Local Health Department Infection Prevention and Control Toolkit

Long-Term Care Focus

August 2023

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Glossary of Terms/Acronyms

Acronym/Term	Definition
APIC	Association for Professionals in Infection Control and Epidemiology
BBP	Bloodborne Pathogen
CDC	Centers for Disease Control
CDI	Clostridioides difficile Infection
CLABSI	Central-Line Associated Bloodstream Infections
CMS	Centers for Medicare and Medicaid Services
COP	Condition of Participation
DHQP	Division of Healthcare Quality Promotion
EVS	Environmental Services
HAIs	Healthcare-Associated Infections
HCP	Healthcare Personnel
HCWs	Healthcare Workers
ICAR	Infection Control Assessment and Response
ICRA	Infection Control Risk Assessment
IP	Infection Preventionist
IPC	Infection Prevention and Control
LHD	Local Health Department
LTC	Long-Term Care
LTCF	Long-Term Care Facility
MDRO	Multidrug-Resistant Organism
NACCHO	National Association of County and City Health Officials
NHSN	National Healthcare Safety Network
OSHA	Occupational Safety and Healthcare Administration
PDSA	Plan-Do-Study-Act
POC	Point of Care
PPE	Personal protective equipment
SIPC	Safe Injection Practices Coalition
TB	Tuberculosis
UTI	Urinary Tract Infection

Acknowledgments

Toolkit Overview

Local health departments (LHDs) can play a critical role in responding to healthcare-associated infections (HAIs) and strengthening infection control expertise, partnerships, and practices within their communities. LHDs are well-positioned to improve healthcare infection prevention and control (IPC) knowledge and practices within their community, including by responding to HAI and antimicrobial resistant (AR) cases, clusters, and outbreaks; assessing facility IPC practices to identify gaps; providing continued assistance until infection control gaps have been addressed; sharing resources; and providing education to healthcare facility personnel. The emergence of COVID-19 revealed critical opportunities to improve IPC practices across all continuums of healthcare delivery. This was particularly true for long term care facilities (LTCFs) given their high-risk resident populations and challenges, including the lack of resources, staffing, and on-going training to name a few. As such, the value of partnerships between LTCFs and LHDs became evident.

The Infection Control Assessment and Response (ICAR) tool utilizes a systematic assessment of a healthcare facility's IPC practices and guides quality improvement activities. State and local partners use findings from the assessments to aid healthcare facilities by providing targeted and timely resources and support to mitigate identified gaps. This toolkit serves as an educational source for LHDs to assist LTCFs to address the identified IPC gaps and support the safety of all residents, staff, and visitors. Utilization of the toolkit will assist the LHD, the assigned facility IPC team, and others to create a robust IPC program. The education provided will walk the LHD and the facility IPC team through all aspects of an ICAR and more. Additional resources include links to evidence-based guidance, useable checklists, and tools to enhance an IPC program.

The toolkit does not have to be read from beginning to end. There are chapters to find the subject matter quickly and easily. This toolkit was created by practicing infection preventionists (IPs) who have worked in a variety of settings including LTCFs where they partnered with the LHD.

Chapter 1: Local Health Departments Introduction to Infection Prevention and Control

Public Health has been recognized in society since around the eighteenth century. Epidemics such as the plague, cholera, and smallpox increased the need for public intervention to protect citizens from illness. "In the late seventeenth century, several European cities appointed public authorities to adopt and enforce isolation and quarantine measures". Later in the nineteenth century, germ theory of disease helped push the increased need for public health. "During this period public agencies that had been developed to conduct and enforce sanitary measures refined their activities and expanded into laboratory science and epidemiology. Public responsibility for health came to include both environmental sanitation and individual health".[1]

Clean, safe care is a patient/residents' right and should be a priority in all healthcare facilities. An IPC program achieves this through standards put into place to prevent harm to residents, workers, and visitors due to infections in healthcare facilities. Residents at LTCFs are at risk of infection due to their advanced age and possible comorbidities. This risk of infection can place the resident at risk of a healthcare-associated infection (HAI). HAIs are infections that a patient/resident can get while they are in a healthcare facility being treated for something else. Some examples of HAIs that residents could get are blood infections, wound infections, urinary tract infections, and respiratory infections. Research shows that HAIs are a significant cause of morbidity and mortality in the United States healthcare system. The Centers for Disease Control and Prevention (CDC) reports about one in 31 hospital patients has at least one HAI.[2]

In this toolkit, LHDs will learn about basic LTC IPC program infrastructure and tools to engage the facility IPC team. An IPC program includes an IPC risk assessment, IPC Plan, Bloodborne Pathogen Exposure Control Plan, Facility TB Risk Assessment and Plan, and other policies. IPC implementation is the responsibility of everyone who works in the healthcare facility. It is important that all healthcare workers have an active IPC orientation and continue to have education throughout the year. It is equally important the LHDs have tools and resources to assist the facilities with IPC processes, plans, and education.

LHDs work with LTCFs to prevent disease outbreaks, identify causes of outbreaks, and then determine appropriate responses. LTCFs may use different models to satisfy IPC initiatives or requirements. There may be one appointed individual to oversee IPC activities, there could be a team of individuals with this responsibility, it could be an individual that has other responsibilities along with IPC. The important part is that IPC is a top priority in the organization and to know that assistance is available. Most LTCF IPC can benefit from targeted education and guidance that LHDs can provide. Education may include new IPC guidance, updates to standards, resources, checklists, and rationale. As we learned from COVID-19, situations can change rapidly. Staying up to date on evidence-based research assists with preparation for possible changes.

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[1] Institute of Medicine (US) Committee for the Study of the Future of Public Health. The Future of Public Health. Washington (DC): National Academies Press (US); 1988. 3, A History of the Public Health System. Available from: The Future of Public Health.

[2] Centers for Disease Control and Prevention. Healthcare-Associated Infections (HAIs). *HAI data.* 2018.

There are also times when it is mandatory for LTCFs to reach out to their LHD. A prime example would be if an outbreak or cluster occurs in a LTCF. LHDs serve as subject matter experts for LTCFs to contact. This toolkit will assist the LHDs in understanding basic IPC concepts so that they can provide sound guidance to LTCFs. The toolkit also covers other topics related to IPC such as the National Healthcare Safety Network (NHSN) reporting system and water management. Resource links are available in the chapters throughout this toolkit to complete training. Educational presentations are also included to assist the LHD with delivering education to LTCFs. These can be individualized for the specific LTCF. The LHD should continue to assess the learning needs of LTCFs IPC and foster continued development. Some items the LHD may address when working with facility IPC are the following:

- Managing critical data and information, such as presence of multidrug-resistant organisms (MDROs) in the facility, hand hygiene compliance rates, new infections, and clusters of infections.
- Developing and implementing policies and procedures to prevent or minimize infection risks, such as policies for transmission-based precautions, screening of workers and residents.
- Intervening to prevent disease transmission through education and training, and outbreak investigation.
- Collaborating with other programs to achieve common goals, such as education for housekeeping services, working with facilities management on IPC environment of care issues, teaming up with occupational/employee health in staff exposure incidences, and working with the LHD on outbreak investigations.
- Environmental health and safety, including construction in the facility, housekeeping, laundry, checking the effectiveness of cleaning and disinfection products used by LTCFs, and air and water handling.
- Microbiology laboratory, such as reviewing urine and wound cultures, and determining drug resistance.
- Antibiotic usage, including working with an antibiotic stewardship team providing education on antibiotic usage.
- Disinfection and sterilization, such as cleaning of equipment between residents, the proper use of reusable instruments, and high-level disinfection policies.
- Education and training including presenting IPC education at staff orientation, creating yearly IPC educational opportunities, and performing just-in-time training as needed.
- Reporting, such as reporting staff influenza and/or COVID vaccination status.
- Audits and surveillance, such as performing surveillance to monitor hand hygiene practices, personal protective equipment (PPE) practices, medication administration, wound care, or catheter care.

Chapter 2: Understanding and Supporting the LTC IPC Program

LHDs play a crucial role in supporting LTCFs' IPC, ensuring the well-being and safety of their residents. They act as a vital resource, offering guidance, oversight, and assistance. By assisting in training and education, the LHD equips the staff with valuable information and empowers LTC staff to provide better care, respond effectively to IPC breaches, and prevent the spread of infections. Such education not only benefits the residents but also contributes to the overall improvement of LTCFs. The following chapter introduces the LHD to the role of LTCF IPC and includes resources to help with a successful IPC program.

This chapter consists of the following:

- Role of IPC in LTCFs
  - Description
  - Role of LTCF IPC
  - Support Resources
  - Training
  - Infection Preventionist Checklist
- Becoming Board Certified in Infection Prevention and Control in LTC
- References

Role of IPC in LTCFs

Description:

LHDs can provide guidance to assist LTCFs with an IPC program. It is important that there is a designated individual, team, or appointed person onsite at LTCFs that are in charge of IPC. They will serve as the IPC liaision between LTC and the LHD. Many LTC staff have a variety of duties in the facility, so whenever possible, the LHD should encourage the LTC leadership to make sure the assigned individual or team has time dedicated to IPC activities based on facility and resident needs. If the LHD is conducting an ICAR, this information is collected as part of the demographics form.

Role of LTCF IPC:

The LTCF IPC program is essential. The program plays a critical role in keeping residents, staff, and visitors safe from infection. Individuals in charge of IPC should be knowledgeable about infections, including how to:

 DETECT

 CONTROL

 PREVENT
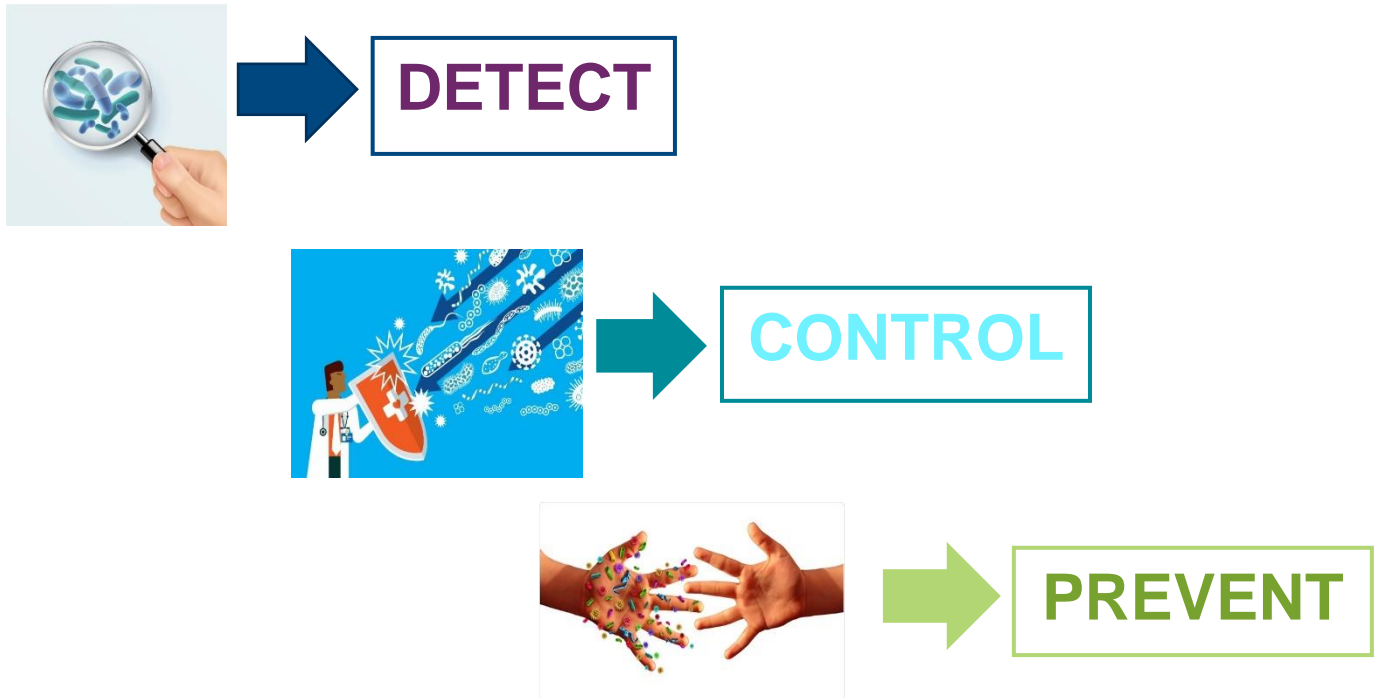
Support Resources:

LTCF IP programs need to have support such as:

- IPC program at affiliated or transferring facilities
- Staff from state and local health departments
- Corporate IPC resources if available
- Member of [IPC professional organization](#)
- Training and encouragement
- [Workforce Resources for LTC Professionals](#)
- Quality Innovation Network-Quality Improvement Organizations
  - Supported by the Centers for Medicare & Medicaid Services (CMS)
  - Work with healthcare providers to improve resident safety and clinical care
    - Consultants within the QUIN-QIO work with individual nursing homes on a voluntary basis.
    - Support is available at no cost to the facility.
    - [Find your QIN-QIO program here](#)
- State-Based Healthcare-Associated Infection and Antimicrobial Resistance Programs: Supported by the CDC
- Examples of support to nursing homes include:
  - Assistance during the response to outbreaks and other IPC practice breaches;
  - Support and training to facility staff on the use of National Healthcare Safety Network (NHSN);
  - Education and resources to support IPC and antibiotic stewardship activities; and
  - Convening healthcare facilities within a community to prevent healthcare-associated infections (HAIs) or the spread of antibiotic-resistant pathogens.
  - [Find your State HAI program here](#)

Training:

Below is a link for free training for LTCF IPC. This course has 23 modules and can take some time to get through, but it is important that those responsible for LTCF IPC take the time required to succeed at the position. It is self-paced training designed for working staff. It has continuing education credit upon completion of training. This training does give a certificate of completion at the end, which can serve as documentation of completed training for the staff member's education file.

[CDC Train: Nursing Home Infection Preventionist Training Course](#)

- AHRQ: A Unit Guide to Infection Prevention for Long-Term Care Staff: [AHRQ PDF Guide](#)
- Key guidelines, tools, and information for IPC programs can be found at the following links:
    - [CDC Long-Term Care Facility Prevention Tools](#)
    - [CDC Influenza Toolkit](#)
    - [Agency for Healthcare Research and Quality Toolkit](#)
    - [National Nursing Home Quality Improvement Campaign](#)
    - [Association for Professionals in Infection Control and Epidemiology (APIC)](#)
    - [Society for Healthcare Epidemiology of America (SHEA)](#)

Infection Preventionist Resources:

- Sample Infection Preventionist Checklist ([Appendix A](#)). This document serves as a guide to assist with the competencies of an infection preventionist or a team that is involved with IPC.
- Sample Infection Preventionist Job Description ([Appendix B](#)). This resource provides an overview of the infection preventionist role and responsibilities within a facility. [IP Job Description](#)

Becoming Board Certified in Infection Prevention and Control in LTC

The Certification Board of Infection Control and Epidemiology (CBIC) has created a certification for infection prevention and control professionals who work in LTC settings. The creation of this certification came shortly after the COVID-19 pandemic and the recognition of the lack of IPC in LTCF. The certification will show that the IP in LTC has a standardized measure of IPC basic knowledge, skills, and abilities to perform their job. This certification will have an internationally recognized certification in IPC and can demonstrate proficiently in all the various aspects of LTC IPC. The certification can also assist to fulfill the Code of Federal Regulation for LTCF: §483.80 Infection Control which reads, "The facility must establish and maintain an infection prevention and control program designed to provide a safe, sanitary, and comfortable environment and to help prevent the development and transmission of communicable diseases and infections". The regulation also states, "The facility must designate one or more individual(s) as the infection preventionist(s) (IPs) who are responsible for the facility's infection prevention and control program (IPCP)." The LHD can play a role in assisting the LTCF on awareness of this certification.

Tools and Resources for LTC Certification in IPC:

- Application (along with a fee) for the exam must be submitted online
- Eligibility Requirements for LTC-CIP
- APIC LTC-CIP Reading Sample
- Explore options for board certification
- Explore the APIC Learning Systems to Prepare for Long-Term Certification (LTC-CIP):
- Overview of Long-Term Care Certification (LTC-CIP):
  - LTC-CIP Certification
  - Home—APIC Exam Preparation
  - Explore the APIC Learning System for LTC-CIP Video
- Prepare for Your Long-Term Care Certification in Infection Prevention Exam:
  - Association for Professionals in Infection Prevention—APIC Text Online subscription
  - Certification Board of Infection Prevention (CBIC)
  - Infection Control Basics (CDC)
  - Brooks, Kathy. Ready Reference for Microbes, 4th edition, APIC
  - Fundamental Statistics & Epidemiology in Infection Prevention, 1st edition, APIC
  - Kulich P, Taylor D, eds. The Infection Preventionist's Guide to the Lab, APIC, Washington, DC, 2012.
  - Infection Prevention Guide to Long Term Care, 2nd edition (APIC)
  - Heymann, D., ed. Control of Communicable Diseases Manual, 20th edition, Washington, DC: American Public Health Association
  - SHEA/APIC Guideline: Infection Prevention and Control In The Long-Term Care Facility | Infection Control & Hospital Epidemiology | Cambridge Core
  - A Unit Guide to Infection Prevention for Long-Term Care Staff (AHRQ).
  - Advisory Committee on Immunization Practices (ACIP)

References:

- Centers for Disease Control and Prevention: [Infection Control website](#).

- Centers for Disease Control and Prevention: [Infection Control Guidelines Library](#).

- Centers for Disease Control and Prevention: [Long-term Care website](#).

- Department of Health and Human Services. Centers for Medicare and Medicaid Services: [Code of Federal Regulations Title 42 – Public Health](#).

- Quality Improvement Organization with HSAG: [Infection Preventionist Orientation Checklist](#).

Chapter 3: Chain of Infection

The chain of infection is the starting point and framework for IPC. In this chapter, the LHD will learn about what makes up the chain of infection and how each link is categorized. The links in the chain will display how the pathogen causes infection. Pathogens utilize unique ways to infect, transmit, and control their environment and ability to survive. Residents of LTCFs are at increased risk of infections. Because of this, continued transmission of infections in LTCFs can be devastating. CDC states, "the risk for germs to spread in healthcare is different than in other places. There's a higher chance for germs to spread in healthcare settings, than, for example, a grocery store, because that is where patients who are sick come for care", (Project First Line: Infection Control in Health Care: An Overview). This also applies to LTCFs. Residents live in a residential type setting where items and spaces are shared. The healthcare workers interact with all the residents, which in turn can lead to transmission of infections if proper IPC practices are not utilized. LHDs can utilize this chapter to provide a foundational understanding on the chain of infection and learning to recognize infection risks in LTCFs. Early identification and interventions can break the chain of infection in LTCFs.

This chapter consists of the following chain of infection:

- Description
- Visual representation of the Chain of Infection
- CDC Video: How Does Disease Spread?
- CDC Project First Line video: Recognizing Risks in Healthcare Settings
- Ways to break the Chain of Infection
- Practice Scenario

Chain of Infection

Description:

There are a series of events and conditions necessary for germs to spread, and one framework for understanding them is the chain of infection. Supporting IPC means stopping the events in this series. Knowing how pathogens spread in the environment and from person to person will assist in any outbreak investigation and knowing how to reinforce IPC actions. The six links in the chain of infection include: the infectious agent/pathogen, reservoir, portal of exit, mode of transmission, portal of entry, and susceptible host.

Visual representation of the Chain of Infection:
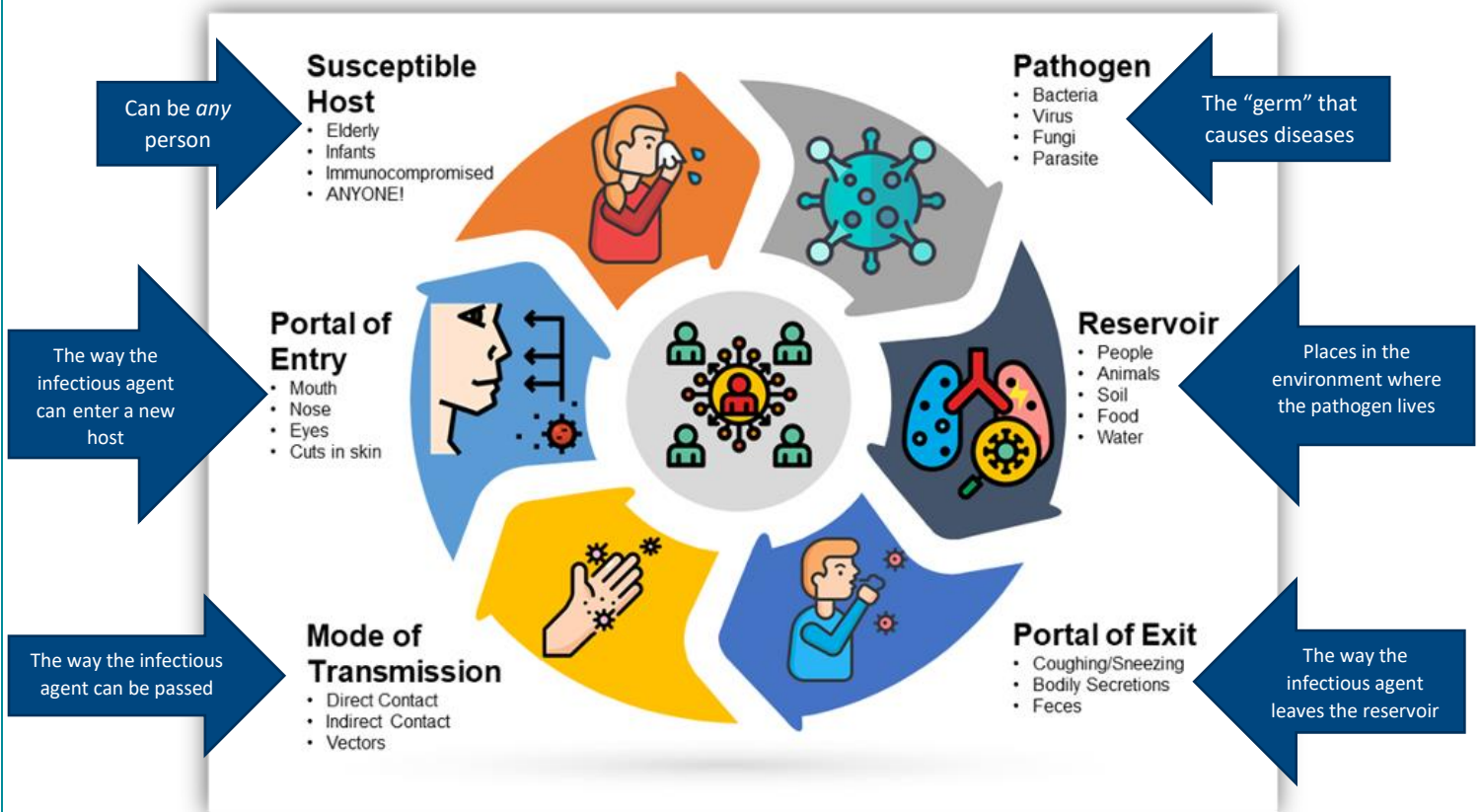
Image: Texas Health and Human Services. Chain of Infection Overview

CDC Video: How Does Disease Spread?

CDC NERD Academy Student Quick Learn: How does disease spread?

CDC Project Firstline video on Recognizing Risks in Healthcare settings:

CDC Project First Line: Recognize Infection Risks in Healthcare Video

Ways to Break the Chain of Infection at Each Link:

- **Pathogen**
  - Diagnosis and Treatment
  - Antimicrobial stewardship
- **Reservoir**
  - Cleaning, disinfection, sterilization
  - Infection prevention policies
  - Pest control
- **Portal of Exit**
  - Hand hygiene
  - Personal protective equipment
  - Control of aerosols and splatter
  - Respiratory etiquette
  - Waste disposal
- **Mode of Transmission**
  - Hand hygiene
  - Personal protective equipment
  - Food safety
  - Cleaning, disinfecting, sterilization
  - Isolation
- **Portal of Entry**
  - Hand hygiene
  - Personal protective equipment
  - Personal hygiene
  - First aid
  - Removal of catheters and tubes
- **Susceptible host**
  - Immunizations
  - Treatment of underlying disease
  - Health insurance
  - Resident education

Poster can be found at this resource: [Break the Chain of Infection](#).

Put Into Practice Scenario:

Overview:

The following practice scenario places a healthcare worker at the center of caring for a resident in a LTCF. This practice scenario highlights the links in the chain of infection. The practice scenario can be used to educate healthcare workers on how they can impact safe resident care while providing good infection prevention and control practices.

Scenario:

Ms. Smith is a resident at a local long-term care facility. She is active in group activities and her favorite time is mealtimes in the dining hall. She recently came down with a sore throat and was taking throat lozenges to help with the discomfort. She continued with her usual activities of Bingo and being social during mealtimes in the dining hall. One of her favorite condiments was ketchup and she usually wanted extra pepper on all her food. She enjoyed the spice!

She noticed two days later that her lymph nodes in the front of her neck were swollen and sore. The nurse administered ibuprofen for the discomfort. Ms. Smith was excited for one of her favorite dishes of macaroni and cheese for lunch, and of course she squirted ketchup and sprinkled pepper on it!

Five days after her sore throat started, she had a headache, fever, and pain upon swallowing. Ms. Smith began to feel worse, and the nurse ordered a throat culture. Ms. Smith was diagnosed with strep throat and placed on antibiotics.

During the time of Ms. Smith's increasing symptoms, four other residents began to suffer sore throats and headaches. Three of the residents had white patches on the soft palate of their mouths by day 2 of symptoms. All four resident cultures came back with a diagnosis positive for strep throat.

After some investigation, it was noted that Ms. Smith had dinner and lunch with three of the four residents on a few occasions over the past days. The ketchup bottle and pepper dispenser were all used by the residents, including Ms. Smith. When interviewing the dietary staff, it was noted that the condiment bottles were rarely wiped down and cleaned. When interviewing the nursing staff, it was noted that hand hygiene of residents is not consistently performed prior to meals.

It is known that group A *Streptococcus* can live on surfaces from anywhere from 3 days to 6 months. Also, it usually takes two to five days for someone exposed to group A strep bacteria to become ill with strep throat.

Here are steps that could have been taken to break the chain of infection:

- Reservoir: cleaning the condiment bottles (ketchup and pepper)
- Portal of Exit/Portal of Entry: hand hygiene of residents prior to entering the dining area
- Infectious agent: early diagnosis and treatment of illness
- Mode of Transmission: assessing signs and symptoms of residents daily and implement interventions

Chapter 4: Hand Hygiene

The importance of clean hands for medical providers was first identified and described simultaneously in the United States and Europe. Between 1842 and 1846, Oliver Wendell Holmes and Ignaz Semmelweis presented evidence that puerperal fever spread from person-to-person on the unclean hands of physicians. The first policy on hand hygiene for healthcare workers was soon created, yet germ theory was still a novel idea and not widely accepted as scientifically based.[3] Today, science points to hand hygiene as the foundation of infection control and the single most effective way to prevent the spread of infection.

Hand hygiene education and competency validation is a learning technique that can strengthen IPC culture in a LTCF. LHDs encourage the surveillance of hand hygiene compliance in LTCFs. Hand hygiene surveillance data can be used to identify gaps in IPC practices in the facility. LHDs can offer hand hygiene education and hand hygiene surveillance tools found in this toolkit.

This chapter consists of the following hand hygiene:

- Description
- Hand hygiene information
- Why do I need to clean my hands?
- Hand hygiene videos
- How do I clean my hands?
- When should I clean my hands?
- How should I use gloves?
- How does the healthcare environment affect the need to clean my hands?
- Put into practice scenario
- FAQs on hand hygiene
- Hand hygiene surveillance/audits
- For your toolbox
- References

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[3] Loudon, I. (2000) The Tragedy of Childbed Fever, Oxford University Press, New York.

Hand Hygiene

Description:

Hand hygiene in healthcare facilities protects staff, residents, resident's family members, and visitors that come into the healthcare facility. Hand hygiene begins with healthy hands, skin, and nails. Healthy hands are hands that are free from injury and able to perform job tasks. Healthy skin on hands should be free from abrasions, wounds, and/or dryness. Dryness of skin can lead to openings in the skin where germs may enter. Washing hands with cool water instead of hot water assists with lessening drying of the skin on the hands. Healthy nails are kept short and clean and free from artificial tips or gels. Jewelry on hands should be kept to a minimum.

Clean hands are the number one way to prevent the spread of infections. Unclean hands can lead to contamination of items and surfaces in the healthcare setting. The equipment and items used in healthcare can also carry pathogens that can be transferred to healthcare worker's hands. The availability of alcohol-based hand sanitizer has increased hand hygiene compliance in healthcare settings. This product makes hand hygiene readily available, when a sink is not accessible. Glove use protects the healthcare workers from possible exposure of bloodborne pathogens or other body fluids, however it is not a substiture for hand hygiene.

Proper hand hygiene by LTCF staff will decrease the chance of germ spreading to surfaces, residents, and staff. Cleaning hands the right way at the right times can be done using an alcohol-based hand rub or soap and water.

Hand Hygiene Information:

- Hand hygiene is part of Standard Precautions. It can reduce the transmission of HAIs to residents and healthcare staff.
- Germs can get onto hands if people touch any object that has germs on it. When these germs get onto hands and are not washed off, they can be passed from person to person and make people sick.
- Germs from unwashed hands can be transferred to other objects, like handrails, table tops, or toys, and then transferred to another person's hands.
- Teaching residents, staff, and visitors about handwashing helps them and their communities stay healthy.
- Handwashing can prevent about 30% of diarrhea-related sickness and about 20% of respiratory infections (e.g., colds).
- Reducing the number of infections, like diarrhea-related sickness and colds, by washing hands frequently helps prevent the overuse of antibiotics – the single most important factor leading to antibiotic resistance around the world.

Why Do I Need to Clean My Hands?

- Cleaning hands reduces:
  - The spread of potentially deadly germs to residents; and
  - The risk of healthcare provider colonization or infection caused by germs from a resident.
- Any healthcare worker, caregiver, or person involved in direct or indirect resident care needs to be concerned about hand hygiene and should be able to perform it correctly and at the right time.

Hand Hygiene Videos:

- [CDC- Engage: The Foundation of a Hand Hygiene Program](#)
- [CDC - Educate: Developing Knowledge and Skill in Hand Hygiene](#)
- [CDC - Execute: Mindfulness and Team Accountability with Hand Hygiene](#)
- [CDC - Evaluate: Using Hand Hygiene Data for Action](#)

How Do I Clean My hands?

- Sanitize them using alcohol-based hand rub (follow manufacturer's directions):
  - Dispense the recommended amount of product per the manufacturer's Instructions for Use
  - Apply product to the palm of one hand
  - Rub hands together, making sure that all surfaces of hands and fingers are covered until they are dry (no rinsing is required)
  - This should take about 15 – 20 seconds
- Hand washing with soap and water
  - Wet hands first with water (do not use hot water)
  - Apply soap to hands
  - Rub hands vigorously for at least 15 – 20 seconds, covering all surfaces of hands and fingers. Include rubbing nail beds.
  - Rinse hands with water and dry thoroughly with a paper towel
  - Use a paper towel to turn off the water faucet
  - Dispose of used paper towel in the trash

When Should I Clean My Hands?

- Use Alcohol-based hand sanitizer:
  - Immediately before touching a resident;
  - Before performing an aseptic task (e.g., placing an indwelling device) or handling invasive medical devices;
  - Before moving from work on a soiled body site to a clean body site on the same resident;
  - After touching a resident or the resident's immediate environment;
  - After contact with blood, body fluids or contaminated surfaces; and
  - Immediately after glove removal.
- Wash with soap and water
  - When hands are visibly soiled
  - After caring for a person with known or suspected infectious diarrhea
  - After known or suspected exposure to spores (e.g., *C. difficile)*
  - Before eating (if soap and water are available, if not use alcohol-based hand sanitizer)
  - After using the restroom

How Should I Use Gloves?

- Glove use is not a substitute for hand hygiene. Hands can be contaminated during glove removal.
- Appropriate glove use: Use gloves when hands may become contaminated with blood, body fluids, excretions, or secretions; or when touching mucous membranes, non-intact skin, or contaminated surfaces or objects.
- Common problems with glove use are <u>failure to</u>:
  - Wear gloves when touching open wounds or mucous membranes, such as the mouth and respiratory tract
  - Wear gloves when touching items that are likely to be contaminated, such as urinary catheters and endotracheal tubes
  - Change gloves between residents
  - Remove gloves after resident care

How Does the Healthcare Environment Affect the Need to Clean My Hands?

Bacteria and other pathogens, such as *Candida auris* can survive for days on resident care equipment and other surfaces.

- Surfaces in the resident care environment – for example: bed rails, computer keyboards, bedside table, personal belongings – are often contaminated with pathogens.
- It is important to practice hand hygiene after leaving a resident's room, even if the staff only touched resident care equipment or other surfaces.
- Staff should perform hand hygiene prior to handling reusable resident care equipment that is moved between rooms. This type of equipment can lead to transmission to the next resident who occupies the room or uses the same equipment.
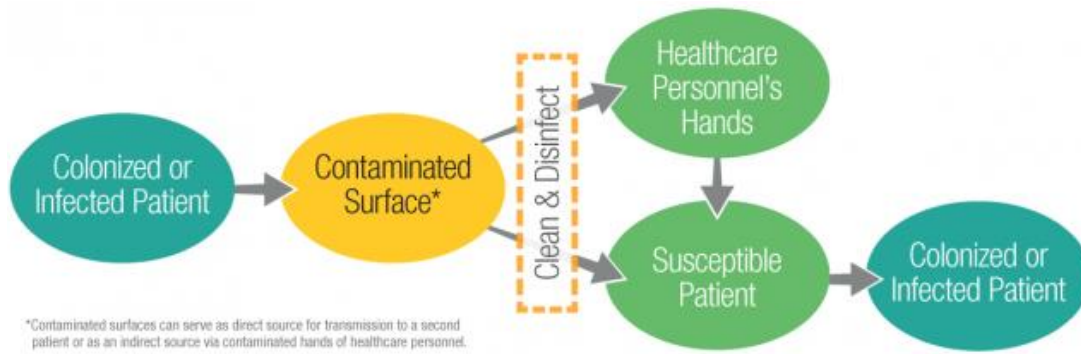
*Contaminated surfaces can serve as direct source for transmission to a second patient or as an indirect source via contaminated hands of healthcare personnel.

Image from: Considerations for Reducing Risk: Surfaces in Healthcare Facilities

Put Into Practice Scenario:

Overview:

The following practice scenario places a healthcare worker at the center of caring for a resident in a LTCF. This practice scenario highlights the opportunities the healthcare worker can perform hand hygiene. The practice scenario can be used to educate healthcare workers on how they can impact safe resident care while providing good infection prevention and control practices.

Scenario:

It is time to see resident Mr. Hughes this morning. The healthcare worker walks to his door and knocks to introduce themselves upon entering the room. The healthcare worker uses alcohol-based hand sanitizer to clean their hands from the dispenser outside Mr. Hughes' room.

Upon entry the healthcare workers notices that Mr. Hughes is reaching towards his bedside table for his drink, and he is unable to reach it. The healthcare worker kindly asks Mr. Hughes if they can assist him with the drink. Mr. Hughes nods yes. While Mr. Hughes is drinking, the healthcare worker opens the shades and fixes the blankets on the foot of the bed.

Mr. Hughes asks the healthcare worker for his toothbrush and if he could get assistance brushing. The healthcare worker sees his toothbrush and toothpaste sitting on the counter in the bathroom area. The healthcare worker washes their hands with soap and water in the sink and dons a clean pair of gloves. The healthcare worker obtains a small basin of water and the toothbrush. The healthcare worker brings them to Mr. Hughes, and he asks for help brushing his teeth. Once Mr. Hughes is done, the healthcare worker takes the toothbrush and basin to the sink area and cleans the items. The healthcare worker takes off the gloves and cleans their hands.

Mr. Hughes sits in his recliner and turns on the television. He asks to get his comb and sets it on the bedside table for later use. After that, the healthcare worker tells Mr. Hughes they will be back after a bit with his medications.

Upon exit of the room, the healthcare worker cleans their hands using the alcohol-based hand sanitizer just outside the door.

