

Prevention and Control of Infectious and Communicable Diseases

Jeffrey S. Mantes, BSN, RN, MLS (AMT), LTC-CIP, CIC

J. Mantes Bio

In 2020, a letter (AFL) was sent out by CDPH requiring all SNFs to have a dedicated full-time IP and Santa Clara Valley Healthcare - O'Connor Hospital (OCH) Just like most of you here He was fortunate, a compassionate nurse steps up to the challenge in the middle of a global pandemic.

He took full responsibility for being the dedicated IP over the Subacute ADP and worked tirelessly to ensure the teams understood the importance of the fundamentals of hand hygiene, PPE donning/doffing, and CAUTI bundle prevention. He trained champions on all shifts on the fundamentals of IP and met with them regularly and rounded daily. Throughout the past few years, he has continued to drive several initiatives such as education on Enhanced Standard Precautions (ESP), infection surveillance utilizing McGeer's criteria, environment of care (EOC), and MDRO for all staff and providers.

All the SNF performance improvements (PI) have shown great success, and his works were featured at the poster presentation at the 2022 and 2024 APIC Annual Conferences entitled "Implementing Infection Prevention and Control (IPC) Practices including COVID-19 Mitigation Strategies in a Skilled Nursing Facility" and "Implementing Enhanced Standard Precaution (ESP) and Its Impact in a Skilled Nursing Facility" respectively and was featured and part of the press release in 2022.

OBJECTIVES

- Understand the importance and application of Hand Hygiene, Standard and Transmission-Based Precautions
- Identify the appropriate Personal Protective Equipment (PPE) based on disease mode of transmission
- Describe the spread and prevention practices required for infectious diseases

Hand Hygiene

- **Hands of health care workers (HCW)** are the most common mode of transmission of pathogens
- **Hand hygiene** has been known to prevent spread of infection for 150 years

Excellent Hand Hygiene can prevent Healthcare-Associated Infections (HAIs)

DID YOU KNOW?

- Up to 70% of infections **can be prevented by hand washing**



Source: HAI Data and Statistics, <http://www.cdc.gov/hai/surveillance/index.html>

Hand Hygiene

- Centers of Disease Control and Prevention (CDC), the World Health Organization (WHO), and many other authorities have promulgated hand hygiene guidelines
- Healthcare facilities have hand hygiene policies and procedures



Hand Hygiene Terminology

Hand Hygiene	Performing handwashing, antiseptic handwash, alcohol-based hand rub, or surgical hand hygiene/antisepsis
Handwashing	Washing hands with plain soap and water
Antiseptic Hand Wash	Washing hands with water and soap or other detergents containing an antiseptic agent
Alcohol-based Hand Rub	Rubbing hands with an alcohol-containing preparation
Surgical Scrub/Antisepsis	Extended period of hand hygiene with antiseptic agent

Indications for Hand Hygiene

Wash hands with soap and water when hands are

- Contaminated
- Soiled
- Before and after eating
- After toileting wash with soap and water

Use an **alcohol-based hand rub**

- **If hands are *not* visibly soiled** for routinely decontaminating hands

During outbreaks and if infection rates are high, consider using only handwashing with soap and water

Examples: C. difficile, Norovirus infections

Indications for Hand Hygiene

Before

- Patient contact
- Donning gloves
- Accessing devices
- Giving medication

After


- Contact with a patient's skin and/or environment
- Contact with body fluids or excretions, non-intact skin, wound dressings
- Removing gloves

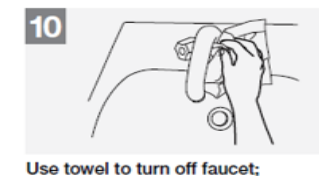
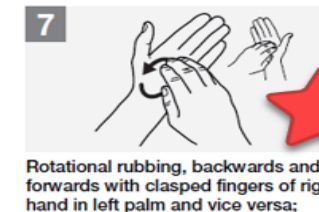
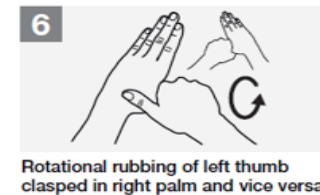
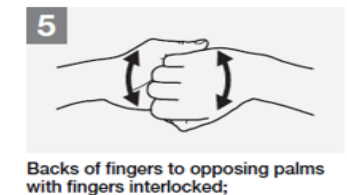
Recommended Hand Hygiene Technique

