



GREATER NEW YORK HEALTH CARE FACILITIES ASSOCIATION

# Infection Prevention Not Just Control

Presented by Mary Gracey-White, Director of Regulatory Compliance

&

Princess Villacarlos, Quality & Education Coordinator



# Objectives

1. Participants will discuss the importance of utilizing evidenced based practice to prevent and control the spread of infection.
2. Participants will understand and apply competency-based strategies regarding the use of PPE and effective hand hygiene.
3. Participants will understand the importance of Facility Environmental Management as it pertains to the Infection Prevention & Control Program.
4. Participants will gain knowledge regarding the current impact that Health Care Acquired infections (HAI) and emerging infections have on population health.
5. Participants will gain knowledge regarding the importance of a trained Infection Preventionist (IP) as per Phase III of the new CMS regulation effective November 28, 2019.

# Regulation: F880, F881- § 483.80 Infection Control

Facilities must establish and maintain an Infection Control Program designed to provide a safe, sanitary and comfortable environment and to help prevent the development and transmission of disease and infections.

Infection Prevention and Control F881 is one of the top 5 Survey Citations 2018-2019. Citations include:

- Hand hygiene for staff and residents,
- Catheters and tubing in contact with floors,
- Employees having direct contact with residents or their food without hand hygiene and PPE as needed.



# Key components of the Infection Prevention Control Program

- A system for preventing, identifying, reporting, investigating, and controlling infections and communicable diseases
- Written standards, policies and procedures in accordance with §483.80(a)(2)
- A system for recording incidents identified under the IPCP and corrective actions taken by the facility
- An Antibiotic Stewardship program (ASP) (F881)
- Continuing education in infection prevention and control
- Disease reporting to public health authorities
- Environmental Facility management
- Resident Health Program: Immunization(s), Initial PPD testing, Annual TB screening
- Employee Health Program: Immunization(s) including Influenza, Hepatitis B, Annual PPD testing/TB screening, post-exposure follow up for needle stick injuries, prohibiting employees with open skin lesions from direct contact with residents and their food.

# Transmission of Infection

**Direct Contact Transmission:** Occurs when microorganisms such as MRSA, VRE, CRE, influenza or mites from a scabies-infected resident are transferred from an infected or colonized person to another person. In nursing homes, resident-to-resident direct contact transmission may occur in common areas of the facility such as the recreation room, rehabilitation area, or dining room.

**Indirect Contact Transmission:** involves the transfer of an infectious agent through a contaminated inanimate object or person.

Opportunities for indirect contact transmission:

- Clothing, uniforms, laboratory coats, or isolation gowns used as PPE may become contaminated with potential pathogens after care of a resident colonized or infected with an infectious agent.
- Contamination of high touch environmental surfaces (bedside table, bed rails, toilets, sinks, and handrails), contributes to transmission of pathogens including *C. difficile* and norovirus.

Certain pathogens may contaminate and survive on equipment and environmental surfaces for long periods of time. Examples include, but are not limited to:

- *C. difficile* spores can live on inanimate surfaces for up to 5 months
- The hepatitis B virus can last up to a week on inanimate surfaces
- The influenza virus can survive on fomites (any inanimate object or substance capable of carrying infectious organisms and transferring them from one individual to another) for up to 8 hours.

Mechanisms to prevent and control transmission of infectious organisms through direct and indirect contact include standard and transmission-based precautions and are described in their subsequent sections.

# Standard and Transmission Based Precautions

## **Standard Precautions**

- Apply to all residents, regardless of suspected or confirmed diagnosis or presumed infection status.
- Based on the principle that all blood, bodily fluids, secretions, excretions except sweat, regardless of whether they contain visible blood, non-intact skin and mucous membranes may contain transmissible infectious agents.
- Standard precautions include but are not limited to: hand hygiene; use of gloves, gown, mask, eye protection, or face shield depending on the anticipated exposure; safe infection practices, and respiratory hygiene. Also equipment or items in the resident environment likely to have been contaminated with infectious bodily fluids must be properly cleaned and disinfected to prevent transmission of infectious agents.

## **Transmission-Based Precautions (Also known as “Isolation Precautions”)**

- Refer to actions implemented in addition to standard precautions that are based upon the means of transmission (airborne, contact, and droplet) in order to prevent or control infectious.

