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Infection Control Basics:
Personal Protective Equipment (PPE)

Long-Term Care Regulatory Services

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Select "Use Telephone" unless your computer has a microphone so we can hear you

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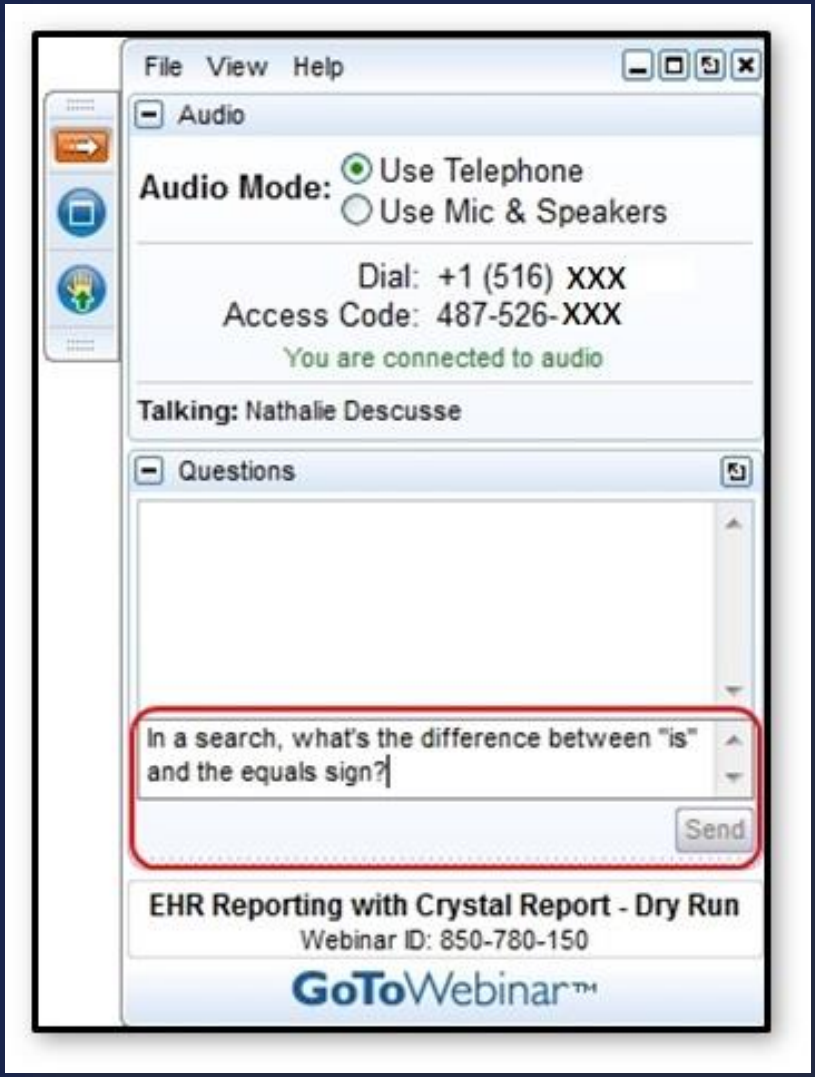
Question box for asking questions or commenting



Important to Note

Information contained in this webinar and its resources are subject to change.
Providers are responsible for staying current with state and federal regulations as well as CDC and DSHS guidelines and recommendations.

For additional offerings of this webinar:
https://apps.hhs.texas.gov/providers/training/jointtraining.cfm

A recorded version of the webinar will be available beginning next week at:

No continuing education hours are being awarded.

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Why are we here?

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To emphasize how to prevent or minimize the spread of infectious disease, by using personal protective equipment (PPE), to protect ourselves and our fellow Texans.

