measures for Common Infections in LTC Facilities 6
Standard Precautions8
Hand Hygiene9
Fransmission-Based Precautions
Contact Precautions
Droplet Precautions
Airborne Precautions
Enhanced Barrier Precautions
Gastroenteritis
Gastroenteritis: Clostridioides difficile
Gastroenteritis: Norovirus
Gastroenteritis: Rotavirus
Methicillin-resistant Staphylococcus aureus (MRSA)19
Multidrug-resistant Organisms (MDROs)20
Pressure Ulcers (Bed sores)
Scabies (Non-crusted)23
Crusted Scabies24
Coronavirus Disease 201925
nfluenza (Flu) Virus
Meningitis28
Mycobacterium tuberculosis29
/aricella Zoster31
_egionella 32
Jrinary tract infection
Medical Waste (TCEQ)34
COVID-19: Waste Disposal Guidance
Disposing of Sharps Containers 36

Disposing of Pharmaceutical Waste	36
Selected EPA-Registered Disinfectants	38
Information on Registration Numbers:	39
Attachment 1. CDC Recommended Vaccines for Healthcare Workers	40
Attachment 2. CDC Recommended Adult Immunization Schedule	41
CDC Airborne Infection Isolation Room (AIIR) guidance	43
Summary of PPE Use and Room Restriction for MDROs	44

Point of Contact for This Document

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Table of changes

Document Version	Date	Change

Infection Prevention and Control Measures for Common Infections in LTC Facilities

This handbook lists the frequently encountered infections in long-term care (LTC) facilities, their common causative agents, and the suggested levels of precaution.

In addition to these common infections, there have been several serious infections and outbreaks reported in long-term care facilities. CDC's <u>Serious Infections and Outbreaks Occurring in LTCFs</u> lists some of the notable outbreaks in the LTFCs.

This guidance can be used by all LTC providers, including:

- assisted living facilities (ALF)
- day activity and health services facilities (DAHS)
- home and community-based services residences (HCS)
- in-patient hospices
- intermediate care facilities for individuals with intellectual or developmental disabilities (ICF-IDD)
- nursing facilities and skilled nursing facilities (NF and SNF)
- prescribed pediatric extended care centers (PPECC)

The guidance presented in this handbook is adapted from the CDC. All providers must meet the minimum requirements for infection prevention and control as established by the regulations governing their program. HHSC is providing this guidance to assist providers with understanding the standard and transmission-based precautions that are the cornerstone of a successful infection prevention and control plan.

Information presented in this handbook should be used as baseline guidance. Please note that the handbook does not contain every specific recommendation from the CDC. A provider may choose to implement more stringent policies than the recommended guidelines.

Please find the Texas Notifiable Conditions including any outbreaks, exotic diseases, and unusual group expressions of disease that must be reported in the Texas DSHS website.

The CDC is the national standard for infection prevention and control measures and provides information on numerous types of infections and the corresponding type and duration of precautions on its webpage: Type and Duration of Precautions Recommended for Selected Infections and Conditions.

The CDC also provides detailed guidance for infection prevention in hospital and LTC settings in <u>Guideline for Isolation Precautions: Preventing</u>

<u>Transmission of Infectious Agents in Healthcare Settings.</u>

The following are the most common infections or conditions encountered in LTC facilities in the nation. They are categorized below according to the required levels of precautions.

Infective agent or Infection	Required levels of
	precautions
Clostridioides difficile (C. diff)	Contact precautions
COVID-19	Droplet precautions
<u>Crusted scabies</u>	Contact precautions
<u>Influenza</u>	Droplet precautions
<u>Legionella</u>	Standard precautions
<u>Meningitis</u>	Droplet precautions
Methicillin-resistant Staphylococcus aureus	Contact precautions
(MRSA)	
Multidrug-resistant Organisms (MDROs)	Contact precautions
Mycobacterium tuberculosis (TB)	Airborne precautions
Norovirus	Contact precautions
Pressure ulcers (Bed sores)	Contact precautions
Rotavirus	Contact precautions
Scabies	Contact precautions
<u>Urinary tract infections</u> (CAUTI)	Standard precautions
<u>Varicella zoster</u>	Airborne precautions

Standard Precautions

Standard precautions are used for all resident care. They're based on a risk assessment and make use of common-sense practices and personal protective equipment that protect staff from infection and prevent the spread of infection among residents and staff.

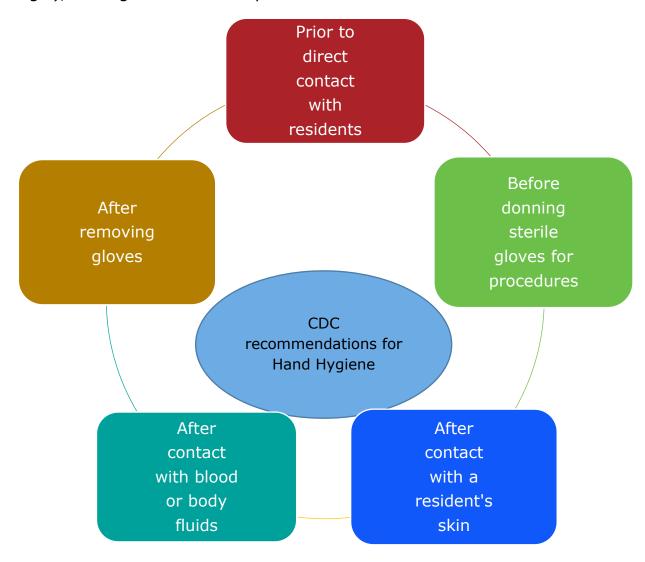
Standard precautions include:

- Practicing <u>Hand Hygiene</u>
- Implementing the use of <u>Personal Protective Equipment</u> (PPE) when exposure to infectious material is expected
- Following Respiratory Hygiene and Cough Etiquette procedures
- Ensuring appropriate <u>Resident Placement</u>
- Implementing correct <u>Disinfection and Sterilization</u> of instruments and devices.
- Handling <u>Textiles and Laundry</u> carefully
- Following <u>Safe Injection Practices</u> and <u>Sharps Safety</u>

For detailed information read the information on CDC webpage for <u>Standard Precautions</u>.

Hand Hygiene

Hand hygiene refers to cleaning your hands by using hand washing techniques (washing hands with soap and water), antiseptic hand wash, antiseptic hand rub (i.e., alcohol-based hand sanitizer, ABHR, including foam or gel), or surgical hand antisepsis.