# Personal Protective Equipment (PPE)

- Includes: gloves, gowns, masks, respirators, and eyewear used to create barriers that protect skin, clothing, mucous membranes and respiratory tract from infectious agents. The items selected for use depend on type of patient care activity and potential modes of Transmission (Ex. mask and goggles or eye shield if chance that splash or spray of blood or body fluids may occur to eyes, mouth, or nose.)



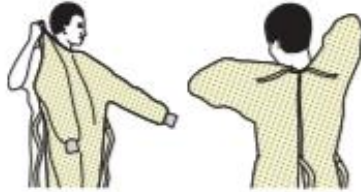


## SEQUENCE FOR PUTTING ON PERSONAL PROTECTIVE EQUIPMENT (PPE)

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

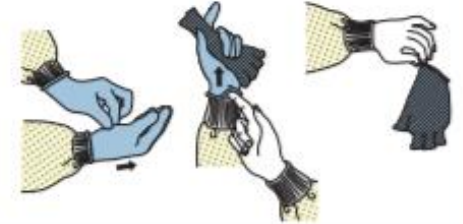


## HOW TO SAFELY REMOVE PERSONAL PROTECTIVE EQUIPMENT (PPE) EXAMPLE 1

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

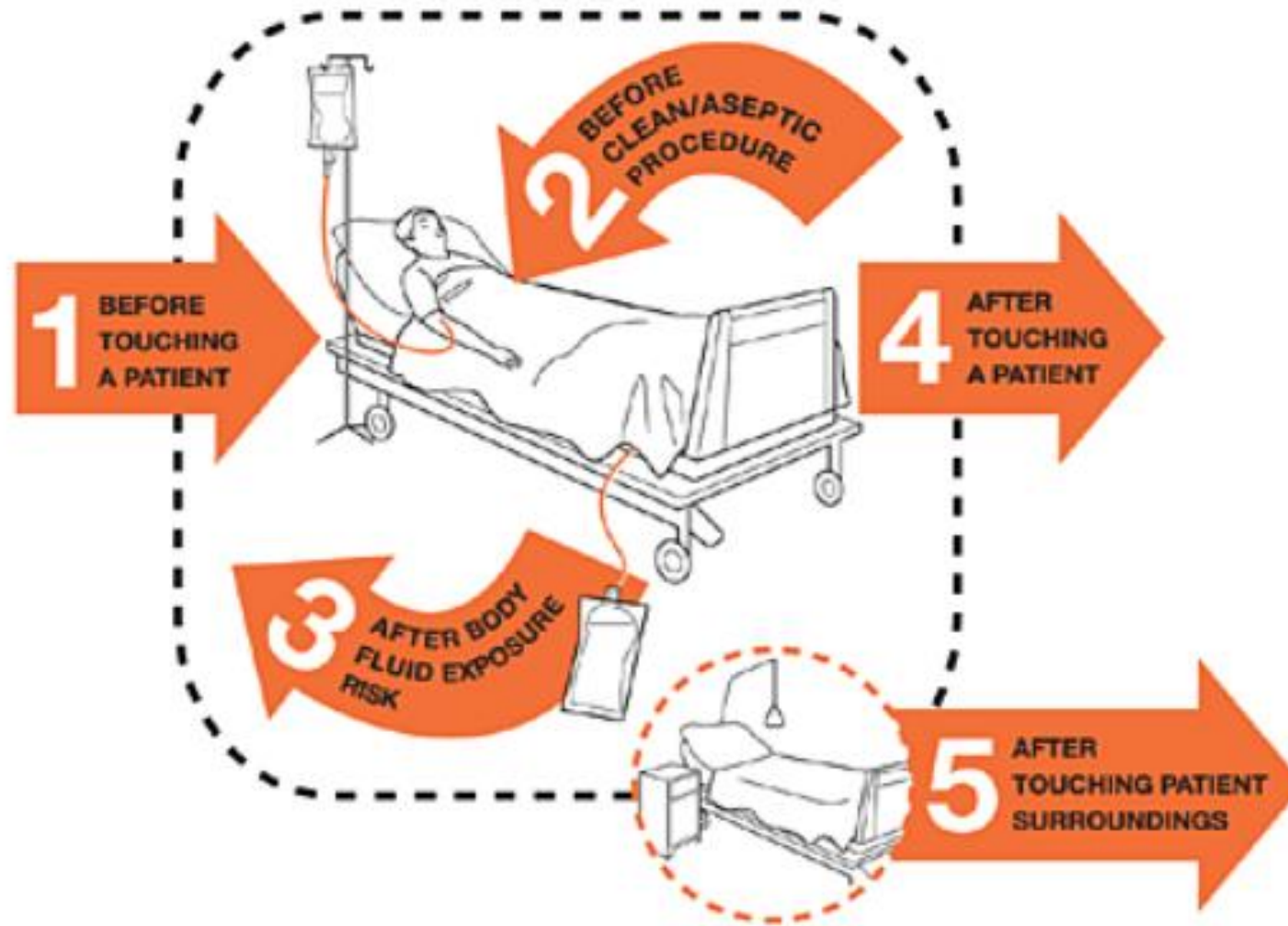


PERFORM HAND HYGIENE BETWEEN STEPS IF HANDS BECOME CONTAMINATED AND IMMEDIATELY AFTER REMOVING ALL PPE





# 5 Moments for Hand Hygiene



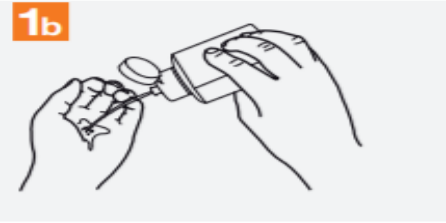
# How to Handrub?

**RUB HANDS FOR HAND HYGIENE! WASH HANDS WHEN VISIBLY SOILED**

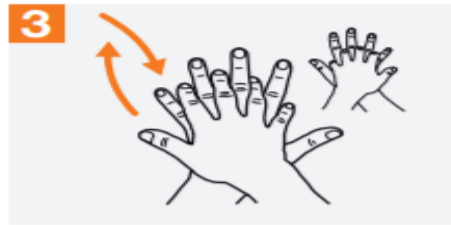