Handwashing

- Wet hands with water, apply soap, rub hands together, paying close attention to between the fingers and nails, for at least **15** seconds
- Rinse and dry with disposable towel
- Use towel to turn off faucet

WASH HANDS WHEN VISIBLY SOILED! OTHERWISE, USE HANDRUB

 Duration of the entire procedure: 40-60 seconds



Recommended Hand Hygiene Technique

Hand rub

- Apply to palm of one hand, rub hands together covering all surfaces until dry
- Volume based on manufacturer recommendation

RUB HANDS FOR HAND HYGIENE! WASH HANDS WHEN VISIBLY SOILED

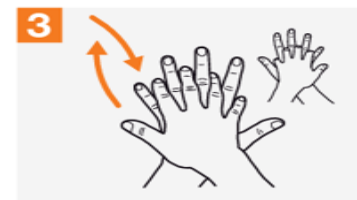
 Duration of the entire procedure: **20-30 seconds**



Apply a palmful of the product in a cupped hand, covering all surfaces;



Rub hands palm to palm;



Right palm over left dorsum with interlaced fingers and vice versa;



Palm to palm with fingers interlaced;



Backs of fingers to opposing palms with fingers interlocked;



Rotational rubbing of left thumb clasped in right palm and vice versa;



Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;



Once dry, your hands are safe.



Nails

- Artificial nails and gel polishes should **not** be worn by health care personnel
- Polish may be worn but must be intact (not chipped)
- Nail tips should be kept to $\frac{1}{4}$ inch in length

How to Improve Hand Hygiene Compliance

- Make hand hygiene a facility priority
 - Ensure competency
- Encourage patients and families to remind health care workers to clean their hands
- Make hand rubs easily available (e.g., place at entrance to patient room, at bedside)
- Monitor adherence to hand hygiene; provide feedback of gaps
 - Train/re-train secret shoppers
 - Explore electronic hand hygiene monitoring systems

Standard Precautions

- Treat all residents as if they are potentially infectious
- Use PPE to protect staff from spray and splashes of blood and body fluids
- Never touch non-intact skin without PPE (gloves, gown as needed)



Standard Precautions

Part of **Core** practices – **Use all the time, in all settings**

1. Hand hygiene
2. Environmental cleaning and disinfection
3. Injection and medication safety
4. Assess the risk of transmission in task to be performed to select appropriate personal protective equipment (PPE) including gloves, gowns, face masks
5. Minimizing potential exposures
 - Using respiratory hygiene and cough etiquette
6. Reprocessing of reusable medical equipment between each patient and when soiled

Standard Precautions

Resources for Visitors

- PPE donning and doffing
- Information about transmission-based precaution, not the disease (unless visitor has MPOA)



Gloving and Hand Hygiene

- **Always wear gloves when contact with blood or infectious material is possible**
- **Remove gloves after caring for each patient**
 - Remove gloves, perform hand hygiene, and re-glove when transitioning care from a soiled to a clean area
- **Perform hand hygiene upon removing gloves**
 - Hand hygiene before accessing the glove box
- **Do not wash gloves**
- **Do not reuse gloves**
- **Do not double glove**

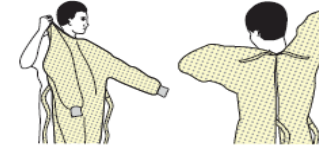
The goal of donning PPE:
Assure complete Coverage
(see handout) →

SEQUENCE FOR PUTTING ON PERSONAL PROTECTIVE EQUIPMENT (PPE)

The type of PPE used will vary based on the level of precautions required, such as standard and contact, droplet or airborne infection isolation precautions. The procedure for putting on and removing PPE should be tailored to the specific type of PPE.

1. 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



2. MASK OR RESPIRATOR

- Secure ties or elastic bands at middle of head and neck
- Fit flexible band to nose bridge
- Fit snug to face and below chin
- Fit-check respirator



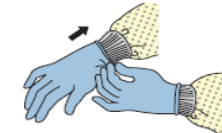
3. GOGGLES OR FACE SHIELD

- Place over face and eyes and adjust to fit



4. GLOVES

- Extend to cover wrist of isolation gown



USE SAFE WORK PRACTICES TO PROTECT YOURSELF AND LIMIT THE SPREAD OF CONTAMINATION

- Keep hands away from face
- Limit surfaces touched
- Change gloves when torn or heavily contaminated
- Perform hand hygiene