Hand washing with soap and water for a minimum of 20 seconds should be practiced for any of the following:

- Engaging in food preparation
- After using the restroom
- If hands are visibly soiled
- Caring for a resident with Clostridium difficile

Transmission-Based Precautions

Transmission-based precautions are the second tier of basic infection control and are to be used in addition to <u>Standard Precautions</u> for residents who may be infected or colonized with certain infectious agents for which additional precautions are needed to prevent infection transmission.

Transmission-based precautions are categorized as:

- Contact Precautions
- Droplet Precautions
- Airborne Precautions

Contact Precautions

Use contact precautions for residents with known or suspected infections that represent an increased risk for contact transmission. See <u>Guidelines for Isolation Precautions</u> for complete details.

- **Ensure appropriate resident placement**. Make room placement decisions balancing risks to other residents.
- Use personal protective equipment (PPE) appropriately, including gloves and gown. Wear a gown and gloves for all interactions that may involve contact with the resident or the resident's environment.
 Donning PPE upon room entry and properly discarding before exiting the resident room is done to contain pathogens.
- Limit transport and movement of residents outside of the room to medically necessary purposes. When transport or movement is necessary, cover or contain the infected or colonized areas of the resident's body. Remove and dispose of contaminated PPE and perform hand hygiene prior to transporting residents on contact precautions. Don clean PPE to handle the resident at the transport location.
- Use disposable or dedicated resident-care equipment (e.g., blood pressure cuffs). If common use of equipment for multiple residents is unavoidable, clean and disinfect equipment before use between residents.
- Prioritize cleaning and disinfection of the rooms of residents on contact precautions ensuring rooms are frequently cleaned and disinfected focusing on frequently touched surfaces and equipment in the immediate vicinity of the resident.

For more information read the information on the CDC webpage for <u>Contact Precautions</u>.

Droplet Precautions

Use droplet precautions for residents known or suspected to be infected with pathogens transmitted by respiratory droplets that are generated by a resident who is coughing, sneezing, or talking.

- See <u>Guidelines for Isolation Precautions</u> for complete details.
- **Source control:** encourage the resident wear a mask, if tolerated.
- **Ensure appropriate resident placement** in a single room if possible. Make decisions regarding resident placement on a case-by-case basis considering infection risks to other residents in the room and available alternatives. Instruct residents to follow respiratory hygiene and cough etiquette recommendations.
- Use personal protective equipment (PPE) appropriately. Don mask upon entry into the resident room or resident space.
- **Limit transport and movement of residents** outside of the room to medically necessary purposes. If transport or movement outside of the room is necessary, instruct resident to wear a mask, if tolerated, and follow respiratory hygiene and cough etiquette.

For more information read the information on CDC webpage for <u>Droplet</u> <u>Precautions</u>.

Airborne Precautions

Use airborne precautions for residents known or suspected to be infected with pathogens transmitted by the airborne route (e.g., tuberculosis, measles, chickenpox, disseminated herpes zoster).

- See Guidelines for Isolation Precautions for complete details.
- **Source control**: encourage the resident wear a mask, if tolerated.
- Ensure appropriate resident placement in an airborne infection isolation room (AIIR) constructed according to the Guidelines for Isolation Precautions. In settings where airborne precautions cannot be implemented due to limited engineering resources, having the resident wear a mask, if tolerated, and placing the resident in a private room with the door closed will reduce the likelihood of airborne transmission until the resident is either transferred to a facility with an AIIR or returns home.
- Restrict susceptible staff from entering the room of residents known or suspected to have measles, chickenpox, disseminated zoster, or smallpox if other immune staff are available.
- Use personal protective equipment (PPE) appropriately, including a fit-tested NIOSH-approved N95 or higher-level respirator for staff.
- **Limit transport and movement of residents** outside of the room to medically necessary purposes. If transport or movement outside an AIIR is necessary, instruct residents to wear a surgical mask, if tolerated, and observe respiratory hygiene and cough etiquette.
- Immunization can be considered following unprotected contact with vaccine-preventable infections (e.g., measles, varicella, or smallpox).

For more information read the information on CDC webpage for <u>Airborne Precautions</u>.

Enhanced Barrier Precautions

Enhanced barrier precautions expand the use of PPE beyond situations in which exposure to blood and body fluids is anticipated and refer 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.

Examples of high-contact resident care activities where gown and glove use for enhanced barrier precautions are recommended include:

- Dressing
- · Bathing and showering
- Transferring
- Providing hygiene
- Changing linens
- Changing briefs or assisting with toileting
- Device care or use: central line, urinary catheter, feeding tube, tracheostomy or ventilator
- Wound care: any skin opening requiring a dressing

Gown and gloves would not be required for resident care activities other than those listed above, unless otherwise necessary for adherence to standard precautions. Residents are not restricted to their rooms or limited from participation in group activities for situations when enhanced barrier precautions are used.

When contact precautions do not otherwise apply, enhanced barrier precautions can be used when caring for residents with any of the following:

- Wounds or indwelling medical devices, regardless of MDRO colonization status
- Infection or colonization with an MDRO

For more information visit CDC webpage for <u>Consideration for Use of Enhanced Barrier Precautions in Skilled Nursing Facilities</u>.

CDC also provides a list of <u>Frequently Asked Questions (FAQs) about Enhanced Barrier Precautions in Nursing Homes</u>.

Gastroenteritis

Gastrointestinal illness (gastroenteritis) is inflammation of the stomach and small and large intestines. The main symptoms include vomiting and watery diarrhea. Other symptoms may include fever, abdominal cramps, nausea, muscle aches, and headache. Infections causing gastroenteritis can be viral, bacterial, or parasitic in origin.

Type of precaution: <u>Standard Precautions</u> + Use <u>Contact Precautions</u> for persons who have incontinence or use disposable briefs for the duration of illness or to control institutional outbreaks.

C. difficile, Norovirus and Rotavirus gastroenteritis require <u>Standard</u>

<u>Precautions</u> + <u>Contact Precautions</u>. Additional details regarding these three causative agents are presented below.

Gastroenteritis: Clostridioides difficile

Clostridioides difficile (formerly known as Clostridium difficile) is a sporeforming, Gram-positive anaerobic bacillus (bacterium) that causes severe diarrhea and colitis (an inflammation of the colon).