**🕒 Duration of the entire procedure: 20-30 seconds**



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;



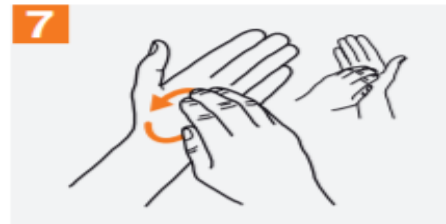
Palm to palm with fingers interlaced;



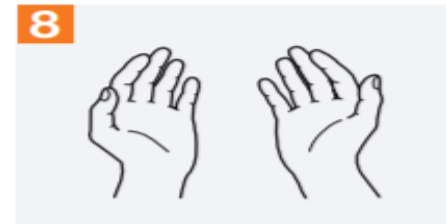
Backs of fingers to opposing palms with fingers interlocked;



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.

# How to Hand Wash

Wash hands when visibly soiled. Otherwise, use handrub.  
Duration of the entire procedure: 40-60 seconds



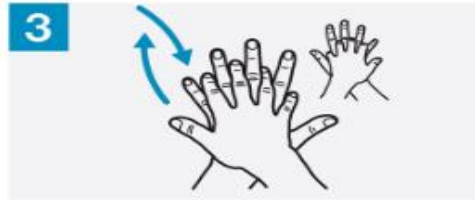
Wet hands with water;



Apply enough soap to cover all hand surfaces;



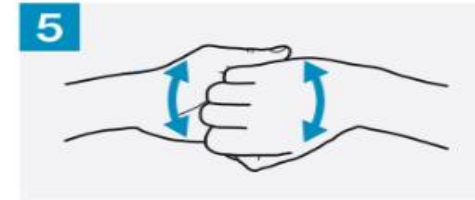
Rub hands palm to palm;



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;



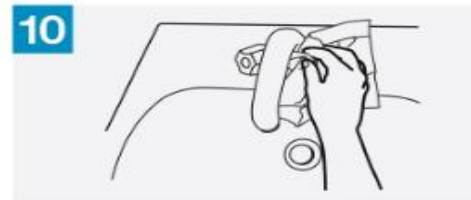
Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;



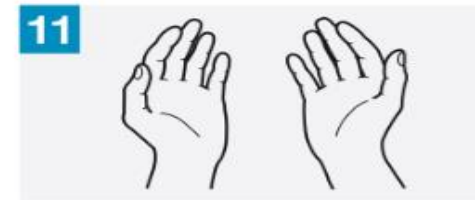
Rinse hands with water;



Dry hands thoroughly with a single use towel;



Use towel to turn off faucet;



Your hands are now safe.

# Outbreak Pathogens and Syndromes in Nursing Homes

**Respiratory:** Influenza, Legionella species, Streptococcus pneumoniae, parainfluenza, respiratory syncytial virus (RSV).