C5200172-E

[CDC PPE Sequence](https://www.cdc.gov/hai/pdfs/ppe/PPE-Sequence.pdf)
(www.cdc.gov/hai/pdfs/ppe/PPE-Sequence.pdf)

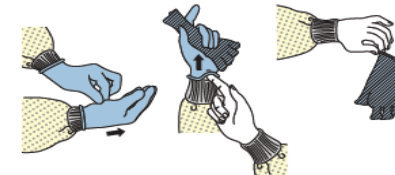
The goal of doffing PPE:
Avoid self Contamination
(see handout) →

HOW TO SAFELY REMOVE PERSONAL PROTECTIVE EQUIPMENT (PPE) EXAMPLE 1

There are a variety of ways to safely remove PPE without contaminating your clothing, skin, or mucous membranes with potentially infectious materials. Here is one example. **Remove all PPE before exiting the patient room** except a respirator, if worn. Remove the respirator **after** leaving the patient room and closing the door. Remove PPE in the following sequence:

1. GLOVES

- Outside of gloves are contaminated!
- If your hands get contaminated during glove removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Using a gloved hand, grasp the palm area of the other gloved hand and peel off first glove
- Hold removed glove in gloved hand
- Slide fingers of ungloved hand under remaining glove at wrist and peel off second glove over first glove
- Discard gloves in a waste container



2. GOGGLES OR FACE SHIELD

- Outside of goggles or face shield are contaminated!
- If your hands get contaminated during goggle or face shield removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Remove goggles or face shield from the back by lifting head band or ear pieces
- If the item is reusable, place in designated receptacle for reprocessing. Otherwise, discard in a waste container



3. GOWN

- Gown front and sleeves are contaminated!
- If your hands get contaminated during gown removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Unfasten gown ties, taking care that sleeves don't contact your body when reaching for ties
- Pull gown away from neck and shoulders, touching inside of gown only
- Turn gown inside out
- Fold or roll into a bundle and discard in a waste container

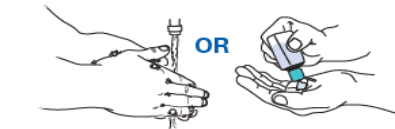


4. MASK OR RESPIRATOR

- Front of mask/respirator is contaminated — **DO NOT TOUCH!**
- If your hands get contaminated during mask/respirator removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Grasp bottom ties or elastics of the mask/respirator, then the ones at the top, and remove without touching the front
- Discard in a waste container



5. WASH HANDS OR USE AN ALCOHOL-BASED HAND SANITIZER IMMEDIATELY AFTER REMOVING ALL PPE



**PERFORM HAND HYGIENE BETWEEN STEPS IF HANDS
BECOME CONTAMINATED AND IMMEDIATELY AFTER
REMOVING ALL PPE**



CS250672-E

[CDC PPE Sequence](https://www.cdc.gov/hai/pdfs/ppe/PPE-Sequence.pdf)

(www.cdc.gov/hai/pdfs/ppe/PPE-Sequence.pdf)

The goal of doffing PPE:
Avoid self Contamination
(see handout) →

HOW TO SAFELY REMOVE PERSONAL PROTECTIVE EQUIPMENT (PPE) EXAMPLE 2

Here is another way to safely remove PPE without contaminating your clothing, skin, or mucous membranes with potentially infectious materials. **Remove all PPE before exiting the patient room** except a respirator, if worn. Remove the respirator **after** leaving the patient room and closing the door. Remove PPE in the following sequence:

1. GOWN AND GLOVES

- Gown front and sleeves and the outside of gloves are contaminated!
- If your hands get contaminated during gown or glove removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Grasp the gown in the front and pull away from your body so that the ties break, touching outside of gown only with gloved hands
- While removing the gown, fold or roll the gown inside-out into a bundle
- As you are removing the gown, peel off your gloves at the same time, only touching the inside of the gloves and gown with your bare hands. Place the gown and gloves into a waste container



2. GOGGLES OR FACE SHIELD

- Outside of goggles or face shield are contaminated!
- If your hands get contaminated during goggle or face shield removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Remove goggles or face shield from the back by lifting head band and without touching the front of the goggles or face shield
- If the item is reusable, place in designated receptacle for reprocessing. Otherwise, discard in a waste container

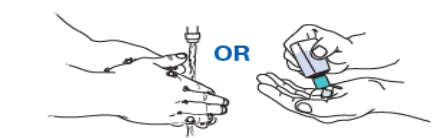


3. MASK OR RESPIRATOR

- Front of mask/respirator is contaminated — **DO NOT TOUCH!**
- If your hands get contaminated during mask/respirator removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Grasp bottom ties or elastics of the mask/respirator, then the ones at the top, and remove without touching the front
- Discard in a waste container