Type of precaution: <u>Standard Precautions</u> + <u>Contact Precautions</u>

Duration of Precaution: Duration of illness.

Mode of transmission: C. diff is shed in feces. Any surface, device, or material (such as toilets, bathtubs, and electronic rectal thermometers) that becomes contaminated with feces could serve as a reservoir for the C. diff spores. C. diff spores can also be transferred to residents via the hands of staff who have touched a contaminated surface or item.

Room: Place these residents in private rooms. If private rooms are not available, they can be placed in rooms (cohorted) with other C. diff infected (CDI) residents.

Actions required:

- Wear gloves and a gown when entering CDI resident rooms and during their care.
- Do not share thermometers.
- Ensure consistent <u>environmental cleaning and disinfection</u>.
 Hypochlorite solutions may be needed for cleaning if transmission continues.
- No single method of hand hygiene will eliminate all *C. diff* spores; using gloves to prevent hand contamination remains the cornerstone for preventing *C. diff* transmission via the hands of the HCP.
- Always perform hand hygiene after removing gloves.

Effective Antimicrobial Products: List K: EPA's Registered Antimicrobial Products Effective Against Clostridium Difficile Spores

Hand Hygiene: Clostridioides difficile is a spore-forming bacterium. If your facility experiences an outbreak, consider using soap and water instead of alcohol-based hand sanitizers for hand hygiene after removing gloves while caring for residents with CDI.

If your facility is currently experiencing a C. diff outbreak, please visit CDC's Information for Healthcare Professionals about C. diff.

Gastroenteritis: Norovirus

The most commonly reported setting for norovirus outbreaks in the United States is healthcare facilities, including long-term care facilities and hospitals. Over half of all norovirus outbreaks reported in the United States occur in long-term care facilities.

The virus can be introduced into healthcare facilities by infected residents, staff, visitors, or contaminated foods. Outbreaks in these settings can sometimes last months. Norovirus illnesses can be more severe and occasionally even deadly in residents in hospitals or long-term care facilities when compared with healthy people.

Type of precaution: Standard Precautions + Contact Precautions.

Duration of Precaution: Use contact precautions for a minimum of 48 hours after the resolution of symptoms or to control institutional outbreaks.

Mode of transmission: Fecal-oral route.

Infective material: Infectious vomitus or fecal material.

Room: Cohorting of affected residents to separate airspaces and toilet facilities may help interrupt transmission during outbreaks.

Actions required:

Persons who clean areas heavily contaminated with feces or vomitus may benefit from wearing masks since virus can be aerosolized from these body substances; ensure consistent <u>environmental cleaning and disinfection</u> with focus on restrooms even when apparently unsoiled.

Hand Hygiene: Hand washing with soap and water or antiseptic hand wash or hand rub.

Effective Antimicrobial Products: List G: EPA's Registered Antimicrobial Products Effective Against Norovirus.

If your facility is currently experiencing a norovirus outbreak, read the information on CDC's <u>Norovirus Guidelines for Healthcare Settings.</u>

Gastroenteritis: Rotavirus

Rotavirus disease is characterized by vomiting and watery diarrhea for three to eight days. Fever and abdominal pain also are common. Additional symptoms include loss of appetite and dehydration.

The primary mode of transmission is the fecal-oral route, usually through direct contact between people. Because the virus is stable in the environment, transmission also can occur through ingestion of contaminated water or food and contact with contaminated surfaces or objects.

Type of precaution: <u>Standard Precautions</u> + <u>Contact Precautions</u>

Duration of Precaution: Use Contact Precautions for the duration of illness.

Mode of transmission: Fecal-oral route.

Actions required: If an outbreak of rotavirus gastroenteritis is identified, good hand hygiene practices among residents and staff should be reinforced. Environmental surfaces should be disinfected using a freshly made solution of 1-part household bleach to 2-parts water (providing approximately 20,000 ppm of free chlorine) or another product that has confirmed viricidal activity against rotavirus. Surfaces visibly contaminated with fecal material should be cleaned to remove the material and then disinfected.

Ensure consistent environmental cleaning and disinfection and frequent removal of soiled diapers. Prolonged shedding may occur in immunocompetent and immunocompromised residents.

Hand Hygiene: Hand washing with soap and water or antiseptic hand wash or hand rub.

If your facility is currently experiencing a rotavirus outbreak, please read the information on CDC's webpage for <u>Rotavirus</u>.

Methicillin-resistant Staphylococcus aureus (MRSA)

MRSA stands for methicillin-resistant Staphylococcus aureus, a type of bacteria that is resistant to several antibiotics. Staphylococcus aureus (staph) have become resistant to several antibiotics, making MRSA and other types of resistant staph major antibiotic-resistance problems. In places such as a hospital or nursing home, MRSA can cause severe problems such as bloodstream infections, pneumonia, surgical site infections, or sepsis.

Type of precaution: <u>Standard Precautions</u> + <u>Contact Precautions</u>

Mode of transmission: MRSA is usually spread by direct contact with an infected wound or from contaminated hands, usually those of healthcare providers. Also, people who carry MRSA but do not have signs of infection can spread the bacteria to others (i.e., people who are colonized). Please visit CDC website for Cleaning and Disinfection of MRSA.

Actions required: Multidrug-resistant organisms (MDROs), including MRSA, should be judged by the infection control program, based on local, state, regional, or national recommendations, to be of clinical and epidemiologic significance. Contact precautions are recommended in settings with evidence of ongoing transmission, including acute care settings with increased risk for transmission or wounds that cannot be contained by dressings. See recommendations for management options in Management of Multidrug-Resistant Organisms In Healthcare Settings, 2006. Contact state health department for guidance regarding new or emerging MDRO.

Effective Antimicrobial Products: List H: EPA's Registered Antimicrobial Products Effective Against Methicillin Resistant Staphylococcus aureus (MRSA) and/or Vancomycin Resistant Enterococcus faecalis or faecium (VRE)

Hand Hygiene: Hand washing with soap and water or antiseptic hand wash or hand rub.

If your facility is currently experiencing a MRSA outbreak, read the information on CDC's website for MRSA in Healthcare Settings.