~ Look at all the opportunities for hand hygiene to help keep Mr. Hughes safe! ~

FAQs On Hand Hygiene:

- What areas of the hands are most frequently missed when sanitizing hands?

  Thumbs, fingertips

- What is the minimum amount of time a healthcare worker should wash their hands for?

  15 – 20 seconds

- When hand washing what is the next step after applying soap to hands?

  Rub hands vigorously together covering all surfaces on hands and fingers.

- What should occur if hands become visibly dirty?

  Wash hands with soap and water

- What should occur immediately after removing gloves after performing resident care?

  Clean your hands.

- Hand hygiene is optional after touching items in a resident's room. True or False

  False

Hand Hygiene Surveillance/Audits:

Despite evidence supporting hand hygiene (and other practices) in reducing the spread of HAIs, adherence is sub-optimal. Several facilities have found it useful to monitor adherence to these prevention practices as a method for identifying improvement opportunities and strategically targeting interventions. Steps for implementing surveillance or audits include:

- Train individuals to perform hand hygiene surveillance. This ensures the surveillance is consistent and the data will be useful.
- Choose a hand hygiene surveillance tool. Examples are included in this chapter.
- Collect and tabulate the data monthly. Share with leadership and staff.
- Identify gaps and opportunities for improvement.
- Target education to increase hand hygiene compliance.

For Your Toolbox:

- Leading Authority: CDC
  - Guidelines for Hand Hygiene in Health-Care Settings (CDC)
  - CDC Clean Hands Count Campaign: Contains promotional material
  - About Hand Hygiene for Patients in Healthcare Settings
  - Frequent Questions About Hand Hygiene | Handwashing | CDC

- Agency for Healthcare Research and Quality: Hand Hygiene Observation Audit Tracking Tool User Guide & Hand Hygiene Observational Audit Tracking Tool:
  - [Auditing Strategies to Improve Infection Prevention Processes in Nursing Homes](#)
  - [Hand hygiene audit tool user guide](#)
  - [Hand hygiene observational audit tool](#)
- ASC Quality Collaboration tools. These tools can be used in a variety of healthcare settings, not just Ambulatory Surgery Centers.
  - [Hand Hygiene: What CMS Surveyors Are Looking For](#)
  - [Hand Hygiene Policy and Procedure Template](#)
  - [Leadership Letter Template](#)
  - [Hand Hygiene Observation Template](#)

References:

- APIC. 2023. Infection Prevention and You: Long Term Care.

- CDC. 2024. Clinical Safety: Hand Hygiene for Healthcare Workers. Healthcare Providers.

- CDC. Guidelines for Hand Hygiene in Health-Care Settings: Recommendations of the Healthcare Infection Control Practices Advisory Committee and the HICPAC/SHEA/APIC/IDSA Hand Hygiene Task Force. MMWR 2002;51(N. RR-16).

- CDC. CDC's Core Infection Prevention and Control Practices for Safe Healthcare Delivery in All Settings. 2022.

- CDC. 2014. About Hand Hygiene for Patients in Healthcare Settings.

- Agency for Healthcare Research and Quality. 2021. Auditing Strategies to Improve Infection Prevention Processes in Nursing Homes.

- ASC Quality Collaboration. 2022. Hand Hygiene Toolkit.

- WHO. 2009. Hand Hygiene: Why, How, & When?

Chapter 5: Standard Precautions

Standard Precautions is a set of infection prevention and control practices that are required in all healthcare settings, regardless of the type of healthcare provided. Standard Precautions are known as standards of care that are used on all residents every time. The foundational document for Standard Precautions is [CDC's Core IPC Practices for Safe Healthcare Delivery in All Settings](). The concepts in this chapter introduce LHDs to basic concepts of Standard Precautions. This material can be used to assist LTCFs on consistent use of Standard Precautions, and the role that healthcare workers play in each concept.

This chapter consists of the following standard precautions:

- Description
- Hand hygiene
- Cleaning and disinfection
- Personal protective equipment
- Respiratory hygiene/cough etiquette
- Safe injection practices
- Sharps safety
- Waste disposal
- Put into practice scenario

Standard Precautions

Description:

CDC states "Standard Precautions are the basic practices that apply to all patient care, regardless of the patient's suspected or confirmed infectious state, and apply to all settings where care is delivered. These practices protect healthcare personnel and prevent healthcare personnel or the environment from transmitting infections to other patients," (CDC's Core Practices for Healthcare Delivery in All Settings). Standard Precautions are based on a risk assessment and make use of comment sense practices and PPE that protect the healthcare worker, residents, and visitors.

Information below can be referenced here: CDC Standard Precautions for All Patient Care

Hand Hygiene:

	Refers to cleaning your hands with an alcohol-based hand sanitizer/rub or soap and water. About Hand Hygiene for Patients in Healthcare Settings
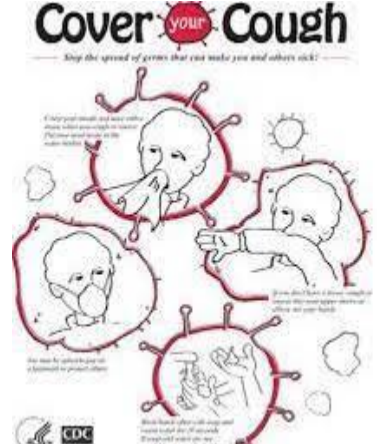
Properly handle, clean, and disinfect patient care equipment and instruments/devices. Clean and disinfect the environment appropriately:

	High touch areas throughout the facility that are touched often by staff, residents, and visitors should be cleaned often with an EPA-registered hospital grade disinfectant ensuring the following of manufacturer's instructions for use. Reusable equipment should be cleaned, disinfected, and/or sterilized as recommended by manufacturer's instructions. • Guidelines for Environmental Infection Control in Health-Care Facilities • Disinfection and Sterilization Guideline • How to Read a Disinfectant Label • CDC Options for Evaluating Environmental Cleaning

Use of Personal Protective Equipment (PPE) whenever there is an expectation of possible exposure to infectious material:

MEDICAL PERSONAL PROTECTIVE EQUIPMENT	Equipment that protects you and keeps germs from spreading (e.g., masks, gowns, gloves, goggles, etc.). • Sequence for Putting On Personal Protective Equipment (PPE) • CDC Isolation Precautions Guideline

Respiratory Hygiene/Cough Etiquette:

Cover your Cough Stop the spread of germs that can make you and others sick!	Are infection prevention measures designed to limit the transmission of respiratory pathogens spread by droplet or airborne routes. These measures should be posted beginning at the point of entry to the facility. Respiratory hygiene steps include: • Cover mouth/nose when coughing or sneezing; • Use and dispose of tissues; • Perform hand hygiene; and • Offer surgical mask to symptomatic persons. • CDC Isolation Precautions Guideline • CDC Respiratory Hygiene/Cough Etiquette

Safe Injection Practices:

1 ONE NEEDLE, ONE SYRINGE, ONLY ONE TIME. Safe Injection Practices Coalition www.ONEandONLYcampaign.org	Are intended to prevent transmission of infectious diseases between one resident and another, or between a resident and the healthcare worker during preparation and administration of parenteral medications. Safe injection practices include: • Use of a new needle and syringe every time a medication vial or IV bag is accessed; • Use of a new needle and syringe with each injection; and • Use of medication vials for one resident only, whenever possible CDC recommendations: • Safe Injection Practices • CDC One & Only Campaign

Sharps Safety:

	Used to prevent health care worker exposure to bloodborne pathogens. Sharps safety includes the use of sharps with engineered safety devices when suitable devices exist.
	• The safety device on needles and other sharps should be activated immediately after use. • Used needles should be discarded immediately after use and not recapped, bent, cut, removed from the syringe or tube holder, or otherwise manipulated • Any used needles, lancets, or other contaminated sharps should be placed in a leak-proof, puncture-resistant sharps container that is either red in color or labeled with a biohazard label. • Sharps containers should not be overfilled. They must be discarded when two-thirds full or when contents are at the 'Full' line indicated on the containers. • Used sharps containers may be taken to a collection facility, such as an area pharmacy, hospital, or clinic that provides this service. • OSHA Needlestick Safety and Prevention Act • Basics • Program Resources • CDC Occupationally-Acquired Infection in Healthcare Settings • CDC The National Institute for Occupational Safety and Health (NIOSH)

Waste Disposal:

	Means treating waste contaminated with blood, body fluids, secretions, and excretions as clinical waste, in accordance with local regulations.

Put Into Practice Scenario:

Overview:

The following practice scenario places a healthcare worker at the center of caring for a resident in a LTCF. This practice scenario highlights injection and medication safety.

Injection and medication safety is part of the core of Standard Precautions. The safest practice is to always enter a medication vial with a sterile needle and sterile syringe, even when obtaining additional doses of medication for the same patient. Whenever possible, use of single-dose vials is preferred over multiple-dose vials, especially when medications will be administered to multiple patients.

The practice scenario can be used to educate healthcare workers on how they can impact safe resident care while providing good infection prevention and control practices.

Scenario:

Resident Ms. Harris requires her morning insulin injection. The healthcare worker also knows that Ms. Harris' roommate, Ms. Tyler, also requires the same kind of insulin.

The healthcare worker has heard through huddles that the LTCF is experiencing some financial difficulties and the leadership has asked staff to be mindful of waste and expenses. The healthcare worker has the thought that they could save the cost of one syringe and use the same one for both Ms. Harris and Ms. Tyler. It is the same medication, and the needle will be changed, so there should not be any issue.

The healthcare worker then remembers Standard Precautions and injection and medication safety, which includes using a brand-new needle and syringe with each resident. Changing the needle is not enough to prevent the spread of pathogens to the next resident. Both the needle and syringe must be new with each resident.

It is not safe to change the needle and reuse the syringe – this practice can transmit disease. CDC states, "reusing a needle or syringe can put patients in danger of getting hepatitis C virus (HCV), hepatitis B virus (HBV), and HIV" (CDC Injection Safety). Reuse of needles or syringes to access medication can result in contamination of the medication in the vial. Germs from the syringe can enter the vial and spread to others when the medicine is used for the next resident. (CDC Injection Safety – A Patient Safety Threat Syringe Reuse).

Chapter 6: Isolation Precautions/Transmission-Based Precautions

Standard Precautions should be used every time for every single resident encounter. CDC established transmission-based precautions to effectively prevent transmission of infectious agents. Residents placed on transmission-based precautions may be infected or colonized with certain infectious agents for which additional precautions are needed to prevent infection transmission. There are three main categories of transmission-based precautions: contact, droplet and airborne. Recently, CDC established a category to be used in nursing homes called Enhanced Barrier Precautions. LHD should update LTCFs on state regulations and any additional requirements. Encourage LTCFs to provide communication and education to staff, residents, and family regarding transmission-based precautions practices.

This chapter consists of the following transmission-based precautions:

- Description
- Contact Precautions
- Droplet Precautions
- Airborne Precautions
- Enhanced Barrier Precautions
- FAQs on transmission-based precautions
- Tools for your toolbox
- References

Transmission-Based Precautions

Description:

Transmission-based precautions are applied when standard precautions alone may not be sufficient to prevent pathogen transmission. It is the second tier of basic infection control and is to be used in addition to standard precautions. Transmission-based precautions may incorporate PPE use, resident placement, and transportation considerations.
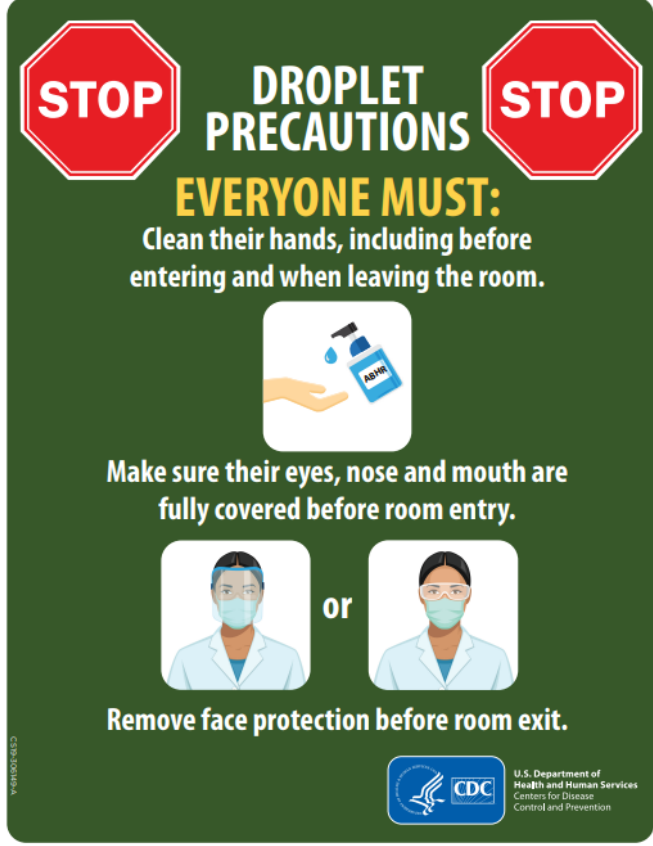
Contact Precautions:
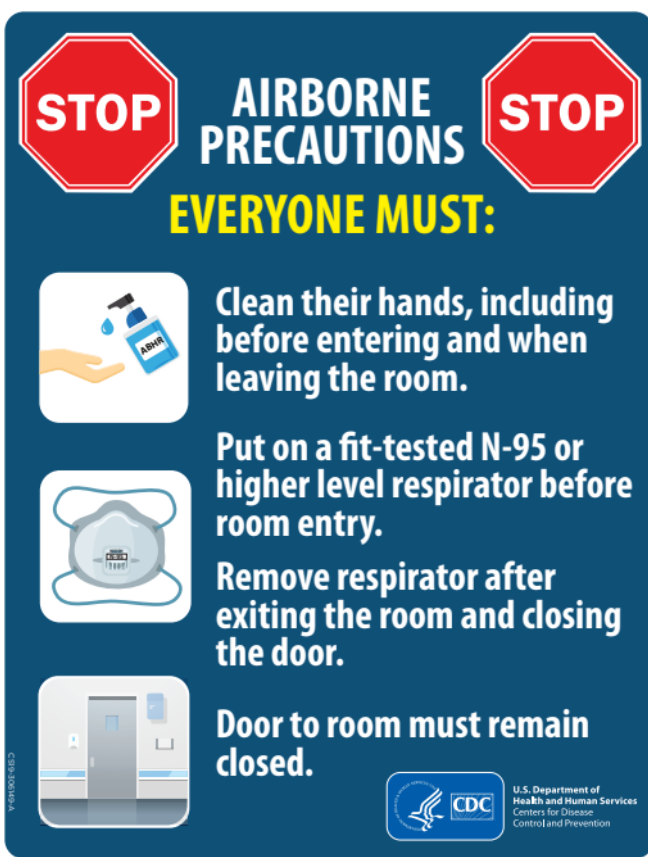
- Used to prevent transmission of infectious agents spread by direct or indirect contact.
- Direct contact involves physical contact between the infected source and another individual.
- Indirect contact involves an individual touching something with germs already on it, like a doorknob, and then touching their mouth or eyes.
- Apply when a resident has excessive secretions or excretions that increase potential for extensive contamination.
- Requires gown and gloves for all interactions; donned upon room entry and discarded prior to exiting the room.
- These residents should be placed in a single-person room with dedicated equipment (e.g., blood pressure cuff).
  o Contact Precautions - Example Sign
  o Contact Precautions in Spanish - Example Sign

Considerations: 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 a resident on Contact Precautions. Don clean PPE to handle the resident at the transport location.

Droplet Precautions:

	• Used to prevent transmission of germs spread within respiratory droplets over short distances. • Facemask worn; donned upon room entry and discarded prior to exiting. Eye protection is also generally recommended. • Residents on droplet precautions placed in a single-person room. 　○ Droplet Precautions - Example Sign 　○ Droplet Precautions in Spanish - Example Sign

Considerations:
- Single-resident room is ideal. Make decisions regarding resident placement on a case-by-case basis considering infection risks to other residents in the room and available alternatives.
- 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 and follow Respiratory Hygiene/Cough Etiquette.

Airborne Precautions:

- Used to prevent transmission of germs contained in particles suspended in air that remain infectious over time and long distance.
- Wear fit-tested, National Institute for Occupational Safety and Health (NIOSH)-approved, N95 or higher-level respirator. Don this prior to room entry. Remove and discard after exiting the room and closing the door.
- Residents placed in an airborne infection isolation room (AIIR). This is a single-person room that is equipped with special air handling and ventilation capacity. If you are not equipped with an AIIR room, arrangements should be made to transfer the resident to another healthcare facility.
  - Airborne Precautions - Example Sign
  - Airborne Precautions in Spanish - Example Sign

Considerations:
- In settings where Airborne Precautions cannot be implemented due to limited engineering resources, masking the resident 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 or returned home.
- Restrict susceptible healthcare personnel from entering the room of resident known or suspected to have measles, chickenpox, disseminated zoster, or smallpox if other immune healthcare personnel are available.
- Limit transport and movement of resident outside of the room to medically necessary purposes. If transport or movement outside an AIIR is necessary, instruct resident to wear a surgical mask, if possible, and observe Respiratory Hygiene/Cough Etiquette.

Enhanced Barrier Precautions for Nursing Homes:

- An infection control intervention designed to reduce transmission of resistant organisms that employs targeted gown and glove use during high contact resident care.
- Expands the use of PPE beyond situations in which exposure to blood and body fluids is anticipated (i.e., Standard Precautions).
  - Enhanced Barrier Precautions - Example Sign
  - Reference and resource can be found at CDC Implementation of Personal Protective Equipment (PPE) Use in Nursing Homes to Prevent Spread of Multidrug-resistant Organisms (MDROs) | HAI | CDC

Enhanced Barrier Precautions Facts:
- Multidrug-resistant organism (MDRO) transmission is common in skilled nursing facilities, contributing to significant morbidity and mortality for residents and increased costs for the health care system.
- High contact resident care activity examples:
  - Dressing
  - Bathing/showering
  - Transferring
  - Providing hygiene
  - Changing linens
  - Changing briefs
  - Assisting with toileting
  - Device care or use
  - Wound care
- EBP should be used (when Contact Precautions do not otherwise apply) for residents with any of the following:
  - Wounds or indwelling medical devices, regardless of MDRO colonization status
  - Infection or colonization with an MDRO
  - Examples of indwelling medical devices include central line, urinary catheter, feeding tube, tracheostomy/ventilator

- Effective implementation of EBP requires staff training on the proper use of PPE and the availability of PPE with hand hygiene products at the point of care.

Considerations:
- Standard Precautions still apply while using Enhanced Barrier Precautions. For example, if splashes and sprays are anticipated during the high-contact care activity, face protection should be used in addition to the gown and gloves.
- Residents are not restricted to their rooms and do not require placement in a private room.
- Enhanced Barrier Precautions are intended to be in place for the duration of a resident's stay in the facility or until resolution of the wound or discontinuation of the indwelling medical device that placed them at higher risk.
- Adherence to other recommended infection prevention practices including performing hand hygiene, cleaning and disinfection of environmental surfaces and resident care equipment, proper handling of indwelling medical devices, and care of wounds is critical for effective infection prevention practices.

FAQs on Transmission-Based Precautions:

- **I receive a call from a LTCF and the staff informs me that they have a new resident admission and it states that the resident has an "MDRO" and should be in isolation. What is the best information I can give the staff member?**

  A resident that is known or suspected to have an MDRO may be placed on transmission-based precautions. An MDRO is a multidrug-resistant organism. The rationale for placing this resident in transmission-based precautions is to reduce the spread of the MDRO to other residents, staff, or onto surfaces and equipment. The use of PPE and standard precautions while caring for this resident will decrease the chance of the organism leaving the resident environment. If you know the MDRO, it can be searched in the following to assist with transmission-based precaution guidance: Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings, Appendix A

- **Is it acceptable to place a resident on transmission-based precautions without any lab results to meet these criteria?**

  It is okay to initiate transmission-based precautions for a potentially communicable disease, even before a specific pathogen has been identified. Staff should be empowered to use critical thinking and place residents into transmission-based precautions prior to lab results being received. Some scenarios that could warrant a resident being placed into transmission-based precautions prior to lab results are uncontained body fluids from a wound, diarrhea, signs and symptoms of flu-like symptoms, and skin rash.

- **What happens if there is not a single-resident room to place a resident in once it is identified that the resident should be in transmission-based precautions?**

  When limited single-person rooms are not available, facilities should provide the highest priority to those residents who are known or suspected to have pathogens that are highly communicable, for example, influenza or norovirus. Make decisions regarding resident placement on a case-by-case basis, balancing infection risks to other residents in the room, the presence of risk factors that increase the likelihood of transmission, and the potential adverse psychological impact on the infected or colonized resident.

- **What if a group of residents are infected with the same pathogen, what recommendations should I give to the LTCF?**

  You could consider cohorting the residents. This means grouping residents who are colonized or infected with same pathogen to one location to prevent transmission to unaffected residents. Often used in outbreak situations and when there is evidence of MDRO transmission. There are times when cohorting is not always possible and you may consider the residents stay in their designated space instead of moving them about. Designate staff to work only with the cohorted residents.

- **How does the facility decrease transmission of an airborne pathogen if a resident gets infected with one and there are not AIIRs at the facility?**

  Try to direct exhaust of air to the outside. If it is not possible to exhaust air 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. Keep door to resident room closed when not required for entry or exit. Consider transferring the resident to a facility that has an available AIIR. Use temporary portable solutions, (e.g., exhaust fan) to create a negative pressure environment in the converted area of the facility.

- **A staff member at a LTCF tells me they are caring for a resident in transmission-based precautions. The staff member is requesting recommendations on if the family of the resident have to wear the PPE also?**

  PPE use by family and visitors should be determined by the facility. Considerations when making the decision could be the following: why precautions were initiated, route of transmission, level of infectivity of the pathogen, and types of interactions visitors may have with the resident. Educate visitors when their loved one is placed on transmission-based precautions.

- **What recommendations can the LHD give to a LTCF beginning to implement transmission-based precautions?**

  The facility should develop policies and procedures using CDC guidance for transmission-based precautions. Staff should be educated and instructed on where to find the policies and procedures. Training on PPE usage and correct taking on and taking off PPE should be administered. A competency check off list can serve as a good source of education and documentation of proper PPE usage. To evaluate adherence and opportunities for improvement, there should be auditing/surveillance of PPE usage. The data obtained can be used for education and training

Tools for your toolbox:

- Perform an assessment using a CDC tool: Pre-Implementation Tool - EBP
- Observation Tools: EBP Implementation Observations Tool
- Letter to Nursing home residents, families, friends, and volunteers
- Enhanced Barrier Precautions Letter to Nursing Home Staff

References:

- CDC. Healthcare-Associated Infections (HAIs). [FAQ about Enhanced Barrier Precautions in Nursing Homes](#).

- CDC. [Healthcare Infection Control Practices Advisory Committee (HICPAC)](#). Consideration for Use of Enhanced Barrier Precautions in Skilled Nursing Facilities.

- CDC. Healthcare-Associated Infections (HAIs). [Implementation of Personal Protective Equipment (PPE) Use in Nursing Homes to Prevent Spread of Multidrug-resistant Organisms (MDROs)](#).

- QIN-QIO Quality Innovation Network-Quality Improvement Organizations: Centers for Medicare and Medicaid Services. [Enhanced Barrier Precautions (EBP): An Overview (Oct. 5, 2022 Webinar)](#).

Chapter 7: Injection Safety

Injection use is a common part of resident treatment in LTCFs. An injection is defined as a clinician using a needle and syringe to administer a liquid into a person's body. Injections can contain medications, vitamins, vaccines, and more. CDC estimates that approximately 385,000 injuries with contaminated needles and other sharps devices occur annually among hospital-based healthcare personnel. That is over 1,000 injuries a day![4] Many more injuries occur in other healthcare settings, such as emergency services, home care, and LTCFs. Healthcare workers who perform resident injections should be educated on injection safety. LHDs could use the attached presentation to assist with education for LTCF healthcare workers. Use of the attached assessments and audits to measure progress can assist in identifying focused educational opportunities.

This chapter consists of the following:

- Injection Safety
    - Description
    - Background of unsafe injection practices
    - CDC's One & Only Campaign
    - Injection Safety: Steps for Success
    - Tools for your toolbox
    - References
- Sample Safe Injection Practices Survey
- Injection Safety Educational Presentation (See Appendix D)

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[4] CDC. Workbook for Designing, Implementing and Evaluating a Sharps Injury Prevention Program.

Injection Safety

Description:

Injection safety, or safe injection practices, include actions done to keep residents and healthcare workers safe from harm. As defined by the World Health Organization, a safe injection does not harm the recipient, does not expose the provider to any avoidable risks and does not result in waste that is dangerous for the community. Accidental needlesticks to healthcare workers may occur if unsafe injection practices are practiced. In addition, unsafe injection practices may lead to residents or healthcare workers being exposed to bloodborne pathogens. The CDC has published resources for safe handling of needles, syringes, and injectable medications in resident care settings.

Background Of Unsafe Injection Practices:

The following unsafe injection practices have resulted in disease transmission:

- Using the same syringe to administer medication to more than one resident;
- Accessing a medication vial or bag with a syringe that has already been used to administer medication to a resident, then using the remaining contents from that vial or bag for another resident;
- Using medication packaged as single-dose or single-use for more than one resident; and
- Failing to use aseptic technique when preparing and administering injections.

CDC's One & Only Campaign:

- This campaign is a public health effort to eliminate unsafe medical injections.
- The campaign's goal is to make sure that residents are protected each time they receive an injectable medication.
- This campaign offers education to healthcare workers to promote injection safety.
- The campaign slogan is One Needle, One Syringe, Only One Time.

Injection Safety Steps for Success:

- Needles and needleless connectors are used for only one resident
- Syringes are used for only one resident
- The rubber septum on a medication vial, whether unopened or previously accessed, is disinfected with alcohol prior to piercing
- Medication vials are always entered with a new needle
- Medication vials are always accessed with a new syringe
- Medications that are pre-drawn are labeled with the date and time of draw, initials of the person drawing, medication name, strength, and beyond-use date and time
- Single dose (single-use) medication vials are used for only one resident
- Bags of IV solution are used for only one resident
- Medication administration-associated tubing and connectors are used for only one resident
- Multi-dose vials are dated when they are first opened and discarded within 28 days unless the manufacturer specifies a different (shorter or longer) date for that opened vial
- Multi-dose vials used for more than one resident are stored appropriately and do not enter the immediate resident care area
- All sharps are disposed of in a puncture-resistant sharps container
- Sharps containers are replaced when the fill line is reached

Tools for Your Toolbox:

- CDC Injection Safety Checklist
- WHO Best Injection Practices Guidelines Poster
- CDC Injection Safety Guidelines Pocket Cards
- CDC Injection Safety Knowledge Check
- CDC Injection Safety for Healthcare Providers Poster
- Safe Injection Practice Video (4:25 min)

References:

- CDC. Injection Safety. 2012.

- CDC. Injection Safety. *Background.* 2019.

- WHO. Injections Safety. 2023.

- APIC. Injection Safety: What you don't know can hurt you.

- CDC. Injection Safety. *One and only campaign.* 2019.

- CDC. Injection Safety. Considerations for Blood Glucose Monitoring and Insulin Administration. 2024.

Chapter 8: Point of Care (POC) Blood Glucose Testing

Testing residents' blood at their bedside is a convenient and rapid way to get results. One of the most common points of care blood tests is blood glucose monitoring. CDC reports that blood glucose testing can lead to opportunities for exposure to bloodborne viruses (e.g., hepatitis B, hepatitis C, and HIV) through contaminated equipment and supplies if devices used for testing are shared, stored, or disposed of improperly. In the last 10 years, at least 15 outbreaks of hepatitis B associated with providers failing to follow basic principles of infection control when assisting with blood glucose monitoring were reported.[5] LHDs can support IPC in LTCFs to prevent improper practices during blood glucose testing and respond when breaches occur. The attached education can be used to assist LTCFs with the basic steps of compliance when performing blood glucose testing on residents.

This chapter consists of the following:

- Point of Care Blood Glucose Testing
  - Description
  - Healthcare worker safety
  - CDC recommendations
  - Training and oversight
  - References
- Point of Care Blood Glucose Testing Educational Presentation (see Appendix E)

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[5] CDC. Injection Safety. Infection prevention during blood glucose monitoring and insulin administration. 2011. Considerations for Blood Glucose Monitoring and Insulin Administration

Point of Care (POC) Blood Glucose Testing

Description:

POC blood testing is becoming more and more common. Not only is it convenient, it also assists with getting results right away and not having to send samples and specimens away to be processed at medical laboratories. A frequent POC blood test performed in LTCFs is blood glucose testing. This test is perfomed by the healthcare worker on the resident at the bedside. This is a high-risk procedure for the healthcare worker and resident if evidence-based IPC practices are not followed. CDC reports, blood glucose testing has resulted in the spread of viruses among residents.Standard Precautions should be applied at all times.

Healthcare Worker Safety:

- Train and educate all staff who will be performing POC testing.
- Document education and skills check competency and maintain records.
- Validate competency on how to obtain the sample, how to use the testing device/equipment, how to properly clean, disinfect, and store reusable device/equipment, and how to dispose of one-time use device/equipment.
- Follow the manufacturer's instructions for use (IFU) on proper maintenance of the device/equipment.
- Educate on Standard Precautions and appropriate PPE to use while performing POC blood glucose testing.
- Educate on potential for bloodborne pathogen (BBP) exposure and proper handling of needles and other sharps.

CDC Recommendations:

- Fingerstick devices, such as lancets and test strips, should never be used for more than one person.
- Whenever possible, blood glucose meters should not be shared. If they must be shared, the device should be cleaned and disinfected after every use, per the manufacturer's instructions. If the manufacturer does not specify how the device should be cleaned and disinfected, then it should not be shared.
- Wear gloves as part of Standard Precautions during blood glucose monitoring.
- After checking a resident's blood glucose, dispose of one-time use equipment in appropriate disposal container, remove gloves, and clean your hands before going to another resident area.
- If during the checking of a resident's blood glucose, your gloves have touched potentially blood-contaminated objects or fingerstick wounds, change your gloves immediately and clean your hands before touching clean surfaces.

Training And Oversight:

- **Review** new provider's orders regularly for persons requiring assistance with blood glucose monitoring.
- **Recommend and Provide** a full hepatitis B vaccination series to all previously unvaccinated staff persons whose activities involve contact with blood or body fluids.
- **Ensure** there is a designated infection preventionist (IP) overseeing infection control activities.
- **Assess** adherence to infection control recommendations for blood glucose monitoring by routinely performing observation audits of healthcare workers who perform this activity and conduct mock surveys to walk through each step of cleaning, disinfection, usage, disposal, and storage.
- **Report** to public health authorities any suspected instances of a newly acquired bloodborne infection, such as hepatitis B, in a resident, or staff member.
- **Check** with state authorities for specific state and federal regulations regarding laboratory testing.

References:

- CDC. Injection Safety. [Considerations for blood glucose monitoring and insulin administration. 2024](#).

- CDC. Division of Laboratory Systems (DLS). [Point-of-care testing: risk assessment basics](#). 2021.

- CDC. Viral Hepatitis. [Health care-associated hepatitis B and C outbreaks (> 2 cases) reported to the CDC 2008-2019](#). 2023.

- DotMed. [Nova Biomedical](#).

- Yenice S. (2021). Training and Competency Strategies for Point-of-Care Testing. EJIFCC, 32(2), 167–178.

Chapter 9: Personal Protective Equipment (PPE)

Healthcare workers use of PPE is not only to protect themselves, but also to protect others. Proper use of PPE can decrease the risk of transmission of pathogens to the environment and to individuals. Types of PPE used in healthcare settings include gloves, gowns, face masks, respirators, goggles, and face shields. PPE should always be available to healthcare workers so that they can choose needed items per Standard Precautions. Healthcare workers are required to receive education on the use of PPE and Standard Precautions. LHDs can assist LTCFs with training about the selection and use of PPE, as well as predicting the amount of supplies needed (i.e., calculating burn rate). Teaching residents and families about why healthcare workers use PPE leads to better adherence and lessens possible fear. LTCFs can assess the level of adherence to PPE usage by performing audits. The LHD can use the sample audit tools in this chapter to assist LTCFs.

This chapter consists of the following PPE:

- Description
- Principles of PPE
- CDC Video: What is PPE?
- CDC Project Firstline Resource: Diarrhea Dilemma
- CDC Poster: Sequence for putting on and removing PPE
- Auditing of PPE use
- PPE Audit Tools
- References

Personal Protective Equipment (PPE)

Description:

PPE is the gear that healthcare workers use to protect themselves, other staff, residents, and visitors from getting exposed to something that could make them sick. When using Standard Precautions healthcare workers select specific elements of PPE. Types of PPE used in healthcare settings include: gloves, gowns, face masks, respirators, goggles, and face shields. There are a variety of PPE that can be utilized.

Principles of PPE Use:

- All healthcare workers who use PPE should be trained in its selection and use.
- Put on (don) before contact with residents (generally immediately before entering the room).
- Clean your hands prior to donning PPE and immediately after removing (doffing) PPE.
- Remove and discard PPE carefully as to not contaminate yourself.
- If moving from a dirty area to a clean area on the resident, remove gloves, perform hand hygiene, and don new gloves.

CDC Video:

What is PPE?

CDC Project Firstline Interactive Activity:

Diarrhea Dilemma

CDC Posters: Sequence for Putting on And Removing PPE:

Putting on PPE

Auditing of PPE Use:

- It is important that the correct use of PPE be rigorously and consistently applied.
- A PPE audit is an evaluation tool where data is collected and analyzed about PPE standards, practices, and procedures.
- PPE auditing is an important strategy for improving IPC practices in LTCFs.
- PPE audits are typically done through direct observation as well as through the routine review of policies and procedures.
- PPE audits can assist in identifying and correcting any gaps or barriers to compliance in the IPC program.
- PPE audits can help with planning and evaluating training and education programs.
- Sample Donning and Doffing PPE Competency Tool (see Appendix G)

PPE Audit Tools:

- PPE Observational Audit Tracking Tool: [AHRQ PPE Audit Tool](#)
- PPE Observational Audit Tracking Tool User Guide: [AHRQ PPE Audit Tool User Guide](#)
- PPE Audit Tool: [Telligen QI Connect PPE Audit Tool](#)
- HH/PPE Monitoring tool for Nursing Homes: [Quality Improvement Org PPE and HH Audit form](#)
- Sample PPE Audit Tool (see [Appendix H](#))
- [ICAR Module 3 – Transmission-Based Precautions (TBP) – Part C (TBP HCP Observations)-Infection Control Assessment Tools | HAI | CDC](#)

References:

- CDC. Donning and Doffing PPE Competency: Healthcare-Associated Infections (HAIs)

- Winnipeg Regional Health Authority (WRHA). PPE Audit Tool.

Chapter 10: Outbreak Investigation

Public health has an important role in any outbreak investigation. LTCFs will reach out to LHDs to report outbreaks, regardless of the organism. LHDs may reach out to state health departments to conduct an outbreak investigation. The LHD and state health department work collaboratively to stop outbreaks. Outbreak investigations are conducted by nonregulatory arms of the health department. Identifying and responding to an outbreak can help remove harmful products from the healthcare setting. The residents in LTCFs are a vulnerable population that are at risk of devastating outcomes if an outbreak occurs in the facility. The collaboration with public health helps mitigate the impact of the outbreak, prevent further spread of the illness, and protect the health and well-being of the residents, staff, and visitors in LTCFs. Throughout the investigations, the LHD and state health department work with the LTCF to gather information about the outbreak, identify affected individuals, and establish communication channels. Tracking of cases helps leverage data on symptoms, test results, and other relevant information to understand the extent of the outbreak and identify potential sources of infection. Guidance should be given to LTCFs on appropriate infection control, such as appropriate isolation procedures, PPE use, cleaning and disinfection protocols, and other preventive measures to contain the outbreak. LHDs can serve as a critical resource for LTCFs to reach out to during an outbreak to assist in collaboration with the state or the CDC.