Objectives

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During this webinar we will:

- Review Standard Precautions and Transmission-based Precautions
- Learn proper hand hygiene techniques
- Demonstrate how to utilize personal protective equipment (PPE)
- Discuss the importance of social distancing in an outbreak situation

Protect Yourself

- ✓ Wash your hands often with soap and water for at least 20 seconds or use alcohol-based hand sanitizer with at least 60% alcohol
- ✓ Avoid touching your eyes, nose and mouth
- ✓ Avoid close contact with people who are sick
- ✓ Stay home when you are sick
- ✓ Cover your cough or sneeze; wash hands afterward

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Protect Yourself

- ✓ Clean and disinfect objects and surfaces you touch often
- ✓ Follow the CDC's recommendations for using a facemask –
  - Not generally recommended for people who are well
  - Should be used by:
    - people who show symptoms to prevent spread to others
    - health care workers and others caring for someone with respiratory disease

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Standard Precautions

Standard Precautions are the minimum infection prevention practices that apply to all resident care, regardless of suspected or confirmed infection status of the resident, in any setting where health care is delivered.

These practices are designed to protect both the residents and the healthcare workers.

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Standard Precautions

- Hand hygiene
- Personal protective equipment (PPE)
- Respiratory hygiene/cough etiquette
- Appropriate resident placement
- Cleaning and disinfecting
- Careful handling of textiles and laundry
- Following safe injection practices
- Proper handling of needles and other sharps

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Hand hygiene

Hand hygiene is recommended using handwashing with soap and water or an alcohol-based sanitizer:

- Before/after contact with a resident or a resident's environment
- When hands are visibly soiled
- After contact with potentially infectious material
- Before putting on and after removing PPE

Personal Protective Equipment (PPE)

- Gloves
- Gowns
- Face masks
- Eye protection

Cough etiquette

- Cover your mouth and nose with a tissue when coughing or sneezing
- Dispose of the tissue after use
- Cough or sneeze into your elbow if no tissue available
- Perform hand hygiene after contact with respiratory secretions

www.cdc.gov

Transmission-based Precautions

Transmission-Based Precautions are used for residents who may be infected or colonized with certain infectious agents for which additional precautions are needed to prevent infection transmission.

- Contact Precautions
- Droplet Precautions
- Airborne Precautions

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Contact Precautions

Contact Precautions are used for residents with known or suspected infections that represent an increased risk for contact transmission.

Contact transmission = direct contact with the resident or indirect contact with environmental surfaces or resident-care items.

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Contact Precautions

- PPE – wear gloves when entering the room; wear a gown if substantial contact is anticipated
- Wash hands – between glove changes and after removing gloves and gowns
- Ensure appropriate resident placement
- Use disposable or dedicated resident-care equipment
- Prioritize cleaning and disinfecting

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Droplet Precautions

Droplet Precautions are used for residents known or suspected to be infected with pathogens transmitted by respiratory droplets.

Droplet transmission = transmitted by respiratory droplets that are generated by coughing, sneezing or talking.

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Droplet Precautions

- Gloves, gowns and hand hygiene
- Face mask – wear a face mask; put mask on residents if transport is required
- Eye protection – wear eye protection if a splash or spray is likely
- Ensure appropriate resident placement on a case-by-case basis; cohort residents with the same infection if necessary

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Airborne Precautions

Airborne Precautions are used for residents known or suspected to be infected with pathogens transmitted by the airborne route.

Airborne transmission = transmitted by aerosol from a person's respiratory tract; pathogens may travel much farther and infect more people.

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Airborne Precautions

- Ensure appropriate placement in an airborne infection isolation room; keep door closed
- Restrict susceptible employees from entering the room
- Use PPE including gloves, gowns & eye protection and practice hand hygiene
- Face mask – wear a fit-tested N95 or higher respirator mask
- Remove all PPE before leaving the room except for the respirator mask