4. WASH HANDS OR USE AN ALCOHOL-BASED HAND SANITIZER IMMEDIATELY AFTER REMOVING ALL PPE



PERFORM HAND HYGIENE BETWEEN STEPS IF HANDS BECOME CONTAMINATED AND IMMEDIATELY AFTER REMOVING ALL PPE



CS250673-E

[CDC PPE Sequence](https://www.cdc.gov/hai/pdfs/ppe/PPE-Sequence.pdf)

(www.cdc.gov/hai/pdfs/ppe/PPE-Sequence.pdf)

Clean and Dirty Areas of PPE

- The sleeve of the gown should not touch the face while untying neck ties
- Ask a 2nd person, if available, to help untie ties and watch for accidental self-contamination, helps keep the staff person safe during PPE removal



Avoid Contamination While Doffing – the Most Common Error



Front and back: Everything from the waist down is considered dirty (contaminated)

Transmission-based Precautions

- Builds on basic principles of standard precautions
- Based on how diseases are transmitted: by the environment, by air, on the hands of healthcare workers

Types of Transmission-based Precautions

1. **Contact** precautions

- Mode of transmission is direct contact with resident or contaminated environment
- Examples when needed: *C. difficile*, scabies

2. **Droplet** precautions

- Mode of transmission is respiratory droplets
- Examples when needed: Influenza, pertussis

3. **Airborne** precautions

- Mode of transmission is small aerosolized particles
- Examples When needed: Tuberculosis, measles

Implementing Transmission-Based Precautions

- Signage
 - Language barriers – pictures > words
 - What is needed before entering the room
 - How to don
 - How and where to doff
 - Hand hygiene considerations
- Will your visitors understand them?
- Do your residents understand them?
- Will a dietary aide or housekeeper know what to do to enter a room with a sign?

How to Implement Contact Precautions

- Ensure appropriate signage at the entrance to the room
- Perform hand hygiene before donning PPE
- Don gown and gloves prior to entry into room and discard prior to exit
 - Perform hand hygiene prior to donning gloves and after removing gloves
- Single room preferred
 - Alternatives include spatial separation or cohorting
 - Cohorting with same genus and species and resistance

Cohorting MDROs

- **Infection Control Basics: Patient Placement (Cohorting)**
- Cohort patients with the same MDRO, regardless of specimen source, infection or colonization status
 - *C. auris* with *C. auris*
 - By carbapenemase/resistance mechanism (e.g., NDM), then by organism
- Place in the same geographic location
- Avoid unnecessary patient movement

How to Implement Droplet Precautions

- Ensure appropriate signage at the entrance to the room
- Perform hand hygiene before donning PPE
- Don surgical or procedure mask prior to entry into room and discard prior to exit
- Single room preferred
- Transport patients in a surgical mask
- Note: some diseases may require both Contact and Droplet Precautions
 - Examples of when needed: Pneumonia adenovirus, group A *Strep*

Sharps Safety

- Sharps injuries occur most frequently due to **inappropriate sharps disposal** by healthcare workers, including
 - Insufficient maintenance of sharps containers in every area
 - Improper design of sharps disposal container
 - Inappropriate placement of sharps disposal container
 - Overfilling sharps disposal container



Food Safety

Regulated by the following requirements:

- ☐ **Policy for use and storage of foods brought in by families and visitors** to ensure safe and sanitary handling and consumption
- ☐ **Recognition of US FDA Food Code and CDC food safety guidance** as national standards.
- ☐ **Compliance with federal, state, and local food safety guidelines** for procurement, storage, preparation, holding, and serving.
- ☐ **Purchase food from approved vendors**, inspect on delivery, check food temperatures, and follow proper storage procedures.