This chapter consists of the following:

- Outbreak Investigation
  - Description
  - Outbreak Investigation Steps
  - CDC HAI Outbreak Resources
  - CDC Line List Templates
  - CORHA
- Outbreak Investigation Educational Presentation (see Appendix F)

Outbreak Investigation

Description:

An outbreak can be described as a sudden rise in the number of cases of a disease. Some illnesses, such as influenza, can cause seasonal outbreaks. Sometimes a single case of an infectious disease may be considered an outbreak. This may be true if the disease is rare (e.g., foodborne botulism) or has serious public health implications. For example, an outbreak of a foodborne illness could impact most of the LTCF residents and possibly staff. Symptoms could include nausea, vomiting, chills, diarrhea, and/or stomach pain. These symptoms could begin within an hour of ingesting the contaminated food and possibly last for days. The residents are vulnerable and can suffer greatly from dehydration if not recognized early. Staff absenteeism due to foodborne illness could impact the residents' care due to there not being enough staff to care for residents. In general, LHDs are experts in outbreak investigations and most states require LTCFs report any outbreak to their LHD.

Outbreak Investigation Steps:

- Step 1: Verify an outbreak is occurring
  - Increase in cases above what is expected in that population
  - Healthcare facilities should contact public health for assistance in the outbreak investigation
- Step 2: Create a case definition, Who is involved, where is it, and during what period
- Step 3: Perform the epidemiologic analysis, Develop a line list: symptoms, onset dates and/or times, demographic information, and exposure information
- Step 4: Introduce preliminary control measures
  - Control measures may change as the
  - Should be guided by epidemiologic results in conjunction with environmental investigation
- Step 5: Perform additional studies as necessary, Case control studies may be done to identify potential risk factors
- Step 6: Target control measures according to identified risk. Ensure adherence through training and audits.
  - Continue to monitor the compliance with control measures
  - Auditing and surveillance are crucial so that the outbreak does not occur again
  - Use "lessons learned" and evaluate the process

CDC HAI Outbreak Resources:

Data should be collected in a systematic way to identify trends and consistency in the outbreak pattern. Characteristics of an outbreak can be more easily identified if they are collected using an abstraction form. Below are tools developed by the CDC to assist with outbreak investigations.

- HAI Outbreak Investigation User's Guide for Completing the Abstraction Form
- HAI Outbreak Investigation Abstraction Form

CDC Line List Templates:

A line list helps organize information during an outbreak investigation. The data points will help determine if an individual meets the case definition, and how many people may be involved in the outbreak. Each row in the line list represents a single individual, and each column represents a specific characteristic about that person. Below are line list templates developed by the CDC:

- LTC Respiratory Surveillance Line List
- LTC Acute Gastroenteritis Surveillance Line List

The Council for Outbreak Response: Healthcare-Associated Infections and Antimicrobial-Resistant Pathogens (CORHA):

"The Council for Outbreak Response: Healthcare-Associated Infections (HAIs) and Antimicrobial-Resistant Pathogens (AR) (CORHA) works to improve practices and policies at the local, state, and national levels for the detection, investigation, control, and prevention of HAI/AR outbreaks across the healthcare continuum. CORHA is a multidisciplinary collaboration of national associations and federal agencies working together since 2015 to improve methods to detect, investigate, control, and prevent HAI/AR outbreaks. Council member representatives bring expertise in healthcare epidemiology and infection prevention, environmental health, public health laboratory activities and HAI/AR reporting and regulation at the local, state and federal levels." CORHA has developed and curated tools to help with investigation and control of HAI/AR outbreaks in healthcare.

For more information, visit CORHA.org.

Chapter 11: Antimicrobial Stewardship

Antimicrobial therapies have been a longstanding intervention to treat infections and are often regarded as one of the greatest medical breakthroughs of the 20th century. However, alongside the development and use of antimicrobials (i.e., antibiotics, antifungals), another phenomenon also emerged—antimicrobial resistance. According to the World Health Organization, antimicrobial resistance is largely due to overuse, overprescribing, or suboptimal use of antibiotics. According to the CDC, drug-resistant microorganisms have resulted in more than 2.8 million infections and 35,000 deaths annually in the U.S.[OBJ]

Antimicrobial stewardship refers to a set of strategies and interventions aimed at optimizing the appropriate use of antimicrobials and preventing the emergence of antimicrobial resistance. LHDs play a crucial role in promoting antimicrobial stewardship in LTCFs. LHDs can help reduce the unnecessary use of antimicrobials, minimize the risks of antimicrobial resistance, and improve resident outcomes in LTCFs. LHDs can utilize the CDC Core Elements of Antimicrobial Stewardship for LTCF that provides a stepwise program to improve antimicrobial use, reduce adverse events, prevent antimicrobial resistance, and improve outcomes for LTCF residents.

This chapter consists of the following steps and resources in the implementation of an effective program with a multidisciplinary approach antimicrobial stewardship:

- Description
- Core Elements of Antimicrobial Stewardship for LTCFs
- Steps to begin an Antimicrobial Stewardship program
- Tools for the Toolbox
- References

Antimicrobial Stewardship

Description:

Antimicrobial (i.e., antibiotic, antifungal) use in LTCFs is on the rise and is of major concern for the development of antimicrobial resistance. Antimicrobial resistance occurs when pathogens have built up defenses to defeat the drugs created to kill them. If this occurs, it makes the condition difficult to treat with drugs. Resistant germs can spread anywhere. Stopping spread is a key action to protect residents of LTCFs and slow the development of antimicrobial resistance. To assist with this concern, the CDC has created Core Elements of Antimicrobial Stewardship for LTCFs. These core elements address the responsibility of staff, residents, prescribers, facility leaders, and the importance of education when it comes to antimicrobial use. LHDs can assist LTCFs with antimicrobial stewardship by using the resources and links in this chapter.

Core Elements of Antimicrobial Stewardship for LTCFs:

Leadership commitment
Demonstrate support and commitment to safe and appropriate antibiotic use in your facility

Accountability
Identify physician, nursing and pharmacy leads responsible for promoting and overseeing antibiotic stewardship activities in your facility

Drug expertise
Establish access to consultant pharmacists or other individuals with experience or training in antibiotic stewardship for your facility

Action
Implement **at least one** policy or practice to improve antibiotic use

Tracking
Monitor **at least one process** measure of antibiotic use and **at least one outcome** from antibiotic use in your facility

Reporting
Provide regular feedback on antibiotic use and resistance to prescribing clinicians, nursing staff and other relevant staff

Education
Provide resources to clinicians, nursing staff, residents and families about antibiotic resistance and opportunities for improving antibiotic use

Tools for the Toolbox:

- CDC Information for LTCFs to give to Residents and Family
  - [Our Commitment to Antimicrobial Stewardship Letter](#)
  - [A Commitment to Our Residents about Antimicrobial Stewardship Poster](#)
- CDC Healthcare staff information
  - [Leading Antimicrobial Stewardship in Nursing Homes Staff Poster and Facts](#)
  - [Creating a Culture to Improve Antimicrobial Use in Nursing Homes for Staff Poster and Facts](#)
  - [Checklist: Core Elements of Antimicrobial Stewardship for Nursing Homes for Staff](#)
  - [CDC Educational Resources for Healthcare Professionals: Antimicrobial Prescribing and Use](#)
- Pharmacist information: [5 Ways Community Pharmacists Can Be Antibiotics Aware](#)
- CDC Action steps
  - [Appendix A: Policy and Practice Actions to Improve Antimicrobial Use Education](#)
  - [AHRQ Toolkit to Improve Antimicrobial Use in LTC Education](#)
- Tracking and Reporting information
  - [Appendix B: Measures of Antimicrobial Prescribing, Use and Outcomes](#)
  - [Appendix C: Data Sources, Elements, and Measures for Tracking Antimicrobial Use in Nursing Homes](#)
  - [Infection Tracking Logs-Center for LTC Quality and Innovation-Brown University](#)
- Education for all
  - [Nursing Home Healthcare Professionals: Effective Communication Tools](#)
  - [Viruses or Bacteria- What's got you sick?](#)
  - [Antibiotics](#)
  - [Top 10 Infection Prevention Questions to Ask a Nursing Home's Leaders](#)
  - [Do You Need Antimicrobials?](#)
  - [CDC Training on Antimicrobial Stewardship](#)
  - [ProCE Website Provident CE for Pharmacists and other HCP](#)
- Example policy and Guide:
  - [Minnesota Sample Antimicrobial Stewardship Policy for LTCF](#)
  - [Companion Guide to Using the Minnesota Sample Antimicrobial Stewardship Policy for LTCF](#)
  - [Minnesota ASP Toolkit for LTCF](#)

References:

- CDC. Antimicrobial Resistance. 2019. AR Threats Report.

- CDC. Antimicrobial Resistance. 2022. About antimicrobial resistance.

Chapter 12: National Healthcare Safety Network (NHSN) in LTCFs

NHSN is an internet-based surveillance system managed by the CDC to monitor and track HAIs and other patient safety data. LHDs can assist with locating and sharing resources for NHSN facility enrollment and training. Most NHSN reporting is completed by hospitals and other healthcare entities, but LHDs should assist LTCFs in understanding the requirements for NHSN reporting. This can vary from state to state. LHDs can also use NHSN to be informed of LTCF IPC activities; and collaborate with state and federal agencies, including the CDC, to share data and participate in regional or national surveillance efforts. LHDs contribute to broader public health initiatives, such as monitoring HAIs, identifying emerging pathogens, and implementing prevention strategies.

This chapter will focus on the protocols for the use of NHSN to collect, track, and use data to drive initiatives to improve resident outcomes. LHDs can utilize the tools and education in this chapter to assist LTCFs. Resources include the enrollment and secured access processes. NHSN training and protocols are provided for managing and extracting data reported monthly and annually.

This chapter consists of the following NHSN in LTCFs:

- Description
- Enrollment in NHSN
- CDC Video: Introduction to NHSN's LTCF Components
- NHSN LTCF Component
- Steps for NHSN Participation
- NHSN and Health Departments
- References

National Healthcare Safety Network (NHSN) in LTC

Description:

CDC's National Healthcare Safety Network is the nation's most widely used healthcare-associated infection tracking system. NHSN provides facilities, states, regions, and the nation with data needed to identify problem areas, measure progress of prevention efforts, and ultimately eliminate healthcare-associated infections.

In addition, NHSN allows healthcare facilities to track blood safety errors and important healthcare process measures such as healthcare personnel influenza vaccine status and infection control adherence rates.

Use of the LTCF component of NHSN allows the ability to track infections and prevention process measures, systematically, to identify problems, improve care, and determine progress toward national healthcare-associated infection goals.

The US Dept of Health and Human Services reports that, "NHSN is the nation's most widely used HAI tracking system, collecting data from over 37,000 healthcare facilities in the 50 states, DC, Puerto Rico, US Virginia Islands, American Samoa, Guam, and the Northern Mariana Islands. All American healthcare facilities are eligible for enrollment in NHSN: acute care (including Veterans Affairs and Department of Defense medical centers), long-term acute care hospitals, psychiatric hospitals, and rehabilitation hospitals, outpatient dialysis centers, ambulatory surgery centers, and long-term care facilities and nursing homes." NHSN allows healthcare facilities and public health to track process measures and HAI data.

Enrollment in NHSN:

NHSN provides facilities, states, regions, and the nation with data needed to identify problem areas, measure progress of prevention efforts, and ultimately eliminate HAIs. NHSN allows healthcare facilities to track antimicrobial resistant (AR) organisms, antimicrobial use, and other adverse events (e.g., blood safety). NHSN is also being used by hospitals and nursing homes to track and report SARS-CoV-2, the virus that causes COVID-19 in their facilities, as well as provide indicators of facilities' capacity to meet surges in demand from COVID-19. NHSN fulfills the Centers for Medicare and Medicaid Services (CMS) and state requirements for HAI-AR reporting, and CMS nursing home COVID-19 reporting requirements. CMS also uses CDC's NHSN data and publishes it on the CMS Hospital Compare and Nursing Home compare websites. Some other examples of infections that could be entered by LTCFs into NHSN are Catheter Associated Urinary Tract Infections (CAUTI), Central Line Associated Blood Stream Infections (CLABSI), and Ventilator Associated Pneumonia (VAP). Learning the NHSN criteria for identifying these infections does take education and practice. Modules are available on the CDC NHSN website to assist the user.

CDC's NHSN provides LTCFs with a customized system to track infections in a streamlined and systematic way. When facilities track infections, they can identify problems and track progress toward stopping infections. On the national level, data entered in NHSN will gauge progress toward national HAI goals.

CDC Video Introduction to NHSN's LTCF Components:

Introduction to NHSN's LTCF Components

NHSN LTCF Component:

- The NHSN LTCF Component provides LTCFs with standardized surveillance methods and definitions. The Component is ideal for use by nursing homes, skilled nursing facilities, chronic care facilities, and assisted living and residential care facilities.
- The Component consists of three modules:
  - Healthcare-associated Infection-Urinary Tract Infections
  - Laboratory-identified Event - *Clostridioides difficile* Infection and Multidrug-resistant Organism (CDI/MDRO)
  - Prevention Process Measures
- The LTCF surveillance protocols, training materials, data collection forms, instructions, and other supporting materials are provided on the Long-term Care Component website: Long-term Care Facilities (LTCF) Component | NHSN | CDC & 2023 LTCF Manual

Steps for LTCF for NHSN participation:

- Contact LHD and inquire about recommendations of reporting that may be mandatory at a local, state, and federal level for the organization.
- Enroll the facility into the NHSN LTC Component
  - First verify if the LTCF is already enrolled: Am I Enrolled?
  - If NO, proceed with enrollment steps: 5-Step Enrollment for Long-term Care Facilities
- Complete the NHSN LTCF Component Training: Long-term Care Facility Component (LTCF) Training
- Complete LTCF Component Annual Facility Survey: Long-term Care Facility Annual Facility Survey
- Begin surveillance in LTCF and enter data into NHSN

NHSN and Health Departments:

LHDs have the ability to gain access to data reported by facilities in their jurisdictions. Meaning, LHDs can create a Data Use Agreement (DUA) with facilities, which will enable them to access a variety of patient safety data from many different healthcare facilities and look at ad hoc data requests if there are specific prevention activities the LHD would like to undergo. Outbreak investigations data also enable health departments a better understanding of what is going on and allows LHDs to develop prevention activities.

Another option is for the health department to complete a DUA with CDC. DUAs enable a state/local health department to access specified HAI data reported by facilities in their jurisdictions for public health surveillance and prevention purposes only and not for punitive or reporting to the public. Data can be accessible to a health department for HAI prevention activities and outbreak investigation. In this option, facility identifiers cannot be made publicly available, therefore, the data needs to be kept confidential at the health department.

To see these and other options for LHDs to access NHSN data explained, visit the table here: DUA FAQs for Health Departments and Facilities

LHDs can request access to data by emailing CDC NHSN representatives at NHSNDUA@cdc.gov by including their purpose and stating whether the LHD wants to access this data either under a new jurisdictional reporting requirement, or a specific project your health department is undertaking.

References:

- CDC. National Healthcare Safety Network (NHSN). About NHSN: About | NHSN | CDC

- CDC. Healthcare-Associated Infections (HAIs). The targeted assessment for prevention (TAP) strategy toolkit. 2024.

- US Dep of Health and Human Services. Healthy People 2023. National Healthcare Safety Network (NHSN): National Healthcare Safety Network (NHSN) - Healthy People 2030 | health.gov

- NACCHO. Local Health Department Access to the National Healthcare Safety Network Presentation. Jan 23, 2018. Webinar Recording: Local Health Department Access to the National Healthcare Safety Network - NACCHO

- NACCHO. What is NHSN and How Can LHDs Better Utilize This System: A Q&A with CDC. Nov 21, 2022.

Chapter 13: Cleaning and Disinfection

Cleaning and disinfection of surfaces and equipment in healthcare facilities are some of the most important mechanisms in breaking the chain of infection. Cleaning and disinfection are two different things. In LTCFs it is important that cleaning and disinfection occur. There are products that can do both cleaning and disinfection with proper use. Reviewing cleaning and disinfection products and the IFU will assist. CDC defines cleaning as: removing germs, dirt, and impurities from surfaces or objects. Cleaning works by using soap (or detergent) and water to physically remove debris and germs from surfaces. This process does not necessarily kill germs, but by removing them, it makes it possible for the disinfectant to kill any that remain. CDC defines disinfecting as: killing germs on surfaces or objects. Disinfecting works by using chemicals to kill germs on surfaces or objects. Killing germs on a surface after cleaning, can further lower the risk of spreading germs. Cleaning must always be performed prior to disinfecting. LHDs help LTCFs implement guidelines and protocols for cleaning and disinfection. Putting guidelines into practice relies on knowledge of resources such as the CDC, Environmental Protection Agency (EPA), and other relevant health organizations. A collaboration with LTCFs can lead to best practices for cleaning different areas of the facility, selecting appropriate disinfectants, and establishing cleaning schedules.

This chapter consists of the following:

- Cleaning and Disinfection
  - Description
  - Environmental Cleaning
  - CDC Videos
  - High-touch surfaces
  - Product Standardization
  - Training and Competency
  - Manufacturer's Instructions For Use
  - Biofilm
- National Nursing Home Quality Improvement Campaign: Appropriate Cleaning/Disinfection of Equipment and the Environment
- References

Cleaning and Disinfection

Description:

Cleaning and disinfection is a Standard Precaution and a core infection control action of infection prevention in healthcare settings. Contaminated surfaces and objects in healthcare settings can lead to transmission of germs. These transmissible germs can lead to HAIs. Using a one-step process and an EPA-registered hospital disinfectant designed for housekeeping purposes is best practice.

Environmental Cleaning:

Environmental contamination plays an important role in the transmission of several key HAIs, including Methicillin-resistant Staphylococcus aureus (MRSA), Vancomycin-resistant enterococci (VRE), Acinetobacter, norovirus, *Clostridiodes difficile (C. Diff)*, and *Candida auris*. All these germs have been shown to persist in the environment for days and even months. Contact with the resident care environment is just as likely to contaminate the hands of healthcare personnel as is direct contact with the resident.

Important items to consider regarding cleaning and disinfection:

- Products used for cleaning
- Preparation and equipment needed
- PPE for environmental cleaning
- Care and storage of items
- Cleaning procedures: frequency, method, process

CDC Videos:

- CDC: Why Do Cleaning and Disinfection Matter in Healthcare?
- CDC: Cleaning? Disinfection? What is the Difference?
- CDC: Why Does Contact Time Matter for Disinfection?

High-Touch Surfaces:

High-touch surfaces are those that people frequently touch with their hands. If these surfaces are touched with unclean hands, they may become contaminated with germs. Since these items are frequently touched, it makes it easier for germs to be picked up by others on their hands. Frequent and appropriate cleaning and disinfecting of high-touch surfaces will decrease germ transmission. Below are examples of high-touch surfaces in healthcare:

- Bedrails
- IV poles
- Sink handles
- Bedside Tables
- Counters where medications and supplies are prepared
- Resident monitoring equipment (e.g., keyboards, control panels)
- Transportation equipment (e.g., wheelchair handles, hoyer lifts)
- Call bells, remote controls
- Doorknobs
- Light Switches

Product Standardization:

Standardization of cleaning and disinfecting products in healthcare settings may help personnel use the products consistently and correctly. This will lead to better compliance and streamlined education. Product standardization often occurs due to a Product Evaluation Committee (PEC) being established.

Training and Competency:

- Education on cleaning and disinfecting products will increase staff compliance.
- Employee safety with products should be addressed and communicated.
- Audits should be completed to ensure competence, proper use, and intended outcomes are being met.

Manufacturer's Instructions for Use (IFU):

- The IFU on the disinfectant will state how to use the product. See How to Read a Disinfectant Label.
- Look at the IFU prior to purchasing cleaning and disinfecting products to determine storage requirements, dilution of product, if PPE is required, and how to use the product.
- The IFU will state the ingredients and safety protocols if exposure occurs.

Biofilm:

Biofilm is made up of clusters of bacteria that are attached to a surface and/or to each other and embedded in a self-produced matrix. Bacteria within biofilm are up to 1,000 times more resistant to antimicrobials than the same bacteria in suspension. Biofilm can attach to instruments and equipment used on residents. The longer biofilm sits on items, the stronger it becomes and the harder it is to remove.

Healthcare sinks and shower drains provide an ideal environment for microorganisms to form biofilm. It can be everyday activities such as hand hygiene that supply the bacteria that colonize drainage systems. Contamination from sinks and drains can potentially be transferred to the hands of healthcare workers and subsequently residents. Many activities occur in and around a sink. It is important to clean and disinfect the area frequently to avoid biofilm buildup and to decrease the amount of standing water on surfaces.

National Nursing Home Quality Improvement Campaign: Appropriate Cleaning/Disinfection of Equipment and the Environment

Appropriate cleaning and disinfection of equipment and the environment in LTCFs is a primary way to decrease the spread of infections. The manufacturer's instructions for use for the product and the equipment will guide users on proper ways to clean and disinfect. There are times when the identified pathogen may require a higher level of cleaning and disinfection (i.e., *Clostridium Difficile,* also referred to as C. diff). *C. diff* is unique in that it is a spore forming bacteria. The spores that are produced may live on surfaces and equipment for long periods of time. This extended period of time can increase the chance of transmission to others or to surfaces. The resource provided in Appendix I may serve as a tool to evaluate the cleaning and disinfection practices in LTCFs. This tool can be used as an additional audit tool.

References:

- CDC. Influenza (Flu). How to clean and disinfect schools to help slow the spread of flu.

- CDC. Water, Sanitation, and Environmentally Related Hygiene (WASH). When and how to clean and disinfect a facility.

- CDC. Influenza (Flu). How to clean and disinfect schools to help slow the spread of flu.

- CDC. Water, Sanitation, and Environmentally Related Hygiene (WASH). When and how to clean and disinfect a facility.

- Chetan J, Cleaning, Disinfection, and Sterilization. In: Boston K.M., et al, eds. APIC Text. 2018. Available at 31. Cleaning, Disinfection, and Sterilization | Basic Principles of Infection Prevention Practice

- Franco, L.C., Tanner, W., Ganim, C. *et al.* A microbiological survey of handwashing sinks in the hospital built environment reveals differences in patient room and healthcare personnel sinks. *Sci Rep* **10**, 8234 (2020).

- Henry A, Product Evaluation. In: Boston H. M., et al, eds. APIC Text 2020. Available at 7. Product Evaluation | Overview of Infection Prevention Programs.

- Iwamoto P. and Post M, Aseptic Technique. In: Boston H. M., et al, eds. APIC Text 2020. Available at 30. Aseptic Technique | Basic Principles of Infection Prevention Practice.

- Jinadatha C and Bridges A, Cleaning, Disinfection, and Sterilization. In: Boston H. M., et al, eds. APIC Text 2020. Available at 31. Cleaning, Disinfection, and Sterilization | Basic Principles of Infection Prevention Practice.

Chapter 14: Wound Care

Any opening in skin can be a portal of entry for a germ. Residents in LTCFs are at an increased risk for skin breakdown, making wound care in LTCFs a common skill performed by healthcare workers. Older adults in LTCFs with wounds face many challenges when it comes to healing. As an individual ages, their skin becomes more fragile and sensitive and is slower to heal. Many LTCF residents also have pre-existing conditions and decreased mobility. All these concerns and other variables lead to an increased risk of developing an infection. It is important for LTCFs to have strict infection prevention and control practices in place for providing wound care.

LHDs can support LTCF staff in properly performing wound care. The presentation in this chapter can serve as education for LHDs to provide to LTCF staff. The IPC elements for wound care are clearly defined to provide healthcare workers with the guidelines needed to perform care properly. LHDs can also incorporate wound care audits to identify opportunities for improvement.

This chapter consists of the following wound care:

- Description
- Wound Care Supplies
- Hand hygiene
- PPE Use
- Used Wound Care Supplies
- Education and Training
- References

Wound Care

Description:

Wound care is a common medical task performed by qualified healthcare workers in LTCFs. Infection prevention and control recommendations related to wound care are established to prevent contamination of the wound, supplies, environment, and healthcare worker. Residents in LTCFs are at an increased risk for developing an infection from a wound due to living in a shared spaces, co-morbidities, advanced age, and other health concerns.

Wound Care Supplies:

Wound care supplies such as dressing materials and equipment should be selected and gathered prior to entering the resident care areas to avoid accessing the supply cart/clean storage area during the procedure. The clean supply cart should not enter the resident's room/immediate care area. Only the materials needed for an individual resident should be brought into the resident's room or treatment area and placed on a clean surface and away from potential sources of contamination (e.g., away from splash zones of sinks) prior to beginning wound care activities.

Multidose vials (medication such as creams, sprays, and ointments) should be dedicated to a single resident whenever possible. If multidose vials are used for more than one resident, restrict the medication vials to a centralized medication area and do not bring them into the immediate area (e.g., resident room/cubicle). If it is not possible to dedicate an entire tube or container of wound care cream or ointment to an individual resident, then a small amount of medication should be allocated (e.g., into a medication cup) for single resident use prior to the procedure with a method that reduces the risk of contamination (i.e., clean gloves). The remainder of the multidose container should be properly stored in a dedicated clean area.

Hand Hygiene:

Make sure alcohol-based hand sanitizer dispensers are easily accessible to healthcare workers while performing wound care activities preferably mounted inside the resident care area. Use an alcohol-based hand rub or wash hands with soap and water following the recommendations below:

- Using alcohol-based hand rub (follow manufacturer's directions):
  - Dispense the recommended amount of product
  - Apply product to the palm of one hand
  - Rub hands together, making sure that all surfaces of hands and fingers are covered until they are dry (no rinsing is required)
  - This should take about 20 seconds
- Use of Alcohol-based hand sanitizer:
  - Immediately before touch a resident
  - Before performing an aseptic task (e.g., placing an indwelling device) or handling invasive medical devices
  - Before moving from work on a soiled body site to a clean body site on the same patient
  - After touching a resident or the resident's immediate environment
  - After contact with blood, body fluids or contaminated surfaces
  - Immediately after glove removal

- Hand washing with soap and water
  - Wet hands first with water (do not use hot water)
  - Apply soap to hands
  - Rub hands vigorously for at least 15 seconds, covering all surfaces of hands and fingers. Include rubbing nails beds.
  - Rinse hands with water and dry thoroughly with a paper towel
  - Use a paper towel to turn off the water faucet
- Wash with soap and water
  - When hands are visibly soiled
  - After caring for a person with known or suspected infectious diarrhea
  - After known or suspected exposure to spores (e.g., *C difficile)*
  - Before eating (if soap and water are available, if not use alcohol-based hand sanitizer)
  - After using the restroom

PPE Use:

- Gloves should be worn during any wound care.
- Gowns should be worn when wound care requires significant contact with the resident or their immediate environment, such as when turning or positioning a resident for wound care, or if the procedure could generate splashes or sprays (e.g., during irrigation).
- Face protection such as goggles and a facemask, or a face shield should be worn during wound care procedures that may generate splashes or aerosols such as irrigation, pulse lavage, and handling of equipment such as vacuum-assisted closure devices, (ex. wound vac).
- Additional PPE may be warranted if the resident is on Transmission-Based Precautions.
- Staff should change gloves and perform hand hygiene before moving from work on a dirty body site to a clean body site on the same resident as well as perform hand hygiene immediately after glove removal.

Used Wound Care Supplies:

- During the procedure, separation should be maintained between clean and dirty supplies. For example, used bandages should be immediately discarded and not placed on a surface next to clean bandages.
- Discard Personal Protective Equipment (PPE) and perform hand hygiene after completing wound care activities.
- Clean and reprocess (disinfect or sterilize) reusable medical equipment after each use and prior to use on another resident.
- Check manufacturer's Instructions for Use (IFU) for proper cleaning and disinfection of equipment.
- Any unused disposable supplies that enter the resident's care area should remain dedicated to that resident or be discarded.
- Supplies that enter the resident's care area should not be returned to the clean supply area.
- If supplies are dedicated to an individual resident, they should be properly labeled and stored in a manner to prevent cross-contamination.

Education and Training:

- Provide infection prevention and control education to staff who will be performing wound care.
- Perform wound care training and auditing for contracted staff that may be performing wound care.
- Perform a competency validation that wound care is safely performed;

- Document the education and competency; and
- Perform random audits of wound care to assess the practice
- Provide feedback of audit results to the staff.

References:

- Centers for Medicare & Medicaid Services. Wound Care. 2020.

- CDC. Infection Control. CDCs Core Infection Prevention and Control Practices for Safe Healthcare Delivery in All Settings. 2022.

- CDC. Healthcare-Associated Infections (HAIs). Infection Control Assessment and Response (ICAR) tool for general infection prevention and control (IPC) across settings. 2023.

- CDC. Clinical Safety: Hand Hygiene for Clinical Workers. 2024.

Chapter 15: Infection Prevention and Control and Construction

A safe healthcare environment is essential for positive resident outcomes. Part of a safe healthcare environment is cleanliness. A clean healthcare environment assists with the decrease of spreading germs. For example, construction or remodeling can be a source of contamination to the environment. Dust can be stirred into the air and contamination of water sources could occur if construction work does not have oversight. LHDs can use tools to assist LTCFs identify risks in their environment regarding construction and lack of cleaning. LHD epidemiologists are knowledgeable regarding transmission of airborne and waterborne pathogens. The tools provided in this chapter assist the LHD and LTCF to identify risks of contaminants that could occur. Early notification of remodeling and construction in a facility will lead to planning and involvement of stakeholders.

This chapter consists of the following infection prevention and control environment of care and construction:

- Description
- Construction
- Basics of an Infection Control Risk Assessment (ICRA)
- Simple Telescopic Airtight Reusable Containment (STARC) Systems Video
- References

Infection Prevention and Control and Construction

Description:

Environment of care involves construction and renovation; equipment and environmental service needs; utility maintenance and use; emergency management; and more. Facility environment of care issues can lead to IPC issues. Residents in healthcare facilities are vulnerable to HAIs if IPC standards are not practiced. Construction and renovation can lead to potential health hazards for residents.

Construction:

CDC requires healthcare facilities to perform an Infection Control Risk Assessment (ICRA) before any renovation, construction, or repair project. Risks associated with construction include dust and debris compromising the environment, airborne microbes journeying via air currents to infect other susceptible hosts, an unbalanced ventilation system affecting air quality, water stagnation and contamination, accumulated of debris, ineffective dustproof barriers, and managing the transportation of waste and contaminated workers, among others.

Given the extent of known conditions, construction-related requirements of the ICRA must be included into the contract documents and implemented during construction.

As part of the infection control risk mitigation recommendations, specific methods to reduce the potential for the transmission of airborne and waterborne biological contaminants are documented in writing. *The Facility Guidelines Institute (FGI) Guidelines* include the following considerations as a minimum standard:

- Resident placement and relocation plans;
- Protection from airborne contaminants (i.e., barriers and other protective measures to protect adjacent areas and residents), demolition and emergencies (e.g., planned, and unplanned utility outages and evacuation);
- Phasing or temporary provisions for construction or modification of HVAC and water supply systems;
- Training for staff, visitors, and construction personnel;
- Construction worker flows, including construction worker routes (e.g., elevator use for personnel and materials); movement of debris, traffic flow and cleanup; and provisions for bathroom and food facility use; and
- Installation of clean materials that have not been damaged by water.

The infection preventionist should be present at the meeting where construction and renovation is discussed. Prior to construction beginning, an ICRA should be completed by all involved.

Basics of an ICRA:

Ongoing cycles of facility renovation and construction present the continual risks for environmental contamination and subsequent infection transmission. The ICRAs are required by jurisdictions that acknowledge or adopt the Facility Guidelines Institute (FGI) *Guidelines for the Design and Construction of Hospital, Outpatient and Residential Facilities* (three separate resources), which provide minimum standards for the design and construction of health care facilities.

A common approach to the ICRA process includes five steps:

1. Identify the hazards
2. Decide who might be harmed and how
3. Evaluate the risks and decide on the precautions
4. Record findings, propose action and identify who will lead on what action
5. Review the assessment and update if necessary

The easiest and best way to identify the five steps is by using the American Society for Health Care Engineering (ASHE) ICRA precautions matrix. For the ICRA form and a helpful toolkit, visit ASHE website at ASHE ICRA 2.0™ Toolkit. Take the time to visit this site and download the ICRA 2.0 form for free.

STARC Systems Video:

YouTube: STARC Systems - Infection Control During Healthcare Renovations: ICRA 2.0 Revisited

References:

- ASHE. [ASHE ICRA 2.0 Toolkit](#).

- Centers for Disease Control and Prevention. Guidelines for environmental infection control in health-care facilities: recommendations of CDC and the Healthcare Infection Control Practices Advisory Committee (HICPAC). MMWR 2003; 52 (No. RR-10): 1–48.

- HRET; ASHE; Association for Professionals in Infection Control and Epidemiology; Society of Hospital Medicine; University of Michigan. [Using the Health Care Physical Environment to Prevent and Control Infection](#). 2022.

- Facility Guidelines Institute. (2014). 2014 guidelines for design and construction of hospitals and outpatient facilities. Chicago, IL: American Society for Healthcare Engineering.

- Facility Guidelines Institute. (2014). 2014 guidelines for residential health, care, and support facilities. Chicago, IL: American Society for Healthcare Engineering.

- STARC Systems. [Infection Control During Healthcare Renovations: ICRA 2.0 Revisited](#). ASHE L&L Webinar Nov 17, 2022. YouTube accessed on March 21, 2023.

Chapter 16: Environmental Services (EVS)/Housekeeping Services

EVS team members work hand in hand with healthcare worker staff in reducing the spread of germs in all healthcare facilities. The onboarding process and continued education to EVS workers is vital to the upkeep of the facility. LHDs can assist LTCFs with training and education for EVS workers. One keyway to break the chain of infection is by keeping the environment clean and disinfected. While cleaning is part of everyone's role in the healthcare facility, it is essential for EVS workers to be meaningfully engaged. Teaching the elements of how to clean and disinfect and the rationale behind its importance will assist the LTCF EVS workers to effectively perform their role. EVS has an important role in preventing the spread of germs through their job duties.

This chapter consists of the following environmental services/housekeeping services:

- Description
- Spread of Germs from the Environment
- CDC video
- Cleaning and Disinfection Principles
- Tools for the Toolbox
- Monitoring, Feedback, and Audit Elements
- References

Environmental Services/Housekeeping Services

Description:

The housekeeping department (also known as Environmental Services) usually has the primary responsibility in cleaning and disinfecting the healthcare environment. It is a collaborative effort with EVS and all healthcare workers to ensure a clean environment to prevent it from becoming a reservoir for germs.

Spread of Germs from the Environment:

- Contact with contaminated surfaces easily leads to cross-transmission of germs between people and the environment.
- Once the contaminated hands of the healthcare professional touch the environment of the resident, the environment then becomes contaminated.
- If surfaces are not properly cleaned and disinfected, germs can remain on the surfaces for long periods of time.
- Germs on environmental surfaces in healthcare facilities plays a role in the spread of HAIs.

CDC Video:

LTC Mini Webinar: Sparkling Surfaces: Stop COVID-19's Spread

Cleaning and Disinfection Principles:

- The key to cleaning and disinfecting environmental surfaces is the use of friction to physically remove visible dirt, organic material, and debris, thereby removing microorganisms.
- Cleaning of environmental surfaces is divided into two categories based on how frequently these surfaces are touched:
  - High touch surfaces: need to be cleaned and disinfected frequently because of the high degree of handling increasing the risk of cross-contamination of germs. Examples of high touch surfaces: bed controls, bed rails, bedside table, blood pressure cuff, cabinet knobs, call light, computer keyboard, doorknobs, IV poles, light switches, telephone, faucet handles, sinks, toilet flush, and toilet seat.
  - Other surfaces: still need to be cleaned and disinfected but less frequently than high touch surfaces. Examples include: tops of cabinets, floor, ceiling, and blinds.
- For resident room cleaning and disinfection:
  - Move from clean to dirty areas
  - Clean from high surfaces to low (top to bottom)
  - Minimize the movement of dust while cleaning (ex. use of a moistened microfiber cloth instead of feather duster)
- Facility should establish cleaning and disinfection policies and procedures to ensure that surfaces are cleaned and disinfected effectively

Tools for the Toolbox:

- CDC Interactive Video: EVS and the Battle Against Infection
- CDC Slide Deck: Environmental Cleaning and Disinfection: Principles of Infection Transmission and the Role of the Environment
- CDC Slide Deck: Cleaning and Disinfection Strategies for Non-Critical Surfaces and Equipment

- CDC Slide Deck: Using a Quality Improvement Approach to Improve Environmental Cleaning Practices
- CDC: Options for Evaluating Environmental Cleaning

Monitoring, Feedback, and Audit Elements:

- Structured monitoring programs ensure that environmental cleaning and disinfection is conducted according to best practices.
- Inspect cleaning and disinfection logs, monitor the cleaning and disinfection processes of staff by following the established checklist.
- Use a standardized methodology for monitoring and apply it on a routine basis. Also provide feedback for staff.
- Use objective methods for cleaning and disinfection when possible.
- Audit cleaning and disinfection of rooms on a routine basis and use a method that indicates if the practice has been completed properly (i.e., Glo-Germ, ATP).

