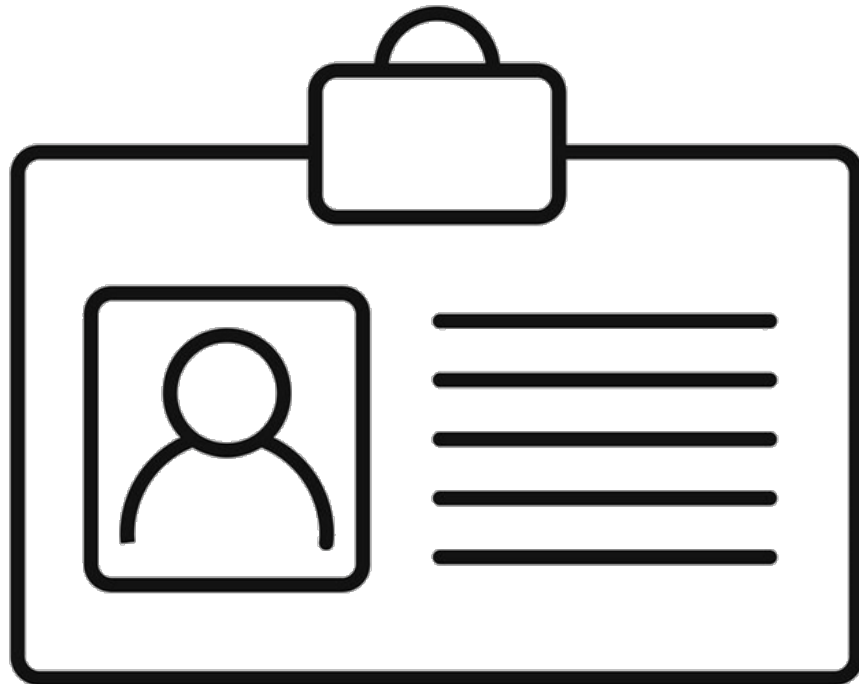




Georgia Department of Public Health:
Infection Prevention and Respiratory Protection
May 25, 2022

Meet the Team:



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Thank You to Our Partners

- Georgia Department of Public Health
- University of Georgia



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Trainings

- There will be two training sessions per year focused on relevant infection prevention topics, updates and shared best practices.
- Stay tuned for dates in:
 - October 2022