Food Safety

- HACCP (Hazard Analysis and Critical Control Point)
 - a food safety management system that **aims to control hazards in the food supply chain**
 - ❖ Purchase food from approved vendors that follow HACCP procedures.
 - ❖ Inspect all products on delivery.
 - ❖ Check food temperatures for perishable items on delivery.
 - ❖ Cover, label, and date refrigerated items; indicate an expiration date for all items.
 - ❖ Keep refrigerated items at 40 degrees Fahrenheit or below

Residents Immunizations

TABLE 7.1: SUMMARY OF RECOMMENDED VACCINES FOR LTC RESIDENTS

Influenza	Annually (September – May)
Pneumococcal disease	Series of two injections (PCV13 then PPSV23)
Tetanus, diphtheria	Every 10 years
Tetanus, diphtheria, pertussis	One time (Tdap)
Shingles	Preferred: Shingrix as a series of two injections; if Shingrix is not available, Zostavax can be administered as a single dose
Hepatitis B (selected residents)	Series of three injections: <ul style="list-style-type: none">» PCV13- pneumococcal conjugate vaccine 13 valent» PPSV23- pneumococcal polysaccharide vaccine 23 valent» Tdap- Tetanus, diphtheria, pertussis

Residents Immunizations

Vaccine Information Statements (VISs)

- information sheets produced by the CDC that explains both the benefits and risks of a vaccine to recipients, parents, or legal representatives that fulfills the requirements of the National Childhood Vaccine Injury Act of 1986
- available in many languages

Residents Immunizations

Vaccination Information To Record:

- edition date of the VIS
- date the VIS is provided
- name, address, and title of the person who administered the vaccine
- date the vaccine is administered
- vaccine manufacturer and lot number

Residents Immunizations

Vaccination Information To Record:

- edition date of the VIS
- date the VIS is provided
- name, address, and title of the person who administered the vaccine
- date the vaccine is administered
- vaccine manufacturer and lot number

Informed Consent

- not a federal requirement, can be verbal consent, no sign/signature required
- some states have informed consent laws
- written physician order is not required by CMS State Operations Manual, F386

Vaccine Adverse Event Reporting System (VAERS)

- a national reporting system that accepts reports from the public on adverse events associated with vaccines licensed in the
- **VAERS** form requests the following information:
 - Type of vaccine received
 - Timing of the vaccination
 - Onset of the adverse event
 - Current illnesses or medications
 - History of adverse events following vaccination

Vaccine Injury Compensation Program (VICP)

- provide compensation to persons who may have been unavoidably injured by vaccines rather than passing the costs on to vaccine manufacturers and providers

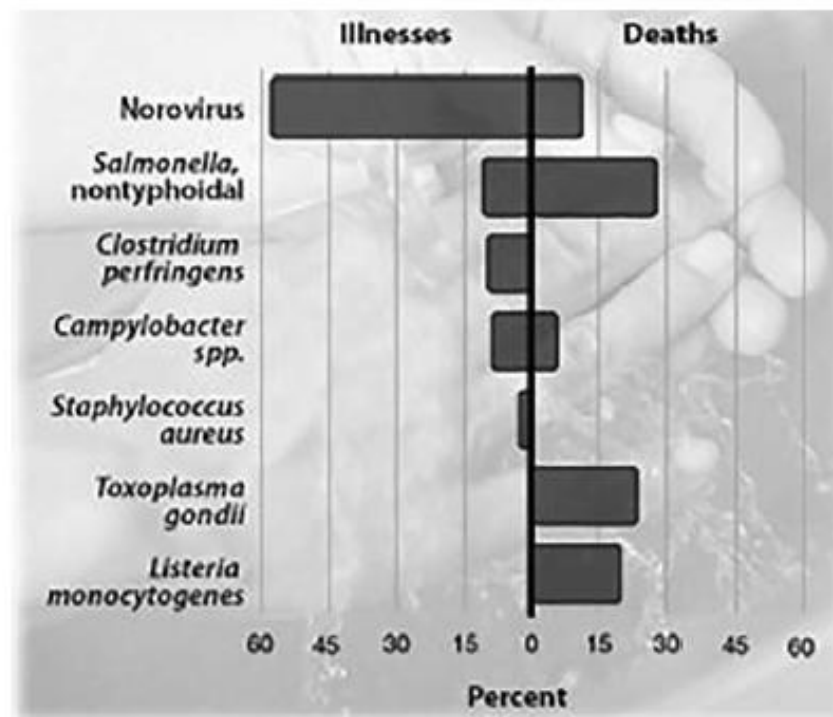
Ancillary Services

- Food and Nutrition Services
- Laundry Services
- Rehabilitation Services and Physical Therapy
- Laboratory Services
- Pharmacy Services and Medication Administration
- Life Enrichment and Activities
- Transportation
- Volunteers
- Animal Services

Food and Nutrition Services

- Food plays a critical role in residents' lives, in terms of both their nutritional and social well-being.
- IP needs to monitor food handling, preparation, and storage, ensuring that food and nutrition staff, nursing staff, and life enrichment staff properly clean, sanitize, and maintain food prep areas, utensils, and equipment.
- IP must also monitor employee health to ensure healthcare personnel are healthy and fit for duty.