References:

- CDC. Guidelines for Environmental Infection Control in Health-Care Facilities. 2003. Updated July 2019.

- CDC. Environmental Cleaning Procedures. 2023.

Chapter 17: Healthcare Laundry

The significance of safe, hygienically clean healthcare laundry should not be overlooked in the role of preventing infections. Clean healthcare laundry is not only a standard of care, but contaminated healthcare laundry may pose a risk to healthcare staff and residents due to exposure to bloodborne pathogens (BBP) and other infectious agents if optimal processes are not properly implemented. LHDs can support LTCFs through education and assessments in following best practices for handling linen. Used linens in healthcare facilities are contaminated and need to be handled in a proper way to decrease the spread of germs. IPC includes looking at the process of linen management from beginning to end. This includes how it reaches the residents, how it is transported, and how the staff handles it. There are many instances where healthcare laundry in a LTCF is a contracted service. It is important that even the contracted services get assessed for proper and safe handling of linen. Healthcare laundry can also be performed onsite and still require oversight.

This chapter consists of the following healthcare laundry:

- Description
- Handling of Healthcare Laundry
- Healthcare Laundry Staff Considerations
- Sample Laundry Inspect Forms and Resources
- References

Healthcare Laundry

Description:

Pathogens in the healthcare environment can be anywhere, including laundry. Laundry (e.g., bedding, towels, personal clothing) can become contaminated with infectious germs (pathogens) via the skin, blood, and body fluids. Resident linen is used daily and can be a harbor for germs. Frequent cleaning of healthcare linen assists with keeping a clean environment. Soft surfaces, like linen, can be a reservoir for pathogens. The cleaning action, in combination with the detergents being used, can effectively remove, and kill pathogens. The handling of linen once it is laundered is the most important step to decrease contamination of the linen. LTCFs should monitor laundering processes, whether performed onsite or offsite, to ensure that laundry is hygienically clean. Contracted laundry services should be monitored to ensure that the services performed under the contract are provided in a safe and effective manner.

Handling of Healthcare Laundry:

- Soiled healthcare laundry should be bagged or contained, without sorting, at the point of use. This should be accomplished in a manner that avoids contamination of the environment and healthcare personnel clothing. They should not be shaken, sorted, or prerinsed at the point of use.
- Soiled laundry should be contained in bags or containers that clearly indicate they are soiled at the point of use.
- Soiled utility and soiled holding areas should be at negative pressure to adjacent areas with a minimum of 2 outdoor air exchanges per hour (ACH) and 10 total ACH.
- Soiled laundry holding areas are anticipated to be heavily contaminated and should undergo at a minimum, daily cleaning and disinfection consistent with other areas of the facility.
- Alcohol-based hand sanitizer or soap and water should be readily available in all areas where soiled or clean textiles are handled.
- Personnel that sort laundry should anticipate exposure to heavily soiled textiles and sharps. PPE should include impervious gowns and puncture resistant gloves. Sorting may result in dispersal of contaminants and eye protections and masks may also be needed.
- Laundry carts used to transport textiles offsite should be cleaned and disinfected with EPA-registered healthcare disinfectants. This is usually done when soiled carts are emptied, prior to restocking them with laundered textiles for return to the facility.
- Work areas on the clean side of the laundry facility may also be considered noncritical surfaces and should be cleaned and disinfected regularly.
- Laundered textiles should remain separated from soiled materials upon receipt at the facility. If loading docks are used, assess the area due to environmental soil or evidence of infestations with vermin.
- Laundered healthcare textiles should be packaged and transported in a manner that will ensure their cleanliness and protect them from dust and soil during interfacility loading, transport, and unloading.
- Following laundering, either onsite or offsite, textiles are stored in a clean staging area where they are sorted and prepared for distribution to the point of use. Laundry storage areas in acute care, outpatient, and long-term care facilities, should be at positive pressure compared to adjacent areas.
- Following laundering, textiles are stored in a clean staging area prior to distribution to the point of use. Offsite packaging is removed, and textiles are placed on clean carts and should be maintained

covered for transport to units. Routine environmental cleaning of this area should be consistent with other areas of the healthcare facility.

- Laundry carts that transport laundered textiles may become contaminated during storage or transport on units. They should be cleaned each time they are restocked.
- Laundered healthcare textiles should be packaged and transported in a manner that will ensure their cleanliness and protect them from dust and soil during interfacility loading, transport, and unloading. There are a variety of methods facilities can use to protect clean laundry from environmental contamination until used. Laundered textiles may be stored in hallway alcoves or clean storage areas. Clean storage areas should be maintained at positive pressure to adjacent areas. Equipment (e.g., laundry cart covers) should be cleaned and disinfected on a regular basis.
- Facilities should ensure routine environmental cleaning and disinfection of linen storage areas on inpatient units consistent with other areas of the facility.

Healthcare Laundry Staff Considerations:

Staff that perform laundry services for LTCFs can be employees of the organization or they could be employed by contract services. These workers should be trained in proper handling of healthcare laundry to prevent contamination. In addition, education should be performed that includes safe handling of linen to decrease contamination to oneself. There is a risk of germs from contaminated linen transferring to worker's clothes and skin. There is also risk of bloodborne pathogen exposure from contaminated linen.

- Facilities should develop processes to ensure that all healthcare personnel understand and are competent to adhere to infection prevention requirements as they perform their roles and responsibilities. Training should not be limited to laundry-facility personnel. It should include all HCP who are assigned responsibility for handling linen across the continuum of use.
- Require training before individuals are allowed to perform their duties and at least annually as a refresher. Provide additional training in response to recognized lapses in adherence and to address newly recognized infection transmission threats (e.g., introduction of new equipment or procedures).
- Teach about hepatitis B vaccine and offer it free of charge to the staff performing laundry services.
- Provide education on PPE, its use, when to wear it, how to wear it and take it off, and disposal of PPE.

Sample Laundry Inspection Forms and Resources:

- [CDC: Linen and laundry management](#)
- [The Joint Commission Laundry Practices IPC Assessment Checklist](#)

References:

- ASHRAE. Standard 170-2017, Ventilation of healthcare facilities. 2020.

- McLay C. Healthcare textile services. APIC Text Online. In: Boston H. M., et al, eds. APIC Text 2020. Available at 113. Healthcare Textile Services | Infection Prevention for Support Services and the Care Environment. Accessed March 20, 2023.

- Centers for Disease Control and Prevention (2015). Laundry and bedding.

- Centers for Disease Control and Prevention (2022). CDC's core infection prevention and control practices for safe healthcare delivery in all settings.

- Centers for Disease Control and Prevention (2023). Healthcare-associated infections – Infection Control Assessment and Response (ICAR) Tool for General Infection Prevention and Control (IPC) Across settings.

- Center for Medicare and Medicaid Services. Clarification of interpretive guidance at F tag 411-laundry and infection control: Center for Clinical Standards and Quality/Survey & Certification Group

- Code of Federal Regulations. Part 483.80 – Requirements for State and long term care facilities.

- Occupational Safety & Health Administration. Occupational exposure to bloodborne pathogens: final rule. OSHA Standard 56 Fed Register 1991 Dec 6;56(235);64004–64182. Available at: Occupational Safety and Health Administration.

Chapter 18: Water Management

Water management programs are designed to ensure the safety and quality of water within LTCFs. The U.S. Environmental Protection Agency (EPA) sets standards and regulations for many different contaminants in drinking water, including disease-causing germs and chemicals. LHDs can help facilities to assess the water systems, including monitoring water sources, storage, and distribution systems to identify potential risks or issues that could affect the health and well-being of residents. LHDs can also provide education on best practices for water management such as water testing, disinfection, and prevention of waterborne illnesses. In addition, early identification of an outbreak of water-associated infections or water contamination allows facilitates early application of interventions. LTCFs should be taught the occurrence of water-associated infections may indicate an outbreak of concern. Early notification of the LHDs can speed the investigation, identify the affected individuals, and implement necessary control measures.

This chapter consists of the following water management:

- Description
- Opportunistic Pathogens of Premise Plumbing
- Water Management Working Group
- Resident and Staff Possible Exposure Sources
- Tools for the Toolbox
- CMS Memorandum
- References

__Water Management__

Description:

Water use in healthcare facilities places residents (and those who visit them) at risk of severe illness or even death every day. The CDC has linked HAIs to water-associated pathogens. Water management programs should help identify hazardous conditions and take steps to minimize the growth and spread of water-associated pathogens in building water systems. Developing and maintaining a water management program is a multi-step process that requires continuous review. Vulnerable residents can develop HAIs with waterborne organisms that are transmitted by colonization of plumbing systems, including sinks and their fixtures. Room humidifiers and decorative fountains have been implicated in serious outbreaks and pose unwarranted risks in healthcare settings. Residents who acquire infection generally have medical conditions that contribute to infection susceptibility. Due to the aging population in LTCFs, residents are susceptible to infection. A water management plan can assist with water-associated pathogens discovery and prevention.

Opportunistic Pathogens of Premise Plumbing:

Legionella:

Legionella bacteria can be found in water systems in healthcare facilities. *Legionella* bacteria is especially concerning because it can cause a serious type of pneumonia (lung infection) called Legionnaires' disease. *Legionella* bacteria can also cause a less serious illness, called Pontiac fever. Outbreaks of Legionnaires' disease are often associated with large or complex water systems, like those found in hospitals, hotels, and cruise ships. The most likely sources of infection include water used for showering (potable water), cooling towers (part of large air conditioning systems), decorative fountains, and hot tubs. Water left untreated can disperse as small droplets containing *Legionella*. These droplets can then be breathed into lungs. Many components of water systems have been implicated in *Legionella* transmission, including cooling towers, evaporative condensers, water heaters, and potable water distribution system.

Other Gram-negative Bacteria:

There are also gram-negative bacteria that have been known to colonize the biofilms of water systems. These bacteria have been linked to infections and outbreaks in hospitalized patients. Some genera that have been associated with transmission include *Pseudomonas, Stenotrophomonas, Acinetobacter, Sphingomonas, Burkholderia, and Achromobacter.* These organisms can be found in biofilms in healthcare water sources used for residents. A few ways to reduce the risk of transmission are cleaning and disinfecting sinks and wash basins routinely.

Mycobacteria:

Nontuberculous mycobacteria (NTM) is present in municipal water systems. This leads to the organism being present in healthcare facilities tap water. HAIs have been reported due to wound care, instrument processing, and rinsing of equipment being performed with tap water. Water contaminated with NTM can splash and aerosolize and infect a resident. Preventing water from splashing on the sink drain could be an intervention strategy

Water Management Working Group:

Water management programs in LTCFs is a way to help protect vulnerable residents as well as staff and visitors. The establishment of a water management working group that varies in individuals' expertise is beneficial. For LTCFs, the group may consist of three or more individuals representing management, nursing (someone filling the role of infection control), and the facilities engineer; ad hoc members with subject matter expertise (to provide advice) may be water consultants. Use of the following tool will assist in starting a water management working group: CDC Healthcare Facility Water Management Program Checklist.

Seven key activities are routinely performed in a water management program:

1. Establish a water management program team
2. Describe the building water systems using flow diagrams and a written description
3. Identify areas where water-associated pathogens could grow and spread
4. Decide where control measures should be applied and how to monitor them
5. Establish ways to intervene when control limits are not met
6. Make sure the program is running as designed (verification) and is effective (validation)
7. Document and communicate all the activities

A water management working group should assess their facility's premise plumbing. This includes examining factors such as: the age and overall design of the system; any modification to the water system; how long water might be held in the piping system; and looking for 'dead ends' where water can sit stagnant. Next, assessing how the residents are getting exposed to water and possibly water-associated pathogens. Healthcare uses water in a variety of ways other than drinking and hygiene care. Water can be used in procedures, in cooking, in cleaning the environment, flushing the toilet, and in hoppers in dirty utility rooms. Biofilm can build up and stick to pipes. This allows the organism to stay in the drain over long periods of time that are difficult to remove. Residents may be exposed to organisms in drains when water splashes from the drain.

Resident and Staff Possible Exposure Sources:

The splashing up of water that hits the sink drain can contaminate the area all around a sink. These droplets can also contaminate resident's and staff's skin. The CDC has recommended the following measures can reduce the risk of these events from occurring in LTCFs:

- Clean and disinfect surfaces near the drain, including the sink basin, faucet, faucet handles, and surrounding counter top at least daily.
- Avoid placement of patient care items or personal items on counters next to sinks. While assuring that handwashing sinks are located close by and accessible to personnel responsible for preparing patient medications, avoid locating sinks adjacent to medication preparation areas unless barriers are in place to prevent splashing in medication preparation areas.
- Prevent faucets from discharging directly above the drain as this causes splashing (i.e., angle water away from the drain or offset the faucet from the drain). When installing new sinks, consider selecting designs that prevent splashing. (Reference FGI Guideline for Hospitals A2.1-8.4.3.2 (1) a.)
- Use sinks in patient care areas with adequate depth and the maximum water flow as regulated to prevent splashing (FGI Guideline for Hospitals A2.1-8.4.3.2 (1) a., b., c. and A2.1-8.4.3.2 (2) (5), (6) and Gestrich, Donskey et al ICHE 2018 A multicenter investigation to characterize the risk for pathogen transmission from healthcare facility sinks.)

- Install and utilize hopper and toilet covers. These covers should be closed before flushing. If such covers are not available or are prohibited due to local plumbing or building code, close any door that separates the hopper or toilet from other patient care areas before flushing to contain any resulting environmental contamination. (Reference Mathers et al. Clinical Infectious Diseases 2018 Intensive Care Unit Wastewater Interventions to Prevent Transmission of Multispecies Klebsiella pneumoniae Carbapenemase-Producing Organisms.)
- Do not discard patient waste down sinks and minimize discarding liquid nutritional supplements or other beverages down sinks or toilets.

Tools for the Toolbox:

- CDC Toolkit for Developing a Water Management Program to Reduce Legionella Growth and Spread in Buildings
- CDC Toolkit for Controlling Legionella in Common Sources of Exposure
- CDC Reduce Risk from Water
- ASHRAE Guidance for Building Water System Risk Management
- CDC Legionella Environmental Assessment Form
- CDC Environmental Infection Control Guidelines | Background D. Water
- CDC Preventing Legionnaires' Disease: A Training on Legionella Water Management Programs
- CDC Water Infection Control Risk Assessment (WICRA) for Healthcare Settings
- CDC Infection Control Assessment and Response (ICAR) Tool | Water Exposure

CMS Memorandum:

The Centers for Medicare & Medicaid Services (CMS) now requires healthcare facilities to have water management policies and procedures to reduce the risk of water-associated pathogens in building water systems. CMS Memorandum

References:

- ASHRAE. Guidance for water system risk management.

- CDC. Legionella (Legionnaires' Disease and Pontiac Fever: About the Disease. 2021.

- CDC. Considerations for Reducing Risk: Water in Healthcare Facilities. 2024.

- CDC. Drinking Water (2022). Drinking water standards and regulations.

- Decker, B., Palmore, T. The role of water in healthcare-associate infections. *CurrO pin Infect Dis.* 2013 August; 26(4): 345-351. Doi:10.1097/QCO.0b013e3283630adf.

Chapter 19: Process Improvement

Healthcare organizations perform process improvement activities to understand and target problem-prone areas. Infection prevention and control activities are no exception to this rule. LTCFs often lack resources to perform robust process improvement projects. LHDs can assist in educating LTCF workers on identifying IPC areas that require attention and improvement. This could include hand hygiene audits, PPE usage audits or wound care performance.

This chapter consists of the following process improvement:

- Description
- What is surveillance?
- The Roles of Audits
- Methods of Surveillance (Data Collection)
- Examples of Process to Audit
- Tools for the Toolbox
- References

Process Improvement

Description:

Infection prevention is a key component of system-wide quality assurance and performance improvement activities. The Quality Assurance and Performance Improvement (QAPI) Plan is a treatment plan for the facility to make infection prevention and quality improvements happen. Quality improvement projects always begin with a QAPI plan. It provides the details of what and how infections will be prevented, and processes identified as needing improvement. Throughout the process data provides and guides the process. Data that could be useful for LTCFs to collect could be hand hygiene rates, PPE compliance, Vaccine rates for residents and staff, urinary tract infections, and antimicrobial usage to name a few. LHDs may be involved in QAPI by providing guidance, oversight, and support to the LTCFs to ensure that the facility maintains safe and good care to the residents. LHDs may collaborate with LTCFs to develop and implement quality improvement initiatives by sharing expertise and resources to enhance care and safety. Process improvement involves gathering data, including surveillance for trends in the facility, health problems, and behaviors specific to the facility. Surveillance can also detect early epidemics, measure trends, and characterize diseases of interest, as well as assess the effectiveness of programs and control measures that were implemented to prevent the spread of disease.

What is Surveillance?

- Detects trends in the facility, health problems, and behaviors specific to the facility
- Detects epidemics
- Measures trends and characterizes diseases of interest
- Can also assess the effectiveness of programs and control measures that were implemented to prevent the spread of disease
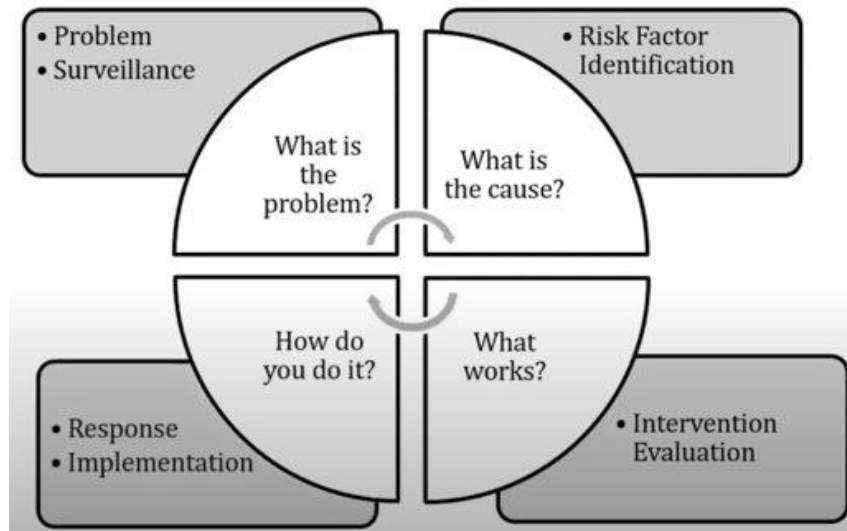
Targeted IPC Utilizing Surveillance Data

The Role of Audits:

Auditing practices, along with surveillance of infection data, can help identify system level gaps and strengths in infection prevention practices. Here are some common roles that audits fulfill:

- Measure healthcare personnel's adherence to standards and processes designed to improve resident care
- Provide valuable information for improvement
- Monitor adherence to infection prevention standards in high-risk settings
- Serve as an opportunity for improvement, not punishment

Methods of Surveillance (Data Collection):

- Direct observation: watching interactions, processes, or behaviors as they occur.
- Chart review: an examination of medical records, to determine what has been done, and see if it can be done better.
- Indirect method: such as monitoring product usage, like measuring alcohol-based hand rub or glove usage, do not require as many resources as direct observation. This method can be used to trend usage over time but does not provide information about how the healthcare personnel are performing the practices with those products.
- Questionnaires: used as a method to query healthcare personnel to self-report their experiences with infection prevention practices. This is a way to educate and involve healthcare personnel in the auditing process.
- Technology: there are increasing options available for electronic monitoring of healthcare personnel compliance with certain practices. These systems can be expensive and may not be accessible.

Examples of Processes to Audit:
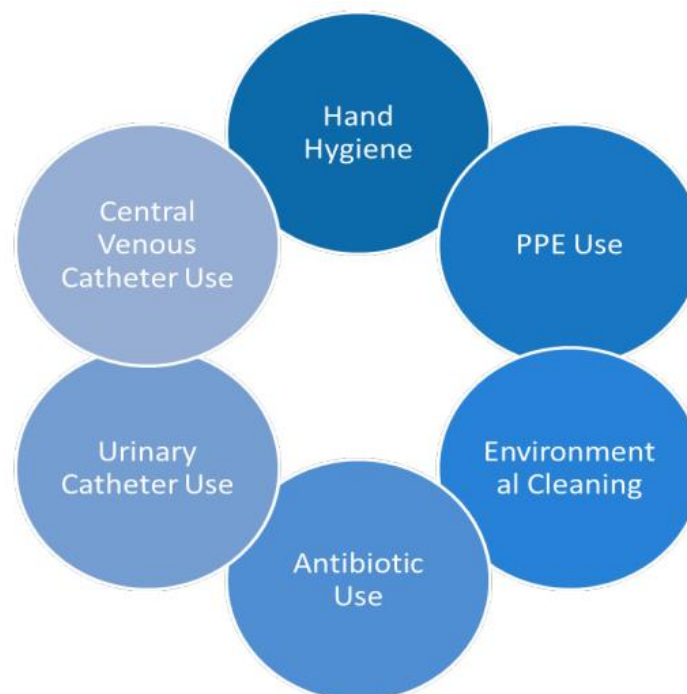
Tools for the Toolbox:

- Audit tools for hand hygiene can be found: [Hand Hygiene Observation Template](#)
- A hand hygiene surveillance app for phones may also prove useful: [iScrub Lite on the App Store (apple.com)](#)
- Audit tool for PPE can be found: [Telligen QI Connect PPE Audit Tool](#)
- AHRQ Urinary Catheter Maintenance education and audit: [Urinary Catheter Maintenance PowerPoint](#)
- AHRQ Central Line Maintenance Audit Form: [Appendix 6: Central Line Maintenance Audit Form | Agency for Healthcare Research and Quality (ahrq.gov)](#)
- AHRQ Antibiotic Stewardship Program: [Stewardship Facilitator Guide](#)
- APIC has Observation Tools Library found at this link: [APIC Tools](#)
- CDC has created a Targeted Assessment for Prevention (TAP) Strategy found here: [CDC TAP Strategy](#)
- CDC Point of Care Testing Audit tool: [Injection Safety- Point of Care Testing (cdc.gov)](#)
- CDC Options for Evaluating Environmental Cleaning: [Options for Evaluating Environmental Cleaning | HAI | CDC](#)
- CDC Environmenatl Cleaning Procedures: [Environmental Cleaning Procedures | Environmental Cleaning in RLS | HAI | CDC](#)
- Video on PDSA Cycles: [AHRQ on PDSA Cycles](#)
- [Plan Do Study Act (PDSA) Form from AHRQ](#)
- [AHRQ Job Aid: Model for Improvement and PDSA Cycles](#)

References:

- Hanskamp-Sebregts M, Zegers M, Boeijen W, Westert GP, van Gurp PJ, Wollersheim H. Effects of auditing patient safety in hospital care: design of a mixed-method evaluation. BMC Health Serv Res. 2013 Jun 22;13:226.

- Duke University. 2021. Patient Safety – Quality Improvement: What is a Chart Audit?

- Davila, Shannon. CDC Using Audits to Monitor Infection Prevention Practices.

Chapter 20: Risk Assessments

LHDs can assist LTCFs in conducting an IPC Risk Assessment to evaluate and address potential risks related to infectious diseases. The IPC Risk Assessment helps to prioritize risks, so that interventions can be aimed at those with the highest risk. The IPC Risk Assessment typically involves reviewing infection prevention practices, facility layout, staff training, and adherence to guidelines. Assessments may also consider factors like vaccination rates, outbreak management protocols, and communication strategies. Each IPC Risk Assessment is individualized for that specific healthcare facility. It considers the resident population and the threats in the community that could impact the residents and staff. LHDs can assist LTCFs in identifying IPC risks in their unique setting. The IPC Risk Assessment allows the LHD and LTCF to prioritize identified risks and create a plan to address those issues. A Risk Assessment assists in goal setting and strategy development. Once risks are prioritized, one can identify the resources required and the best interventions. The resources in this chapter can be used by LHDs to educate LTCFs on the importance of an IPC Risk Assessment. This chapter also contains examples.

IPC Risk Assessments differ from ICARs as IPC Risk Assessments are made after an IPC risk has been identified. Whereas an ICAR is a tool that is used to identify IPC risks for the facility. An ICAR is intended to help assess IPC practices. The ICAR tool is a series of questions to help focus and guide the assessment that is being performed. ICARs identify areas where improvements can be made to prevent the spread of infections and ensure the safety of residents and staff and can assist with the writing of the formal IPC Risk Assessment.

This chapter consists of the following risk assessments:

- Description
- Reasons for an IPC Risk Assessment
- Example Templates
- Elements to Consider in an IPC Risk Assessment
- Prioritization
- TJC Resource Slide Deck
- References

Risk Assessments

Description:

An IPC Risk Assessment is a foundational informational source for IPC programs. It is used to determine where a healthcare facility should focus its infection surveillance, prevention, and control activities. The purpose is to assess the risk of acquiring and spreading germs and prioritizing improvement activities to diminish or eliminate those risks.

Reasons for an IPC Risk Assessment:

- Helps organizations to identify potential hazards and react to them before they cause harm. This creates a proactive, rather than reactive strategy.
- Protects individuals in the healthcare facility.
- Provides a framework for infection prevention and control teams and others to work within.
- Could assist with cost control by cutting down on infections and outbreaks.
- Meets regulatory requirements.

IPC Risk Assessment Templates:

There is no standard IPC Risk Assessment Template. Pick a template that is relevant and easy to understand.

- [CDC IPC Risk Assessment Template](#)
- [APIC Risk Assessment Template](#)

Elements to Consider in an IPC Risk Assessment:

- Population: describe the population that is served in the community.
  - Aging
  - Minorities
  - Low socioeconomic status
- Communications: evaluate communication methods used to communicate IPC concerns.
  - Identification of the presence of residents with communicable diseases: through charting, flagging the chart, verbal report, huddles, etc.
  - Infection Control Program: medical director and infection preventionist work in collaboration to identify IPC risks and breaches.
- Employees: assessment of staff related to infectious diseases and prevention.
  - TB testing: follow state statutes on TB testing/screening of staff.
  - Hepatitis B vaccine: process of offering hepatitis B vaccination for at risk staff.
  - Bloodborne pathogen exposures: education and prevention activity is evident and documented.
- Environment: assessment of the environment for IPC risks related to resident safety.
  - Heating, Ventilation, and Air Conditioning (HVAC): assess air exchanges in critical spaces if available, pressures in rooms related to clean and dirty areas. Working with facility's management is crucial.
  - EVS: education to staff regarding cleaning and disinfection, assessment of cleaning, etc.

- Cleaning, disinfection, sterilization
  - Education: teaching staff the products and instructions for use (IFU), how to read the label of the product, etc.
  - Low/intermediate level disinfection: reusable medical equipment (e.g., BP cuff, Hoyer lifts, bedside commodes)
- Risks of infections: identify evidence-based interventions for implementation to decrease risks of infection to residents.
  - Catheter-associated urinary tract infection: bundle approach to teaching staff to decrease risk of infection (resource: APIC: Preventing CAUTI)
  - Wound infection: perform audits and educate staff on proper wound care to decrease risk of infection
  - Cellulitis/soft tissue infection: educate and document skin assessments and treatments to decrease risk of infection
  - Influenza outbreak: educate staff and residents on vaccination to decrease risk of infection
- Procedures: evaluate the medical procedures performed in the facility on residents.
  - Sterile instruments: proper education on single use instruments and procedures that require aseptic and/or sterile technique.
  - Bedside procedures: determine procedures that can be performed bedside to those that should be in a procedure room.
- Emergency management: work with facilities and safety departments to include IPC issues that may arise from emergencies (e.g., pandemic, bioterrorism, influx of residents).
  - Boil water advisory: LHDs will announce information regarding unsafe drinking water for the community. Design a process to have safe drinking water for staff and residents. Look at medical procedures that may need clean drinking water.
  - Evacuation: regardless of reason for evacuation, determine IPC needs. IPC needs may include clean supplies at evacuation site, clean drinking water, electrical power, etc.
- Natural disasters in the area: what would the facility do regarding IPC if natural disasters impacted the facility?
  - Wildfires: evacuation of residents that have lines and tubes, those with open wounds, those on ventilators, etc.
  - Tornadoes: keeping supplies clean and free from contamination, safe drinking water, etc.
  - Hurricanes: moving resources to an area to prevent flood water contamination, safe drinking water, etc.
- Education and competency evaluation: determine IPC education for staff and contractors.
  - IPC onboarding of new staff: IPC orientation and education
  - Education and training in IPC: determine yearly IPC education and how it will be administered.
  - Competencies for skills: determine high-risk IPC skills that require written competency for staff.

Prioritization:

Once the IPC Risk Assessment template has been decided on (examples above), then the identified risks can be placed onto the template. The template linked here has explanations on how to risk each item: APIC Risk Assessment Template. Anything that is considered "high risk" will need to be followed up in an IPC plan. Not all risks will be included on the plan. Keep in mind that the IPC risk assessment is a living

document that can change over time. For example: an outbreak of influenza occurs, breaches in medication administration are identified, PPE compliance is low, etc.

The Joint Commission (TJC) Resource Slide Deck:

TJC Health Center Infection Control Slide Deck

References:

- CDC template: IPC Risk Assessment Template

- Patrick, Marcia. 10 Elements to consider when conducting an infection risk assessment. Infection Control Today. June 24, 2016.

- APIC template: ASC Risk Assessment Template

Chapter 21: Tuberculosis (TB) Control Plan and Risk Assessment

All healthcare facilities are responsible for implementing and recognizing the importance of a robust TB control plan. TB is a highly communicable airborne disease, which can spread both inside and outside of healthcare facilities. A TB control plan and risk assessment provides the necessary guidance to prevent the spread of TB among healthcare workers and residents. LHDs can assist LTCFs in completing a facility specific TB Risk Assessment and developing a TB Control Plan. LHDs can also use the data they have on TB rates in the community to communicate and collaborate with LTCFs on the level of TB risk for the facility. The items contained in this chapter can assist the LHD in educating LTCF staff on TB plans and facility TB risk assessments.

This chapter consists of the following implementing a TB control plan:

- Description
- TB Characteristics
- TB Infection Control Measures
- Healthcare Personnel TB Screening and Testing
- Tools for the Toolbox
- References

Tuberculosis (TB) Control Plan and Risk Assessment

Description:

A facility TB risk assessment is a process for health care settings to identify and evaluate the risk of TB transmission in their facility. The assessment is usually performed annually. This assessment helps to ensure that the healthcare setting's infection control measures match its risk level classification ([Guidelines for Preventing the Transmission of Mycobacterium tuberculosis in Health-Care Settings, 2005 - Minnesota Dept. of Health](#)). There are template facility TB risk assessments that an organization may use. This chapter includes the CDC [Appendix B](#): TB Risk Assessment Worksheet.

TB Characteristics:

- TB is caused by *Mycobacterium tuberculosis*, a bacterium.
- TB <u>mainly</u> infects the lungs but can infect any part of the body (e.g., kidneys, spine, brain).
  - Pulmonary TB: TB disease that occurs in the lungs typically causing a cough and an abnormal chest x-ray; pulmonary TB is usually infectious if untreated. Most TB cases reported in the United States are pulmonary cases.
  - Extrapulmonary TB: TB disease that occurs in places other than the lungs, such as the lymph nodes, the pleura, the brain, the kidneys, or the bones; most types of extrapulmonary TB are not infectious.
- TB infections may be:
  - Latent TB infection (LTBI): These individuals do not feel sick and cannot spread TB germs to others. This refers to the condition when a person is infected with *M. tuberculosis* but does not have TB disease., or
  - Active TB disease (active): This is mostly pulmonary TB and can spread to others.
- The signs and symptoms of active Pulmonary TB are:
  - Bad cough that lasts 3 weeks or longer;
  - Pain in the chest;
  - Coughing up blood or sputum (phlegm from deep inside the lungs);
  - Weakness or fatigue;
  - Unexplained weight loss;
  - Loss of appetite;
  - Chills;
  - Fever; and
  - Sweating at night
- The bacteria that cause TB spread through the air from one person to another. When a person with TB disease of the lungs or throat coughs, speaks, or sings, TB bacteria can get into the air. People nearby may breathe in these bacteria and become infected.
- A TB IPC Plan is part of a general IPC program designed to ensure the following:
  - Prompt detection of infectious TB patients,
  - Airborne precautions, and
  - Treatment of people who have suspected or confirmed TB disease.

TB Infection Control Measures:

- Administrative Controls
  - Assigning someone the responsibility for TB infection control in the health care setting;

- Conducting a TB risk assessment of the setting;
- Developing and implementing a written TB infection-control plan;
- Ensuring the availability of recommended laboratory processing, testing, and reporting of results;
- Implementing effective work practices for managing patients who may have TB disease;
- Ensuring proper cleaning, sterilization, or disinfection of equipment that might be contaminated (e.g., endoscopes);
- Educating, training, and counseling health care personnel, patients, and visitors about TB infection and TB disease;
- Screening, testing, and evaluating personnel who are at risk for exposure to TB disease;
- Applying epidemiology-based prevention principles, including the use of setting-related TB infection-control data;
- Using posters and signs to remind patients and staff of proper cough etiquette (covering mouth when coughing) and respiratory hygiene; and
- Coordinating efforts between local or state health departments and high-risk health-care and congregate settings.
- Environmental Controls
  - Primary environmental controls consist of controlling the source of infection by using local exhaust ventilation (e.g., hoods, tents, or booths) and diluting and removing contaminated air by using general ventilation.
  - Secondary environmental controls consist of controlling the airflow to prevent contamination of air in areas adjacent to the source airborne infection isolation (AII) rooms; and cleaning the air by using high efficiency particulate air (HEPA) filtration, or ultraviolet germicidal irradiation.
- Respiratory Protective Equipment
  - Implementing a respiratory protection program;
  - Training health care personnel on respiratory protection; and
  - Educating patients on respiratory hygiene and the importance of cough etiquette procedures.

Healthcare Personnel TB Screening and Testing:

Baseline screening of all healthcare personnel is required upon hire as part of preplacement.
- TB blood test and/or Mantoux TB skin test (Testing for Tuberculosis): these are tests to determine exposure to active TB. These tests only test for exposure. If positive, it does not indicate active TB disease.
- A baseline TB risk assessment (Health Care Personnel (HCP) Baseline Individual TB Risk Assessment) should be completed by all HCWs.
- If HCW has a past positive TB test, they can show proof of LTBI treatment and a clear chest x-ray, no TB test is required.
- If the HCW has a past positive TB test with no LTBI treatment and no chest x-ray, TB testing is indicated. A sign and symptom TB questionnaire (Signs and Symptoms of Tuberculosis) should be completed by individuals that have a past positive TB test without treatment.
- Annual testing of HCW is not recommended unless there is a known exposure or ongoing transmission, though high-risk occupations in certain settings should be considered (e.g., respiratory therapists, pulmonologists).
- Review current state or local jurisdiction screening and testing requirements for compliance.

Tools for the Toolbox:

- [UNMC TB Exposure Control Plan](#)
- [CDC Baseline Individual TB Risk Assessment](#)
- [CDC: TB Respiratory Protection in Health-Care Settings Fact Sheet](#)
- [CDC Annual TB Risk Assessment Appendix B](#)
- [CDC: MMWR TB Screening, Testing, and Treatment of US Healthcare Personnel FAQs for Personnel | Infection Control | Topic | TB | CDC](#)
- [Infection Control & Prevention | TB Guidelines by Topic | Publications & Products | TB | CDC](#)
- [Control & Elimination | TB Guidelines | Publications & Products | TB | CDC](#)

References:

- CDC. 2022. Tuberculosis (TB). How TB Spreads: [Tuberculosis: Causes and How It Spreads](#).