Multidrug-resistant Organisms (MDROs)

The CDC defines novel or targeted MDROs as:

- Pan-resistant organisms,
- Carbapenemase-producing Enterobacterales,
- Carbapenemase-producing Pseudomonas spp.,
- · Carbapenemase-producing Acinetobacter baumannii, and
- Candida auris

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 is not adequate** for prevention of MDRO transmission.

Description of New Precautions: <u>Standard Precautions</u> + <u>Contact</u> Precautions + Enhanced Barrier Precautions

Enhanced barrier precautions expand the use of PPE beyond situations in which exposure to blood and body fluids is anticipated and refer 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.

Examples of high-contact resident care activities requiring gown and glove use for enhanced barrier precautions include:

- Dressing
- Bathing and showering
- Transferring
- Providing hygiene
- Changing linens
- Changing briefs or assisting with toileting
- Device care or use: central line, urinary catheter, feeding tube, tracheostomy or ventilator
- Wound care: any skin opening requiring a dressing

Gown and gloves would not be required for resident care activities other than those listed above, unless otherwise necessary for adherence to standard precautions. Residents are not restricted to their rooms or limited from participation in group activities. **Hand Hygiene:** Hand washing with soap and water, or antiseptic hand wash or hand rub.

For resident placement and Personal Protective Equipment use please read the CDC's <u>Summary of PPE Use and Room Restriction for MDROs</u>.

Pressure Ulcers (Bed Sores)

Pressure ulcers, also known as bed sores, pressure sores, or decubitus ulcers, are wounds caused by unrelieved pressure on the skin. They usually develop over bony prominences, such as the elbow, heel, hip, shoulder, back, and back of the head. Pressure ulcers are serious medical conditions and one of the important measures of the quality of clinical care.

Type of precaution:

- Pressure ulcer, infected major (If dressing does not cover and contain drainage): <u>Standard Precautions</u> + <u>Contact Precautions</u> - Until drainage stops or can be contained by dressing.
- Pressure ulcer, infected **minor** or limited (If dressing covers and contains drainage): <u>Standard Precautions.</u>

Duration of Precaution: Duration of illness

The CDC provides the following conditions that increase the risk of developing pressure ulcers:

- Residents who have mobility related problems have a greater occurrence of pressure ulcers.
- Residents aged 64 years and under are more likely than older residents to have pressure ulcers.
- Residents in nursing homes for 1 year or less are more likely to have pressure ulcers than those with a longer length of stay.
- Recent weight loss in residents increases the risk of having pressure ulcers.

Hand Hygiene: Hand washing with soap and water or antiseptic hand wash or hand rub.

Please refer to CDC's NCHS Data Brief No. 14, <u>Pressure Ulcers Among Nursing Home Residents: United States</u>, for more details.

Scabies (Non-crusted)

Scabies is an infestation of the skin by the human itch mite (Sarcoptes scabiei var. hominis). The microscopic scabies mite burrows into the upper layer of the skin where it lives and lays its eggs. The most common symptoms of scabies are intense itching and a pimple-like skin rash. The scabies mite usually is spread by direct, prolonged, skin-to-skin contact with a person who has scabies.

If a person has never had scabies before, symptoms may take 4-8 weeks to develop. It is important to remember that an infested person can spread scabies during this time, even if he or she does not have symptoms yet. In a person who has had scabies before, symptoms usually appear much sooner (1-4 days) after exposure.

Type of precaution: <u>Standard Precautions</u> + <u>Contact Precautions</u>

Duration of Precaution: Until 8 hours after initiation of effective therapy.

Mode of transmission: Direct, prolonged, skin-to-skin contact with a person who has scabies.

Actions required: Environmental Disinfection

Hand Hygiene: Hand washing with soap and water or antiseptic hand wash or hand rub.

If your facility is currently experiencing a scabies outbreak, please read the information on CDC webpage for <u>Scabies</u>.

Crusted Scabies

(Norwegian scabies)

Crusted scabies is a severe form of scabies that can occur in some persons who are immunocompromised (have a weak immune system) or are elderly, disabled, or debilitated. It is also called Norwegian scabies. Persons with crusted scabies have thick crusts of skin that contain large numbers of scabies mites and eggs.

Persons with crusted scabies are very contagious to other persons and can spread the infestation easily both by direct skin-to-skin contact and by contamination of items such as their clothing, bedding, and furniture. Persons with crusted scabies may not show the usual signs and symptoms of scabies such as the characteristic rash or itching (pruritus). Persons with crusted scabies should receive quick and aggressive medical treatment for their infestation to prevent outbreaks of scabies.

All suspected and confirmed cases, as well as all potentially exposed residents, staff, and visitors, should be treated at the same time to prevent re-exposure.

Type of precaution: <u>Standard Precautions</u> + <u>Contact Precautions</u>

Duration of Precaution: Maintain contact precautions until skin scrapings from a resident with crusted scabies are negative.

Mode of transmission: Direct skin-to-skin contact and by contamination of items such as their clothing, bedding, and furniture.

Room: Isolate residents with crusted scabies from other residents who do not have crusted scabies; consider assigning a cohort of caretakers to care only for residents with crusted scabies.

Actions required: <u>Environmental Disinfection</u>

Hand Hygiene: Hand washing with soap and water or antiseptic hand wash or hand rub.

If your facility is currently experiencing a crusted scabies outbreak, please read the information on CDC webpage for Crusted Scabies.

Coronavirus Disease 2019

(COVID-19)

Type of precaution: <u>Standard Precautions</u> + <u>Droplet Precautions</u> + <u>Contact</u>

Precautions

Infective material: Respiratory droplets and sputum

Room: Single preferred, Cohorting required

Duration of precaution: Variable

Hand Hygiene: Hand washing with soap and water or antiseptic hand wash

or hand rub.

Actions required:

For Nursing Facilities:

- For Core Principles of Infection Prevention, Visitations, Communal activities, Dining, and Resident Outings related rules, please refer to QSO-20-39-NH.
- For resident and staff testing rules, please refer to <u>QSO-20-38-NH</u>.