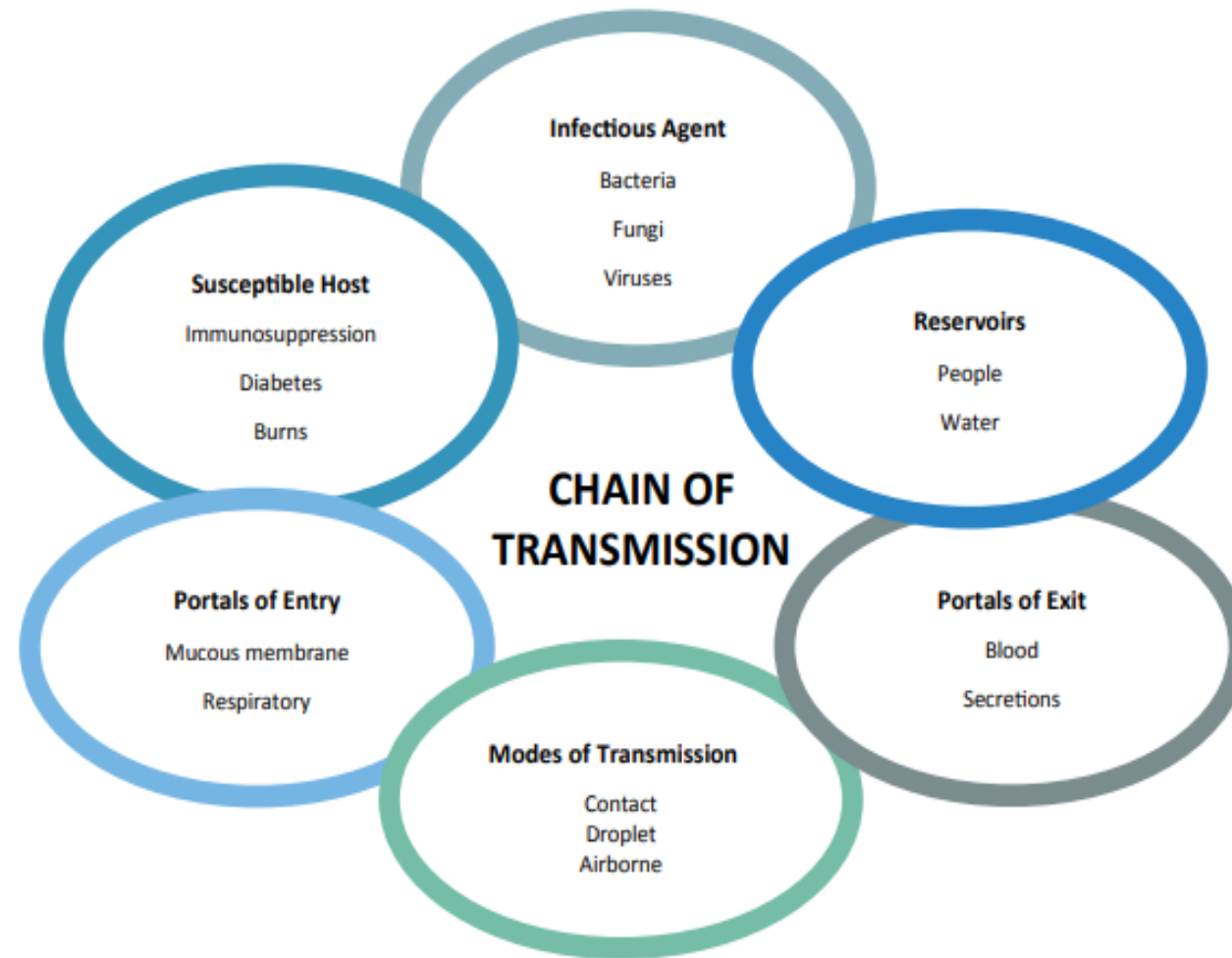
Intro to Infection Prevention

- Good infection prevention and control practices are key to maintaining a good, safe and healthy environment for residents and staff.
- The goal of infection prevention is to prevent the transfer of microorganisms and therefore prevent infection.

Goals

- Understand how infections are spread
- Understand how to apply basic principles and practices to prevent the spread of infection
- Understand when to use additional precautions
- Understand when and how to safely use personal protective equipment (PPE)

How Infections Are Spread



Preventing Spread of Infection

- **Immunization**

- Staff vaccines

- COVID-19 vaccine
- Influenza vaccine
- Measles, Mumps, Rubella (MMR)
- Varicella
- Hepatitis B
- Pertussis
- Meningococcal
- Tetanus/diphtheria

Preventing Spread of Infection

- **Immunization**

- Resident vaccines

- Assess upon admission and at least annually thereafter

Standard Precautions

- Established for the safety of healthcare personnel and is basic practice that all employees in healthcare setting should adhere to
- Assume that every person is potentially infected or colonized therefore protect yourself when anticipating contact with blood, body secretions & excretions, non-intact skin or lesions and mucous membranes

Standard Precautions

- **Includes:**
 - Hand hygiene
 - Proper use of Personal Protective Equipment (PPE) such as gloves, gown, mask and eye protection
 - Safe injection practices
 - Respiratory hygiene/cough etiquette

Standard Precautions

- **Hand Hygiene**

- After contact with blood, body fluids, secretions, excretions, contaminated items
- Immediately after removing gloves
- Between resident contacts
- Before and after food preparation and service

Standard Precautions

- **Needles and other sharps**
 - "One needle-one syringe-only one vial" rule
 - Use safety engineered products
 - Dispose of used needles and other contaminated sharps per OSHA requirements (OSHA's Bloodborne Pathogens Standard ([29 CFR 1910.1030](#)))

Standard Precautions

- **Respiratory hygiene/cough etiquette**
 - Cover mouth/nose when sneezing or coughing
 - Use tissue and dispose in no-touch receptacle
 - Perform hand hygiene contaminating hands with respiratory secretions
 - Wear surgical mask if unable to follow basic respiratory hygiene practices
 - Maintain separation between residents' beds if possible

Preventing Spread of Infection

- **Surveillance**

- Continually assess residents and staff for signs and symptoms of illness.
- Staff should avoid coming to work if they are sick.
- Be familiar with additional precautions to take for residents diagnosed with infections that are easily transmissible.
- Be on the lookout for potential outbreaks within your facility.

What Is Considered an Outbreak?