- CDC. 2011. Tuberculosis (TB). Tuberculosis general information fact sheet: [What You Need to Know About Tuberculosis Fact Sheet](#)

- CDC. Transmission and Pathogenesis of Tuberculosis. 2019. [Self-Study Modules On Tuberculosis Module 1: Transmission and Pathogenesis of Tuberculosis](#)

- MMWR. Guidelines for Preventing the Transmission of Mycobacterium tuberculosis in Health-Care Settings, 2005. Dec. 30, 2005/54(RR17)1-141.

- Sosa LE, Njie GJ, Lobato MN, et al. Tuberculosis Screening, Testing, and Treatment of U.S. Health Care Personnel: Recommendations from the National Tuberculosis Controllers Association and CDC, 2019. MMWR Morb Mortal Wkly Rep 2019;68:439–443. DOI: [http://dx.doi.org/10.15585/mmwr.mm6819a3external icon](http://dx.doi.org/10.15585/mmwr.mm6819a3external).

Chapter 22: Bloodborne Pathogen (BBP) Exposure Control Plan

The Occupational Safety and Healthcare Administration (OSHA) announced the Occupational Exposure to Bloodborne Pathogen Standard in 1991, which outlines requirements for healthcare settings to protect workers from occupational exposure to blood and other potentially infectious materials. LHDs can collaborate with LTCFs to provide education and training on bloodborne pathogens, proper infection control practices, and the use of PPE for healthcare workers. In addition, LHDs can assist LTCFs as they create protocols and guidelines for handling and disposing of sharps, managing spills of blood and body fluids, and conducting risk assessments to identify potential areas of exposures. LTCFs should have a plan that outlines access to testing and counseling services for individuals who may have been exposed to bloodborne pathogens, ensuring prompt diagnosis, treatment, and follow-up care. OSHA has online training for BBPs that should be used: OSHA BBP Training. This chapter serves as an introduction to BBP exposure control plans.

This chapter consists of the following bloodborne pathogen exposure control plans:

- Description
- Bloodborne Pathogens
- Healthcare BBP Exposures
- Prevention
- Tools for the Toolbox
- References

Bloodborne Pathogens Exposure Control Plans

Description:

A Bloodborne Pathogen (BBP) Exposure Control Plan is a comprehensive, workplace-specific document that outlines all measures to be taken to minimize or eliminate employee exposure to bloodborne pathogens. LHDs may not be involved in full BBP Exposure Control Plan review or development but should understand the implications and requirements of these plans. OSHA requires employers to have an Exposure Control Plan. The OSHA Occupational Exposure to BBP Standard (29 CFR 1910.1030) was created to protect workers by limiting their occupational exposure to blood and other potentially infectious material. Healthcare workers are especially vulnerable to BBP exposure due to their nature of work. Employees have the right to request a copy of this document from their employer. Employers are required by OSHA to:

- Provide training to the employee before the employee's first day on the job and then annually thereafter;
- Offer the hepatitis B vaccination series free of charge to the employee;
- Learn about the risks and how to avoid risks that may occur during employee's job duties;
- Provide a safe work environment and protective equipment;
- Know what to do the employee is exposed; and
- Provide post-exposure treatment and counseling to the employee.

BBP:

BBP are germs (i.e., viruses, bacteria, parasites) that are present in human blood or other fluids, including semen, vaginal secretions, saliva, and serous fluids – pleural, pericardial, peritoneal, and amniotic – clear or visibly contaminated with blood potential to transmit the pathogen and cause infectious disease.

The most concerning BBP in healthcare-related exposures are:

- Human Immunodeficiency Virus (HIV)
- Hepatitis B Virus (HBV)
- Hepatitis C Virus (HCV)

Healthcare BBP Exposures:

Modes of Transmission

- Percutaneous (i.e., needlestick) injuries
- Accidental puncture (with contaminated sharps)
- Human bites, cuts, abrasions
- Touch, splash, or spray to the mucous membranes (eyes, nose, mouth)

Percutaneous (i.e., needlestick) injuries are the most common source of BBP infections.

Occupational exposure to BBP should include one or more of the following immediate interventions:

- Be evaluated and first aid administered based on the type of injury
- Wounds and skin injuries involving needle sticks or cuts in contact with blood or body fluids should be washed with soap and water

- Mucous membranes (i.e., nose, mouth) should be flushed with water
- If the exposure was to the eye, irrigate the eye with clean water, saline, or sterile irrigants
- Report all exposures promptly. This should be either a direct supervisor or the department responsible for managing the facility's occupational health. Careful evaluation of the exposure and the exposure source (such as the resident cared for or the site or object causing exposure) should be done.;
- Interventions should include:
  - Medical evaluation of the HCW immediately
  - Chemoprophylaxis (dependent on the type of exposure); some of these treatment decisions must be made within 2 hours of exposure
  - Follow-up evaluations (should occur in one week, three months, six months, and twelve months depending on the type of exposure and source); repeat testing may be necessary depending on the infection
- Evaluation, counseling, and follow-up conducted by a licensed healthcare provider at no cost to the HCP

Prevention:

- Encourage employees to complete Hepatitis B vaccination series
- Teach employees to use appropriate PPE whenever there is an anticipation of exposure to germs (even if blood is not visibly present)
- Educate about the use of an Environmental Protection Agency (EPA) registered cleaning and disinfecting product appropriate for use on environmental surfaces.
- Educate on the proper disposal or laundering of possibly contaminated materials
- Provide education on safety devices for sharps used in facility and education for employees to not recap needles and for the proper disposal and availability of sharps containers that reduce the risk of potential injury or exposure (ex. mounted sharps containers in residents' rooms)
- Change into clean attire (should be provided by employer) if clothing becomes contaminated with body fluids

In healthcare settings, the employer should offer the hepatitis B vaccine to any staff member who is at risk of BBP exposure at no cost within 10 days of the employee's assignment and after the required BBP training.

- The Hepatitis vaccine is a series usually given as three or four shorts over a six-month period
- The vaccine series must be offered to the HCW at a reasonable time and place
- Employees have the right to decline the vaccination but must sign a declination form

Tools for the Toolbox:

- [OSHA Model BBP Exposure Control Plan Template](#)
- [Environmental Health & Safety Bloodborne Pathogens Exposure Control Plan](#)
- [OSHA Bloodborne Pathogen Standards - PubMed (nih.gov)](#)

References:

- American Association for the Study of Liver Disease and the Infectious Diseases Society of America (2022). HCV guidance: Recommendations for testing, managing, and treating hepatitis C.

- Centers for Disease Control and Prevention (2019). HIV and occupational exposure.

- Centers for Disease Control and Prevention (2013). CDC guidance for evaluating health-care personnel for hepatitis B virus protection and for administering postexposure management.

- Centers for Disease Control and Prevention (2022). HIV treatment as prevention.

- Centers for Disease Control and Prevention (2020). Viral hepatitis: Hepatitis B | CDC

- Hepatitis C questions and answers for health professionals: Clinical Overview of Hepatitis C.

- Occupational Safety and Health Administration, Bloodborne pathogens standard.

- Occupational Safety and Health Administration (2011). OSHA fact sheet: Bloodborne pathogens exposure incidents.

Chapter 23: Sample Materials for Conducting an Infection Control Assessment Response (ICAR) with LTCFs

The ICAR is a tool used to systematically assess a healthcare facility's IPC practices and guide quality improvement activities (e.g., by addressing identified gaps). The ICAR tool is divided into different IPC modules. The LHD can use a focused approach with LTCFs and use only the modules appropriate to the facility challenges or use the tool in its entirety for a complete assessment of a facility's IPC practices. LHDs can utilize the ICAR tool so they can better prevent and respond to infection threats in LTCFs. This chapter includes sample tools for LHDs to connect and communicate with their LTCF partners about the ICAR.

This chapter consists of the following sample communications to LTCFs:

- Description
- Choosing LTCFs for an ICAR
- LHD Readiness
- What Should be Expected from LHD to LTCFs
- Recruitment Letter
- Demographic Section of ICAR
- Example Agenda for ICAR
- CDC ICAR Assessment Tool for LTCFs
- Observation Tools
- Example of Findings/Observations & Recommendations
- Summary Report
- Development of Background Knowledge
- Additional Resources

Sample Communication to LTCFs

Description:

This chapter contains sample communication and resources that LHDs can use with LTCFs to complete an ICAR assessment. The tools will assist LHDs in performing ICARS in person and can be adapted for TeleICARs. TeleICARs are ICARs that are performed virtually and should be used only when an in-person ICAR is not feasible.

Choosing LTCFs for an ICAR:

An ICAR is used to assist a LTCF that has experienced an increase in facility-associated infections, and/or when a novel MDRO has been detected in a regional area. The tool will ensure IPC practices are consistent with prevention and to build capacity with a LTCF that has experienced a change in staffing or has hired a new, less experienced IP Department.

If LHDs are unclear to which LTCFs to contact, prioritizing facilities may prove useful:

- High prioritization should be considered for LTCFs that have recurrent IPC-related citations (i.e., tags) from the Centers for Medicare and Medicaid Services (CMS), the state health department, or another regulatory body within the jurisdiction of the facility.
- Moderate prioritization should be considered for LTCFs that have had previous IPC-related citations (i.e., tags) in the past few years as regulated by CMS, the State Health Department, or another regulatory body within the jurisdiction of the facility.
- Facilities that do not have recurrent or previous IPC-related citations (i.e., tags) may benefit from a routine or preventative ICAR but should be considered a lower priority when comparing with facilities who have recurrent or previous IPC-related citations (i.e., tags)

Below are tools to use to assist with determining prioritization of facilities.

- [Medicare Care Compare Tool](); areas to consider for review include overall rating, health inspection rating, and inspection results
- CMS Special Focus Facility Program List - [Nursing Homes | CMS]() (scroll to bottom of page for most recent SFF Program List download); review both current facilities and candidate facilities
- Multidrug-resistant organism line lists
- Outbreak line lists

LHD Readiness:

LHDs should educate themselves on basic IPC principles and practices in any healthcare setting. Using the public health care experience and IPC foundational concepts will lead to better success when performing an ICAR. Becoming familiar with the LTCF and its IPC challenges will assist in focusing on areas of concern. It should be known that the ICAR is nonpunitive to the LTCF. LHD staff that would be ideal to perform ICARs are:

- Public Health Nurses
- Infection Preventionists
- Sanitarians
- Those specifically trained in infection prevention and control

What Should be Expected from LHD to LTCFs:

The template below provides an outline of the activities recommended for the ICAR process and expectations regarding next steps after an ICAR has been completed. It will also address the expected timeline for the ICAR process. The template is a suggestion for best practice and may be modified based on discussions between the LHD and the LTCF.

Activities	Timeline
LHD Coordinate with LTCF	
The LHD will send recruitment letters out to prospective LTCFs Once the invitation is accepted by the LTCF, the LHD will work with the LTCF's point-of-contact to coordinate an onsite ICAR (e.g., date, time, tools).	*Timeline:* Within **5 business days** of receiving the invitation *Estimated level of effort:* To complete the Demographics section of the ICAR, will take two hours (or less) to complete
LTCF accepts invitation	
The LTCF accepts the opportunity to participate, with a commitment to actively engage in the onsite via email confirmation. The LHD will email a meeting invitation for the ICAR assessment to the LTCF's point-of-contact. The initial meeting will take up to three (3) hours. The invitation will include an agenda. Some LTCFs may choose to have a separate meeting for the observation assessment. The LTCF will complete the Demographic section of the ICAR. This section will help focus the ICAR assessment and allow the LHD's team to better understand the facility. The Demographic section is due at least two business days before the scheduled ICAR. The LHD will coordinate the date and time for the assessment.	*Timeline:* Within **5 business days** of receiving the invitation *Estimated level of effort:* To complete the Demographics section of the ICAR will take two hours (or less) to complete
Onsite ICAR Assessment	
The LHD will conduct an onsite ICAR assessment with LTCF on a mutually agreed upon date using the CDC ICAR tool; the assessment duration will last up to three to six hours. The ICAR assessment will consist of:	*Timeline:* The goal will be to schedule the ICAR within 1-2 weeks of receiving this email. *Estimated level of effort:* Three hours (or less) to complete the

• An introduction to facility leadership before beginning the ICAR;
 	
• Observations, interviews, and policy reviews; and
 	
• A Q&A session about IPC-related topics. Note that attendees could include:
 	
    o Duration of Assessment: Facility Administrator, Infection Preventionist
 	
    o Others who may attend: Director of Nursing, Assistant Director of Nursing, Clinical Leads
 	
    o During Environmental Services Review: Housekeeping supervisor
	ICAR meeting. If the LTCF has time constraints, the assessment can be completed in two separate meetings.

Follow-up	
The LHD will share with LTCF a Summary Report of the assessment. The summary will include facility-specific recommendations, educational opportunities, and resources.	*Timeline:* Summary Report will be sent within five business days after completing the assessment. *Estimated level of effort to review:* 1 hour (or less) to complete internal review.

Recruitment Letter from LHD to LTCFs:

The example letter found in Appendix J could be revised and used as a recruitment letter from LHDs to encourage LTCFs to participate in an ICAR. This letter is set up so that it can be individually edited for LHDs and LTCFs.

Please see Appendix J

Demographics Section for LTCFs:

The CDC ICAR Section 1 - Demographics for LTCF is a pre-assessment that can be used by the facility to complete and send to the LHD prior to the visit. The Demographic section is sent out to the contact person at the LTCF at least 5 days prior to the date of the ICAR. The LHD will receive the completed section, assess the answers, and complete some sections on the ICAR form. This gives the LHD an idea about the LTCF.

CDC ICAR Section 1 – Demographics for LTCF

Example Agenda for ICAR:

The sample agenda found in Appendix K can serve as a template for an ICAR Agenda. This template can be edited to personalize the ICAR agenda.

Please see Appendix K

CDC ICAR Assessment Tool for LTCFs:

This tool is intended to assist in the assessment of infection control programs and practices in LTCFs. The LHD use this tool to guide through the whole ICAR processes. The LHD can ask the questions from all 11 domains or choose to do a focused ICAR and only do relevant domains.

CDC ICAR Section 2 – Facilitator Guide Assessment Modules:

- Module 1 – Training, Audits, Feedback
- Module 2 – Hand Hygiene
- Module 3 – Transmission-Based Precautions (TBP)
- Module 4 – Environmental Services
- Module 5 – High Level Disinfection and Sterilization
- Module 6 – Injection Safety
- Module 7 – Point of Care (POC) Blood Testing
- Module 8 – Wound Care
- Module 9 – Healthcare Laundry
- Module 10 – Antibiotic Stewardship
- Module 11 – Water Exposure

Observation Tools:

The following tools are for the LHD to perform observations during the ICAR visit. The observations will assist in identifying IPC gaps.

CDC ICAR Section 3 – Observation Forms

- Observation Form – Hand Hygiene
- Observation Form –Transmission-Based Precautions (TBP)
- Observation Form – Environmental Services (EVS)
- Observation Form – High-level Disinfection and Sterilization
- Observation Form – Injection Safety
- Observation Form – Point of Care (POC) Blood Testing
- Observation Form – Wound Care
- Observation Form – Healthcare Laundry
- Observation Form – Water Exposure

Example of Findings/Observations & Recommendations:

The following document will assist the LHD in writing the summary report of findings from the ICAR. The document walks the LHD through all the domains of the ICAR and gives the evidence-based guidance for a proper process. It also details recommended activities to improve processes.

Please see Appendix L

Summary Report:

The summary report is a template for the LHD to utilize after the ICAR is complete. The summary reports lists the IPC deficiencies in a table format. This summary report is completed by using the Example of

Findings/Observations & Recommendations document that is linked above. Once the summary report is completed, it is sent to the LTCF.

Please see [Appendix M](#)

Development of Background Knowledge:

The linked document below can be used as an additional IPC resource guide. The document is broken up into the domains in an ICAR. Each domain has subjects and links to evidence-based guidance. This document can be used as a quick reference tool to develop IPC knowledge.

Please see [Appendix N](#)

Additional Resources:

- Long-term Care Facility resources: [CDC Clinical Staff Information](#)
- Information for residents: [CDC Be a Safe Resident](#)
- Long-term Care Facility Infection Prevention Tools: [CDC Infection Prevention Tools](#)
- Long-term Care Facility Infection Prevention Training: [CDC Infection Prevention Training](#)
- Long-term Care Facility Success Stories: [CDC Infection Prevention Success Stories](#)
- Health Department Resources for Long-term Care Facilities: [CDC Health Department Resources for LTCFs](#)
- [Intro to ICAR - YouTube](#)

Appendix A

<u>Infection Preventionist Checklist</u>

The following document is a guide to assist with the competencies of an infection preventionist or a team that is involved with IPC. It includes document links, resources, and skills that are essential to a successful IPC program. This document can be adjusted to meet the objectives of the organization/facility. A date can be placed into the box on the left-hand side of each objective. This checklist can be used as an ongoing competency for IPC. The original reference for this document can be located here.

Name: _____

Indicate date completed in the space provided.

Departmental Organization:

Provided by Administrator/Director of Nursing

	Review the Infection Prevention (IP) Scope of Responsibilities and/or job description
	Review the IPC Program Risk Assessment
	Review the IPC Plan and Goals
	Review any Emergency Management plans as it relates to IPC (e.g., pandemic response, loss of potable water)
	Review responsibilities of Infection Prevention and Control Committee
	Review the annual Facility Tuberculosis Risk Assessment (work with local health department to determine prevalence)
	Review the Quality Assurance & Performance Improvement (QAPI) function and metrics as it relates to IP

Infection Prevention Education:

	Review and complete education by the AHRQ: A Unit Guide to Infection Prevention for Long-Term Care Staff: AHRQ PDF Guide
	Review and complete education by Centers for Disease Control and Prevention (CDC) IP Training
	Review and complete education by the Association for Professionals in Infection Control and Epidemiology (APIC) self-study following core curriculum (requires membership)

Technological Skills:

	Demonstrate basic computer literacy
	Know the functions of email
	Obtain education on how to send secure message via email
	Educate self on surveillance software (if any)
	Obtain basic knowledge of Microsoft Word
	Obtain basic knowledge of Microsoft Excel
	Obtain basic knowledge of Microsoft PowerPoint
	Know basics of Intranet/Internet

IP Surveillance:

	Work with partners to create Laboratory alerts/reports related to IPC
	Create alerts for Admission lists as it relates to active infection/isolation/MDRO
	Obtain access to CDC's National Healthcare Safety Network (NHSN) for educational purposes and to adhere to mandatory reporting if applicable
	Create and implement targeted surveillance audits (hand hygiene, isolation, etc.)
	Educate self on identifying and reporting Central line-associated bloodstream infections using NHSN definitions as applicable (Long-term Care Facility Component (LTCF) Training)
	Educate self on identifying and reporting Catheter-associated urinary tract infections using NHSN definitions as applicable (Long-term Care Facility Component (LTCF) Training)
	Collaborate with LHDs to be compliant with State and Local reportable diseases/health department notifications
	Create IPC unit rounding forms and perform rounds and provide feedback to stakeholders
	Assist with Environment of Care (EOC) rounds with leadership with a focus on IPC as applicable
	Educate self on Infection Control Risk Assessment (ICRA) related to construction/projects and round as needed

Exposure/Outbreak Investigations:

	Obtain knowledge on investigation of exposures and outbreaks
	Obtain State list of notifiable conditions for mandatory reporting. Contact LHD for guidance.
	Create an action plan template for identified exposures and outbreaks
	Create education for frontline staff as it relates to exposures and outbreaks

	Develop standardized inspection and interview forms to use during an exposure or outbreak investigation
	Perform follow-up and evaluation method once incident is resolved

Public Health:

	Introduce oneself to the State, County, or City Health Department to whom notifiable conditions are reported. Healthcare-Associated Infections (HAIs)	HAIs	CDC

In-Service Education:

	Develop in-service content for staff related to IPC in the facility
	Create list for annual mandatory IPC education for facility staff
	Create and present IPC education at general orientation for all staff
	Assist with creation of resident IPC education
	Develop IPC targeted education as it relates to surveillance data obtained
	When performing rounds, perform Just In Time training

Microbiology/Laboratory:

	Create and present education on importance of quality specimen collection
	Create education on stains/cultures

Environmental Services (EVS):

	Educate self and review with EVS leaders the importance of appropriate cleaning product selection for healthcare settings
	Learn to read cleaning and disinfection product labels and review the manufacturer's instructions for use (IFU) on how to use product
	Create, with EVS leaders, a cleaning matrix for the facility that reads who is responsible for cleaning certain areas, equipment, surfaces etc. This cleaning matrix can be placed under an EVS policy and revised every two years or as needed.
	Create and education on Personal Protective Equipment (PPE) that is required (per the IFU) to clean and disinfect safely

Policies/Guidelines/Regulatory:

	Update and/or create IPC department policies
	Review IPC Corporate policies if applicable
	Obtain an Environment of Care (EOC) manual and update sections that relate to IPC
	Have meeting with Accreditation and Regulatory Departments to get up to speed on noncompliance issues with IPC
	Educate self on Occupational Safety and Health Administration (OSHA): Including blood-borne pathogens standard, airborne protection
	Educate self on Centers for Medicare & Medicaid Services (CMS) Conditions of Participation (CoPs)
	Educate self on Environmental Protection Agency (EPA) waste management
	Use APIC guidelines/practice standards/text as helpful resources as applicable
	Use Society for Healthcare Epidemiology of America/Infectious Diseases Society of America (SHEA/IDSA) guidelines as a helpful resource as applicable
	Use American Society of Healthcare Environmental Services (ASHES) guidance documents as a helpful resource as applicable
	Use Association of perioperative Registered Nurses (AORN) standards as a helpful resource as applicable
	Use American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE)/American Institute of Architects (AIA) guidelines/standards as helpful resources as applicable
	Continue to seek guidance from CDC guidelines and recommendations with all IPC

Appendix B

Developed by APIC's Professional Development Committee, May 2019 [Infection preventionist (IP) competency model](#)

Sample Job Description for the Infection Preventionist

Job Description

Job Title: Infection Preventionist

Job Summary:

The Infection Preventionist (IP) is responsible for identifying, investigating, monitoring, and reporting healthcare-associated infections. The IP collaborates with teams and individuals to create infection prevention strategies, provide feedback, and sustain infection prevention strategies.

Qualified Candidate:

Educational and Certification Requirements:

- Baccalaureate degree in nursing, public health, epidemiology, clinical laboratory science, medical technology or related field.
- Certification in Infection Control and Epidemiology (i.e.: CIC© preferred) or, attainment within _____ years after employment

Essential Skills:

- Analytical
- Problem solving
- Collaboration
- Strong oral and written communication skills
- Ability to implement evidence-based guidelines
- Conflict resolution
- Program and project management
- Expertise in data collection and analysis, report writing, and data presentation
- Leadership
- Familiar with software technologies

Reports to: _____

Job Duties:

(Note the key accountabilities/responsibilities of the job)

- Program Management:
  - Develop, implement, and evaluate the organizational infection prevention program.
  - Surveillance

- Develop an annual surveillance plan based on the population(s) served, services provided, and analysis of surveillance data.
- Utilize epidemiologic principles to conduct surveillance and investigations.
- Evaluate and modify the surveillance plan as necessary.
- Develop, interpret and assist with implementation of infection prevention and control policies and protocols.
- Communicate infection prevention and control information and data to various committees and healthcare workers across the organization as assigned.

Percent of time: (% _____)

- Design and Deliver Education
  - Assess and address learning needs of those served.
  - Create educational goals, objectives, and strategies using learning principles and available educational tools and technology.
  - Evaluate the effectiveness of educational programs and learner outcome

Percent of time: (% _____)

- Regulatory Requirements
  - Comply with regulatory and mandatory reporting requirements at the local, state and federal levels.
  - Facilitate compliance with regulatory and accreditation standards.
  - Stay current on infection prevention and control regulatory and accreditation standards.

Percent of time: (% _____)

- Performance Improvement (PI)
  - Utilize PI methodology as a means of enacting change.
  - Define the scope of the project and select appropriate PI tools to aid in efficiency, reliability, effectiveness and ensure sustainability of the initiative.
  - Ensure that customer needs and expectations are considered in the development of and continuous improvement of processes, products, and services.
  - Monitor and analyze process and outcome measures to evaluate the effectiveness and sustainability.
  - Participate in PI committees, teams and initiatives as indicated.

Percent of time: (% _____)

- Occupational Health
  - Participate in the development/review of occupational health policies and procedures related to IPC.
  - Assess risk of occupational exposures to infectious disease.
  - Develop (or assist with) rates and trends of occupational exposures.
  - Develop (or assist with) immunization and screening programs.
  - Apply work restrictions and recommendations related to communicable diseases or following an exposure.

Percent of time: (% _____)

Performance Standards (Job Expectations):

- Professional Accountability
  - Pursue professional growth and development of required knowledge and skills.
  - Maintain certification and licensure requirements.
  - Establish at least 1 professional goal per year.
  - Advocate for patient safety, health worker safety, and safe practices.
  - Participate in an infection prevention and control professional organization/association (i.e.: APIC).
- Collaboration
  - Consult and collaborate, as needed, with local, state, and federal public health officials, and community health organizations.
  - Involve multidisciplinary teams to ensure changes are vetted by all stakeholder groups.
- Leadership
  - Utilize principles of influence, leadership and change management.
  - Bring enthusiasm, creativity and innovation to practice.
  - Work collaboratively with others, providing direction when necessary.
  - Readily share knowledge and expertise.
  - Contribute to the development of less-experienced healthcare providers through education and mentorship.
  - Prepare and deliver infection prevention presentations to external groups.
- Research and Implementation Science
  - Evaluate (critically) research and evidence-based practices and incorporate appropriate findings into routine practice.
  - Integrate evidence-based practices into policies, guidelines, protocols and educational strategies.
  - Identify barriers for implementation and develop strategies to minimize or remove barriers.
  - Implement strategies to sustain efforts such as audit tools and meaningful feedback.
- IPC Informatics
  - Be familiar with infection prevention software and other technology.
  - Collaborate with IT to create meaningful electronic reports to enhance infection prevention initiatives.
- Fiscal Responsibility
  - Consider the financial/safety implications and clinical outcomes when making recommendations, evaluating technology and products, and developing policies and procedures.
  - Use a systematic approach to evaluate costs, benefits, and efficacy.
  - Incorporate fiscal assessments into program evaluations and/or reports.
  - Develop and maintain departmental budgets.

References:

- Davis, J., Billings, C., Malik, C. Revisiting the association for professionals in infection control and epidemiology competency model for the infection preventionist: an evolving conceptual framework.

- American Journal of Infection Control, 46, 745 – 749 https://doi.org/10.1016/j.ajic.2018.04.210.

Recommendations for Use of the Job Description for Infection Preventionists

Objectives:

- Provide a foundational document to support the development of an organization's Infection Prevention and Control department.
- Plan and manage the work of the Infection Preventionist and provide role clarity.
- This job description was developed to be utilized across healthcare settings.

Suggestions for Use:

- Healthcare leaders may adapt the document to align with their organization's goals and needs. For example: if the Infection Preventionist does not perform Occupational Health duties, this section can be removed or modified.
- Periodic review of the job description is recommended to maintain its relevance with the evolving healthcare environment and changing job responsibilities.
- Organizations may want to refer to APIC's Professional and Practice Standards for additional guidance.

Reference:

Bubb, T., Billings, C., Berrel-Cass, D., Bridges, W., Caffery, L., Cox, J., Rodriquez, M., Swanson, J., Titus – Hinson, M. APIC professional and practice standards. *Am J of Infect Control* 2016; 44(7), 745 – 749.

Appendix C

<u>Sample Safe Injection Practices Survey</u>

> **This survey may be used to observe staff practices as a first step toward improving injection safety.**

Department_____ **Date**_____ **Completed by**_____

Policy Number	Item	Satisfactory	Needs improvement	Unsatisfactory	Recommendations	Recommendations Implemented	
						Date	Initials
	Vials						
	Entry to multi-dose vials is always done with new needles or cannulas and syringes—these items are single-use only.						
	Multi-dose vials are discarded immediately if inadvertently entered with a used needle, cannula, or syringe.						
	When possible, multi-dose vials are not used for more than one resident, even if entered each time with new needles and syringes.						

Sample Safe Injection Practices Survey

Policy Number	Item	Satisfactory	Needs improvement	Unsatisfactory	Recommendations	Recommendations Implemented Date	Initials
	Left over parenteral medications are never pooled for later administration.						
	Needles are never left inserted in any vial septum for multiple withdrawals.						
	Single dose vials are discarded after a single entry.						
	IV bags and administration sets						
	Bags of IV solutions are not used as common sources of supply for more than one resident.						
	New syringes, needles, or cannulas are used each time an IV line or bag is accessed.						
	Needles/syringes						
	Sterile, single-use syringes are always used for any type of injection or infusion.						
	Needles, cannulas, and syringes are always used as single-use items and						

Sample Safe Injection Practices Survey

Policy Number	Item	Satisfactory	Needs improvement	Unsatisfactory	Recommendations	Recommendations Implemented	
						Date	Initials
	are never re-used on other residents or to access medications or solutions more than once.						
	Medications are never administered from the same syringe or needle to more than one resident.						
	Used needles are discarded immediately after use and are not recapped, bent, cut, removed from the syringe, or otherwise manipulated.						
	Aseptic technique						
	Medications are prepared and drawn in clean areas that do not have other biological materials, used equipment or food present.						
	Hand hygiene is performed at appropriate times during medication preparation and administration.						
	Disposable gloves are worn according to facility policy.						

Sample Safe Injection Practices Survey

Policy Number	Item	Satisfactory	Needs improvement	Unsatisfactory	Recommendations	Recommendations Implemented	
						Date	Initials
	Skin at the injection/insertion site is prepared with an appropriate antiseptic which is allowed to dry for the recommended period of time.						
	Aseptic technique (con't)						
	The injection/insertion site is not touched after skin antisepsis occurs.						
	Medication vial septums and IV ports are disinfected before each entry.						
	Sharps containers						
	Containers are located at points of use where needed.						
	Containers are leak-proof, puncture-resistant, and are red in color or labeled with a biohazard symbol.						
	Containers are emptied when two-thirds full.						
	Containers are either wall mounted or otherwise stabilized.						

Sample Safe Injection Practices Survey

Policy Number	Item	Satisfactory	Needs improvement	Unsatisfactory	Recommendations	Recommendations Implemented	
						Date	Initials
	Safety devices						
	Sharps with engineered safety devices, blunt cannulas and needle-less IV entry devices are used when suitable devices exist.						
	The safety devices are activated immediately after each use.						
	Additional safety devices staff would like to have available:						

Appendix D

Injection Safety
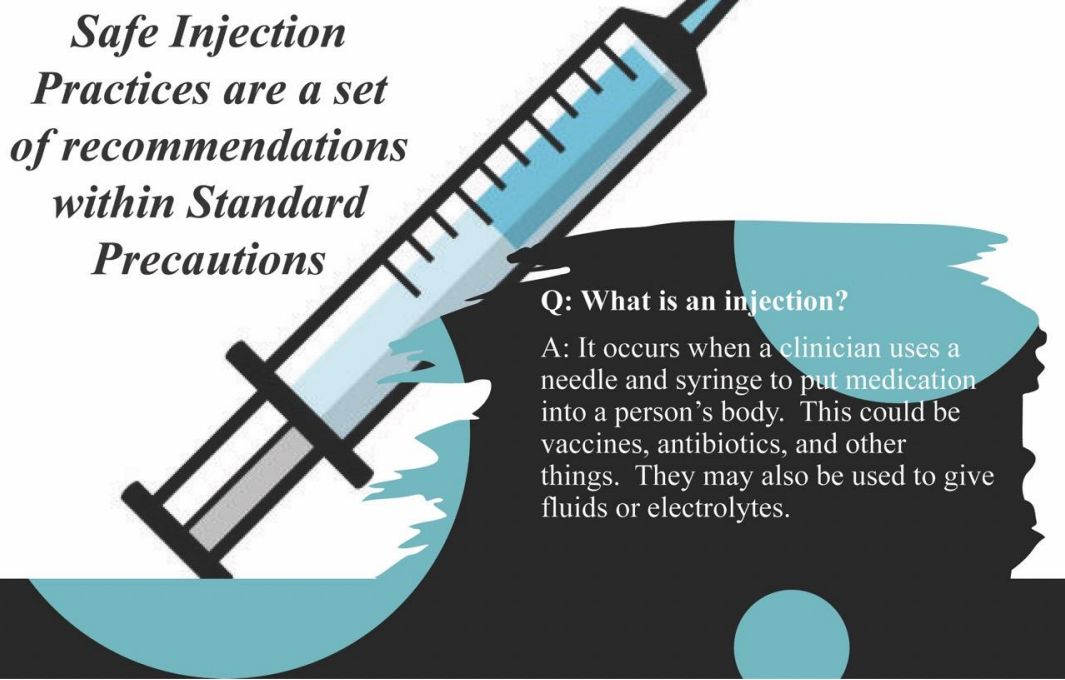
Safe Injection Practices are a set of recommendations within Standard Precautions

Q: What is an injection?

A: It occurs when a clinician uses a needle and syringe to put medication into a person's body. This could be vaccines, antibiotics, and other things. They may also be used to give fluids or electrolytes.

Background

Despite recommendations, outbreaks and patient notifications resulting from healthcare personnel failing to adhere to Standard Precautions and basic infection control practices continue to be reported.

Unsafe injection practices that have resulted in disease transmission most included:

- Using the same syringe to administer medication to more than one patient

- Accessing a medication vial or bag with a syringe that has already been used to administer medication to a patient, then using the remaining contents from that vial or bag for another patient

- Using medications packaged as single-dose or single-use for more than one patient

- Failing to use aseptic technique when preparing and administering injections

Injection Safety Practices

SINGLE-USE ONLY DO NOT RE-USE

Administer
- Never administer medications from the same syringe to more than one patient, even if the needle is changed or you are injecting through an intervening length of IV tubing.

Do Not Enter
- Do not enter a medication vial, bag, or bottle with a used syringe or needle.

Never
- Never use medications packaged as single-dose or single-use for more than one patient. This includes ampules, bags, and bottles of intravenous solutions.

Always
- Always use aseptic technique when preparing and administering injections.

Question: Is it sufficient to visually inspect syringes to determine whether they are contaminated or can be used again?
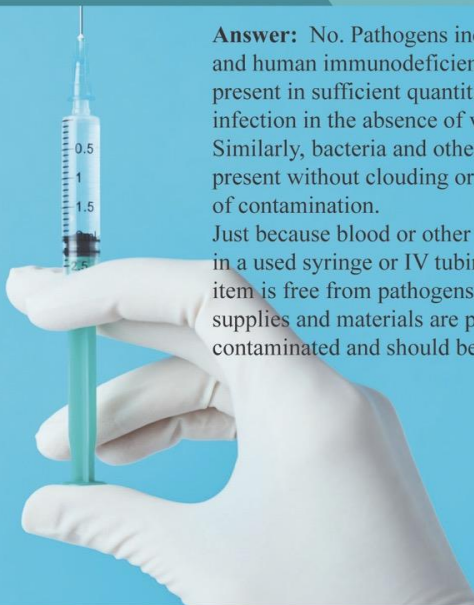
Answer: No. Pathogens including HBV, HCV, and human immunodeficiency virus (HIV) can be present in sufficient quantities to produce infection in the absence of visible blood. Similarly, bacteria and other microbes can be present without clouding or other visible evidence of contamination.

Just because blood or other material is not visible in a used syringe or IV tubing does not mean the item is free from pathogens. All used injection supplies and materials are potentially contaminated and should be discarded.

One and Only Campaign

- Public health effort to eliminate unsafe medical injections

- Led by CDC and the Safe Injection Practices Coalition (SIPC)

- Raises awareness among patients and healthcare providers about safe injection practices

- Prevent disease transmission from unsafe injection practices

CDC One & Only Campaign

ONE NEEDLE,
ONE SYRINGE,
ONLY ONE TIME.