FIGURE 12.1: TOP PATHOGENS CONTRIBUTING TO DOMESTICALLY ACQUIRED
FOODBORNE ILLNESSES AND DEATHS, 2000-2008



Source: Centers for Disease Control and Prevention.⁴

Norovirus

- It is the most common cause of gastroenteritis and the leading cause of disease from contaminated foods in the U.S.
- Common food source: leafy greens (e.g., lettuce), fresh fruits, and shellfish (e.g., oysters)
- It is spread either by direct person-to-person contact or by fecal contamination of food or water. Residents can be infected by touching facility surfaces or objects contaminated with norovirus and by having contact with residents who are infected.
- **Symptoms begin 12 to 48 hours after exposure.** Recover within 1 to 2 days, but more serious threat to the elderly due to the risk of dehydration.

Salmonella

- **Symptoms begin 6 hours to 6 days after exposure**, characterized by diarrhea, fever, and abdominal cramping and are acquired from eating contaminated foods
- **Common food sources:** Raw or undercooked chicken, turkey, and meat; eggs; unpasteurized (raw) milk and juice; raw fruits and vegetables. usually resolve in 5 to 7 days and most do not require treatment other than oral fluids.
- choices for antibiotic therapy for severe infections include *fluoroquinolones*, *third-generation cephalosporins*, and *ampicillin* (for susceptible infections).
- *Salmonella* may also be found in the feces of some animals, especially those with diarrhea. Hand hygiene reduces transmission after contact with animals.

Clostridium perfringens

- It is a spore-forming, gram-positive bacterium that may produce toxins, causing disease in the intestine.
- develop diarrhea and abdominal cramps within 6 to 24 hours (typically 8 to 12), usually begins suddenly and lasts for less than 24 hours. However, complications including dehydration, may occur, and symptoms may last for 1 to 2 weeks in severe cases.
- Foods should be kept warmer than 140° F (60° C) or cooler than 41° F (5° C) to prevent the growth of *C. perfringens* spores
- Leftover foods should be refrigerated at 40° F (4° C) or below as soon as possible and within two hours of preparation.

Campylobacter

- **Symptoms begin 2 to 5 days after exposure:** Diarrhea (often bloody), stomach cramps/pain, fever
- **Common food sources:** Raw or undercooked poultry, raw (unpasteurized) milk, and contaminated water

Staphylococcus aureus (Staph)

- **Symptoms begin 30 minutes to 8 hours after exposure:** Nausea, vomiting, stomach cramps. Most people also have diarrhea.
- **Common food sources:** Foods that are not cooked after handling, such as sliced meats, puddings, pastries, and sandwiches

Listeria

- **Symptoms begin 1 to 4 weeks after exposure:** Pregnant women usually have a fever and other flu-like symptoms, such as fatigue and muscle aches
- Infections during pregnancy can lead to serious illness or even death in newborns
Other people (most often older adults): headache, stiff neck, confusion, loss of balance, and convulsions in addition to fever and muscle aches
- **Common food sources:** Queso fresco and other soft cheeses, raw sprouts, melons, hot dogs, pâtés, deli meats, smoked seafood, and raw (unpasteurized) milk

Botulism (Clostridium botulinum)

- **Symptoms begin 18 to 36 hours after exposure:** Double or blurred vision, drooping eyelids, slurred speech. Difficulty swallowing and breathing, dry mouth
- Muscle weakness and paralysis
- Symptoms start in the head and move down as the illness gets worse
- **Common food sources:** Improperly canned or fermented foods, usually homemade. Prison-made illicit alcohol (pruno)

Escherichia coli (E. coli)

- **Symptoms begin 3 to 4 days after exposure:** Severe stomach cramps, diarrhea (often bloody), and vomiting
- Around 5–10% of people diagnosed with *E. coli* develop a life-threatening health problem
- **Common food sources:** Raw or undercooked ground beef, raw (unpasteurized) milk and juice, raw vegetables (such as lettuce), raw sprouts, unsafe water

Laundry Services

- Per CMS F-tag 880 regulation §483.80 (C) Linens, facility is required to provide clean linen and must clean residents' clothing to prevent the spread of infection
- Criteria for laundry facilities:
 - Physical barrier between the clean and soiled linen
 - Ventilation should not move from soiled processing areas to clean laundry areas
 - Carts, shelves, and folding tables should be cleaned and disinfected on a regular basis
 - Accessibility of sharps containers
 - Hand hygiene products and sinks must be available
 - Laundry personnel must be trained and demonstrate the correct use of PPE including eye protection