**Gastrointestinal:** Norovirus, Clostridioides difficile (C.Diff), Salmonella.

**Other pathogens:** Group A Streptococcus, Methicillin-resistant Staphylococcus aureus (MRSA).

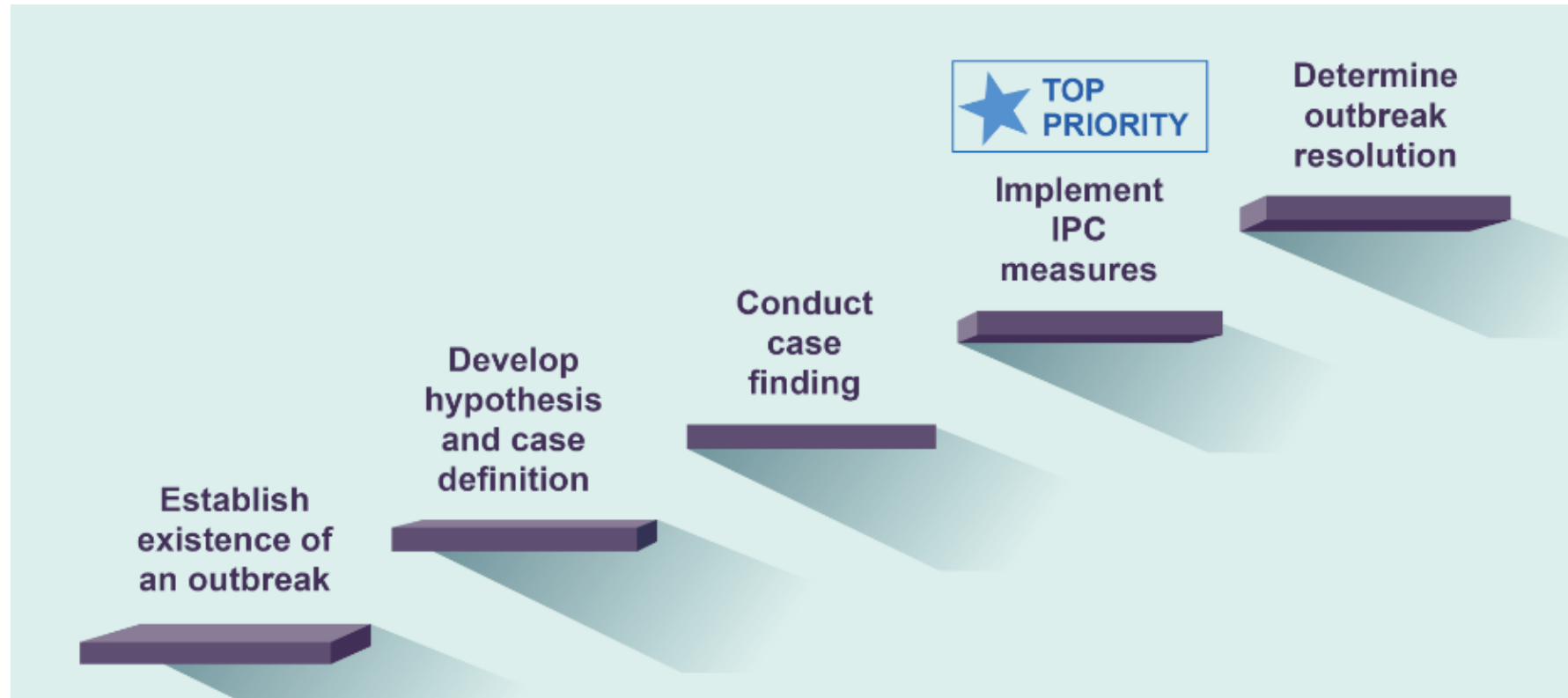
**Other syndromes:** Conjunctivitis, skin infestations (e.g., scabies or lice).

# Healthcare Acquired Infections & Population Health

- Healthcare-associated infections (HAIs) are a significant source of complications across the continuum of care
- Risk factors for HAIs can be grouped into three general categories: medical procedures and antibiotic use, organizational factors, and patient characteristics. The behaviors of health care providers and their interactions with the health care system also influence the rate of HAIs.
- The financial benefit of utilizing effective prevention practices is estimated to be \$25 billion to \$31.5 billion in medical cost savings
- Studies have shown that proper education and training of health care workers increases compliance with and adoption of best practices (e.g., infection control, hand hygiene, attention to safety culture, and antibiotic stewardship) to prevent HAIs.