For all providers:

For detailed guidance for COVID-19 in your facility please refer to:

- COVID-19 Response for Assisted Living Facilities
- <u>COVID-19 Response for Nursing Facilities</u>
- COVID-19 Response for Intermediate Care Facilities for Individuals with an Intellectual Disability or Related Conditions
- Infection Control Home Health and Hospice

The CDC provides additional guidance for <u>Interim Infection Prevention and</u> <u>Control Recommendations to Prevent SARS-CoV-2 Spread in Nursing Homes.</u> The following topics from CDC guidance may be useful for long-term care providers during the COVID-19 pandemic:

- Infection Prevention and Control Program
- Vaccinations
- Source Control and Physical Distancing Measures
- Visitation
- Personal Protective Equipment
- Testing
- Evaluating and Managing Personnel and Residents
- Manage Residents with Close Contact
- New Admissions and Residents who Leave the Facility
- New Infection in Healthcare Personnel or Resident
- Recommended routine infection prevention and control practices
- Recommended infection prevention and control practices when caring for a resident with suspected or confirmed SARS-CoV-2 infection

Additional Resources:

- Interim Guidance for Managing Healthcare Personnel with COVID-19
 Infection of Exposure to COVID-19
- Interim Infection Prevention and Control Recommendations for Healthcare Personnel During the Coronavirus Disease 2019 (COVID-19) Pandemic
- Use of COVID-19 Vaccines in the United States
- Ending Isolation and Precautions for People with COVID-19: Interim Guidance

Effective Antimicrobial Products: List N: Disinfectants for Use Against SARS-CoV-2

Vaccines: Three COVID-19 vaccines are authorized or approved for use in the United States to prevent COVID-19. Pfizer-BioNTech or Moderna (COVID-19 mRNA vaccines) are preferred. <u>Vaccine information</u> and <u>Booster information</u> are made available by the CDC.

Influenza (Flu) Virus

Influenza (flu) is a contagious respiratory illness caused by influenza viruses that infect the nose, throat, and lungs. There are two main types of influenza (flu) viruses: Types A and B. The influenza A and B viruses that routinely spread in people (human influenza viruses) are responsible for seasonal flu epidemics each year. People 65 years and older are at higher risk of developing serious flu <u>complications</u> due to changes in immune defenses with increasing age.

Vaccine: <u>Influenza vaccination</u> should be provided routinely to all residents and healthcare staff of long-term care facilities. Vaccination to prevent flu and its potentially serious complications is particularly important for people who are at <u>higher risk of developing serious flu complications</u>.

CDC and the Advisory Committee on Immunization Practices (ACIP) recommend that all U.S. healthcare staff get vaccinated annually against influenza.

Influenza Testing: Even if it's not influenza season, influenza testing should occur when any resident has signs and symptoms of acute respiratory illness or influenza-like illness.

Type of precaution: <u>Standard Precautions</u> + <u>Droplet Precautions</u>

CDC's guidance titled <u>Prevention Strategies for Seasonal Influenza in</u> <u>Healthcare Settings</u> contains details on the prevention strategies for all healthcare settings.

Room: Place ill residents in a private room. If a private room is not available, place (cohort) residents suspected of having influenza with one another.

Mode of transmission: Large-particle respiratory droplet transmission

Actions required: Refer to CDC's <u>Interim Guidance for Influenza Outbreak</u> Management in Long-Term Care and Post-Acute Care Facilities

Hand Hygiene: Hand washing with soap and water or antiseptic hand wash or hand rub.

Please refer to CDC's website <u>Novel Influenza A Viruses Associated with</u>
<u>Severe Disease</u> for residents who may be infected with a novel influenza A virus.

Meningitis

(with H. influenza, type B, or N. meningitidis)

Meningitis is an inflammation (swelling) of the protective membranes covering the brain and spinal cord. A bacterial or viral infection of the fluid surrounding the brain and spinal cord usually causes the swelling. Bacterial meningitis is serious. Some people with the infection die, and death can occur in as little as a few hours. However, most people recover from bacterial meningitis. Those who do recover can have permanent disabilities, such as brain damage, hearing loss, and learning disabilities.

Type of precaution: Standard Precautions + Droplet Precautions

Duration of precaution: Until 24 hours after initiation of effective therapy

Mode of transmission: How people spread the germs often depends on the type of bacteria. It is also important to know that people can have these bacteria in or on their bodies without being sick. These people are "carriers." Most carriers never become sick but can still spread the bacteria to others.

- **H. influenzae, M. tuberculosis, and S. pneumoniae:** People spread these bacteria by coughing or sneezing while in close contact with others, who breathe in the bacteria.
- **N. meningitidis:** People spread these bacteria by sharing respiratory or throat secretions (saliva or spit). This typically occurs during close (coughing or kissing) or lengthy (living together) contact.
- **E. coli**: People can get these bacteria by eating food prepared by people who did not wash their hands well after using the toilet.

Vaccine recommendations: Please see <u>vaccine recommendations</u> for Pneumococcal and Meningococcal vaccines in residents. Meningococcal vaccines may also be recommended for certain <u>healthcare workers</u>.

Hand Hygiene: Hand washing with soap and water or antiseptic hand wash or hand rub.

Please read the CDC's information on <u>Meningitis</u> if someone in your facility has suspected or confirmed Meningitis.

Mycobacterium tuberculosis

Tuberculosis (TB) is caused by a bacterium called Mycobacterium tuberculosis. The bacteria <u>usually attack the lungs</u>, but TB bacteria can attack any part of the body such as the kidney, spine, and brain. Not everyone infected with TB bacteria becomes sick. As a result, two TB-related conditions exist: latent TB infection (LTBI) and TB disease. If not treated properly, TB disease can be fatal.

Type of precaution: <u>Standard Precautions</u> + <u>Airborne precautions</u>

Infective material: Respiratory secretions through the air.

Room: Single - with <u>Negative pressure.</u>

Duration of precaution: Discontinue precautions only when resident on effective therapy is improving clinically and has 3 consecutive sputum smears negative for acid-fast bacilli collected on separate days.

Actions required:

- Isolate the positive residents from others
- HCPs to wear fitted N95 while providing care to the infected residents
- Residents to wear procedure mask when outside the room, if tolerated
- Discontinue precautions only when resident on effective therapy is improving clinically and has 3 consecutive sputum smears negative for acid-fast bacilli collected on separate days

Effective Antimicrobial Product: List B: <u>EPA Registered Tuberculocide</u> Products Effective Against Mycobacterium tuberculosis

Hand Hygiene: Hand washing with soap and water or antiseptic hand wash or hand rub.