Laundry Services

- Damp linen must not be left in machines overnight.
- Laundry detergents are not required to state they are antimicrobial.
- Not required to maintain a record of water temperatures during the laundry process.
- CDC and CMS recommend leaving washing machines open to air when not in use.
- In case of lice or scabies outbreak, linen must be washed and dried at high temperature, no insecticide needed, and commercial wash and dryer cycles provides sufficient heat to kill these parasites

Rehabilitation Services and Physical Therapy

- All equipment used in rehabilitative services must be routinely cleaned and disinfected between uses according to manufacturer's instructions for use (IFUs). More rigorous cleaning procedures may be required during outbreaks
- Treatment tables, "mats" or "platform tables," must be cleaned and disinfected between each resident use with manufacturer-approved chemicals that will not damage and if a sheet is placed changed after each use.
- Gait belts including those made with antimicrobial-coated materials, should be cleaned between use by different residents. May consider having dedicated gait belts for each resident
- Any equipment from isolation room must be thoroughly cleaned and disinfected upon removal. If possible, equipment should remain within the room until the isolation is discontinued

Laboratory Services

- IP must be knowledgeable about the lab services available:
 - Types of tests performed by the lab and the normal ranges for each test
 - Expected turnaround times
 - Methods of reporting results
 - Specimen collection procedures – monitor collection, handling and transport
 - Procedures for specimen holding and transport to the laboratory
 - IP should evaluate, Incomplete or misplaced specimen labels, accidental contamination, inadequate amount, missed or delayed transport, etc....
 - Types of diagnostic testing not performed by the laboratory

Pharmacy Services and Medication Administration

Safe Handling of Injections and Vials

- disinfect the vial hub prior to access and should never reuse a needle to withdraw medicine from a vial
- A single-use vial contains one dose of medication and for single patient use only
- A multidose vial contains more than one dose of medication – a new, clean needle and clean syringe must always be used to access a multidose vial. Reuse of needles or syringes can result in contamination and can lead to outbreaks.
 - CDC recommends that single-use vials be used whenever possible, and that multidose vials of medication be assigned to a single resident to reduce the risk of disease transmission.
 - Insulin pen are approved only for single-patient use.

Salon, Barbershop, Manicure Services

- Nail-care tools must be cleaned and disinfected or discarded and replaced between resident.
- Designating nail-care tools for each resident is ideal.
- Individuals providing nail care must use the proper PPE such as gloves, gowns, masks, and eye equipment.
- Foot care is not part of this program, only authorized individual should perform foot/toenail care

Intergenerational and Group Activities

- Include onsite day care, school activities, arts and crafts or religious group
- Limit attendance, do not include those with s/s of infection (prescreen)

Transportation

- Facility vehicles need to be cleaned & disinfected and be equipped with first aid kits, PPE and spill containment kits
- Drivers should be included in bloodborne pathogen training and hepatitis B vaccination programs as they are at risk for exposure to blood and other potentially infectious materials

Volunteers

- Infection Control orientation should be part of the program
- Seasonal influenza vaccine should be offered to volunteers

Animal Services

- Animals should be clean, fully immunized and well mannered with no s/s of infection – may transmit pathogens such as MRSA and C, diff

TABLE 12.2: SAMPLE POLICY FOR ANIMALS IN LTC FACILITIES^{40,41,44}

General Statement	The presence of companion animals in LTC facilities may have a beneficial effect on the residents, patients, and employees. While evidence is mixed, individuals with life histories of pet interactions may have decreased loneliness as the result of the presence of companion animals.
Exclusions	High-risk animals such as reptiles, snakes, and insects; animals with a history of biting, and wild or feral animals will not be allowed in the facility due to the documented risk of disease transmission.
Vaccinations and Health Maintenance	<ul style="list-style-type: none">• All animals allowed into care communities must have records of appropriate vaccinations and health examinations as directed by applicable state and federal laws and guidelines.• All animals must have appropriate and responsible care provided with veterinary oversight including oral care and nail care.• All animals must be kept clean.• Ill animals will be excluded from visiting.• Animals should not have open wounds.
Cat Care	<ul style="list-style-type: none">• Do not allow cats into food preparation areas.• Do not feed cats or other pets in the kitchen or dining areas of facilities.• Clean the cat's litter box at least daily. Clean and sanitize box daily with appropriate EPA-approved disinfectant. Use appropriate PPE.• Wash hands with soap and water after cleaning litter box.• Keep facility cat indoors and ensure visiting cats are not allowed to roam in facility. Outdoor cats are more likely to be exposed to Toxoplasma and shed oocysts in their stool.
Dog Care	<ul style="list-style-type: none">• Do not allow dogs into food preparation areas.• Do not feed dogs or other pets in the kitchen or dining areas of facilities.• Dogs should be discouraged from licking patients.• Patients and residents will not feed treats to dogs.