- How many cases make an outbreak?
- “An increase in cases above what is normally expected.”
- What is normally expected in your area/facility for the following?
 - Norovirus
 - C. diff
 - MRSA
 - Invasive Group A Strep

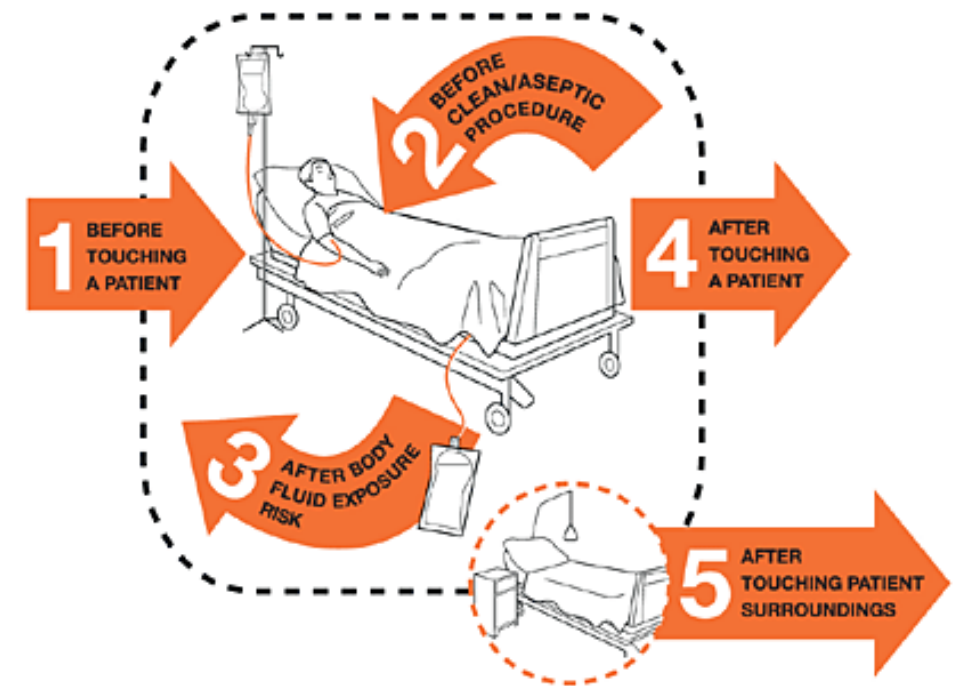
Preventing Spread of Infection

- **Hand Hygiene**

- The most important way to prevent spread of infection.
- The act of hand cleaning to remove visible soil or killing of germs from the hands.
- Can be done through hand washing with soap and water or an alcohol-based hand rub.

Indications for Hand Hygiene

- WHO five moments for hand hygiene
- Soap and water is recommended:
 - When hands are visibly soiled
 - Before eating
 - After using the bathroom
 - After exposure to spore-forming bacteria or during GI outbreaks (*C. difficile* or Norovirus)



Routine Handwashing

- When developing a hand hygiene program, we must consider:
 - Product selection
 - Dispenser location
 - Indications
 - Technique