Safe Injection Practices Coalition

Injection Safety: Steps for Success

- ✓ Needles are used for only one patient

- ✓ Syringes are used for only one patient

- ✓ The rubber septum on a medication, whether unopened or previously accessed, vial is disinfected with alcohol prior to piercing
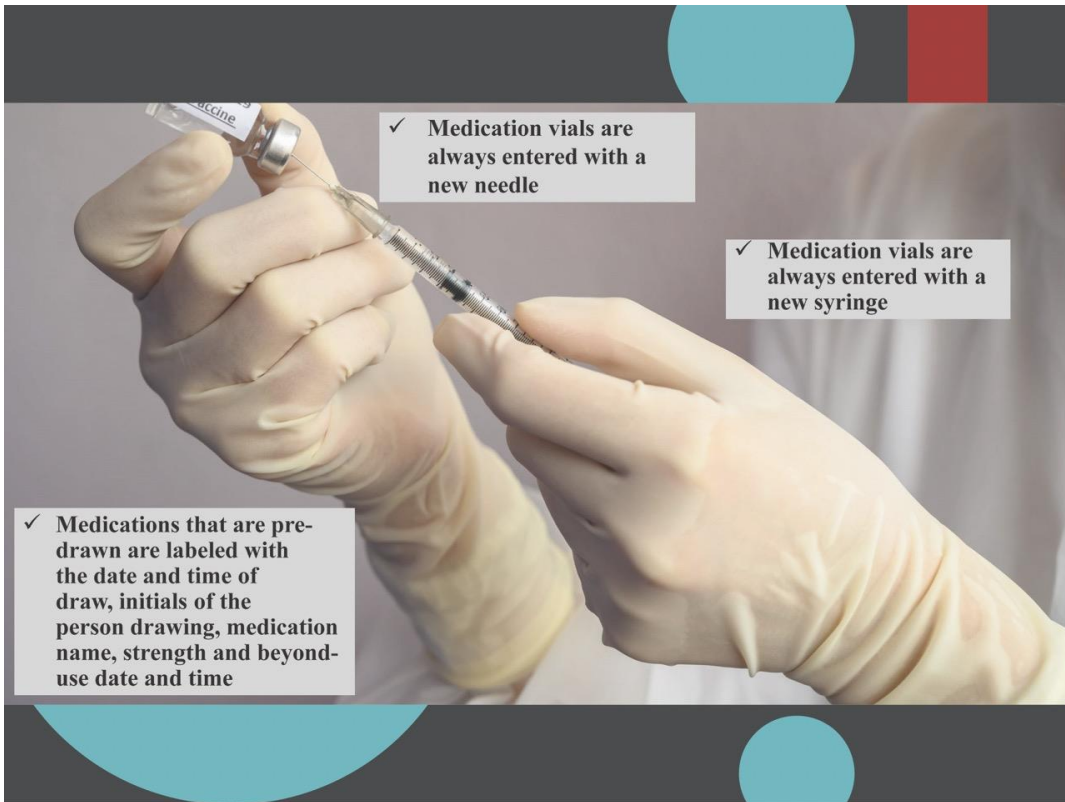
- ✓ Medication vials are always entered with a new needle

- ✓ Medication vials are always entered with a new syringe

- ✓ Medications that are pre-drawn are labeled with the date and time of draw, initials of the person drawing, medication name, strength and beyond-use date and time

- ✓ Single dose (single-use) medication vials are used for only one patient

- ✓ Bags of IV solution are used for only one patient

- ✓ Medication administration tubing and connectors are used for only one patient

- ✓ Multi-dose vials are dated when they are first opened and discarded within 28 days unless the manufacturer specifies a different (shorter or longer) date for that opened vial.

- ✓ Multi-dose vials used for more than one patient are stored appropriately and do not enter the immediate resident care area

- ✓ All sharps are disposed of in a puncture-resistant sharps container

- ✓ Sharps containers are replaced when the fill line is reached

Glucometer, Finger Sticks, and Insulin….Oh My!

► CDC is alerting all persons who assist others with blood glucose monitoring and/or insulin administration of the following infection control requirements:

Fingerstick devices should **NEVER** be used for more than one person.

Whenever possible, blood glucose meters should **NOT** be shared. If they must be shared, the devise should be cleaned and disinfected after every use, per manufacturer's instructions.

Insulin pens and other medication cartridges and syringes are for single-patient-use only and should **NEVER** be used for more than one person.

Assessment and Audit

1. Designate someone to provide ongoing oversight for infection control issues

2. Develop written infection control policies

3. Provide competency-based training

4. Perform periodic observations of infection control practices (i.e., audits) and provide feedback to personnel who prepare or administer injectable medications

Tools for Your Toolbox:

- Injection Safety Checklist:
  - https://www.cdc.gov/injectionsafety/pdf/Safe-Injection-Checklist-P.pdf
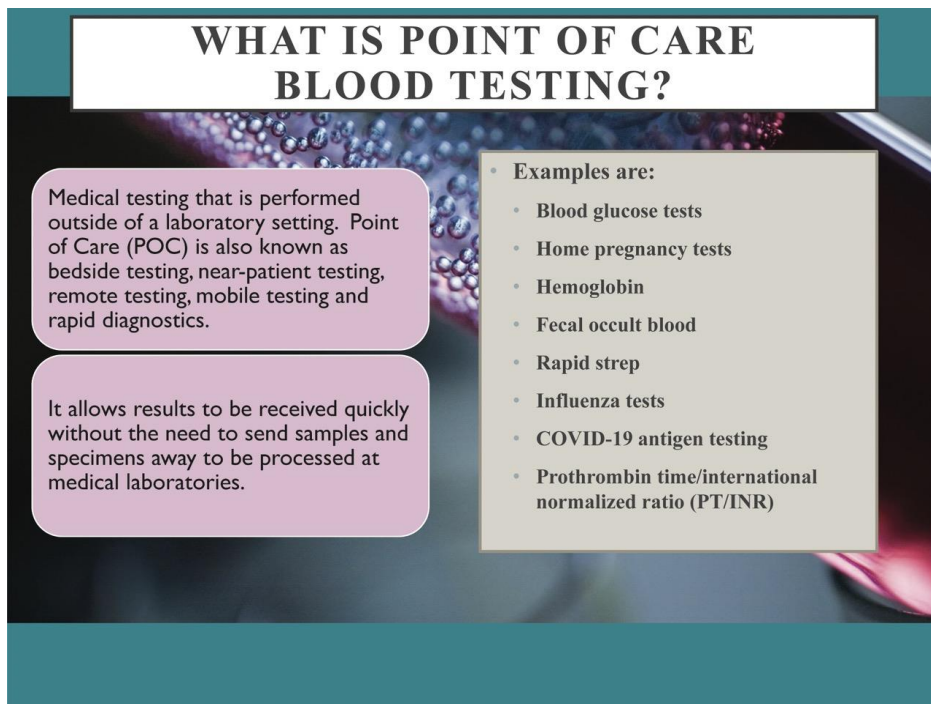
- WHO Best Injection Practices Guidelines Poster:
  - https://cdn.who.int/media/docs/default-source/integrated-health-services-(ihs)/injection-safety/posters-toolbox/injection-poster?sfvrsn=d2902e9d_5

- Injection Safety Guidelines pocket cards: https://www.cdc.gov/injectionsafety/pdf/injection-safety-guidelines-web?

- Injection Safety Knowledge Check:
  - https://www.cdc.gov/injectionsafety/pdf/Safe-Injection-Myths-P.pdf

- Injection Safety for Healthcare Providers Poster:
  - https://www.cdc.gov/injectionsafety/pdf/Safe-Injections-Reduce-Infections-P.pdf

- Safe Injection Practices Video (4:25 min):
  - https://www.youtube.com/watch?v=90stMoz80k

References

- CDC. Injection Safety. 2012. https://www.cdc.gov/injectionsafety/index.html
- CDC. Injection Safety. *Background.* 2019. https://www.cdc.gov/injectionsafety/providers/provider_faqs.html#:~:text=Does%20all%20the%20medical%20to%20for%20preparing%20and%20administering%20injections.
- WHO. Injections Safety. 2023. https://www.who.int/teams/integrated-health-services/infection-prevention-control/injection-safety
- APIC. Injection Safety: What you don't know can hurt you. https://apic.org/monthly_alerts/injection-safety-what-you-dont-know-can-hurt-you/
- CDC. Injection Safety. *One and only campaign.* 2019. https://www.cdc.gov/injectionsafety/one-and-only.html
- CDC. Injection Safety. *Infection Prevention during blood glucose monitoring and insulin administration.* 2011. https://www.cdc.gov/injectionsafety/blood-glucose-monitoring.html

Appendix E

Point of Care Blood Glucose Testing Educational Presentation

HEALTHCARE WORKER SAFETY

When performing POC testing on residents, you are at risk of exposure to bloodborne pathogens and other illnesses.

Collecting samples from residents means you're handling human specimens, biological material. This material can contain viruses that can cause influenza-like illness or bacteria that can cause sickness with strep throat or a staph infection.

There is also risk of getting harmful material on your hands that can be transferred to your mouth or directly into your body through exposed scratches and cuts on your skin.

HEALTHCARE WORKER SAFETY

- Train and educate all staff who will be performing POC testing.

- Document education and skills check competency and maintain records.

- Validate competency on how to obtain the sample, how to use the testing device/equipment, how to properly clean, disinfect, and store reusable device/equipment, and how to dispose of one-time use device/equipment.

- Follow the manufacturer's instructions for use (IFU) on proper maintenance of the device/equipment.

- Educate on Standard Precautions and appropriate PPE to use while performing POC blood glucose testing.

- Educate on potential for bloodborne pathogen (BBP) exposure and proper handling of needles and other sharps

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CDC AND POC BLOOD GLUCOSE TESTING

There is risk of transmitting hepatitis B virus (HBV) and other infectious diseases during assisted blood glucose (blood sugar) monitoring.

Healthcare workers should follow these infection control requirements:

Don't share fingerstick devices	Whenever possible, blood glucose meters should **NOT** be shared.

UNSAFE PRACTICES

🚫 Using fingerstick devices for more than one person

🚫 Using blood glucose meter for more than one person without cleaning and disinfecting after every use, per the manufacturer's instructions.

🚫 Using insulin pens for more than one person

🚫 Failing to change gloves and perform hand hygiene between fingerstick procedures

FINGERSTICK DEVICES, ALSO CALLED LANCING DEVICES, ARE DEVICES THAT ARE USED TO PRICK THE SKIN AND OBTAIN DROPS OF BLOOD FOR TESTING

CDC Recommendations for POC Blood Glucose Testing for Long Term Care Facilities:

☑ Use single-use, auto-disabling fingerstick devices in long term care facilities.

☑ These are devices that are disposable and prevent reuse through an auto-disabling feature.

BLOOD GLUCOSE METERS ARE DEVICES THAT MEASURE BLOOD GLUCOSE LEVELS

CDC Recommendations for POC Blood Glucose Testing for Long Term Care Facilities:

☑ Whenever possible, blood glucose meters should be assigned to an individual person and not be shared

☑ If blood glucose meters must be shared, the device should be cleaned and disinfected after every use, per manufacturer's instructions, to prevent carry-over of blood and infectious agents. If the manufacturer does not specify how the device should be cleaned and disinfected, then is should not be shared

HAND HYGIENE

- Wear gloves during blood glucose testing and during any other procedure that involves potential exposure to blood or body fluids

- Change gloves between resident contacts. Change gloves that have touched potentially blood-contaminated objects or fingerstick wounds before touching clean surfaces. Discard gloves in appropriate receptacles.

- Perform hand hygiene immediately after removal of gloves and before touching other medical supplies intended for use on other persons.

Review	Provide	Establish	Assess	Report	Check
New provider's orders regularly for persons requiring assistance with blood glucose monitoring.	Provide and Recommend a full hepatitis B vaccination series to all previously unvaccinated staff persons whose activities involve contact with blood or body fluids.	Establish there is a designated infection preventionist (IP) overseeing infection control activities.	Assess adherence to infection control recommendations for blood glucose monitoring by routinely performing observation audits to walk through each step of cleaning, disinfection, usage, disposal, and storage.	Report to public health authorities any suspected instances of a newly acquired bloodborne infection, such as hepatitis B, resident, or staff member.	Check with State authorities for specific State and federal regulations regarding laboratory testing.

TRAINING AND OVERSIGHT

REFERENCES

- CDC. Injection Safety. *Infection prevention during blood glucose monitoring and insulin administration.* 2011. https://www.cdc.gov/injectionsafety/blood-glucose-monitoring.html

- CDC. Division of Laboratory Systems (DLS). *Point-of-care testing: risk assessment basics.* 2021. https://www.cdc.gov/csels/dls/point-of-care-testing-risk-assessment-basics.html

- CDC. Viral Hepatitis. *Health care-associated hepatitis B and C outbreaks (> 2 cases)* reported to the CDC 2008-2019. 2023. https://www.cdc.gov/hepatitis/outbreaks/healthcarehepoutbreaktable.htm

- DotMed. Nova Biomedical. https://www.dotmed.com/listing/other/nova-biomedical/statstrip/glucose-meter-battery-docking-station-and-charger/3634849?utm_source=base&utm_medium=search&utm_campaign=Base&gclid=CjwKCAiAk9itBhASEiwA1my_65Qy_RmEcVJeXHqDuoUCxy6AafICgBBMQNxl_cxt9PLFAcquyb590xoC5XIQAvD_BwE

- Yenice S. (2021). Training and Competency Strategies for Point-of-Care Testing. EJIFCC, 32(2), 167–178.

Appendix F

Outbreak Investigation Educational Presentation

3 KEY QUESTIONS REGARDING OUTBREAKS

- What is the problem?

- What is the cause?

- What can we do about it?

BASIC EPIDEMIOLOGY

The Epidemiologic Triangle is a model that scientists have developed for studying health problems. It can help one understand infectious diseases and how they spread.

The goal is to break at least one of the sides of the Triangle, disrupts the connection between the environment, the host, and the agent, and stopping the continuation of disease.

- Agent, or microbe that causes the disease (the "what")

- Host, or organism harboring the disease (the "who")

- Environment, or those external factors that cause or allow disease transmission (the "where")

- The center of the Triangle is time..

Age, sex, race, genetic profile, previous diseases, immune status, religion, customs, occupation, marital status, family background

Host

Environment
Temperature, humidity, altitude
Crowding, housing, neighborhood
Water, milk, food
Radiation, pollution, noise

Agent
Biologic (bacteria, viruses)
Chemical (poison, alcohol, smoke)
Physical (trauma, radiation, fire)
Nutritional (lack, excess)

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CHAIN OF INFECTION

Susceptible Host
- Elderly
- Infants
- Immunocompromised
- ANYONE!

Can be *any* person

Pathogen
- Bacteria
- Virus
- Fungi
- Parasite

The "germ" that causes diseases

Portal of Entry
- Mouth
- Nose
- Eyes
- Cuts in skin

The way the infectious agent can enter a new host

Reservoir
- People
- Animals
- Soil
- Food
- Water

Places in the environment where the pathogen lives

Mode of Transmission
- Direct Contact
- Indirect Contact
- Vectors

The way the infectious agent can be passed

Portal of Exit
- Coughing/Sneezing
- Bodily Secretions
- Feces

The way the infectious agent leaves the reservoir

Image: Texas Health and Human Services. https://apps.hhs.texas.gov/providers/NF/credentialing/cna/infection-control/module2/Module_2_Chain_of_Infection5.html

PRINCIPLES OF OUTBREAK INVESTIGATIONS

► Be systematic!
  ► Follow the same steps for every type of outbreak
  ► Write down case definitions
  ► Ask the same questions of everybody

► Stop often to re-assess what you know
  ► Line list and epi curve provide valuable information; many investigations never go past this point

► Coordinate with partners
  ► Environmental and epidemiology
  ► Consult with your local health department

IMPACT THAT MATTERS

OUTBREAK INVESTIGATION STEPS

- Verify an outbreak is occurring

- Create a case definition

- Perform the epidemiologic analysis

- Introduce preliminary control measures

- Perform additional studies as necessary

- Target control measures according to identified risk. Ensure adherence through training and audits.

CREATE A CASE DEFINITION

- **Person**…..Type of illness (e.g., "a person with…")
- **Place**…….Location of suspected exposure
- **Time**…….Based on incubation (if known)

Sample outbreak case definition:

Hepatitis A outbreak:

Person: An acute illness involving jaundice or elevated liver function tests

Place: Occurring after visiting or residing on Property A.

Time: During May-August 2021

VERIFY AN OUTBREAK IS OCCURRING

- **Increase in cases above what is expected in that population**
  - Examples
    - Residents vomiting after eating in the dining hall
    - One case of COVID-19
    - 2 residents with influenza
    - Scabies discovered in resident environment

- **Contact local public health for assistance**
  - Public health can assist with the identification of an outbreak
  - They can assist with next steps and give recommendations

PERFORM THE EPIDEMIOLOGIC ANALYSIS

- **Develop a Line List**
  - Clinical information
    - Symptoms (type, duration)
    - Onset dates and/or times
  - Demographic information
  - Exposure information

Line List Template

Reporting County or State: _____   Date of Initial Report: _____

CaseID*	Case Initials	Age	Sex	Onset date	Current Status	Location	Case Category	Epi Links	Underlying Conditions

CDC Line List Template

PERFORM THE EPIDEMIOLOGIC ANALYSIS (CONT.)

➢ Line lists and epi curves useful in developing hypotheses

➢ Epi curves can suggest type of exposure
  o Point-source
  o Person-to-person
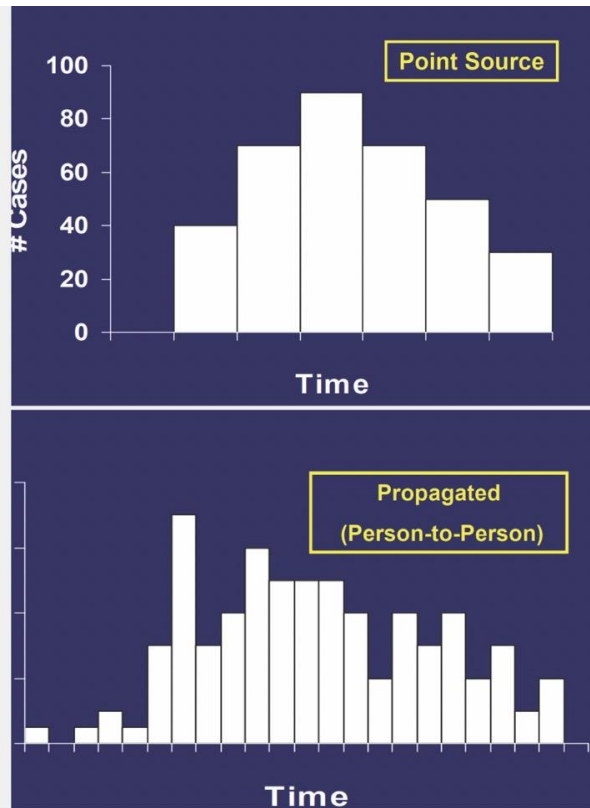
INTRODUCE PRELIMINARY CONTROL MEASURES

Control measures can occur at any point during the outbreak

Isolation, cohorting, product recall

Balance between preventing further disease and protecting credibility and reputation of institution

Should be guided by epidemiologic results in conjunction with environmental investigation

INTRODUCE PRELIMINARY CONTROL MEASURES (CONT.)

- Once the pathogen is identified, it is easier to initiate interventions to decrease its spread.

- Look at the Chain of Infection and determine interventions to break the chain (i.e., transmission-based precautions, masks, cohorting, removing the reservoir)

- **Ways to Break the Chain of Infection at Each Link:**

- **Pathogen**
  - Diagnosis and Treatment
  - Antimicrobial stewardship
- **Reservoir:**
  - Cleaning, disinfection, sterilization
  - Infection prevention policies
  - Pest control
- **Portal of Exit**
  - Hand hygiene
  - Personal protective equipment
  - Control of aerosols and splatter
  - Respiratory etiquette
  - Waste disposal
- **Mode of Transmission**
  - Hand hygiene
  - Personal protective equipment
  - Food safety
  - Cleaning, disinfecting, sterilization
  - Isolation
- **Portal of Entry**
  - Hand hygiene
  - Personal protective equipment
  - Personal hygiene
  - First aid
  - Removal of catheters and tubes
- **Susceptible host**
  - Immunizations
  - Treatment of underlying disease
  - Health insurance
  - Patient education
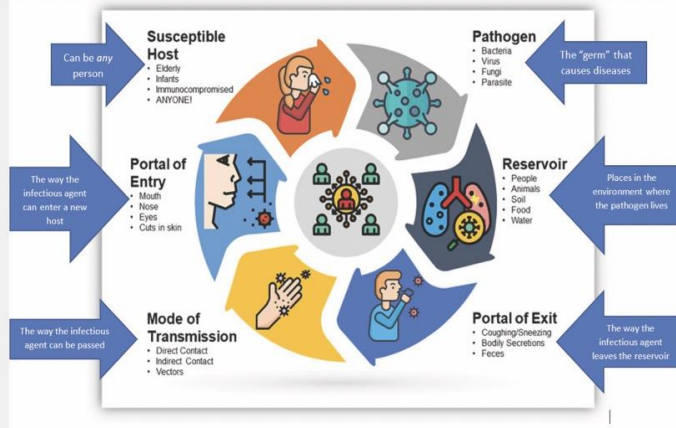
PERFORM ADDITIONAL STUDIES AS NECESSARY

- If there is uncertainty about the source of the outbreak, additional studies may be required.

- Compare groups who have the disease against those that do not.

PERFORM ADDITIONAL STUDIES AS NECESSARY (CONT.)

Case-control study

- Retrospective
- Control group – those that did not have an infection
- Compare control group to those that had an infection

Cohort study

- Prospective
- Identify a group of individuals <u>before</u> they develop an infection
- Follow the group to identify risks of those who go on to develop infection versus those who do not

TARGET CONTROL MEASURES ACCORDING TO IDENTIFIED RISK.

ENSURE ADHERENCE THROUGH TRAINING AND AUDITS.

- When the source is identified with reasonable certainty, control measures can be determined, put into place, and followed.

- Continue to monitor the compliance with control measures.

- Auditing and surveillance are crucial so the outbreak does not occur again.

- Use "lessons learned" and evaluate the processes.

REFERENCES

► APIC. Outbreaks, epidemics, and pandemics – what you need to know. https://apic.org/monthly_alerts/outbreaks-epidemics-and-pandemics-what-you-need-to-know/

► APIC Text

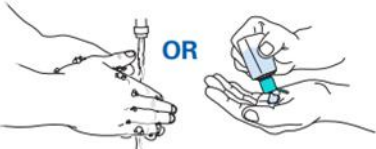 ► Holmes K, McCarty J, Steinfeld S, Infection Prevention and Control Programs. In: Boston K.M., et al, eds. APIC Text. 2021. Available at https://text.apic.org/toc/overview-of-infection-prevention-programs/infection-prevention-and-control-programs . Accessed March 10, 2023.

  ► Bienvenu S, Moody J, Healthcare Informatics and Information Technology. In: Boston K.M., et al, eds. APIC Text. 2014. Available at https://text.apic.org/toc/overview-of-infection-prevention-programs/healthcare-informatics-and-information-technology . Accessed March 10, 2023.

  ► Tweeten S, General Principles of Epidemiology. In: Boston K.M., et al, eds. APIC Text. 2022. Available at https://text.apic.org/toc/epidemiology-surveillance-performance-and-patient-safety-measures/general-principles-of-epidemiology . Accessed March 10, 2023.

  ► Arias, K, Surveillance. In: Boston K.M., et al, eds. APIC Text. 2014. Available at https://text.apic.org/toc/epidemiology-surveillance-performance-and-patient-safety-measures/general-principles-of-epidemiology . Accessed March 10, 2023.

  ► Campbell E, Eichhorn C, Outbreak Investigations. In: Boston K.M., et al, eds. APIC Text. 2020. Available at https://text.apic.org/toc/epidemiology-surveillance-performance-and-patient-safety-measures/outbreak-investigations . Accessed March 10, 2023.

  ► Potts A, Wilson AC, Descriptive Statistics. In: Boston K.M., et al, eds. APIC Text. 2020. Available at http://text.apic.org/toc/epidemiology-surveillance-performance-and-patient-safety-measures/use-of-statistics-in-infection-prevention . Accessed March 10, 2023.

  ► Weimken T, Kelley R, Process Control Charts. In: Boston K.M., et al, eds. APIC Text. 2014. Available at https://text.apic.org/toc/epidemiology-surveillance-performance-and-patient-safety-measures/process-control-charts . Accessed March 10, 2023.

  ► Dudeck M, Edwards J, Risk-Adjusted Comparisons. In: Boston K.M., et al, eds. APIC Text. 2014. Available at https://text.apic.org/toc/epidemiology-surveillance-performance-and-patient-safety-measures/risk-adjusted-comparisons . Accessed March 10, 2023.

  ► Monsees E, Quality Concepts. In: Boston K.M., et al, eds. APIC Text. 2014. Available at https://text.apic.org/toc/epidemiology-surveillance-performance-and-patient-safety-measures/quality-concepts . Accessed March 10, 2023.

  ► Soule B, Nadzam D, Performance Measures. In: Boston K.M., et al, eds. APIC Text. 2014. Available at https://text.apic.org/toc/epidemiology-surveillance-performance-and-patient-safety-measures/performance-measures . Accessed March 10, 2023.

  ► Monsees E, Patient Safety. In: Boston K.M., et al, eds. APIC Text. 2020. Available at https://text.apic.org/toc/epidemiology-surveillance-performance-and-patient-safety-measures/patient-safety . Accessed March 10, 2023.

  ► Stroever S, Qualitative Research Methods. In: Boston K.M., et al, eds. APIC Text. 2014. Available at https://text.apic.org/toc/epidemiology-surveillance-performance-and-patient-safety-measures/qualitative-research-methods . Accessed March 10, 2023.

  ► Herzig C, Research Study Design. In: Boston K.M., et al, eds. APIC Text. 2020. Available at https://text.apic.org/toc/epidemiology-surveillance-performance-and-patient-safety-measures/research-study-design . Accessed March 10, 2023.

► Brooks K. *Ready Reference for Microbes*, 2nd Edition. Association for Professionals in Infection Control and Epidemiology, 2007.

► CDC. Understanding the Epidemiologic Triangle. https://www.cdc.gov/healthyschools/bam/teachers/documents/epi_1_triangle.pdf

► Fricker, R. D., Jr, & Rigdon, S. E. (2020). Investigating a disease outbreak. *Significance (Oxford, England)*, 17(2), 14. https://doi.org/10.1111/1740-9713.01372

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Appendix G

Donning and Doffing PPE Competency (Sample)

Name of Healthcare Worker:_____
Date:_____
Name of Observer:_____
Check box when competency has been met.   *Inter-Facility Infection Control Transfer form for States Establishing hai Prevention Collaboratives*

SEQUENCE FOR DONNING PERSONAL PROTECTIVE EQUIPMENT (PPE)

☐	## Hand Hygiene • Use alcohol-based hand rub or soap and water	
☐	## Gown • Fully cover torso from neck to knees, arms to end of wrists, and wrap around the back • Fasten in back of neck and waist	
☐	## Mask or Respirator • Secure ties or elastic bands at middle of head and neck or place loops around ears • Fit flexible band to nose bridge • Fit snug to face and below chin • Fit-check respirator (if using respirator)	
☐	## Goggles or Face Shield • Place over face and eyes and adjust to fit	
☐	## Gloves • Extend to cover wrist of isolation gown	

SEQUENCE FOR REMOVING PERSONAL PROTECTIVE EQUIPMENT (PPE)

☐	### Gloves • Outside of gloves is contaminated! • Grasp outside of glove with opposite gloved hand; peel off • Hold removed glove in gloved hand • Slide fingers of ungloved hand under remaining glove at wrist • Peel glove off over first glove • Discard gloves in waste container
☐	### Goggles or Face Shield • Outside of goggles or face shield is contaminated! • To remove, handle by head band or earpieces • Place in designated receptacle for reprocessing or in waste container
☐	### Gown • Gown front and sleeves are contaminated! • Unfasten ties • Pull away from neck and shoulders, touching inside of gown only • Turn gown inside out • Fold or roll into a bundle and discard
☐	### Mask or Respirator • Front of mask/respirator is contaminated — DO NOT TOUCH! • Grasp bottom, then top ties or elastics and remove • Discard in waste container
☐	### Hand Hygiene Use alcohol-based hand rub or soap and water immediately after removing all PPE

The type of PPE used will vary based on the situation. The procedure for putting on and removing PPE should be tailored to the specific type of PPE being used.

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Appendix H

PPE Audit Tool (Sample)

USE OF PERSONAL PROTECTIVE EQUIPMENT (PPE) FOR CONTACT PRECAUTIONS
Infection Prevention and Control Audit

Facility: _____   Date: DD_____ MM_____ YYYY_____

Patient Unit: _____   Day of Week: S   M   T   W   Th   F   S

Auditor (print): _____   Start time: ____:____   End time: _____:____

Healthcare Worker Category (Circle #):

1 = Physician	7 = Physiotherapy	13 = Dietary
2 = Nurse	8 = Occupational Therapy	14 = Speech Language/ Audiology
3 = Healthcare Aide	9 = Housekeeping	15 = Rec. Therapy
4 = Social Worker	10 = Patient Transport	16 = Pharmacy
5 = Spiritual Care	11 = Radiology/DI Technician	17 = Other
6 = IV Team/ DSM	12 = Respiratory Therapy	

Instructions: Select "Y" if activity was observed and completed appropriately; select "N" if activity was observed and not completed appropriately. Select "Not observed" if you were not able to observe the activity.

Bed/Bed Space Location or Number ▶ _____

Item	Compliance		
Setup			
1. Precaution signage visible before entering the room or bedspace	Y	N	Not observed
2. PPE supplies available immediately outside room or bedspace	Y	N	Not observed
Putting On PPE			
3. Hand hygiene is performed immediately prior to putting on PPE	Y	N	Not observed
4. New single use PPE applied prior to entering room/space	Y	N	Not observed

5.   PPE applied in appropriate sequence:
    A. Gown
    B. Gloves
	Y	N	Not observed

6. Gown worn as indicated by Contact Precautions	Y	N	Not observed
7. Appropriate type of gown is worn (i.e., yellow isolation gown)	Y	N	Not observed
8. Gown securely tied at the neck and then waist	Y	N	Not observed
9. Gloves worn as indicated by Contact Precautions	Y	N	Not observed
Use of PPE			
10. PPE is only worn inside the isolation room/space	Y	N	Not observed
Taking Off PPE			
11. PPE is removed within the isolation room	Y	N	Not observed
12. PPE is removed in a manner to prevent contamination	Y	N	Not observed
13. PPE is removed in appropriate sequence: A. Gloves and gown removed	Y	N	Not observed
B. Hand hygiene performed immediately after removal of PPE	Y	N	Not observed

Infection Prevention and Control Audit

Appendix I

<table>
<tr><td colspan="4" style="background-color:#29ABE2">Assessment of Current CDI Prevention Activities:</td></tr>
<tr><td colspan="4" style="background-color:#595959">APPROPRIATE CLEANING/DISINFECTION OF EQUIPMENT AND THE ENVIRONMENT</td></tr>
</table>

Advancing Excellence in America's Nursing Homes is a national campaign that began in September 2006. Our goal is to improve the quality of care and life for the 1.5 million people served by nursing homes in the United States. Nursing homes and their staff, along with residents and their families and consumers can join in this effort by working on the Campaign goals that are designed to improve quality. We do this by providing tools and resources to help nursing homes achieve their quality improvement goals. To learn more about the Campaign, visit www.nhqualitycampaign.org.

Background/Rationale:

- *C. difficile* spores, surviving for a long time on objects and surfaces, play a role in the spread of *C.difficile* infections (CDI).

- Appropriate cleaning and disinfection of the environment and equipment is an essential strategy for reducing CDI.

- Spores can be found throughout a room like light switches, door knobs, and bedside tables.

- Nursing homes should have educational programs, policies and procedures that outline schedules and responsibilities for cleaning practices.

- Nursing homes should monitor adherence to procedures, evaluate effectiveness of cleaning, and keep staff informed of the results.

Current activities survey:

SECTION 1. KNOWLEDGE AND COMPETENCY		YES	NO	N/A
General: Do direct care personnel* know				
Q1	Appropriate use of personal protective equipment when handling and disposing of soiled materials according to Standard Precautions?			
Q2	How to clean and disinfect equipment that is shared between residents?			
Environmental services* personnel know				
Q3	How to use personal protective equipment (e.g., gowns, gloves) when cleaning a room of a resident with known CDI?			
Q4	The difference between cleaning and disinfection?			
Q5	To follow manufacturers' instructions for use of cleaners and disinfectants?			

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https://nhqualitycampaign.org/

Environmental Cleaning Assessment

SECTION 2. INFECTION PREVENTION POLICIES AND INFRASTRUCTURE			
	YES	NO	N/A
Q1 Is there a policy for using an EPA-registered disinfectant with a *C.difficile* sporicidal claim when cleaning the room of a resident with known CDI?			
Q2 Is there a process to communicate with environmental services personnel when a resident is suspected or known to have CDI?			
Q3 Are there procedures and schedules in place for daily cleaning and cleaning when a resident with CDI stops occupying a room (e.g., the resident moves, is discharged, or dies)?			
Q4 Are there policies and procedures in place for the cleaning and disinfection of all equipment used by residents with known CDI?			
Q5 Are the responsibilities for cleaning and disinfecting equipment used by residents with CDI well defined between direct care personnel and EVS personnel?			
Q6 If environmental services are provided by a contracting company, are those individuals aware of and following the nursing home's policies for cleaning and disinfecting the room of a resident with CDI?			
Q7 Are environmental services personnel available 24/7? If not, who is trained/ responsible for cleaning during the off hours and do they have access to the appropriate supplies?			
SECTION 3. MONITORING PRACTICES	YES	NO	N/A
Q1 Does your nursing home monitor the adequacy of room cleaning by EVS personnel on a regular basis?			
Q2 Is there a method to track room and equipment cleaning/disinfection according to schedule?			
Q3 Does your nursing home monitor that direct care personnel appropriately clean/disinfect equipment before using it for the next resident?			

* **Direct care personnel –** All persons interacting with and/or providing hands-on care for residents; **Environmental services** are also known as housekeeping services.

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Environmental Cleaning Assessment

Appendix J

Email Subject:

Invitation to participate in free Infection Prevention and Control Assessment Training

We would like to work with as part of our initiative to help improve and are extending this invitation for your team to participate!

Note the level of personalized consultation and support we are offering your LTCF is free and nonpunitive in nature. We hope your facility will take advantage of this opportunity to benefit residents, staff, and your IPC program. Participation in these visits will require a maximum of seven (7) hours

Action items:

If your LTCF would like to participate, please respond to this email with the following information to **by 5:00 pm on**.

- First and last name, title, direct phone number, and email for primary point-of-contact (individual commits to involvement and success of the opportunity);
- Participation commitment statement, to include: Confirmation of commitment of up to seven (7) hours. Note: It is expected to take closer to six (6) or less for pre-work, assessment, and review of final report.

We look forward to working with you!