If your facility is currently experiencing a TB outbreak, please refer to the CDC's <u>TB infection control program</u>. The TB ICP should be based on a three-level hierarchy of control measures and include:

- Administrative measures
- Environmental controls
- <u>Use of respiratory protective equipment</u>

For staff TB screening, please refer to <u>Resources for TB Screening and Testing of Health Care Personnel</u>. The <u>Texas DSHS TB Program</u> webpage provides additional resources for <u>Health Care Professionals</u> in Texas.

Varicella Zoster

Herpes zoster, also known as shingles, is caused by the reactivation of the varicella-zoster virus (VZV), the same virus that causes varicella (chickenpox). Infection-control measures depend on whether the resident with herpes zoster is immunocompetent or immunocompromised and whether the rash is localized or disseminated (defined as appearance of lesions outside the primary or adjacent dermatomes).

Type of precaution:

Disseminated disease or Localized in Immunocompromised
 Resident - <u>Standard Precautions</u> + <u>Airborne precautions</u> + <u>Contact</u>
 Precautions

• **Room**: Single - with <u>Negative pressure</u>

Duration of Precaution: Duration of illness

Susceptible Health Care Workers (HCWs) should not enter room if immune caregivers are available; no recommendation for face protection of immune HCWs; no recommendation for type of protection (i.e., surgical mask or respirator) for susceptible HCWs.

2. Localized disease in Immunocompetent Resident - Standard Precautions

Susceptible HCWs should not provide direct resident care when other immune caregivers are available.

• Duration of Precaution: Until lesions dry and crusted

Please refer to CDC's <u>Management of Healthcare Personnel</u> page for information regarding staff exposure to varicella or herpes zoster.

Hand Hygiene: Hand washing with soap and water or antiseptic hand wash or hand rub.

If your facility is currently experiencing a varicella outbreak, please visit CDC's webpage for <u>Management of Residents with Herpes Zoster</u>

Legionella

(Legionnaires' disease)

Legionella bacteria can cause a serious type of pneumonia (lung infection) called Legionnaires' disease. Legionella bacteria can also cause a less serious illness called <u>Pontiac fever</u>. Legionella bacteria are found naturally in freshwater environments, like lakes and streams. The bacteria can become a health concern when they grow and spread in human-made building water systems. <u>Legionnaires' disease</u> is very similar to other types of pneumonia.

In human-made water systems, Legionella can grow and spread to susceptible hosts, such as persons who are at least 50 years old, smokers, and those with underlying medical conditions such as chronic lung disease or immunosuppression. Legionella can grow in parts of building water systems that are continually wet, and certain devices can spread contaminated water droplets via aerosolization.

Type of Precaution: <u>Standard Precautions</u>

Hand Hygiene: Hand washing with soap and water or antiseptic hand wash or hand rub.

Please refer to CMS's <u>QSO-17-30 - Hospitals/CAHs/NHs</u> for Requirement to Reduce Legionella Risk in Healthcare Facility Water Systems to Prevent Cases and Outbreaks of Legionnaires' Disease (LD) for Nursing facilities.

While QSO-17-30 is intended as guidance for nursing facilities, other providers may also choose to use this information.

Urinary tract infection

(with or without urinary catheter)

A urinary tract infection (UTI) is an infection involving any part of the urinary system, including urethra, bladder, ureters, and kidney. UTIs are the most common type of healthcare-associated infection reported to the National Healthcare Safety Network (NHSN). The most important risk factor for developing a catheter associated UTI (CAUTI) is prolonged use of the urinary catheter. Catheters should only be used for appropriate indications and should be removed as soon as they are no longer needed.

Type of Precaution: Standard Precautions

Hand Hygiene: Hand washing with soap and water or antiseptic hand wash or hand rub.

CDC provides a detailed guidance for healthcare workers regarding <u>Catheter-Associated Urinary Tract Infections (CAUTI)</u>. For infection prevention purpose, reviewing the following topics is recommended:

- Appropriate Urinary Catheter Use
- Proper Techniques for Urinary Catheter Insertion
- Proper Techniques for Urinary Catheter Maintenance

If your facility experiences CAUTI on a frequent basis, please visit CDC's <u>Guideline for Prevention Of Catheter-associated Urinary Tract Infections</u> <u>2009.</u> This HICPAC handbook contains detailed guidelines for prevention of CAUTI.

Medical Waste (TCEQ)

Medical waste is a subset of wastes that may be contaminated by blood, body fluids, or other potentially infectious materials and is often referred to as regulated medical waste. Medical waste is primarily regulated by state environmental and health departments.

The <u>Texas Commission on Environmental Quality</u> (TCEQ) is the environmental agency for the State of Texas.

Under the State Biological Hazards Annex, TCEQ is responsible for providing technical and regulatory guidance regarding authorized medical waste transporters, disposal facilities, and waste incinerators—plus provide local jurisdictions with a list of authorized medical waste transporters, disposal facilities, and waste incinerators.

Special waste from health care-related facilities: As defined in <u>25 TAC 1.132(44)</u>, there are five categories of <u>untreated medical waste that are regulated</u>:

- Waste from animals that have been intentionally exposed to pathogens
- Bulk blood, bulk human-blood products, and bulk human bodily fluids
- Microbiological waste
- Pathological waste
- Sharps

COVID-19: Waste Disposal Guidance

Relevant to <u>TCEQ</u>'s responsibilities associated with the State's Biological Hazards Annex, the agency has prepared regulatory guidance regarding the transportation, treatment, and disposal of COVID-19 medical waste. TCEQ also stands ready to provide technical assistance to these facilities and local jurisdictions to help them handle any associated issues that may arise.

COVID-19 medical wastes should be handled as <u>Regulated Medical</u> <u>Waste</u> (49 CFR 173.134 and 30 TAC Chapter 326, Subchapter B), just like the medical waste from seasonal flu residents. <u>See TCEQ's regulatory</u> <u>guidance on disposal of COVID 19 medical waste</u>.

This would include waste or reusable material derived from the medical treatment of a human or animal, which includes diagnosis and immunization materials, or from biological medical research, which includes the production and testing of biological products (for example, disposable materials saturated with blood or body fluids, laboratory specimens, sharps, etc.).

Waste from quarantined residents not yet diagnosed or suspected cases: If the waste is generated from a health-care related facility it should be handled as regulated medical waste.

Regulated medical waste can be transported with other medical waste. Regulated medical waste can be treated just like other medical waste using steam-sterilization (autoclaving), incineration, or an alternative method (such as using chemicals).