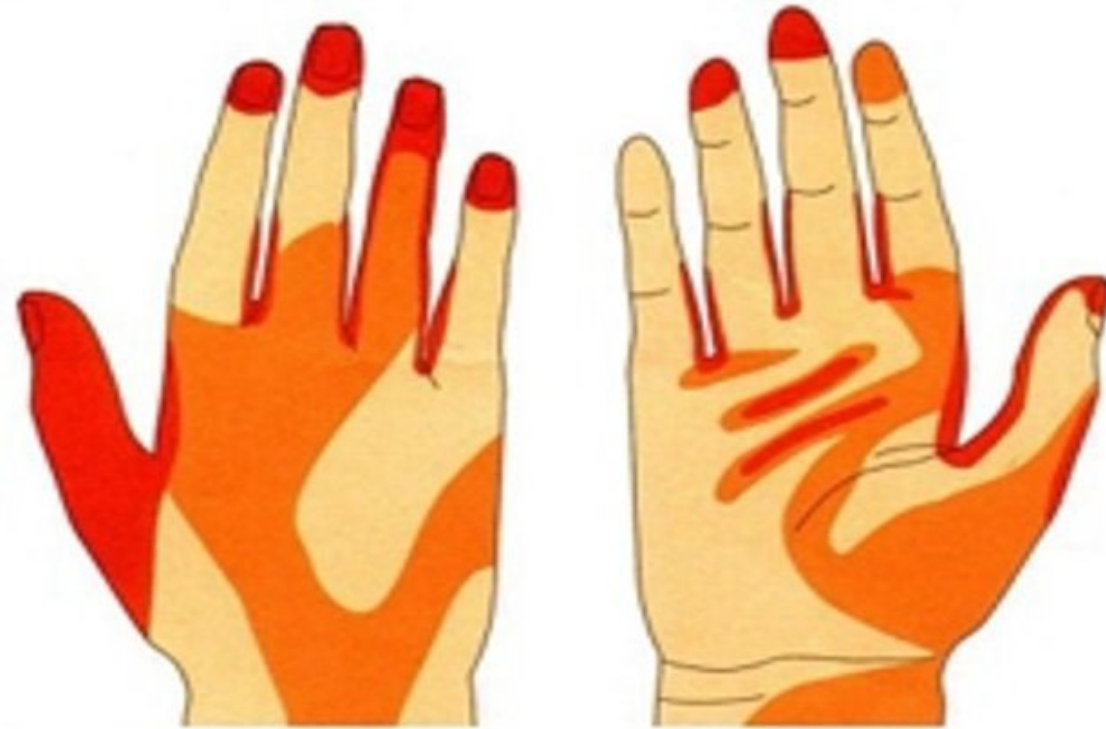
Product Selection

- How much alcohol content is necessary?
 - 60-95% is the normal range
 - Higher alcohol content can dry the skin
 - Many products contain emollients to moisturize the skin
- Should hand soap be antimicrobial?
 - This is not necessary; hand soaps should be fragrance-free lotion soap in most settings

Technique and Competency


- ABHR
 - Volumen dispensed should take 15-20 seconds to rub in and dry
 - Some dispensers have adjustments for volume dispensed
- Soap and water
 - Wet hands
 - Apply soap and lather for 20 seconds, covering all surfaces and under rings
 - Rinse thoroughly
 - Dry using a disposable towel
 - Turn off faucet with dry towel

Hand Hygiene



 Most frequently missed

 Frequently missed

 Less frequently missed

Staff Education

- Staff education about the role of hand hygiene in preventing infections is a priority for health care organizations
- Free training and promotional materials
 - www.cdc.gov/handhygiene/traning.html
- Education does not ensure adherence

Adherence Considerations

- Multimodal and multidisciplinary strategies must be used to improve adherence to hand hygiene.
 - Administrative support
 - Convenient and acceptable products and dispensers
 - Monitoring and feedback
 - Role modeling of desired HH practices
 - Motivational or incentive programs
 - Behavioral and motivational components

Preventing Spread of Infection

- **PPE**

- Physical barrier used to prevent transmission of germs between residents and staff
 - Protects airways, skin, clothing and mucous membranes
- Selection of PPE is dependent on potential anticipated risk
- Should be removed immediately following use and disposed of appropriately
- Ensure PPE is readily accessible and available for all staff

Preventing Spread of Infection

- **PPE**

- Gloves
- Gown
- Masks
- Eye protection

Preventing Spread of Infection

- **PPE**

- Gloves and gowns

- Used for activities that involve direct care where the caregiver's skin or clothes may come in direct contact with the resident or items in the resident's room or bed
- Upon completion of patient care activities, remove, discard and perform hand hygiene immediately

Preventing Spread of Infection

- **PPE**

- Masks and Eye Protection

- Used for activities that involve direct care where there is a risk of encountering infectious droplets

Transmission-Based Precautions (TBP)

- Implemented for residents with a known or suspected infectious agent such as:
 - COVID-19, Influenza, Norovirus, MRSA, VRE, C.DIFF, C.AURIS, ESBL

Transmission-Based Precautions


- Three main types of TBPs:
 - Contact precautions
 - Droplet precautions
 - Airborne precautions

Transmission-Based Precautions

- Other types of TBPs:
 - Enhanced barrier precautions
 - Enteric precautions
 - Special droplet contact*
 - Droplet contact and airborne contact

*Could be named differently at each facility

Sample Signage



STOP

CONTACT PRECAUTIONS

Visitors must report to Nursing Station before entering.



✓ Perform hand hygiene before entering and before leaving room



✓ Wear gloves when entering room or cubicle, and when touching resident's intact skin, surfaces, or articles in close proximity



✓ Wear gown when entering room or cubicle and whenever anticipating that clothing will touch resident items or potentially contaminated environmental surfaces



✓ Use resident-dedicated or single-use disposable shared equipment or clean and disinfect shared equipment (BP cuff, thermometers) between residents



ALTO

Precauciones Ambientales

Los visitantes deben presentarse primero al puesto de enfermería antes de entrar.

- Lávese las manos con agua y jabón.
- Póngase guantes al entrar al cuarto.

Disclaimer: This isolation sign is provided as visual example of what a facility could use and may be modified as necessary to meet a specific LTC facility's needs. Any isolation signs used must be compliance with CMS F tag 241 section 483.15(a), state requirements, and specific facility policy.



STOP

CONTACT PRECAUTIONS

Visitors must report to Nursing Station before entering.