Sincerely,

Appendix K

Agenda

Infection Control Assessment and Response ICAR

Attendees:

5 minutes	**Participants Join the Meeting via Computer or Phone** • Local Health Department (LHD) Representative • Long-term Care Facility Contact(s) (LTCF)
15 minutes	**Introductions & Overview** • Introductions • Purpose and Focus of the Visit • Review Agenda
3 hours	**Infection Prevention and Control Gap Assessment** • Training, Audits, Feedback • Hand Hygiene • Transmission-Based Precautions (TBP) • Environmental Services (EVS) • High-level Disinfection and Sterilization • Injection Safety • Point of Care (POC) Blood Testing • Wound Care • Healthcare Laundry • Antibiotic Stewardship • Water Exposure
15 minutes	**Break**
1 hour	**Observations (as able and/or applicable)** • Hand Hygiene • Transmission-Based Precautions (TBP) • Environmental Services (EVS) • High-level Disinfection and Sterilization • Injection Safety • Point of Care (POC) Blood Testing • Wound Care • Healthcare Laundry • Water Exposure
15 minutes	**Exit Summary** • Summary of Observed Best Practices by Facility • Summary of Opportunities for Improvement • LHD will send Summary Report to LTCF within 5 business days
25 minutes	**Final Questions, including but not limited to Q&A session about COVID-19 and other IPC topics**

Appendix L

Example of Findings/Observations & Recommendations

Infection Control Program and Infrastructure:				
Topic Area	**Findings**	**Evidence-Based Guidance for Proper Process**	**Recommended Activities to Improve Processes**	**Timeline for Implementing Activity**
Infection Preventionist (IP) Education for the Role	The facility's Infection Preventionist (IP) has not received any formal training for the role of infection prevention and control.	QSO 20-03 Updates and initiatives to ensure safety and quality in nursing (cms.gov) Nursing Home Infection Preventionist Training Course - WB4448R and/or Infection Prevention Training & Education - APIC.	• The CMS regulations for nursing homes state that "the facility must have one or more designated individuals with initial and ongoing specialized training for the role of Infection Preventionist. This individual works at least part-time in the facility." • CDC recommends that IP receive specialized infection prevention and control training in long-term care. • Consider following APIC's "Road Map for the Novice Infection Preventionist" that can assist a new IP with structured training. The Novice Roadmap establishes all the knowledge, skills, and abilities that the infection preventionist must gain from day 1 on the job through taking the Certification in Infection Prevention and Control (CIC®) exam.	Within 90 days of assessment

Infection Preventionist Career Growth and Learning Support	Infection Preventionist (IP) completed approved online training in the field of long-term care infection prevention and control but expressed an interest in acquiring further training and experience in the field.	APIC SHEA – The Society for Healthcare Epidemiology of America IDSA	IP join a professional association for infection prevention and control, like the Association for Professionals in Infection Control and Epidemiology (APIC) or a similar organization.	Within 60 days of receiving report.
Annual Facility Risk Assessment	Facility does not have documentation of an **annual** review of the IPCP using a risk assessment of both facility and community risks and updates the program, as necessary.	QSO 20-03 Updates and initiatives to ensure safety and quality in nursing (cms.gov) https://www.cdc.gov/longtermcare/excel/IPC-RiskAssessment.xlsx	• Develop a facility risk assessment which is conducted by identifying and reviewing potential risk factors for infection related to the care, treatment, and services provided and to the environment of care in a specific healthcare setting. • The identified risks of greatest importance and urgency should be then selected and prioritized. • Based on these identified risks, facility personnel should develop the organization's Infection Surveillance, Prevention and Control (ISPC) Plan (i.e., an action plan). • Infection control risk assessment should be done annually.	Within 90 days of assessment

Infection Prevention and Control Policies	The facility infection prevention and control policies are not based on nationally recognized evidence-based guidelines (e.g., CDC/HICPAC), regulations and standards and they have not been updated reviewed annually and updates as indicated.	[QSO 20-03 Updates and initiatives to ensure safety and quality in nursing (cms.gov)](#)	• Review guidelines from nationally recognized evidence-based guidelines (e.g., CDC, HICPAC) and regulatory standards and revise policies to reflect the most recent updates. • Review/revise all infection prevention and control policies at least annually and more often if needed.	Within 90 days of assessment
Emergency Preparedness	Facility's emergency preparedness plan does not discuss pandemics or potential emerging infectious diseases.	[CDC Emergency Preparedness and Response;](#) [Long-Term Care and Other Residential Facilities Pandemic Influenza Planning Checklist](#)	Emergency preparedness plan addressing pandemics or potential emerging infectious diseases should be established and reviewed annually. This plan should include: • Strategies to maintain consistent personnel assignments • Evaluation and management of ill personnel • Equipment (e.g., beds, chairs, lights) disinfection • Personal protective equipment (PPE) education and training • Protocols for new admissions or transfers • Reassignment of high-risk personnel • Resident cohorting • Respiratory hygiene • Social distancing and other nonpharmaceutical interventions	Within 30 days of date of assessment

			• Vaccination plan for personnel and residents • Vaccine and antiviral distribution • Visitation restrictions	

Healthcare Personnel and Resident Safety:

Topic Area	Findings	Evidence-Based Guidance for Proper Process	Recommended Activities to Improve Processes	Timeline for Implementing Activity
Work Exclusion Policy	The facility does not have a work exclusion policy for personnel who have potentially transmissible conditions and staff have not been educated on prompt reporting of illness.	Guidelines for Environmental Infection Control in Health-Care Facilities QSO 20-03 Updates and initiatives to ensure safety and quality in nursing (cms.gov)	The employee health policy should address the following: • Work-exclusion that encourages reporting of illness and personnel are not penalized with loss of wages, benefits, or job status. • Education of personnel on prompt reporting of illness to supervisor and/or employee health.	Within 30 days of date of assessment
TB Risk Assessment of Healthcare Personnel	The facility does not have a written policy to assess healthcare personnel risk for TB and periodic TB screening of healthcare personnel as indicated.	Guidelines for Preventing the Transmission of Mycobacterium tuberculosis in Health-Care Settings, 2005 (cdc.gov) Tuberculosis Screening, Testing, and Treatment of U.S. Health Care Personnel: Recommendations from the National Tuberculosis Controllers Association and CDC, 2019 | MMWR	Facility policy should include: • Annual TB risk assessment of facility based on community and state data. • TB screening of personnel as indicated based on the facility risk assessment, federal regulations, state laws and local health jurisdictions.	Within 30 days of date of assessment

		QSO 20-03 Updates and initiatives to ensure safety and quality in nursing (cms.gov)		
TB Risk Assessment of Residents	The facility does not have a written policy to assess risk for TB (based on regional, community data) and provide screening to residents on admission	Guidelines for Preventing the Transmission of Mycobacterium tuberculosis in Health-Care Settings, 2005 (cdc.gov) Tuberculosis Screening, Testing, and Treatment of U.S. Health Care Personnel: Recommendations from the National Tuberculosis Controllers Association and CDC, 2019 | MMWR QSO 20-03 Updates and initiatives to ensure safety and quality in nursing (cms.gov)	Facility policy should include: • Annual TB risk assessment of facility based on community and state data. • TB screening of residents on admission and annually based on federal regulations, state laws and local health jurisdictions. • Documentation of TB screening on admission in the medical record.	Within 30 days of date of assessment
Hepatitis B Vaccination	The facility does not offer Hepatitis B vaccination to personnel who may be exposed to blood/body fluids	Recommended Vaccines for Healthcare Workers | CDC Bloodborne Pathogens - Overview | Occupational Safety and Health Administration (osha.gov) 1910.1030 - Bloodborne pathogens. | Occupational Safety and Health	• Hepatitis B vaccine should be offered to all personnel who may be exposed to blood/body fluids on hire within 10 days of initial assignment and after occupational exposure to BBF if non-immune. • If personnel refuse the Hepatitis B vaccination, then they must sign a declination statement as written in Appendix A of 1910.1030 .OSHA BBP standard.	Within 30 days of date of the assessment

		Administration (osha.gov)		
Low COVID-19 and/or influenza vaccination rates among staff and/or low COVID-19 and/or influenza vaccination rates among residents	Low percentage of staff and residents are vaccinated for the COVID-19 and influenza vaccination. Leadership states reasons include misconceptions about vaccine as well as improper education of vaccine.	Coronavirus Disease 2019 (COVID-19) Myths & Facts About COIVD-19 Vaccines Post-acute and Long-term Care Facility Toolkit: Influenza Vaccination among Healthcare Personnel	• Provide influenza vaccination annually to personnel and residents. • Provide COVID-19 vaccination to personnel and residents. • Provide education to staff and residents regarding vaccination. Address commonly held misconceptions and myths. • Provide opportunities for all staff on all shifts to receive vaccination. • Offer vaccine to new employees upon hire or new resident on admission. • Vaccination records should be maintained.	Within 30 days of date of assessment
Exposure Control Plan	Facility's exposure control plan is not updated annually and should include review of the safety devices and personnel have not received training and competency on managing a blood-borne pathogen.	Considerations for Blood Glucose Monitoring and Insulin Administration Bloodborne Pathogens and Needlestick Prevention 1910.1030 - Bloodborne pathogens.	Occupational Safety and Health Administration (osha.gov)	• Facility should have an exposure control plan that addresses potential hazards (e.g., BBPs) • Exposure control plan should be reviewed/revised annually and should include a review of the safety devices. • Personnel should have training and competency on managing a blood-borne pathogen on hire and annually.	Within 30 days of date of assessment

| Pneumococcal Vaccination | The facility does not document resident immunization status for pneumococcal vaccination on admission. | QSO 20-03 Updates and initiatives to ensure safety and quality in nursing (cms.gov) | • Residents should be assessed on admission for their pneumococcal immunization status and documented in their medical record.
• Pneumococcal vaccination should be offered to the resident when indicated. | Within 30 days of date of assessment |

Surveillance and Disease Reporting:

Topic Area	Findings	Evidence-Based Guidance for Proper Process	Recommended Activities to Improve Processes	Timeline for Implementing Activity
Screening of Residents on Admission for Infectious Diseases	Facilities does not currently have a method for screening new admissions for the need for transmission-based precautions outside screening for COVID-19.	Inter-Facility Infection Control Transfer Form for States Establishing HAI Prevention Collaboratives	• All new admissions should be screened for need for transmission-based precautions before entry to the facility. • Facility should inquire all need admissions for type of transmission-based precautions, microbiology data, treatment, and current status. • CDC offers the attached transfer form to facilitate effective communication between facilities.	Within 30 days of date of assessment
Notification of reports of antibiotic-resistant organisms to Infection Prevention Coordinator	Facility does not have a systematic process to notify the Infection Prevention Coordinator of antibiotic resistant organism and other significant organisms (e.g., *C. difficile*, COVID-19)	QSO 20-03 Updates and initiatives to ensure safety and quality in nursing (cms.gov) MDRO Management	Guidelines Library	Infection Control	CDC	• Facility should have a system in place to notify both the Infection Prevention Coordinator and the unit staff of an antibiotic resistant organism and other significant organisms. • Staff and/or Infection Prevention Coordinator should implement measures, such as	Within 30 days of the date of the assessment

			transmission-based precautions as indicated	
Written Surveillance Plan	Needs written surveillance plan outlining the activities for monitoring/tracking infections occurring in residents of the facility.	CDC: Infection Surveillance in Long-term Care CDC IPC Risk Assessment Worksheet:	• Facility should develop a surveillance plan based of National Healthcare Safety Network (NHSN)-or equivalent-definition of different types of infections in long term care facility. • Utilize a risk assessment to prioritize surveillance activities. • Surveillance plan should include all types of infection not just UTIs. • Tracking and trending should include if infections meeting NHSN or equivalent definition of the infection type. • Facility should develop a plan to track and trend infections per resident dates.	Within 90 days of date of assessment
Surveillance Data	Facility reports numbers of infections per month to QAPI and does not calculate incidence rates for infections.	Principles of Epidemiology | Lesson 3 - Section 2 (cdc.gov)	• Calculate infection incidence rates from January 2021 through current and plot these rates of healthcare acquired infections on a line graph to analyze over time. • Provide information on infection rates to the Infection Prevention and QAPI Committees.	Address within 30 days of date of assessment.
Outbreak Response Plan	Facility does not have an outbreak response plan	Outbreak and Case Definitions Conducting a Field Investigation Foodborne Outbreaks	Facility should have an outbreak response plan that includes: • Definition of an outbreak • Listing of steps in investigation of an outbreak	Within 30 days of date of assessment

		Managing Investigations During an Outbreak Interim Guidance for Influenza Outbreak Management in Long-Term Care and Post-Acute Care Facilities	• Procedures for surveillance and containment • List of syndromes or pathogens for which monitoring is performed.	
Influenza and Other Respiratory Virus	Facility does not consider influenza or other respiratory virus testing in response to active respiratory symptoms in residents of healthcare workers.	CDC: Testing and Management Considerations for Nursing Home Residents	Establish a plan for influenza for the facility in regard to potential co-circulation with COVID-19 and establishing annual influenza vaccinations. Consider influenza or other respiratory virus testing in response to active respiratory symptoms in residents of healthcare workers.	Within 30 days of date of assessment
Reportable Diseases	Facility does not have an updated state reportable disease list readily available for staff reference.	Applicable state department of health reportable disease list	Facility should have most recent state reportable disease list readily available for staff reference at nurse's stations or in EMR. Facility infection preventionist should keep updated annual list readily available for reference.	Within 30 days of date of assessment
Transfer Process	Facility does not have a transfer form that includes MDROs and transmission-based precautions with indication.	Communication | COVID-19 | CDC Inter-Facility Infection Control Transfer Form for States Establishing HAI Prevention Collaboratives	• Facility transfer form should include Transmission-Based Precautions highlighted or emphasized in any way to ensure receiving's facility and transport teams receives this information in addition to the verbal report of status. • Additionally, facility contact information should be listed on transfer forms.	Within 30 days of date of assessment

			• Facility should follow-up on clinical information (e.g., laboratory findings, procedure results, and diagnoses), when residents are transferred to acute hospital for management of suspected infections.	

Hand Hygiene:

Topic Area	Findings	Evidence-Based Guidance for Proper Process	Recommended Activities to Improve Processes	Timeline for Implementing Activity
Hand Hygiene Policy	Hand hygiene policy does not promote the preferential use of alcohol-based hand rub (ABHR) over soap and water in most clinical situations.	[About Hand Hygiene for Patients in Healthcare Settings](#) [Guideline for Hand Hygiene in Health-Care Settings](#) [CDC Project Firstline: Hand Hygiene: Clean Hands: Combat COVID-19](#)	Hand hygiene policy should include: • Indications for hand hygiene • When hands should be washed with soap and water versus ABHR (e.g., hands should be washed when visibly soiled and when caring for a resident with known or suspected *C. difficile, norovirus, B. anthracis*, etc.) • Steps in the handwashing procedure • Steps in the use of the ABHR	Within 30 days of date of assessment
Hand Hygiene Competency	Facility is not providing hand hygiene competency-based training (return demonstration) of the healthcare personnel.	[About Hand Hygiene for Patients in Healthcare Settings](#) [Guideline for Hand Hygiene in Health-Care Settings](#) [Competency Based Training 101 (cdc.gov)](#)	Competency-based training on hand hygiene with return demonstration be provided to healthcare personnel on hire and retraining annually.	Within 30 days of date of assessment

		[Project Firstline Hand Hygiene](#)		
Hand Hygiene Audits and Feedback	Facility does not currently audit compliance with hand hygiene and provide feedback to the healthcare personnel.	[USER GUIDE: Hand Hygiene Observational Audit Data Tracking Tool for Use in Skilled Nursing Facilities](#) [Auditing Strategies to Improve Infection Prevention Processes in Nursing Homes](#) [Clinical Safety: Hand Hygiene for Healthcare Workers](#) [iScrub Lite on the App Store (apple.com)](#)	• Perform routine documented hand hygiene audits to assess healthcare personnel's adherence to hand hygiene. • Compliance rates should be calculated based off infection prevention practices, role of staff member, and assigned work area. This assist in identifying trends in infection prevention noncompliance in order to target efforts for improvement. • Unit based and facility-wide hand hygiene compliance data should be provided to the frontline staff and committees as appropriate.	Within 30 days of date of assessment
Supplies for Hand Hygiene	Hand hygiene supplies were not readily available in the resident care areas in the facility	[About Hand Hygiene for Patients in Healthcare Settings](#) [Guideline for Hand Hygiene in Health-Care Settings](#) [Standard Precautions: Observation of Hand Hygiene Provision of Supplies](#)	• Assess areas in the facility to assure hand hygiene supplies are readily accessible in all resident care areas (e.g., entrance, common areas, resident rooms, nursing station, therapy rooms, soiled utility rooms, etc.) • Assign responsibility for replacing hand hygiene supplies when empty (e.g., ABHS, soap, water, paper towels, etc.) • Install hand hygiene dispensers in identified areas of need	Within 30 days of date of assessment

| Hand Soap Dispensers | The facility adds soap to a partially empty soap dispenser (topping off). *Note: Topping off can lead to bacterial contamination of the soap.* | [Guideline for Hand Hygiene in Health-Care Settings](#) | • Soap dispensers should be emptied, cleaned, and allowed to dry before refilling. • Consider use of a non-refillable soap dispenser with a disposable bag. | Addressed immediately and within 30 days of receiving report. |

Personal Protective Equipment (PPE):

Topic Area	Findings	Evidence-Based Guidance for Proper Process	Recommended Activities to Improve Processes	Timeline for Implementing Activity
Policy on Standard Precautions	Facility does not have an updated policy on standard precautions	[Standard Precautions for All Patient Care](#) [Standard Precautions Suite of Quick Observation Infection Prevention Tools](#)	• Develop a policy on standard precautions based on CDC guidelines. • Review policy annually for possible revisions based on updates in guidelines.	Within 30 days of date of assessment
Policy on Transmission-based Precautions	Facility does not have an updated policy on transmission-based precautions	[Isolation Precautions Guideline](#) [Healthcare-Associated Infections (HAIs)](#) [Sequence for Putting On Personal Protective Equipment (PPE)](#) [Transmission-Based Precautions (Isolation) Suite of Quick Observation Infection Prevention Tools](#)	• Develop a policy on transmission-based precautions based on CDC latest guidelines. • Review policy annually for possible revisions based on updates in guidelines.	Within 30 days of date of assessment

Isolation Precautions Signs	The facility does not post signs on the resident's door that clearly indicate resident is on transmission-based precautions and the required PPE.	Isolation Precautions Guideline	• Develop isolation signs for the different transmission types that clearly indicate the type of transmission-based precautions the resident is in and the required PPE to use. • Signs should be approved by the QA/IPC Committee.	Within 30 days of date of assessment
Competency-based Training on Proper Use of PPE	Facility is not providing competency-based training (return demonstration) of proper use of PPE by healthcare personnel.	Sequence for Putting On Personal Protective Equipment (PPE) CDC Project Firstline: PPE Basics: Training and Continuing Education Online (TCEO)	Competency-based training on PPE use with return demonstration be provided to healthcare personnel on hire and retraining annually.	Within 30 days of date of assessment
Audits on PPE Use and Feedback	Facility does not currently audit compliance with PPE and provide feedback to the healthcare personnel.	Infection Control Assessment and Response (ICAR) Tool for General Infection Prevention and Control (IPC) Across Settings Auditing Strategies to Improve Infection Prevention Processes in Nursing Homes Standard Precautions Suite of Quick Observation Infection Prevention Tools	• Perform routine documented PPE audits to assess healthcare personnel's adherence to PPE use. • Compliance rates should be calculated based off infection prevention practices, role of staff member, and assigned work area. This assist in identifying trends in infection prevention noncompliance in order to target efforts for improvement. • Unit based and facility-wide PPE compliance data should be provided to the frontline staff and committees as appropriate.	Within 30 days of date of assessment
PPE Supplies Readily Accessible	PPE supplies are not readily	Standard Precautions-Observation of Personal	• Assess the facility to assure that supplies necessary for adherence to proper PPE	Within 30 days of date of assessment

| | accessible in all resident care areas | Protective Equipment Provision | use (e.g., gown, gloves, mask, eye protection) is readily accessible in all resident care areas (e.g., nursing units, therapy rooms, etc.).
• Designate staff to routinely check PPE supply stock and restock accordingly.
• Routinely audit that PPE supplies are readily available in the resident care areas. | |

Respiratory Hygiene/Cough Etiquette:

Topic Area	Findings	Evidence-Based Guidance for Proper Process	Recommended Activities to Improve Processes	Timeline for Implementing Activity
Respiratory Hygiene Instructions Posted at Entrance(s)	No sign for respiratory hygiene and cough etiquette was posted at the entrance(s) to the facility	Respiratory Hygiene/Cough Etiquette in Healthcare Settings Cover Your Cough Signage: Preventive Actions to Help Protect Against Flu	Post signs at the entrances with instructions to individuals with symptoms of respiratory infection to cover their mouth/nose when coughing or sneezing, use and dispose of tissues, and perform hand hygiene after contact with respiratory secretions.	Within 30 days of date of assessment
Resources Available for Respiratory Hygiene & Cough Etiquette	Resources for respiratory hygiene and cough etiquette were not available at the entrances and common areas.	Respiratory Hygiene/Cough Etiquette in Healthcare Settings	Resources should be readily available for persons to perform respiratory hygiene and cough etiquette at the entrance and in public areas (e.g., tissue, alcohol-based hand sanitizer, trash receptacle) and mask should be offered to coughing residents and other symptomatic persons upon entry to the facility.	Within 30 days of date of assessment

Education on Respiratory Hygiene & Cough Etiquette	Healthcare personnel, residents and visitors have not been educated on respiratory hygiene and cough etiquette.	[Respiratory Hygiene/Cough Etiquette in Healthcare Settings](#)	• Visitors and residents should receive education on respiratory hygiene and cough etiquette via signage, resident information booklet, one-on-one education, etc. • Healthcare personnel should receive education on respiratory hygiene and cough etiquette on hire and annually.	Within 30 days of date of assessment
Respiratory Protection Program	Facility reports performing fit testing and using N95s in the facility but does not currently have a respiratory protection program policy and plan.	OSHA; [Respiratory protection. | Occupational Safety and Health Administration](#) [Respiratory Protection Guidance for the Employers of Those Working in Nursing Homes, Assisted Living, and Other Long-Term Care Facilities During the COVID-19 Pandemic](#) [Small Entity Compliance Guide for the Respiratory Protection Standard](#)	Respiratory protection program should be created and adapted according to OSHA guidelines to fit your facility according to layout, staffing, and resources. A fit testing program must be established to properly fit staff on respirators offered to staff.	Within 30 days of date of assessment
Fit Testing of N95 respirators	Not all staff have been fit tested and/or N95 respirators that are available may not be the same mask the employee was fit tested with.	[1910.134 - Respiratory protection. | Occupational Safety and Health Administration](#) [Coronavirus Disease 2019 (COVID-19)](#) CDC Project Firstline: [What is a respirator](#):	Excerpts below are from Occupational Safety and Health Administration (OSHA): • A respirator shall be provided to each employee when such equipment is necessary to protect the health of such employee. • The employer shall provide the respirators which are	Address within 30 days of date of assessment

		CDC Project Firstline: [What is an N95?](#)	applicable and suitable for the purpose intended.	
		CDC Project Firstline: [How do I seal check my N95?](#)	• The employer shall be responsible for the establishment and maintenance of a respiratory protection program.	
			• Before an employee may be required to use any respirator, the employee must be fit tested with the same make, model, style, and size of respirator that will be used.	
			• The employer shall provide the training prior to requiring the employee to use a respirator in the workplace.	
			• Implement a [respiratory protection program](#) that is compliant with the OSHA respiratory protection standard ([29 CFR 1910.134external icon](#)) for employees if not already in place. The program should include [medical evaluations](#), training, and [fit testing](#).	

Antibiotic Stewardship:

Topic Area	Findings	Evidence-Based Guidance for Proper Process	Recommended Activities to Improve Processes	Timeline for Implementing Activity
Antibiotic stewardship-Leadership	Facility cannot demonstrate leadership commitment to antibiotic stewardship (AS).	[Infection Prevention and Long-term Care Facility Residents](#)	Review and update antibiotic stewardship policy to include leadership commitment for AS activities.	Address within 30 days of date of assessment.

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Antibiotic stewardship-Accountability	Facility has not identified individual accountable for leading the antibiotic stewardship activities.	Infection Prevention and Long-term Care Facility Residents	Facility should have policy to include individual accountable to lead the AS activities.	Address within 30 days of date of assessment.
Antibiotic stewardship-Drug Expertise	Facility does not have access to individuals with expertise with antibiotic prescribing practice	Infection Prevention and Long-term Care Facility Residents	Facility to assign/contract with individual to provide expertise with antibiotic prescribing practice, for example, a consultant pharmacy that is trained/experienced in antibiotic stewardship, external infectious disease physician, partnership with stewardship team at referral hospital.	Address within 30 days of date of assessment.
Antibiotic Stewardship-Evidence-Action to Improve Use	Facility does not currently implement evidence-based practice techniques to decrease antibiotic use.	Infection Prevention and Long-term Care Facility Residents	Examples of evidence-based practices to reduce antibiotic overuse are the following: • Utilize a standard assessment and communication tool for residents suspected of having an infection • Implement a process for communicating or receiving antibiotic • Implement an antibiotic review process/ "antibiotic time out" • Implement an infection specific intervention to improve antibiotic use	Within 3 months of date of assessment (include at next quarterly antibiotic stewardship meeting)
Antibiotic stewardship-Tracking	Facility does not give monitor/track antibiotic use.	Infection Prevention and Long-term Care Facility Residents	Facility should routinely monitor/track measures of antibiotic use. Here are some examples below: • Adherence to clinical assessment documentation	Address within 90 days of date of assessment

			(signs/symptoms, vital signs, physical exam findings) • Adherence to prescribing documentation (dose, duration, indication) • Adherence to facility-specific treatment recommendations • Performs point prevalence surveys of antibiotic use • Monitors rates of new antibiotic starts/1,000 resident-days • Monitors antibiotic days of therapy/1,000 resident-days • Monitors rates of *C. difficile* infection • Monitors rates of antibiotic-resistant organisms • Monitors rates of adverse drug events due to antibiotic	
Antibiotic stewardship-Reporting	Facility does not give providers or nursing staff regular feedback on antibiotic use and resistance patterns.	Infection Prevention and Long-term Care Facility Residents	Give regular feedback on antibiotic use and resistance patterns to clinicians and nursing staff.	Address within 90 days of date of assessment
Antibiotic stewardship-Reporting: Antibiogram	Facility does not have an antibiogram.	Infection Prevention and Long-term Care Facility Residents	• Take steps to implement AS activities using the CDC Core Elements of Antibiotic Stewardship for Nursing Homes. • Do an annual review of facility antibiogram with regular feedback on antibiotic use and resistance patterns to clinicians and nursing staff.	Address within 60 days of date of assessment.

Antimicrobial stewardship-Education of Staff & Clinicians	Facility reports frontline staff have not been educated on antimicrobial stewardship or involved with the antimicrobial stewardship program.	[Core Elements of Antibiotic Stewardship for Nursing Homes | Antibiotic Use | CDC](#)	- Nursing homes provide antibiotic stewardship education to clinicians, nursing staff, residents, and families. Effective educational programs address both nursing staff and clinical providers on the goal of an antibiotic stewardship intervention, and the responsibility of each group for ensuring its implementation. - There are a variety of mechanisms for disseminating antibiotic education to nursing home staff including flyers, pocket-guides, newsletters, or electronic communications; however, interactive academic detailing (e.g., face-to-face interactive workshops) has the strongest evidence for improving medication prescribing practices. - Frontline staff should receive antimicrobial use and multidrug-resistant organisms (MDROs) education on hire and annually. - Facility antimicrobial use data should be shared with frontline staff.	Within 90 days of date of assessment
Antibiotic Stewardship – Education of Resident and Family	The facility has educational materials on antibiotic stewardship for residents and families.	[Core Elements of Antibiotic Stewardship for Nursing Homes | Antibiotic Use | CDC](#) [Handouts and Posters | Be Antibiotics Aware](#)	Engage residents and their family members in antibiotic use and stewardship educational efforts to ensure clinicians have their support to make appropriate antibiotic use decisions.	Within 90 days of date of assessment

| | | Partner Toolkit \| Antibiotic Use \| CDC | • Work with residents and families to reduce the perception that their expectations may be a barrier to improving antibiotic use in nursing homes.
 • Consider including information on antibiotic stewardship to resident/families via, for examples, signs, handbook, flyers, etc. | |

Injection Safety and Point of Care Testing:

Topic Area	Findings	Evidence-Based Guidance for Proper Process	Recommended Activities to Improve Processes	Timeline for Implementing Activity
Injection Safety Policy	Facility does not have a policy on injection safety.	Safe Injection Practices and Your Health CDC One & Only Campaign Safe Injection Checklist	Facility should develop a policy on injection safety which includes protocols for performing finger sticks and point of care testing including blood glucose checks, multi-vial use, single-dose vials, safe medical preparation, use of IV fluids bags/bottles, safe injection of medications, single-use syringe, etc.	Within 30 days of date of assessment
Injection Safety Competency of Staff	Facility reports staff who perform point of care testing have not received training and competency on injection safety at time of employment. No competency validation of staff on injection safety	Considerations for Blood Glucose Monitoring and Insulin Administration	Facility staff who perform point of care testing should receive training and competency validation on injection safety procedures on hire and annually.	Within 30 days of date of assessment

	within the past 12 months.			
Injection Safety Competency of Staff for Blood Glucose Testing	Facility reports staff who perform point of care *blood glucose testing* have not received training and competency on injection safety on hire. No competency validation on injection safety when performing blood glucose testing procedures within the past 12 months.	[Considerations for Blood Glucose Monitoring and Insulin Administration](#)	Facility staff who perform point of care testing should receive training and competency validation on injection safety procedures on hire and annually.	Within 30 days of date of assessment
Injection Safety – Insulin pens	Staff could not reiterate that insulin pens are used for only one resident.	[Considerations for Blood Glucose Monitoring and Insulin Administration](#)	• Develop policy and procedure that insulin pens should be used with only one resident. • Provide education to staff on the policy and procedure. • Audit staff for compliance and provided immediate feedback.	Immediately and with 30 days of assessment
Injection Safety – Disinfection of Rubber Septum	Staff could not reiterate that the rubber septum on any medication vial, whether unopened or previously accessed, are disinfected with alcohol prior to piercing.	[Preventing Unsafe Injection Practices](#) CDC Project Firstline Poster on MDVs: [Why + How: How Do I Safely Use a Multi-Dose Vaccine Vial?](#)	• Educate staff that the rubber septum of medical vials, whether unopened or previously accessed, must be disinfected with alcohol prior to piercing. • Ensure that infection prevention policies on injection safety include the proper disinfection of the rubber septum of medication vials.	Immediately and within 30 days of assessment

			• Audit staff for compliance and provide feedback to the staff.	
Injection Safety – Multi-dose Vial (MDV) Policy on When to Discard	Staff did not know the facility's multi-dose vial policy: Multi-dose medical vials are dated when they are first opened and discarded within 28 days unless the manufacturer specifies a different (shorter or longer) date for that opened vial.	Preventing Unsafe Injection Practices CDC Project Firstline: MDVs: Multi-Dose Vial	• Review facility's multi-dose vial policy to assess for compliance to CDC guidelines on labeling when used and revise if needed. • Education staff on the multi-dose vial policy. • Consider posting signs with the multi-dose vial policy in the medication prep areas. • Audit staff for compliance and provide feedback.	Within 30 days of date of assessment
Injection Safety – Storage and Use of Multi-dose Vials (MDV)	Facility was not following guidelines: Multi-dose medication vials used for more than one resident are stored appropriately and do not enter the immediate resident care area (e.g., procedure room, resident room)	Preventing Unsafe Injection Practices CDC Project Firstline: MDVs: Multi-Dose Vial CDC Project Firstline Poster on MDVs: Why + How: How Do I Safely Use a Multi-Dose Vaccine Vial?	• Review facility's MDV policy to assess for compliance to CDC guidelines on storage, and MDV not entering the immediate resident care area and revise if needed. • Educate staff on the multi-dose vial policy on storing appropriately and MDV not entering the immediate resident care area. • Consider posting signs with the multi-dose vial policy in the medication prep areas. • Audit staff for compliance and provide feedback.	Within 30 days of assessment
Injection Safety Audits and Feedback	Facility reports that it does not routinely monitor injection safety practices and provide feedback to the staff	Considerations for Blood Glucose Monitoring and Insulin Administration Injection Safety: Point of Care Testing	• Facility should routinely monitor injection safety practices. • Facility should provide feedback to the clinicians of the audit results.	Within 30 days of date of assessment

Injection Safety Audits and Feedback – Blood glucose monitoring	Facility does not perform audits of blood glucose monitoring.	Safe Injection Practices and Your Health	Establish a process for auditing blood glucose monitoring and implement a quality improvement program to ensure practices are in compliance with CDC guidelines.	Address within 30 days of date of assessment.
Supplies for Safe Injection Practice	Facility does not have supplies for safe injection practice.	Preventing Unsafe Injection Practices	Facility should have supplies readily accessible to the staff to promote safe injection practice, for example, single use, auto-displacing lancets, sharp containers.	Within 30 days of date of assessment
Policy on Controlled Substances and Drug Diversion	Facility does not have a written policy and procedures on tracking personnel access to controlled substances to prevent narcotics theft/drug diversion	Clinician Brief: Drug Diversion	Facility should have written policy and procedures in place that include tracking personnel access to controlled substances to prevent narcotics theft/drug diversion including actions to be taken when this occurs.	Within 30 days of date of assessment

Environmental Cleaning and Disinfection:

Topic Area	Findings	Evidence-Based Guidance for Proper Process	Recommended Activities to Improve Processes	Timeline for Implementing Activity
Environmental Cleaning and Disinfection Policy/ Protocols	Facility does not currently have written protocols for cleaning and disinfection of residents' rooms requiring transmission-based precautions.	CDC: Best Practices for Environmental Cleaning in Healthcare Facilities in Resource-Limited Settings	Facility should develop of policy for cleaning and disinfection of residents' rooms requiring transmission-based precautions based on CDC's Best Practices for Environmental Cleaning in Healthcare Facilities: in Resource-Limited Settings. This policy should include at minimum:	Within 30 days of date of assessment

			• Frequency of cleaning and disinfection of these areas • PPE required during room cleaning according to the type of transmission-based precautions. • Definitions of routine and terminal cleaning with frequencies of each • Facility commitment to use only Environmental Protection Agency (EPA)-approved cleaning and disinfectant products based on their manufacture's guidelines • Infectious agents that require certain chemicals for cleaning and disinfection such as *C. difficile* and multi drug resistant organisms.	
Environmental Cleaning and Disinfection - Shared Resident Equipment	Facility is sharing a glucometer for all residents on the unit. Glucometer is not being properly cleaned/disinfected between use.	Considerations for Blood Glucose Monitoring and Insulin Administration	• Whenever possible, blood glucose meters should not be shared. • If they must be shared, the device should be cleaned and disinfected after each use, per manufacturer's instructions. • If the manufacturer does not specify how the device should be cleaned and disinfected then it should not be shared.	Within 30 days of date of assessment
Environmental Cleaning and Disinfection – Training	Environmental services staff have not received formal training on proper cleaning and disinfection of resident care areas.	Environmental Cleaning in Healthcare Facilities: in Resource-Limited Settings CDC Project Firstline: Sparkling Surfaces: Stop COVID-19's Spread	• Training for cleaning staff should be based on national or facility environmental cleaning guidelines and policies. It should be mandatory, structured, targeted, and delivered in the right style (e.g., participatory) and conducted before staff can work independently within	Within 30 days of date of assessment

		CDC Train: Environmental Cleaning and Disinfection: [Module 11B - Environmental Cleaning and Disinfection](#)	the healthcare facility and again annually. Training content should include, at a minimum: • General introduction to the principles of infection prevention and control, including transmission of pathogens, the key role cleaning staff play in keeping residents, staff, and visitors safe and how cleaning staff can protect themselves from pathogens. • Detailed review of the specific environmental cleaning tasks for which they are responsible, including review of standard operating procedures (SOP), checklists, and other job aids • When and how to safely prepare and use different detergents, disinfectants, and cleaning solutions • How to prepare, use, reprocess, and store cleaning supplies and equipment (including PPE) • Participatory training methods, hands-on component with demonstration and practice • Easy-to-use visual reminders that show the cleaning procedures (i.e., without the need for a lot of reading) orientation to the facility layout and key areas for the cleaning program (e.g., environmental cleaning services areas) • Other health and safety aspects, as appropriate	

Environmental Cleaning and Disinfection of Resident Rooms - Audits and Feedback	Facility does not perform audits of cleaning/disinfection of resident rooms and provide feedback to the staff.	[Options for Evaluating Environmental Cleaning	HAI	CDC](#)	It is recommended that facility leadership develop a policy and procedure for auditing terminally cleaned rooms. • Investigate the use of fluorescent markers used for auditing the quality of cleaning commonly touched surfaces. • Reach out to local hospital to see what methods they use to determine efficacy of cleaning. Routine cultures are not recommended. • Perform audits regularly and share results with staff as a measure of the quality of cleaning. • Share audit results at quality assurance and performance improvement (QAPI) meetings.	Within 30 days of receiving report.
Environmental Cleaning and Disinfection or Resident Equipment- Audit and Feedback	Facility does not perform audits of cleaning and disinfection of resident equipment.	[Environmental Cleaning Procedures	Environmental Cleaning in RLS	HAI	CDC](#) CDC Train: Reprocessing Reusable Resident Care Equipment: [Module 11A - Reprocessing Reusable Resident Care Equipment](#)	Establish a process for auditing cleaning and disinfection of resident equipment and implement a quality improvement program to ensure practices are in compliance with CDC guidelines and provide feedback of the results to the frontline staff and committees as appropriate.	Address within 30 days of date of assessment.
Environmental Cleaning and Disinfection – List of Cleaning and Disinfecting Products	Facility unable to produce a list of cleaning and disinfecting products used in the facility.	[CDC: Environmental Cleaning Procedures](#) OSHA: [1910.1200 - Hazard Communication.	Occupational Safety](#)	• The environmental services (EVS) manager should maintain a master list of the supplies and equipment (i.e., detailed specifications and supplier information) and required quantities (e.g., annual basis). • The facility administrator must ensure that Safety	Within 30 days of date of assessment

| | | and Health Administration | Data Sheets (SDS) are available and up to date for all cleaning and disinfection products in use at the facility
• The disinfectants should be reviewed by the Infection Preventionist and approved by the oversite committee for infection prevention and control. | |

Clean Linen & Storage Findings/Observation:

Topic Area	Findings/Observations	Evidence-Based Guidance for Proper Process	Recommended Activities to Improve Processes	Timeline for Implementing Activity
Soiled Linen Bagged at Point of Use	Soiled linens are not bagged or otherwise contained at the point of collection in leak-proof containers or bags and are not sorted or rinsed in the location of use.	Appendix D - Linen and laundry management	• Review facility policy to assess compliance to CDC guidelines on handling soiled linen and revise if needed. • Educate staff that soiled linen should be bagged or otherwise contained at the point of collection in leak-proof containers/bags. • Audit staff for compliance (loose linen in linen cart or observe staff) and provide feedback of the results.	Within 30 days of receiving report.
Cleaning and Disinfection - Soiled Linen	Personal laundry machine used to clean mechanical lift slings and privacy curtains.	SOM - Appendix PP (cms.gov) Appendix D: Linen and Laundry Management | Environmental Cleaning in RLS | HAI | CDC	• It is strongly recommended that commercial laundry equipment (e.g., washers and dryers) be utilized for all resident laundry. • Laundry staff are specially trained to adhere to the proper concentration of detergent and water temperature requirements for all facility laundry.	Within 30 days of receiving report.