Used rapid test kits should be handled as regulated medical waste. They should be stored separately from regular garbage in rigid containers that are leak resistant, impervious to moisture, and strong enough to prevent tearing or bursting from handling. <u>See TCEQ's list of medical waste treatment</u> facilities and transfer stations.

COVID-19 regulated medical waste (after treatment), unused and expired test kits, and personal protective equipment from administering tests can be managed as routine municipal solid waste and placed in a municipal solid waste Type I or Type IAE landfill.

Disposing of Sharps Containers

Sharps generated from a health care-related facility as defined in 25 TAC 1.134 must be managed as medical waste. Options include:

- <u>Self-transport</u> the waste to an authorized medical waste processing facility.
- Engage a <u>registered medical waste transporter</u> to pick up the waste for transport to an authorized facility for treatment and disposal.
- Send the waste to an authorized facility using the <u>US Postal Service</u>.
- Treat the waste on-site following the procedures regarding notification of on-site treatment on our <u>Information for Generators of Medical Waste</u> page. Use one of the pre-approved treatment methods in the Texas Department of State Health Services' (DSHS) rules <u>25 TAC 1.136(a)(5)</u> or an alternative treatment technology approved by DSHS. You may encapsulate sharps in a hard matrix, such as using plaster of Paris, inside a container that is sealed and labeled and then disposed of with your routine trash.

Disposing of Pharmaceutical Waste

Disposing of pharmaceutical waste generated by a health care-related facility must be managed based on following categorizations:

- Hazardous Pharmaceutical Wastes— Manage as hazardous waste any pharmaceutical wastes that are listed as hazardous by EPA under Title 40, Code of Federal Regulations, Section 261.33 (40 CFR 261.33) or that include ingredients that may cause the medication to show the toxicity characteristic under 40 CFR.
- Nonhazardous Pharmaceutical Wastes—Manage as special waste any pharmaceutical wastes that are nonhazardous per Title 30, Texas Administrative Code, Chapter 330. In addition, Title 30, Texas Administrative Code, Chapter 326 does not specifically address the disposal of nonhazardous pharmaceutical waste. Although is not required, TCEQ recommends that health care-related facilities contact authorized medical waste treatment facilities for their treatment and disposal procedures and landfills for their disposal procedures.
- Reverse Distribution Program—You may return pharmaceutical wastes to the manufacturer if the pharmaceutical manufacturer offers a reverse distribution program.

<u>Contact the MSW Permits Section</u> if you have questions about managing medical waste.

Please refer to <u>Title 30</u>, <u>Texas Administrative Code</u>, <u>Chapter 326</u> for State rules establishing the requirements for the collection, transport, transfer, storage, treatment, and disposal of medical waste, and for registering medical waste processing facilities.

For additional information, please read TCEQ Regulatory Guidance - <u>Texas</u> Regulations on Medical Waste.

Selected EPA-Registered Disinfectants

The following lists of antimicrobial products registered by EPA are effective against common pathogens, as indicated in the list titles. EPA-registered antimicrobial products may not make efficacy claims against these pathogens unless the EPA has reviewed data to support the claim and approved the claim on the label.

- List A: EPA's Registered Antimicrobial Products as Sterilizers
- <u>List B: EPA Registered Tuberculocide Products Effective</u> Against *Mycobacterium tuberculosis*
- <u>List C: EPA's Registered Antimicrobial Products Effective Against</u>
 Human HIV-1 Virus
- <u>List D: EPA's Registered Antimicrobial Products Effective Against Human HIV-1 and Hepatitis B Virus</u>
- <u>List E: EPA's Registered Antimicrobial Products Effective</u>
 <u>Against Mycobacterium tuberculosis Human HIV-1 and Hepatitis B</u>
 Virus
- <u>List F: EPA's Registered Antimicrobial Products Effective Against Hepatitis C Virus</u>
- <u>List G: EPA's Registered Antimicrobial Products Effective</u>
 Against Norovirus
- <u>List H: EPA's Registered Antimicrobial Products Effective Against Methicillin Resistant Staphylococcus aureus (MRSA) and/or Vancomycin Resistant Enterococcus faecalis or faecium (VRE)</u>
- <u>List J: EPA's Registered Antimicrobial Products for Medical Waste</u>
 Treatment
- <u>List K: EPA's Registered Antimicrobial Products Effective Against Clostridium Difficile Spores</u>
- <u>List L: EPA's Registered Antimicrobial Products That Meet the CDC</u>
 <u>Criteria for Use Against the Ebola Virus</u>
- <u>List M: Registered Antimicrobial Products with Label Claims for Avian</u> Influenza
- <u>List N: Disinfectants for Use Against SARS-CoV-2</u>
- <u>List O: Disinfectants for Use Against Rabbit Hemorrhagic Disease Virus</u> (RHDV2)
- <u>List P: Antimicrobial Products Registered with EPA for Claims Against Candida Auris</u>

Information on Registration Numbers:

All EPA-registered pesticides must have an EPA registration number (EPA Reg. No.). The EPA Reg. No. of a product can be more useful than its brand name for identifying the EPA-registered product. Alternative brand names have the same EPA Reg. No. as the primary product. The EPA Reg. No. of a product for primary registrants consists of two sets of numbers separated by a hyphen (for example, EPA Reg. No. 12345-12). The first set of numbers refers to the registrant's company identification number, and the second set of numbers represents the product number.