✓ **SPECIAL ENTERIC**
Perform hand hygiene before entering and before leaving the room. *Must wash with soap and water for 15-20 seconds.*



✓ Wear gloves when entering room or cubicle, and when touching resident's intact skin, surfaces, or articles in close proximity



✓ Wear gown when entering room or cubicle and whenever anticipating that clothing will touch resident items or potentially contaminated environmental surfaces



✓ Use resident-dedicated or single-use disposable shared equipment or clean and disinfect shared equipment (BP cuff, thermometers) between residents



ALTO

Precauciones Ambientales

Los visitantes deben presentarse primero al puesto de enfermería antes de entrar.

- Lávese las manos con agua y jabón.
- Póngase guantes al entrar al cuarto.

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Sample Signage



DROPLET PRECAUTIONS

Visitors must report to Nursing Station before entering.



- ✓ Perform hand hygiene before entering and before leaving room



- ✓ Wear mask when entering room

! Visitors and health care workers



Precauciones de Gotas Diminutas

Los visitantes deben presentarse primero al puesto de enfermería antes de entrar.

- Lávese las manos.
- Póngase máscara al entrar al cuarto.

Disclaimer: This isolation sign is provided as visual example of what a facility could use and may be modified as necessary to meet a specific LTC facility's needs. Any isolation signs used must be compliance with CMS F tag 241 section 483.15(a), state requirements, and specific facility policy.



AIRBORNE PRECAUTIONS

Visitors must report to Nursing Station before entering.



- ✓ Perform hand hygiene before entering and before leaving room



- ✓ Wear N95 respirator when entering room

! See nurse for instructions on proper use



- ✓ Keep door closed



- ✓ Dietary may not enter



Precauciones Ambientales

Los visitantes deben presentarse primero al puesto de enfermería antes de entrar.

- Lávese las manos.
- Mantenga la puerta cerrada.
- Póngase máscara N95 con filtro al entrar al cuarto.
- No debe entrar el dietista.

Disclaimer: This isolation sign is provided as visual example of what a facility could use and may be modified as necessary to meet a specific LTC facility's needs. Any isolation signs used must be compliance with CMS F tag 241 section 483.15(a), state requirements, and specific facility policy.

Transmission-Based Precautions

SEQUENCE FOR *DONNING* PERSONAL PROTECTIVE EQUIPMENT (PPE)

The type of PPE used will vary based on the level of precautions required; e.g., Standard and Contact, Droplet or Airborne Infection Isolation.

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



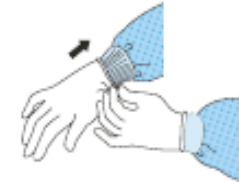
3. Goggles or Face Shield

- 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

Adapted from Centers for Disease Control and Prevention. Available at: <http://www.cdc.gov/HAI/pdfs/ppe/ppeposter148.pdf>.

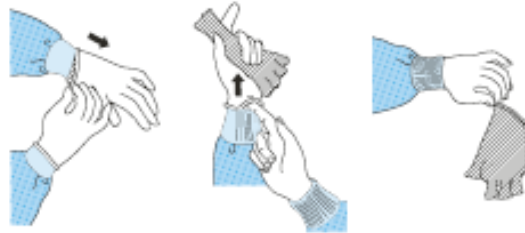
Transmission-Based Precautions

SEQUENCE FOR REMOVING PERSONAL PROTECTIVE EQUIPMENT (PPE)

Except for respirator, remove PPE at doorway or in anteroom.
 Remove respirator after leaving patient room and closing door.

1. 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



2. Goggles or Face Shield

- Outside of goggles or face shield is contaminated!
- To remove, handle by head band or ear pieces
- Place in designated receptacle for reprocessing or in waste container



3. 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



2. 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



Perform hand hygiene immediately after removing all PPE

Adapted from Centers for Disease Control and Prevention. Available at: <http://www.cdc.gov/HAI/pdf/ppe/ppeposter148.pdf>.

Cleaning, Disinfection of the Environment

- Staff who perform cleaning activities should also wear PPE:
 - For protection from microorganisms
 - To ensure their safety while handling chemicals
 - To prevent transmission of microorganisms between resident environments

Cleaning, Disinfection of the Environment

- Cleaning versus Disinfection
 - Cleaning is the physical removal of dirt, body fluids and other organic matter.
 - Disinfection is the act of destroying the number of "bugs" on a surface.
 - A surface cannot be disinfected unless it has been cleaned.

Cleaning, Disinfection of the Environment

- **WHY** is cleaning and disinfection of the environment so important?
 - The physical environment in a facility can be a reservoir for infectious agents, such as bacteria, fungus and viruses.
 - Cleaning, disinfecting and storing equipment and supplies is important in preventing the transmission of potential pathogens.