# Outbreak Investigative Process



Norovirus outbreaks have a significant impact on residents in nursing homes. More than half of all norovirus outbreaks reported in the United States occur in long-term care facilities. Older adults and those with comorbidities residing in nursing homes are at risk for complications that may lead to hospitalizations and death.

Measures to limit transmission:

- Resident cohorting and Isolation Precautions
- Hand Hygiene
- Resident transfer & unit closure
- Environmental Cleaning
- Staff sick leave policy
- Communication and notification

# Emerging Infectious Diseases

- Facility staff should be knowledgeable of and follow the guidelines as outlined by the CDC in order to decrease the potential for the transmission of various infectious diseases.
- Medical Director / DNS will be notified of any new admission with a clinical presentation of symptoms that were not listed on the PRI and/or hospital medical records.
- For residents residing in the facility more than 21 days, the Medical Director / DNS will be notified regarding any signs and symptoms that have not been formally diagnosed by their primary physician.
- The Infection Preventionist (IP) will convene the infection control committee to determine the plan of care for a resident with a potential infectious disease diagnosis



- **CDC:** The first human infection with an avian influenza A(H5N1) virus (H5N1 bird flu) since September 2017 has been reported in Nepal (May 6<sup>th</sup>, 2019). This is the South Asian country's first human infection with H5N1 bird flu. Nepal has been experiencing sporadic outbreaks of H5N1 bird flu among poultry in recent months. Asian-lineage H5N1 viruses have been associated with poultry outbreaks in Asia, the Middle East, Europe and Africa since 2003 (860 human infections reported in total)
- **WHO:** In the first four months of 2019, 179 countries reported 168,193 cases of measles. That is almost 117,000 more cases reported during the same period in 2018. The WHO estimates that only 1 in 10 cases are reported.
- **NATGEO:** An Ebola epidemic affecting heavily populated provinces in the northeastern Democratic Republic of the Congo has sickened 1,877 people and killed 1,248 as of May 22, according to the World Health Organization—despite the efforts of specialist medical teams, an effective vaccine, and new treatments that are being tested in the region.
- **The New York Times:** *Candida auris*, 2018's #1 emerging infection continues to be a concern in 2019. *C auris* is not easily identified, is often multidrug-resistant and outbreak-prone in healthcare-related settings. In New York State, most of the 331 identified cases were found in Brooklyn and Queens. NYSDOH has discussed the possibility of prescreening those people who have recently stayed at a hospital intensive care unit or nursing home in Brooklyn or Queens; and those who are on ventilators, catheters or other invasive equipment that allow the infection to enter the body.

# Facility Environmental Management

- The U.S. Environmental Protection Agency (EPA) recommends that only EPA-registered products be used. Only a sanitizer or disinfectant product with an EPA registration number on the label can make public health claims that they are effective in reducing or inactivating germs. Many bleach and hydrogen peroxide products are EPA-registered and can be used to sanitize or disinfect.
- It is imperative that employees follow the manufactures' instructions when using EPA-registered products described as sanitizers or disinfectants. This includes pre-cleaning, how long the product needs to remain wet on the surface or item, whether or not the product should be diluted or used as is, and if rinsing is needed.
- The CDC recommends thorough daily and terminal cleaning and disinfection of patient rooms in which *C. auris* infection or colonization was present, and the use of an EPA-registered hospital-grade disinfectant effective against *C. difficile* spores.



# Phase III

- The facility must designate one or more individuals as the Infection Preventionist(s) (IP)(s) who are responsible for the facility's Infection Prevention & Control Program (IPCP).
- The Infection Preventionist must:
  - Have primary professional training in nursing, medical technology, microbiology, epidemiology, or another related field
  - Be qualified by education, training, experience, or certification
  - Work at least part-time at the facility
  - Have completed specialized training in infection prevention and control
- The Infection Preventionist must be a member of the facility's QA committee and report to the committee on the IPCP. **This regulation will go into effect beginning November 28, 2019.**

# Resources

- CMS Infection Preventionist Training:  
[https://www.train.org/cdctrain/training\\_plan/3814](https://www.train.org/cdctrain/training_plan/3814)
- PPE Training and Posters:  
<https://www.cdc.gov/hai/prevent/ppe.html>
- Disinfection and Sterilization Guidelines:  
<https://www.cdc.gov/infectioncontrol/guidelines/disinfection/>
- CDC Reports on Infectious Diseases and Outbreaks in LTC facilities  
<https://www.cdc.gov/longtermcare/staff/report-publications.html>