Attachment 1. CDC Recommended Vaccines for Healthcare Workers

Vaccines	Recommendations in brief
<u>Hepatitis B</u>	If you don't have documented evidence of a complete hepB vaccine series, or if you don't have a blood test that shows you are immune to hepatitis B (i.e., no serologic evidence of immunity or prior vaccination) then you should
	 Get a 3-dose series of Recombivax HB or Engerix-B (dose #1 now, #2 in 1 month, #3 approximately 5 months after #2) or a 2-dose series of Heplisav-B, with the doses separated by at least 4 weeks. Get an anti-HBs serologic test 1-2 months after the final dose.
Flu (Influenza)	Get 1 dose of influenza vaccine annually.
MMR (Measles, Mumps, & Rubella)	If you were born in 1957 or later and have not had the MMR vaccine, or if you don't have a blood test that shows you are immune to measles or mumps (i.e., no serologic evidence of immunity or prior vaccination), get 2 doses of MMR (1 dose now and the 2nd dose at least 28 days later). If you were born in 1957 or later and have not had the MMR vaccine, or if you don't have a blood test that shows you are immune to rubella, only 1 dose of MMR is recommended. However, you may end up receiving 2 doses, because the rubella component is in the combination vaccine with measles and mumps. For HCWs born before 1957, see the MMR ACIP vaccine recommendations.
Varicella (Chickenpox)	If you have not had chickenpox (varicella), if you haven't had varicella vaccine, or if you don't have a blood test that shows you are immune to varicella (i.e., no serologic evidence of immunity or prior vaccination) get 2 doses of varicella vaccine, 4 weeks apart.
<u>Tdap (Tetanus,</u> <u>Diphtheria, Pertussis)</u>	Get a one-time dose of Tdap as soon as possible if you have not received Tdap previously (regardless of when previous dose of Td was received). Get either a Td or Tdap booster shot every 10 years thereafter. Pregnant HCWs need to get a dose of Tdap during each pregnancy.
	Microbiologists who are routinely exposed to <i>Neisseria</i>
<u>Meningococcal</u>	meningitidis should get meningococcal conjugate vaccine and serogroup B meningococcal vaccine.

Attachment 2. CDC Recommended Adult Immunization Schedule

Vaccine	19-26 years	27-49 years	50-64 years	≥65 years
Influenza inactivated (IIV4) or Influenza recombinant (RIV4) 0		1 dose annually		
Influenza live attenuated (LAIV4) ①		or 1 dose annually		
Tetanus, diphtheria, pertussis (Tdap or Td) ①	(see notes)	regnancy; 1 dose Td/ ⁻		anagement
Measles, mumps, rubella (MMR)	1 or 2 doses depend (if born in 1957 or la	_		
Varicella (VAR) ①	2 doses (if born in 1980 or later)		2 doses	
Zoster recombinant (RZV) ①	2 doses for immuno conditions (see note	,	2 doses	
Human papillomavirus (HPV) 🛈	2 or 3 doses depending on age at initial vaccination or condition	27 through 45 years		
Pneumococcal (PCV15, PCV20, PPSV23) ①	1 dose PCV15 follow OR 1 dose PCV20 (<u>see I</u>	·		1 dose PCV15 followed by PPSV23 OR 1 dose PCV20

Vaccine	19-26 years	27-49 years	50-64 years	≥65 years
Hepatitis A (HepA) ①	2 or 3 doses depending on vaccine			
Hepatitis B (HepB) ①	2, 3, or 4 doses depending on vaccine or condition			
Meningococcal A, C, W, Y (MenACWY)	1 or 2 doses depending on indication, see notes for booster recommendations			
Meningococcal B (MenB) ①	2 or 3 doses depending on vaccine and indication, see notes for booster recommendations			
	19 through 23 years			
Haemophilus influenzae type b (Hib) ①	1 or 3 doses depend	ling on indication		

Recommended vaccination for adults who meet age requirement, lack documentation of vaccination, or lack evidence of past infection Recommended vaccination for adults with an additional risk factor or another indication Recommended vaccination based on shared clinical decision-making No recommendation/Not applicable

CDC Airborne Infection Isolation Room (AIIR) guidance

Use Airborne Precautions as recommended in <u>Appendix A</u> for residents known or suspected to be infected with infectious agents transmitted person-to-person by the airborne route.

Resident placement:

- In LTC settings, place residents who require Airborne Precautions in an AIIR that has been constructed in accordance with current guidelines
- Provide at least six (existing facility) or 12 (new facility or construction/renovation) air changes per hour.
- Direct exhaust of air to the outside. If it is not possible to exhaust air from an AIIR directly to the outside, the air may be returned to the air-handling system or adjacent spaces if all air is directed through HEPA filters.
- Whenever an AIIR is in use for a resident on Airborne Precautions, monitor air pressure daily with visual indicators (e.g., smoke tubes, flutter strips), regardless of the presence of differential pressure sensing devices (e.g., manometers).
- Keep the AIIR door closed when not required for entry and exit.
- When an AIIR is not available, transfer the resident to a facility that has an available AIIR

In the event of an outbreak or exposure involving large numbers of residents who require Airborne Precautions:

- Consult infection control professionals before resident placement to determine the safety of alternative room that do not meet engineering requirements for an AIIR.
- Place together (cohort) residents who are presumed to have the same infection (based on clinical presentation and diagnosis when known) in areas of the facility that are away from other residents, especially residents who are at increased risk for infection.
- Use temporary portable solutions (e.g., exhaust fan) to create a
 negative pressure environment in the converted area of the facility.
 Discharge air directly to the outside, away from people and air intakes,
 or direct all the air through HEPA filters before it is introduced to other
 air spaces.

Summary of PPE Use and Room Restriction for MDROs

For ease of understanding, CDC provides a <u>Summary of PPE Use and Room</u> <u>Restriction When Caring for Residents Colonized or Infected with Novel or Targeted MDROs in Nursing Homes</u>.

Precautions	Applies to:	PPE used for these situations:	Required PPE
Standard Precautions	All residents	 Any potential exposure to: Blood Body fluids Mucous membranes Non-intact skin Potentially contaminated environmental surfaces or equipment 	Depending on anticipated exposure: gloves, gown, or facemask or eye protection (Change PPE before caring for another resident)
	All residents with any of the following: • Infection or colonization with an MDRO when Contact Precautions do not apply • Wounds and/or indwelling medical devices (e.g., central line, urinary catheter, feeding tube, tracheostomy/ventilato r) regardless of MDRO colonization status	 Changing linens Changing briefs or assisting with toileting Device care or use: central line, urinary catheter, feeding tube, 	Gloves and gown prior to the high-contact care activity (Change PPE before caring for another resident) (Face protection may also be needed if performing activity with risk of splash or spray)

Precautions	Applies to:	PPE used for these situations:	Required PPE
Precautions	All residents infected or colonized with a 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 • For a limited time period, as determined in consultation with public health authorities, on units or in facilities during the investigation of a suspected or confirmed MDRO outbreak • When otherwise directed by public health authorities All residents who have another infection (e.g., C. difficile, norovirus, scabies) or condition for which Contact Precautions is recommended in Appendix A of the CDC Guideline for Isolation Precautions		Don before room entry, doff before room exit; change before caring for another resident Face protection may also be needed if performing activity with risk of splash or spray (Resident room restriction is required except for medically necessary care)