Cleaning, Disinfection of the Environment

- **WHAT** items must be cleaned?
 - Ideally, ALL surfaces should be cleaned according to an established schedule. For example:
 - Any items or equipment used/shared between patients
 - Common high-touch surfaces, such as call lights, remote control devices, over-bed tables and nightstands, rails, sinks, toilets and bathroom fixtures, telephones, light switches, doorknobs, handrails and other handles, etc.
 - Walls, floors and blinds
 - Carpets
 - Hard surfaces in the facility
 - Horizontal surfaces

Cleaning, Disinfection of the Environment

- **WHAT** products do I use to clean?
 - As much as possible, use hospital-grade cleaners and disinfectants.
 - Microfiber is recommended over cotton fiber.
 - Follow the manufacturer's directions for use (read the label).
 - Ensure correct dilution of disinfectants/germicides, recommended contact times and appropriate environmental conditions as these affect how well the product works.

Cleaning, Disinfection of the Environment

- **WHEN** should cleaning occur?
 - Clean any equipment, items or surfaces used between patients.
 - Clean any visibly soiled items as soon as possible.
 - Clean high-touch surfaces at least daily and more often as needed during outbreaks. The same applies to emptying trash.
 - Walls, floors and other surfaces should be cleaned according to the established Environmental Services (EVS) schedule.

Cleaning, Disinfection of the Environment

- **WHEN** should cleaning occur?
 - Deep cleaning should occur once a resident is discharged or transferred
 - All surfaces that came in contact with the resident or may have been contaminated must be cleaned and disinfected prior to the next resident.
 - Unused items, such as toilet paper and towels, should be discarded if disposable or cleaned if reusable.
 - All linen, both used and unused, must be sent to the laundry.

Cleaning, Disinfection of the Environment

- **WHEN** should cleaning occur?
 - Deep cleaning should occur after a resident is discharged or transferred.
 - Pillows and mattresses should be inspected. Replace if any holes or tears are found.
 - Use PPE, including a gown, when performing deep cleaning. All PPE must be removed and discarded upon exiting the cleaned room.

Cleaning, Disinfection of the Environment

- **WHERE** should cleaning products and supplies be stored?
 - Chemicals must be securely stored when not in use.
 - All cleaning supplies should be stored in their original containers when possible. If stored in secondary containers, they should be adequately labeled with contents.
 - Facility should try to be familiar with precautions associated with the chemicals they use.

Other Considerations

- Trash
- Medical waste
- Laundry and linen handling and storage
- Handling and storage of equipment and supplies
- Enhanced cleaning during an outbreak

Other Considerations

- **Needles and other sharps**
 - "One needle-one syringe-only one vial" rule
 - Use safety engineered products
 - Dispose of used needles and other contaminated sharps per OSHA requirements (OSHA's Bloodborne Pathogens Standard ([29 CFR 1910.1030](#)))

Other Considerations

- **Respiratory hygiene/cough etiquette**
 - Cover mouth/nose when sneezing or coughing
 - Use a tissue and dispose in no-touch receptacle
 - Perform hand hygiene when hands become contaminated with respiratory secretions
 - Wear a surgical mask if unable to follow basic respiratory hygiene practices
 - Maintain separation between residents' beds if possible


Additional Precautions

- **Visitors**

- Use hand hygiene prior to and after visiting the resident.
- Additional PPE, such as masks and gloves, can be used when warranted.
- Sick visitors should not be allowed to visit.


Respiratory Protection Program

- If the use of a respirator is required in the course of a staff member's work, a respiratory protection program (RPP) is required by OSHA's respiratory protection standard.
- The [OSHA Respiratory Protection Guidance](#) resource is helpful for facilities such as ALFs and PCHs to develop their RPP.



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



OSHA is committed to protecting the health and safety of America's workers. This guidance is designed specifically for nursing homes, assisted living, and other long-term care facilities (LTCFs) (e.g., skilled nursing facilities, inpatient hospice, convalescent homes, and group homes with nursing care). LTCFs are different than other healthcare settings because they assist residents and clients with tasks of daily living in addition to providing skilled nursing care.