Animal Services

TABLE 12.3: FACTORS TO CONSIDER FOR RESIDENT ANIMALS⁴⁴

Animal Factors	Management Factors
What species?	Where will the animal be fed and by whom?
What age?	Where will the animal defecate, and will there be any potential contact with that area by residents?
Source	Will the animal be restricted to certain areas? If so, how will that be done?
Temperament and health testing	What mechanism will be used to detect, report, and deal with any problems with the animal or residents?
What preventive medicine program will be used (vaccination, deworming)?	How will hand hygiene be emphasized and implemented?
Who will pay for veterinary care?	Will all residents have access to the animal?
If the animal becomes unsuitable (e.g., behavior, disease), what will happen to it?	What will be done if a resident or staff member is fearful or allergic?
What will happen if the animal develops a potentially zoonotic disease? Is there a plan to temporarily re-home the animal during treatment?	Will residents carrying pathogens that are potentially transmissible to the animal be restricted from animal contact?

Animal Services

TABLE 12.4: ANIMAL BENEFITS AND RISKS⁴³⁻⁴⁶

Animal	Benefit	Risk	
Birds, including caged parakeets, canaries, finches, rock doves, cockatiels, and parrots	<p>Active, colorful, personable</p> <p>Smaller birds can be inexpensive to keep</p> <p>Can be kept in cages or aviaries</p> <p>Can be taught to interact with humans</p>	<p>Allergies</p> <p>Bites or pecking</p> <p>Scratches</p> <p>Illness caused by</p> <ul style="list-style-type: none"> • <i>Mycobacterium avium</i> complex • <i>Chlamydomydia psittaci</i>, (psittacosis in parrots, ornithosis in other birds) • <i>Salmonella</i> • <i>Giardia</i> <p>Infected birds can remain infectious for several months, shedding bacteria through feces and nasal discharges</p>	
Cats	<p>Affectionate</p> <p>Familiar</p> <p>Interact well with humans</p>	<p>Allergies</p> <p>Bites</p> <p>Ringworm</p>	<p>Scratches</p> <p>Coats can pick up multidrug-resistant organisms</p> <p><i>Toxoplasma gondii</i></p>
Dogs	<p>Affectionate</p> <p>Familiar</p> <p>Interact well with humans</p>	<p>Allergies</p> <p>Bites</p> <p>Ringworm</p> <p>Scratches</p>	<p>Coats can pick up multidrug-resistant organisms</p> <p>Therapy dogs have been shown to shed MRSA and <i>C. difficile</i> after exposure to healthcare environments</p>
Fish	Properly maintained aquariums provide colorful diversion	Bacterial infections	
Miniature horses	<p>Affectionate</p> <p>Interact well with humans</p> <p>Can be trained as guide animals</p>	<p>Bites</p> <p>MRSA</p> <p><i>C. difficile</i></p>	<p>Kicking or accidental placement of hooves</p> <p><i>Salmonella</i></p>
Monkeys and other nonhuman primates	Exclude from LTC facilities due to infection risk	<p>Allergies</p> <p>Bites</p> <p>Scratches</p> <p>Macacine herpesvirus B</p> <p>Herpesvirus</p>	<p>Measles</p> <p><i>Salmonella</i></p> <p><i>Giardia</i></p> <p>Tuberculosis</p> <p>Rabies</p>

Animal Services

- Service Animals
 - Trained to do work and perform tasks for the benefit of individual with disability
- Companion Animals
 - Domesticated or domestic-bred animals, do not have specialized training of service animal, and are not guaranteed access under ADA (Americans with Disabilities Act)
 - Serves as companion in the home or in close daily relationship with humans
- Therapy Animals
 - Owned pet for visiting individuals in facilities, trained with their volunteer handlers, was evaluated over 1 year of age and was a registered-on therapy animal program
 - Not a service animal