			• Develop policies and procedures for cleaning mechanical lift slings and privacy curtains by laundry staff in the dedicated commercial equipment in the laundry department.	
Clean Linen Storage – Solid Bottom Shelf	Bottom shelves in the clean linen room were not solid which could cause contamination from dust and splashes during floor cleaning.	CMS; CDC: State Operations Manual Appendix PP; Appendix D: Linen and Laundry Management	Environmental Cleaning in RLS	HAI	CDC	• Clean linens should be stored in a manner to prevent contamination from dust and water splashes. • An alternative to providing a solid bottom (e.g., plexiglass sheet) is to ensure that all storage on the bottom shelves is protected from dust or mop water splash by being placed in impervious bins or are stored high enough above the ground to avoid splash. • Consider storing bagged items on the bottom shelf of carts.	Within 30 days of receiving report.
Clean Linen Storage – Clean Pillows	Clean pillows stored on an open bottomed shelf in the clean linen room.	CMS; CDC: State Operations Manual Appendix PP Appendix D: Linen and Laundry Management	Environmental Cleaning in RLS	HAI	CDC	• Clean bedding should be stored in a manner to prevent contamination from dust and water splashes. • Consider bagging pillows to ensure cleanliness. • Consider placing pillows on a higher shelf in the storage unit.	Within 30 days of receiving report.
Clean Linen Storage - Covered	Some shelves in dedicated clean linen room are in close proximity to a sink and were not covered.	State Operations Manual Appendix PP; Appendix D - Linen and laundry management	• Store linens away from a water source to prevent contamination from splashes. • Ensure that water-resistant cover is in place when cart must be placed in proximity of the sink.	Within 30 days of receiving report.

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| Clean Linen Transport | Laundry employee noted to transport uncovered linens on the top of the covered laundry cart. | Appendix D - Linen and laundry management | • Cover all clean linens during transport to the clean linen room.
• Ensure all staff are aware of clean linen transport guidelines. | Addressed immediately and within 30 days of receiving report. |
| Linen Carts | The facility does not have a policy for cleaning and disinfecting linen carts on the premises or for cart exchange off the premises. | Appendix D - Linen and laundry management | • Develop a policy that include that linen carts are designated and are cleaned regularly (e.g., at least once daily) with a neutral detergent and warm water solution. | Addressed immediately and within 30 days of receiving report. |

Water Management and Legionella Prevention:

Topic Area	Findings	Evidence-Based Guidance for Proper Process	Recommended Activities to Improve Processes	Timeline for Implementing Activity

Water Management – Annual Meeting of Team	Facility does not currently have an established a water management team meeting annually to discuss water management plan.	D. Water
		
		Toolkit: Developing a *Legionella* Water Management Program
		
		Guidance for Water System Risk Management
			• Facility should establish a water management team to include facility administration, facilities engineer, and infection prevention.
			• Members of a building water management program team work together to:
			  o Identify ways to minimize growth and spread of *Legionella* and other waterborne pathogens
			  o Conduct routine checks of control measures to monitor areas at risk
			  o Take corrective action if a problem is found.
				Within 30 days of date of assessment

Water Management - Plan	Facility does not currently have a	D. Water	• Water management programs should identify hazardous conditions and take steps to minimize the	Within 30 days of date of assessment

| | written water management plan. | [Toolkit: Developing a *Legionella* Water Management Program](#)

[Guidance for Water System Risk Management](#) | growth and spread of Legionella and other waterborne pathogens in building water systems. Developing and maintaining a water management program is a multi-step process that requires continuous review. Seven key activities are routinely performed in a Legionella water management program:
1. Establish a water management program team
2. Describe the building water systems using flow diagrams and a written description
3. Identify areas where Legionella could grow and spread
4. Decide where control measures should be applied and how to monitor them
5. Establish ways to intervene when control limits are not met
6. Make sure the program is running as designed (verification) and is effective (validation)
7. Document and communicate all the activities | |
| Water Management _ Policy Does Not Address Plumbing | Facility does not have a policy to identify areas in plumbing where opportunistic pathogens may grow and spread. | [Toolkit: Developing a *Legionella* Water Management Program](#) | Once an interdisciplinary water management team is created, develop a legionella disease prevention policy that follows CDC guidelines including addressing plumbing and prevention of opportunistic pathogens. | Address within 30 days of date of assessment. |

OBSERVATIONS:				
Screening Station:				
Observation Topic Area	**Observations**	**Evidence-Based Guidance for Proper Process**	**Recommended Activities to Improve Processes**	**Timeline for Implementing Activity**
Screening and Triage	This facility requires everyone entering to sign in and have their temperature taken upon entering and exiting the building However, this facility does not conduct any other kind of screening or questionnaire such as a list of symptoms or risk of possible exposure.	[Interim Infection Prevention and Control Recommendations for Healthcare Personnel During the Coronavirus Disease 2019 (COVID-19) Pandemic](#) [CDC Project Firstline: Closely Monitor Residents for COVID-19](#)	• Screen and triage everyone who enters a healthcare facility for signs and symptoms of COVID-19. • Screening for symptoms will not identify asymptomatic or pre-symptomatic individuals with COVID-19 infection; however, symptom screening remains an important strategy to identify those who could have COVID-19 so appropriate precautions can be implemented. • Take steps to ensure that everyone adheres to source control measures and hand hygiene practices while in a healthcare facility. • Post visual alerts and posters at the entrance and in strategic places to provide instructions about wearing a well-fitting form of source control and how and when to perform hand hygiene. (This facility utilizes posters) • Provide supplies for respiratory hygiene and cough etiquette, including alcohol-based hand sanitizer (ABHS) with 60-95% alcohol, tissues, and no-touch receptacles for	Immediately addressed and within 30 days of date of assessment

			- disposal, at healthcare facility entrances, waiting rooms, and check-ins. - Limit and monitor points of entry to the facility. (You can only enter the front door at this facility and the receptionist must buzz you in.) - Establish a process to ensure everyone entering the facility is assessed for symptoms of COVID-19, or exposure to others with suspected or confirmed COVID-19 infection and that they are practicing source control. - Options could include individual screening on arrival at the facility; or implementing an electronic monitoring system in which, prior to arrival at the facility, people report absence of fever and symptoms of COVID-19, absence of a diagnosis of infection in the prior 10 days and confirm they have not been exposed to others with COVID-19 infection during the prior 14 days. - Fever can be either measured temperature ≥100.0°F or subjective fever. People might not notice symptoms of fever at the lower temperature threshold that is used for those entering a healthcare setting, so they should be encouraged to actively take their temperature at home or have their temperature taken upon arrival. (This	

			facility takes your temperature upon arrival.) • Properly manage anyone with suspected or confirmed COVID-19 infection or who has had contact with someone with suspected or confirmed COVID-19 infection.	

Hand Hygiene:

Observation Topic Area	Observations	Evidence-Based Guidance for Proper Process	Recommended Activities to Improve Processes	Timeline for Implementing Activity
Hand Hygiene Dispenser Placement	Increase the availability of Alcohol Based Hand Rub (AHRB) dispensers. Staff must perform hand hygiene prior to donning personal protective equipment (PPE).	Clinical Safety: Hand Hygiene for Healthcare Workers NFPA 101 Life Safety Code® 2010 ADA Standards for Accessible Design CDC Project Firstline: Hand Hygiene: Clean Hands: Combat COVID-19!	Consider mounting AHRB dispensers at least every other room in traditional units to provide opportunity for hand hygiene prior donning PPE and entering the room, as permitted by the fire safety code. • Educate staff on the rationale for providing additional hand hygiene dispensers. • Consider either mounting an AHRB dispenser on an IV pole for portable use from room to room on the Memory Care unit and/or supply pocket size AHRB to direct care staff.	Within 30 days of receiving report.
Hand Hygiene	Staff members observed not performing hand hygiene after exiting resident room or after removing gloves.	Clinical Safety: Hand Hygiene for Healthcare Workers Sequence for Putting On Personal Protective Equipment (PPE)	• Staff should be educated on appropriate times to perform hand hygiene. This should include immediately after removing gloves. • Facility leadership should perform daily hand hygiene audits through outbreak.	Immediately addressed and within 30 days of date of assessment

| | | WHO: Your 5 Moments for Hand Hygiene poster

CDC Project Firstline: Hand Hygiene: Clean Hands: Combat COVID-19! | • Facility Manager should round with other members of leadership to determine more locations for hand sanitizer dispensers. | |

PPE Use/Storage

Observation Topic Area	Observations	Evidence-Based Guidance for Proper Process	Recommended Activities to Improve Processes	Timeline for Implementing Activity
Clean Equipment Storage	"Clean" equipment stored in the clean storage room were not covered or marked as clean.	Environmental Cleaning and Disinfection: Options for Evaluating Environmental Cleaning Environmental Cleaning Procedures Environmental Cleaning in Healthcare Facilities: in Resource-Limited Settings Guidelines for Environmental Infection Control in Health-Care Facilities	• Consider developing a system to tag clean equipment after disinfection. • Recommend covering the clean equipment with a clear bag during storage to prevent dust collection.	Within 30 days of receiving report.
Clean Storage	Clean supplies were stored on the floor.	Guidelines for Environmental Infection Control in Health-Care Facilities	• Clean supplies should be stored in a clean utility room. • Clean supplies should be stored off the floor, at least 18 inches from the ceiling, and in protective packaging until use. • Clean utility area should be distinctly separate from	Within 30 days of date of assessment

			soiled areas to prevent confusion regarding cleanliness status. • Shelves in this area should be smooth, non-porous and easy to clean. • Clean utility area should be protected from water and soil, dirt, and dust. • Location should be easily accessible to staff and close as possible to resident areas.	
Personal Protective Equipment- Mask Use	Staff members on and off clinical areas noted wearing masks incorrectly.	CDC: Sequence for Putting On Personal Protective Equipment (PPE) Coronavirus Disease 2019 (COVID-19)	• Facility leadership to stress the importance of wearing mask correctly to protect staff and others. • Post pictures throughout the facility of the correct way to wear a mask.	Immediately and within 30 days of date of assessment
Personal Protective Equipment – Eye Protection	Facility staff observed not wearing adequate eye protection based on rates of community transmission or zone in which they are working	Centers for Disease Control and Prevention (CDC); Interim Infection Prevention and Control Recommendations for Healthcare Personnel During the COVID-19 Pandemic Coronavirus Disease 2019 (COVID-19) | COVID-19 Project Firstline: Why is Eye Protection Needed?	• Health care professionals (HCP) working in facilities located in areas with moderate to substantial community transmission are more likely to encounter asymptomatic or pre-symptomatic residents with SARS-CoV-2 infection. • Eye protection should be worn during resident care encounters to ensure the eyes are also protected from exposure to respiratory secretions. • Eye protection should be in the form of goggles or a face shield that covers the front and sides of the face. Protective eyewear (e.g., safety glasses, trauma glasses) with gaps between	Within 30 days of date of assessment

			glasses and the face likely do not protect eyes from all splashes and sprays.	
Personal Protective Equipment – Isolation Gown Extended Use	Facility is currently implementing extended use of isolation gowns. Facility is not currently reporting shortage of Personal Protective Equipment (PPE) including isolation gowns.	Centers for Disease Control and Prevention (CDC) Conserving Supplies of Personal Protective Equipment in Healthcare Facilities during Shortages Conserving Supplies of Personal Protective Equipment in Healthcare Facilities during Shortages	• Staff are recommended to doff isolation gowns after each resident encounter. • Disposable isolation gowns should not be used for more than one use. Washable isolation gowns should be laundered appropriately between each use. • PPE should not be worn in the hallways or outside resident rooms. • Isolation gowns should not be hung up for re-use • Post pictures of correct PPE to be worn by staff as a reminder. • Educate staff as the need to wear specific personal protective equipment changes. • Facility leadership to round and audit and identify any issues.	Addressed immediately and within 30 days of assessment
Personal Protective Equipment – Isolation Gown Worn Incorrectly	Staff were seen wearing isolation gowns incorrectly. Current gowns do not have opening in back or way to allow for safe doffing to avoid self-contamination.	Coronavirus Disease 2019 (COVID-19) Considerations for Selecting Protective Clothing used in Healthcare for Protection against Microorganisms in Blood and Body Fluids CDC Project Firstline: Use of PPE Correctly: Use Personal Protective Equipment (PPE)	• Ensure choice of gown size is correct (based on training). • Tie all of the ties on the gown. • Gown should not be altered in any way during use. • The manner in which the clothing is donned and doffed in sequence with other PPE is an important consideration when selecting gowns and coveralls. This is critical because the ease or difficulty with which PPE	Within 30 days of date of assessment

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		correctly for COVID-19	• is put on and removed may affect its effectiveness and the potential for self-contamination, especially during doffing of contaminated PPE. Donning and doffing features included in the selection process should consider the entire PPE ensemble, not simply the gown or coverall.	
Respiratory Protection Program – Fit Testing of N95 Respirator	Staff member observed wearing an N95 mask and had not been fit tested.	1910.134 - Respiratory protection. | Occupational Safety and Health Administration	Ensure all facility staff that enter COVID isolation or airborne isolation rooms have an N95 mask available that has been fit tested.	Address immediately and address within 30 days of assessment.

Front Line Staff Interview:

Observation Topic Area	Observations	Evidence-Based Guidance for Proper Process	Recommended Activities to Improve Processes	Timeline for Implementing Activity
Hand Hygiene Indications	Staff interviewed could not articulate when hand hygiene should be done and when to use soap and water versus alcohol-based hand sanitizer	CDC: Clinical Safety: Hand Hygiene for Healthcare Workers CDC: Sequence for Putting On Personal Protective Equipment (PPE) WHO: Your 5 Moments for Hand Hygiene poster CDC Project Firstline: Hand Hygiene: Clean Hands: Combat COVID-19!	• Education staff on indications for hand hygiene based on CDC/WHO guidelines and audit for compliance and provide feedback to the frontline staff. • Education staff that when hands should be washed instead of using ABHS based on CDC/WHO guidelines and audit for compliance and provide feedback to the frontline staff.	Within 30 days of date of assessment

Observation Topic Area	Observations	Evidence-Based Guidance for Proper Process	Recommended Activities to Improve Processes	Timeline for Implementing Activity
PPE Use	Staff was observed and performed improper sequence of donning/doffing of PPE	Sequence for Putting on Personal Protective Equipment (PPE)	Educate staff on proper PPE use including donning/doffing based on CDC guidelines and audit staff for compliance and provide feedback of the results to the frontline staff.	Immediately and within 30 days of assessment

Environmental Service Interview:

Observation Topic Area	Observations	Evidence-Based Guidance for Proper Process	Recommended Activities to Improve Processes	Timeline for Implementing Activity
Environmental Cleaning and Disinfection	Housekeeper was interviewed or observed using disinfectants in resident care areas without adherence to manufacturer's instructions for use (i.e., contact times, dilution ratios, etc.).	Healthcare-Associated Infections (HAIs) CDC Project Firstline: Cleaning and Disinfection: Why do Cleaning and Disinfection Matter in Healthcare? CDC Project Firstline: Why does contact time matter for disinfection?	• Only medical grade cleaning and disinfecting products should be used in the facility. • Facility environmental services staff should be educated and trained on all cleaning and disinfectant products on instructions for use (i.e., contact times, dilution ratios, etc.) • Ensure all cleaning chemicals are listed on the EPA's List N of products effective against COVID-19 - List N Tool: COVID-19 Disinfectants • Facility recommended to utilize automatic dispensing mechanisms (i.e., J Fill machine) for mixing of disinfectants to ensure correct chemical to water ratios	Within 30 days of date of assessment

Physical Distancing/Breakrooms:

Observation Topic Area	Observations	Evidence-Based Guidance for Proper Process	Recommended Activities to Improve Processes	Timeline for Implementing Activity
Social Distancing in Break Rooms	Staff were observed in break rooms not socially distancing and no mask on while not eating.	Infection Control: Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) | CDC CDC Project Firstline: What is source control?	• Staff should sit at least six feet away from other staff in the break rooms. • Staff should wear a mask when not eating/drinking • Post signs in the breakroom to remind staff of these infection prevention and control practices.	Addressed immediately and within 30 days of receiving report.

Isolation Sign/Designated COVID-19 Care Area:

Observation Topic Area	Observations	Evidence-Based Guidance for Proper Process	Recommended Activities to Improve Processes	Timeline for Implementing Activity
Isolation Precautions Signs	The sign did not indicate which type of precautions were in use and did not indicate the type of PPE to be worn upon entering the room. Facility does use the CDC transmission-based precaution signs.	Implementation of Personal Protective Equipment (PPE) Use in Nursing Homes to Prevent Spread of Multidrug-resistant Organisms (MDROs) Isolation Precautions Guideline	• Post signage on the door or wall outside of the resident room clearly indicating the type of precautions and required PPE. • Reeducate staff to utilize the facility approved transmission-based precaution signs when a resident has symptoms of a transmissible infection. • Ensure there is an adequate supply of transmission-based precaution signs at each nurses' station.	Addressed immediately and within 30 days of receiving report.
Isolation Precautions Carts	Facility isolation carts are not stocked with the supplies needed to assure PPE is	Implementation of Personal Protective Equipment (PPE) Use in Nursing Homes to Prevent Spread of	• Isolation carts should be restocked on a regular basis. • Assign responsibility for checking and restocking the isolation carts	Address immediately and within 30 days of assessment.

| | easily accessible to staff.

Alcohol-based hand hygiene was not readily available.

Resident in isolation did not have dedicated equipment

Door to isolation room was left open | Multidrug-resistant Organisms (MDROs) | • Assure all PPE is stocked on the cart (e.g., gown, gloves, N95, medical face mask)
• Alcohol-based hand sanitizer should be at the door to the isolation room
• Dedicated equipment (e.g., vital sign equipment) has been provided.
• Room to door should be kept closed (unless resident safety concerns require opening | |

OTHER RESOURCES:

Auditing/Feedback:

Topic Area	Findings	Evidence-Based Guidance for Proper Process	Recommended Activities to Improve Processes	Timeline for Implementing Activity
Infection Prevention and Control Practice - Auditing and Feedback	Facility does not currently have any methods to audit (monitor and document) the essential infection prevention and control practices	Healthcare-Associated Infections (HAIs) USER GUIDE: Hand Hygiene Observational Audit Data Tracking Tool for Use in Skilled Nursing Facilities Auditing Strategies to Improve Infection Prevention Processes in Nursing Homes	It is essential to audit infection prevention and control practices to ensure adherence to prevention strategies and improve outcomes. Many paper audit tools from the CDC or phone applications are available for auditing these infection prevention practices. The following infection prevention activities should be audited: • Hand hygiene • Blood glucose monitoring devices • Injection Safety • PPE use (non-COVID and COVID) • Catheter Associated Urinary Tract Infections	Within 30 days of date of assessment.

| | | | • Central Line Associated Bloodstream Infections
• Wound care
• Resident Room Cleaning
• Shared resident equipment cleaning | |

Regulated Waste Observations:

Observation Topic Area	Observations	Evidence-Based Guidance for Proper Process	Recommended Activities to Improve Processes	Timeline for Implementing Activity
Regulated Medical Waste (RMW) – Proper Disposal of Trash	Waste improperly disposed of in RMW containers. Isolation materials do not need to be disposed of in RMW containers unless grossly soiled.	Guidelines for Environmental Infection Control in Health-Care Facilities Medical Waste | Background | Environmental Guidelines | Guidelines Library | Infection Control | CDC Does RCRA regulate wastes that may contain the virus that causes COVID-19, such as used medical equipment or personal protective equipment? | US EPA	• Recommend that leadership develop a policy to limit items being placed in red bags based on current evidenced based guidelines. • Consider using covered trash cans with clear bags for trash in isolation rooms, including used PPE. • Update staff on red bag storage policies.	Within 30 days of receiving report.
Regulated Medical Waste (RMW) -Signage Soiled Utility Room	Several soiled utility rooms with biohazardous waste barrels did not have appropriate signage on the door.	OSHA: Bloodborne Pathogens and Needlestick Prevention	• Refer to the OSHA Bloodborne Pathogen Standard regarding storage of biohazardous waste. • Biohazardous waste storage must be in a locked room appropriately labeled on the outside of the door.	Within 30 days of receiving report.

Injection Safety Observations

Observation Topic Area	Observations	Evidence-Based Guidance for Proper Process	Recommended Activities to Improve Processes	Timeline for Implementing Activity
Injection Safety – Shared Glucometer	Facility was observed sharing a glucometer for all residents on a unit.	Considerations for Blood Glucose Monitoring and Insulin Administration	- Whenever possible, blood glucose meters should not be shared. - If they must be shared, the device should be cleaned and disinfected after every use, per manufacturer's instructions. - If the manufacturer does not specify how the device should be cleaned and disinfected then it should not be shared.	Within 30 days of date of assessment
Injection safety – Disinfection of Glucometer	Facility utilizes alcohol swabs for cleaning and disinfection of blood glucose meters.	Safe Injection Practices and Your Health	- Alcohol swabs are not effective against viral bloodborne pathogens such as Hepatitis B and are not appropriate for cleaning and disinfection of blood glucose meters. (See State Operations Manual). - Ensure blood glucose meters are cleaned and disinfected according to the manufacturer's instructions and FDA guidelines.	Address immediately and within 30 days of date of assessment.

Urinary Catheter Maintenance Audits:

Observation Topic Area	Observations	Evidence-Based Guidance for Proper Process	Recommended Activities to Improve Processes	Timeline for Implementing Activity
Infection Control and Prevention Auditing - Indwelling urinary catheter maintenance	Facility does not perform audits of indwelling urinary catheter maintenance.	Targeted Assessment for Prevention (TAP) Strategy Toolkit	Establish a process for auditing indwelling urinary catheter maintenance and implement a quality improvement program to ensure practices are in compliance with CDC guidelines.	Address within 30 days of date of assessment.

COVID-19 Testing Guidelines

Observation Topic Area	Observations	Evidence-Based Guidance for Proper Process	Recommended Activities to Improve Processes	Timeline for Implementing Activity
COVID-19 Testing	Testing algorithms not in accordance with CDC guidance	Coronavirus Disease 2019 (COVID-19)	Follow CDC guidance flowchart for follow-up PCR testing according to resident case and facility outbreak status.	Within 30 days of date of assessment
COVID specimen collection/ testing	Facility does not perform audits of staff who perform COVID specimen collection.	Coronavirus Disease 2019 (COVID-19)	Establish a process for auditing COVID specimen/ testing collection to assure best practices and to prevent errors in accordance with add local guidelines where appropriate.	Address within 30 days of date of assessment.

Appendix M

<u>Summary Report</u>

[Month DD, YYYY]

[Point of Contact Name]

[LTCF Facility Name]

[Address]

[City, State, Zip]

[LTCF Point of Contact Name]:

You are receiving this Summary Report because your facility participated in an important Infection Control Assessment of Risk (ICAR) initiative. Your [Local Health Department], [LHD Contact], conducted an enhanced Centers for Disease Control and Prevention (CDC) ICAR Assessment -- at your facility on [Date of ICAR].

Best Practices Identified:

(Optional and as applicable: 1-3 items, positive Feedback of above and beyond practices at the LTCF. Only add this if a facility is really doing a great job.)

The table below provides observations/findings and specific recommendations for improving infection prevention and control (IPC) processes/protocols in your facility, which were found to be focus areas during the ICAR.

- Column 1 indicates the topic area related to the other columns.
- Column 2 lists the specific finding or observation made during the ICAR assessment, which indicated an IPC focus area for the facility.
- Column 3 lists the evidence-based guidance materials upon which the recommended activities are based.
- Column 4 lists the recommended activities to be completed by the facility.
- Column 5 lists the recommended timeline for implementing these activities.

Please see your facility-specific recommendations below:

Topic Area	Findings/Observations	Evidence-Based Guidance for Proper Process	Recommended Activities to Improve Processes	Recommended Timeline for Implementing Activity
Instructions to LHD. This information to be filled in by the LHD from the "Example Findings and Recommendations by Topic Area" comprehensive list. Be sure to add links to state/local guidelines where appropriate and delete this row before sending.				

[LHD to expand on any findings or the overall experience as desired here.]

We appreciate your commitment to resident and staff wellbeing through preventing infections in your facility. For questions or assistance related to these recommendations, please do not hesitate to contact [Insert Local Health Department Name].

Thank you for your participation.

Sincerely,

[LHD Contact Name]

[LHD Contact Title]

[LHD Contact Number]

[LHD Contact Email]

Appendix N

Infection Prevention & Control
Background Knowledge Development Long-Term Care Facility Focus

Infection Control Program Infrastructure:

- Training for the Role of Infection Preventionist in LTCF
  - Nursing Home Infection Preventionist Training Course - WB4448R
  - Infection Prevention in LTCs Bundle - APIC
- Certification of Infection Prevention & Control (a-IPC or CIC)
- Infection Prevention and Control Resources
  - Association for Professional in Infection Control and Epidemiology (APIC)
  - The APIC Text - APIC
    - Chapter 1. Infection Prevention and Control Programs
    - Chapter 2. Competency and Certification Infection Preventionists
    - Chapter 3. Education and Training
  - Developmental path of the infection preventionist
  - APIC-SHEA Guidelines: Infection Prevention & Control for LTC
  - Implementation Guides - APIC
  - Guidelines Library | Infection Control | CDC
  - Infection Control Basics | CDC
  - National Healthcare Safety Network (NHSN) | CDC
  - World Health Organization (WHO)
  - Other
    - International Federation of Infection Control (IFIC)
    - Society for Healthcare Epidemiology of America (SHEA)
    - Infectious Disease Society of America (IDSA)
    - American Society of Microbiology (ASM)
    - Agency for Healthcare Research and Quality (AHRQ)
- Infection Control Risk Assessment Tool: Nursing Home Infection Preventionist Training

Accreditation & Regulatory Compliance:

Resources:

- The APIC Text - APIC. Chapter 4. Accrediting and Regulatory Agencies
- Centers for Medicare & Medicaid Services (CMS)
  - CMS Long-term Care Infection Control Worksheet
  - CMS Nursing Home Quality Initiative
  - CMS Quality Improvement Organization
- Occupational Safety and Health Administration (OSHA)
  - Bloodborne Pathogen Standard
  - Respiratory Protection Standard
  - Respiratory Protection Guidance for LTC

- Other:
  - [National Institute for Occupational Safety and Health (NIOSH)](#)
  - [U.S. Food and Drug Administration (FDA) Med Watch](#)

Epidemiology & Surveillance:

Guidelines:

- [The APIC Text - APIC](#). Chapter 10. Surveillance
- [The APIC Text - APIC](#). Chapter 11. General Principles of Epidemiology
- [CDC Principles of Epidemiology](#)

Microbiology/Lab:

Guidelines:

- [The APIC Text - APIC](#). Chapter 24 Microbiology Basics
- [The APIC Text - APIC](#). Chapter 25 Laboratory Testing and Diagnostics
- [The APIC Text - APIC](#). Chapter 110 Laboratory Services
- [Ready Reference for Microbes, 4th edition](#)
- [The Infection Preventionist's Guide to the Lab](#)
- [CDC Lab Training: Microbiology Series](#)

Standard Precautions:

Guidelines:

- [CDC Standard Precautions](#)
- [The APIC Text - APIC](#). Chapter 28. Standard Precautions

Hand Hygiene:

Guidelines:

- [The APIC Text - APIC](#). Chapter 27. Hand Hygiene
- [About Handwashing](#)
- [APIC Implementation Guide](#)
- [Guideline for Hand Hygiene in Healthcare Settings (2002)](#)
- [Clinical Safety: Hand Hygiene for Healthcare Workers](#)
- [Cover your cough, clean your hands after coughing or sneezing](#)

Videos:

- [WHO Handwashing Video](#)
- [Hand-washing Steps Using the WHO Technique - YouTube](#)
- [Clean Hands - Combat COVID-19!](#)

Audit Form: [CDC Standard-Precautions-Hand-Hygiene-Supplies Audit](#)

Personal Protective Equipment (PPE):

Guidelines:

- [Sequence for putting on Personal Protective Equipment (PPE) (cdc.gov)](#)
- [NIOSH Approved N95 Respirators](#)
- [Counterfeit Respirators](#)
- [CDC PPE Burn Rate Calculator](#)
- [FDA Clear Transparent Mask](#)
- [Respiratory Protection vs. Source Control – What's the difference?](#)
- [DHHS (NIOSH) User Seal Check](#)

Videos: [Use PPE Correctly in LTC Video](#)

Audit Form: [CDC Standard-Precautions-PPE-Provision Audit](#)

Respiratory Hygiene & Cough Etiquette:

Guidelines:

- [Respiratory Hygiene/Cough Etiquette in Healthcare Settings](#)
- [Preventive Actions to Help Protect Against Flu](#)

Audit Form: [Cough-Courtesy-Waiting-Room-Audit](#)

Safe Injection Practice:

Guidelines:

- [Safe Injection Practices and Your Health](#)
- [Sharps Safety Program Resources](#)

Audit Form: [Safe Injection Checklist](#)

Cleaning, Disinfection & Sterilization:

Guidelines:

- [The APIC Text - APIC](#). Chapter 31. Cleaning, Disinfection, and Sterilization
- [The APIC Text – APIC](#). Chapter 32. Reprocessing Single-Use Devices
- [The APIC Text - APIC](#). Chapter 108. Sterile Processing
- [Disinfection and Sterilization Guideline](#)
- [AAMI](#)
- [Disinfection & Sterilization: Dr. Rutala's Resources, Slide Presentations, etc.](#)

Environmental Infection Prevention and Control/Laundry:

Guidelines:
- [The APIC Text - APIC](#). Chapter 109. Environmental Services
- [The APIC Text - APIC](#). Chapter 113. Healthcare Textile Services
- [The APIC Text - APIC](#). Chapter 115. Waste Management
- [CDC Guidelines for Environmental Infection Control in Healthcare Settings](#)
- [AHRQ - Environmental Cleaning Infection Control](#)

Transmission-Based Precautions:

Guidelines:

- [The APIC Text - APIC](#). Chapter 29 Isolation Precautions
- [Isolation Precautions Guideline](#)
- [Transmission-Based Precautions](#)
- [Implementation of Personal Protective Equipment (PPE) Use in Nursing Homes to Prevent Spread of Multidrug-resistant Organisms (MDROs)](#)
- [Consideration for Use of Enhanced Barrier Precautions in Skilled Nursing Facilities HICPAC (cdc.gov)](#)

Audit Forms:

- [Isolation- Observation of Area Exterior to Contact Isolation Rooms](#)
- [Isolation- Observation of Area Exterior to Airborne Infection Isolation Rooms](#)
- [Transmission-Based Precautions (Isolation) Suite of Quick Observation Infection Prevention Tools](#)

Healthcare Personnel and Resident Safety:

Guidelines:

- [The APIC Text - APIC](#). Chapter 102. Occupational Health
- [The APIC Text - APIC](#). Chapter 103. Occupational Exposure to BBPs
- [The APIC Text - APIC](#). Chapter 104. Volunteers, Contract Workers, and Others
- [The APIC Text - APIC](#). Chapter 105. Immunizations of HCWs
- [The APIC Text - APIC](#). Chapter 106. The Pregnant HCW
- [The APIC Text - APIC](#). Chapter 107. Minimizing Exposure to Blood
- [Infection Control in Healthcare Personnel](#)
- [Vaccines for Healthcare Personnel](#)
- [HIV Occupational Exposure Management](#)
- [HBV Infected Healthcare Personnel](#)
- [HBV Protection and Postexposure Management](#)
- [Healthcare Personnel Exposed to HCP](#)

Facility Management, Construction, Renovations:

Guidelines:

- Construction & Renovation Manual (apic.org)
- The APIC Text – APIC. Chapter 118 Construction and Renovation
- The American Institute of Architects: AIA
- Water Quality Association

Maintenance/Engineering:

The APIC Text - APIC. Chapter 114. Maintenance and Engineering

Water Systems:

- The APIC Text - APIC. Chapter 117. Water Systems Issues and Prevention of Waterborne Infectious Diseases
- SC17-30.Legionella_Risks in Healthcare. Revised 6-09-17
- Water Infection Control Risk Assessment (WICRA) for Healthcare Settings (cdc.gov)
- Legionella and Water System Management - YouTube

Ventilation:

Guidelines:

- The APIC Text - APIC. Chapter 116. Heating, Ventilation, and Air Conditioning
- Ventilation in Buildings
- Guidance for Building Operations During the COVID-19 Pandemic
- CDC Air Contaminant Removal – Air Changes per Hours
- Heating, Ventilator, and Air Conditioning (HVAC) and Fan Considerations for Long-term Care during COVID-19

Antibiotic Stewardship:

Guidelines:

- The APIC Text – APIC. Chapter 26 Antimicrobials and Resistance
- Antibiotic Prescribing and Use | CDC
- Core Elements of Antibiotic Stewardship for Nursing Homes
- 2006 guide for management of multidrug resistant organisms in healthcare settings provides guidance for the implementation of strategies and practices to prevent the transmission of MRSA, VRE, and other MDROs.
- Guidance for control of infections with carbapenem-resistant or carbapenemase-producing Enterobacteriaceae in acute care facilities provides new guidance for CRE infection prevention and control in an effort to limit the further emergence of these organisms.
- Vancomycin-resistant Enterococci (VRE) Basics
- Infection Control Guidance: *Candida auris*

Audit Form: [The Core Elements of Antibiotic Stewardship for Nursing Homes: Checklist (cdc.gov)](#)

Outbreak Investigations:

Guidelines:

- [The APIC Text - APIC](#). Chapter 12: Outbreak Investigations
- [Foodborne Outbreaks](#)
- Heyman, David. Control of Communicable Diseases Manual. 2008; pages A10-A19.
- [About Outbreak Investigations in Healthcare Settings](#)
- [Interim Guidance for Influenza Outbreak Management in Long-Term Care and Post-Acute Care Facilities](#)
- [Group A Strep Outbreaks and Public Health Response | CDC](#)