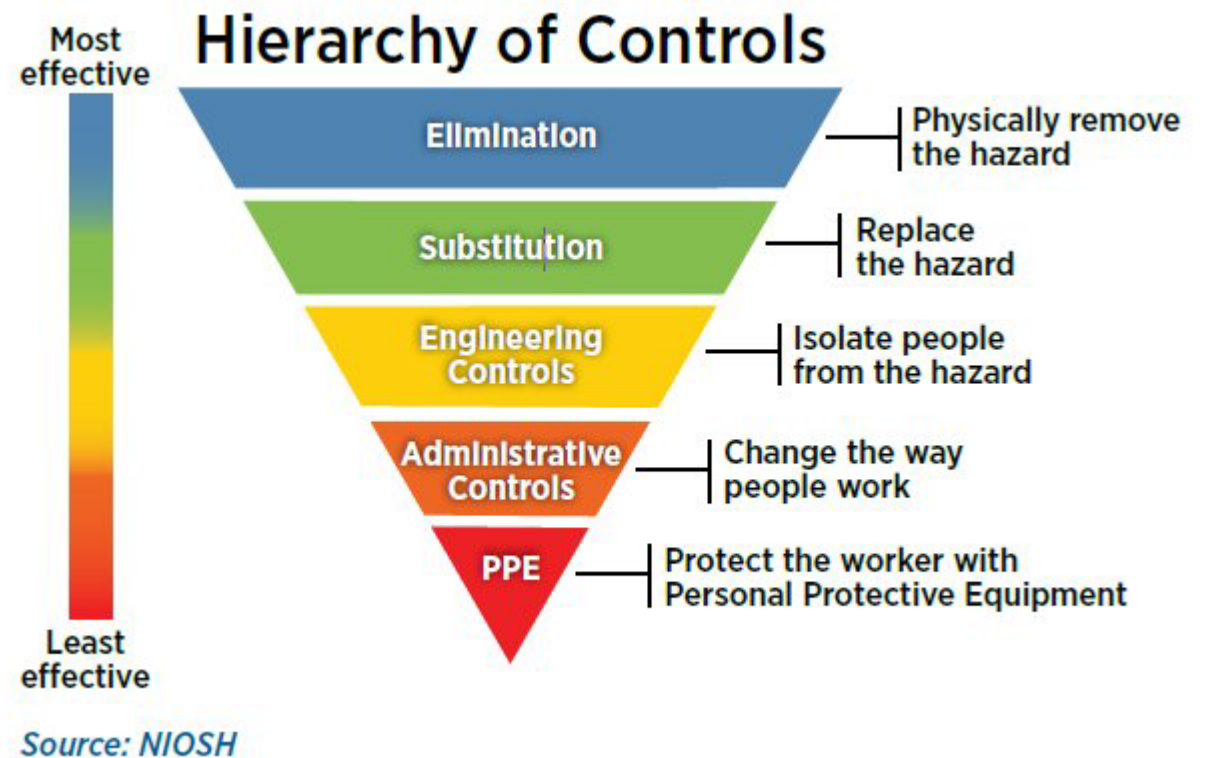
While this guidance focuses on protecting workers from occupational exposure to SARS-CoV-2 (the virus that causes COVID-19 disease) by the use of respirators, primary reliance on engineering and administrative controls for controlling exposure is consistent with good industrial hygiene practice and with OSHA's traditional adherence to a "hierarchy of controls."¹ Under this hierarchy, engineering and administrative controls are preferred to personal protective equipment (PPE). Therefore, employers should always reassess their engineering controls (e.g., ventilation) and administrative controls (e.g., [hand hygiene](#), physical distancing, cleaning/disinfection of surfaces) to identify any changes they can make to avoid over-reliance on respirators and other PPE (see CDC's COVID-19 webpage on [Nursing Homes and Long-Term Care Facilities](#)). This is especially vital considering the current supply chain demand for N95 filtering facepiece

¹ More information about the hierarchy of controls can be found at: <https://www.osha.gov/hierarchyofcontrols/hazard-prevention.html>

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Hierarchy of Controls

- Eliminate or control hazard/all serious hazards
- Use interim controls while you develop and implement long-term solutions
- Select controls according to a hierarchy that emphasizes engineering solutions first, followed by those that are less effective
- Avoid controls that could indirectly introduce new hazards, such as exhausting contaminated air near fresh air intakes

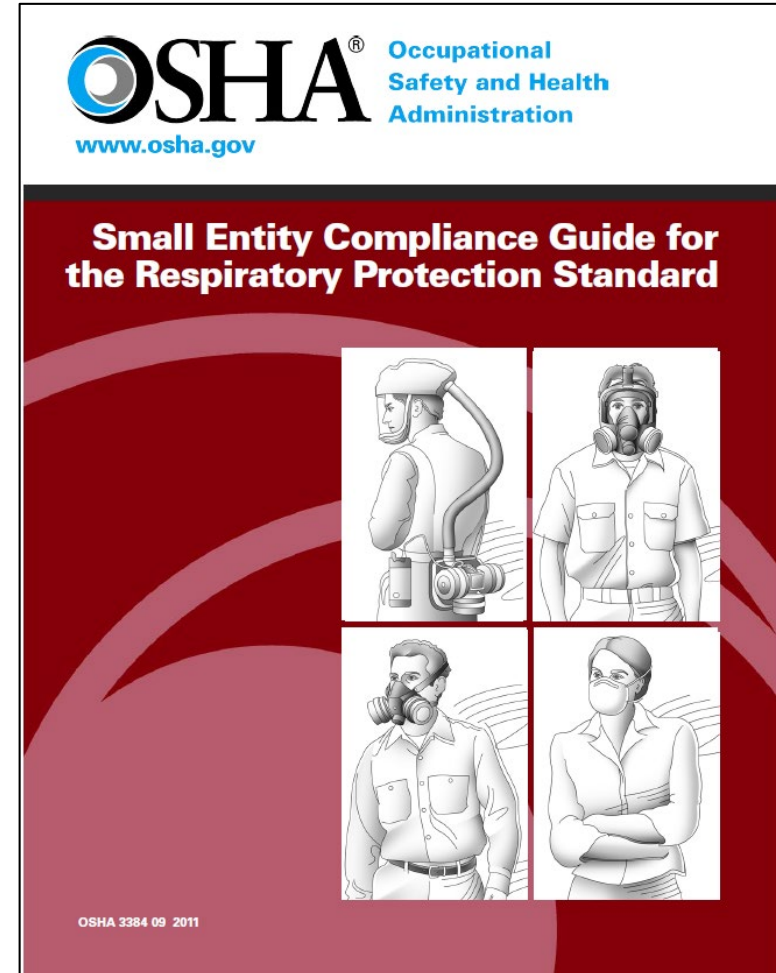


What Elements of a RPP Are Required?

- When respirators are required, employers must implement a written, worksite-specific RPP.
- Program must include the following elements:
 - Medical evaluation
 - Fit testing
 - Training
 - Documentation

RPP

- Refer to OSHA's Small Entity Compliance Guide for the Respiratory Protection Standard for a better understanding of OSHA's Respiratory Protection standard.
- www.osha.gov



RPP Elements

- Assign a trained program administrator.
 - IP, nurse administrator or consulting service
- Implement and maintain a written RPP detailing worksite procedures and elements required for respirator use and hazards.
 - Medical evaluation, fit testing, training, maintenance

RPP Elements

- Conduct a risk assessment to identify which workers are at risk to specific hazards.
 - e.g., Tuberculosis, COVID-19, hazardous chemicals
 - Include any staff working closely with residents or others with suspected or confirmed COVID-19 or other identified hazards
- Implement procedures for the selection of appropriate respirators for hazards.
- Select from NIOSH-approved respirators and understand the risks of counterfeit products during the time of high demand.

RPP Elements

- Consider alternatives during times of supply shortages.
- Choose eye and face protection that can be safely worn together and not interfere with the respirator seal.
- Implement procedures for medical evaluations of workers who are required to wear respirators.
- Ensure OSHA-approved fit tests are completed for all who are required to wear respirators.

RPP Elements

- Establish procedures and schedules for maintaining and storing respirators that are not single-use.
 - Procedures for cleaning, disinfecting, storing, repairing, and discarding
 - Procedures in accordance with CDC guidelines for standard (single use), contingent, and crisis use
- Provide training tailored to the language and education levels of workers required to wear respirators.
- Train staff on donning, seal check, workplace hazards, and use and removal of a respirator.
- Conduct workplace evaluations to ensure the RPP is appropriately implemented and up-to-date and that respirators are correctly used.

Fit Testing

- Use only OSHA-approved fit testing protocols found in 29 CFR 1910.134, Appendix A.

Face Coverings, Face Masks Used for Source Control, Surgical Masks and Respirator

- As a part of the RPP, it's important to understand the different PPE available for use and entities offering authorization for such products and devices.
- This understanding ensures the appropriate selection and uses for the various products.
- Other PPE and eye and face protection is covered in the OSHA General PPE Standard (29 CFR 1910.132) and Eye and Face protection standard (29 CFR 1910.133).

Source Control

- Refers to the use of a product or device to cover a person's mouth and nose to reduce the spread of respiratory secretions and aerosols from breathing, talking, sneezing, etc.
- Source control is used as an infection prevention strategy in many disease processes, such as influenza, tuberculosis and COVID-19, which are transmissible prior to symptom onset or diagnosis.



References

- OSHA 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

Questions?



Thanks Again...

- Georgia Department of Public Health
- University of Georgia



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