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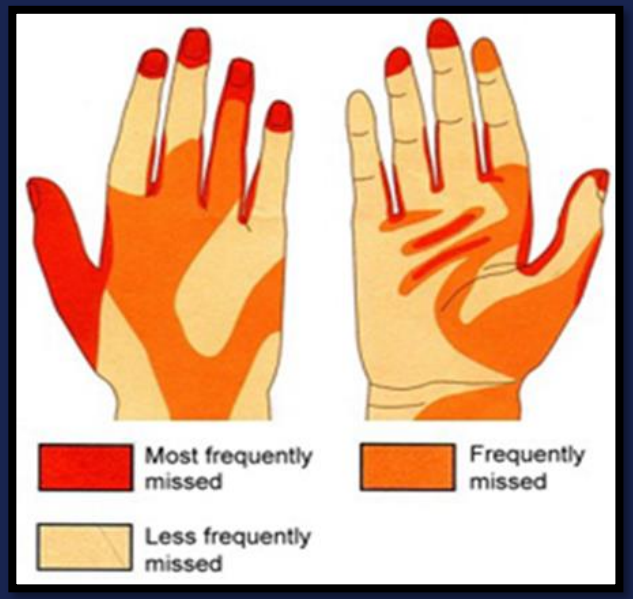
Donning and Doffing PPE

Hand Hygiene

- Practice good hand hygiene



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Sequence for Donning PPE - CDC

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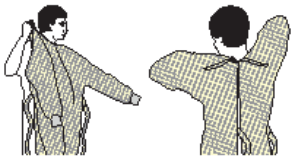
SEQUENCE FOR PUTTING ON PERSONAL PROTECTIVE EQUIPMENT (PPE)

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

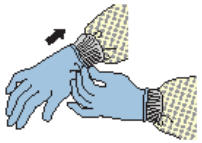
- Secure ties or elastic bands at middle of head and neck
- Fit flexible band to nose bridge
- Fit snug to face and below chin
- Fit-check respirator

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

Donning
Step 1: Gown

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- Fully cover torso from neck to knees, arms to end of wrists, and wrap around the back
- Fasten in back of neck and waist

Donning
Step 2: Mask or Respirator

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

Respirator Mask (N95)

Cover the front of the respirator with both hands, being careful not to disturb the position of the respirator

Positive seal check – Exhale sharply
Positive pressure inside = no leakage

Negative seal check – Inhale deeply
Negative pressure inside = no leakage

If leakage, adjust the position and/or tension straps. Retest the seal. Repeat the steps until the respirator is secured properly

Donning
Step 3: Goggles/Face Shield

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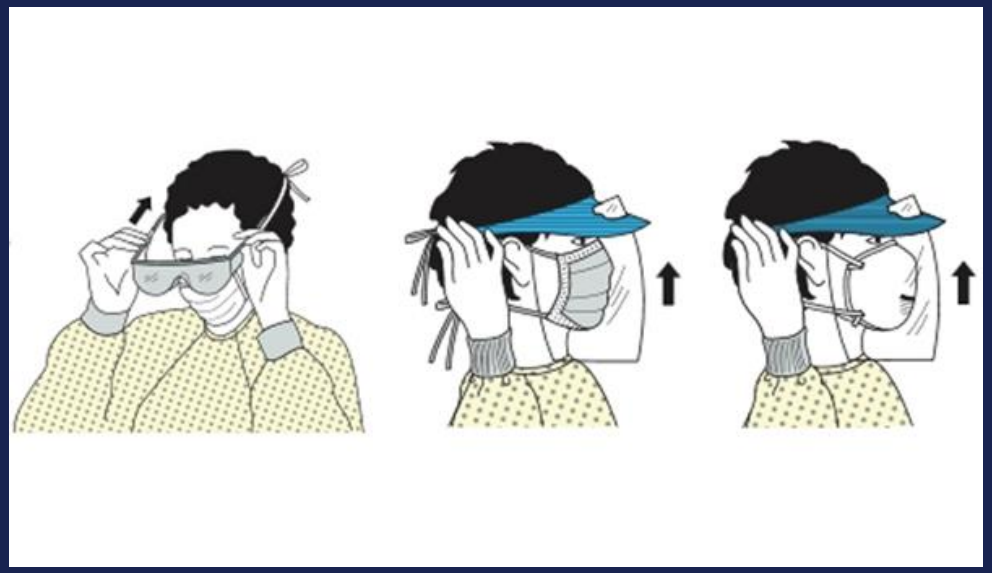
Place over face and eyes and adjust to fit



Donning
Step 4: Gloves

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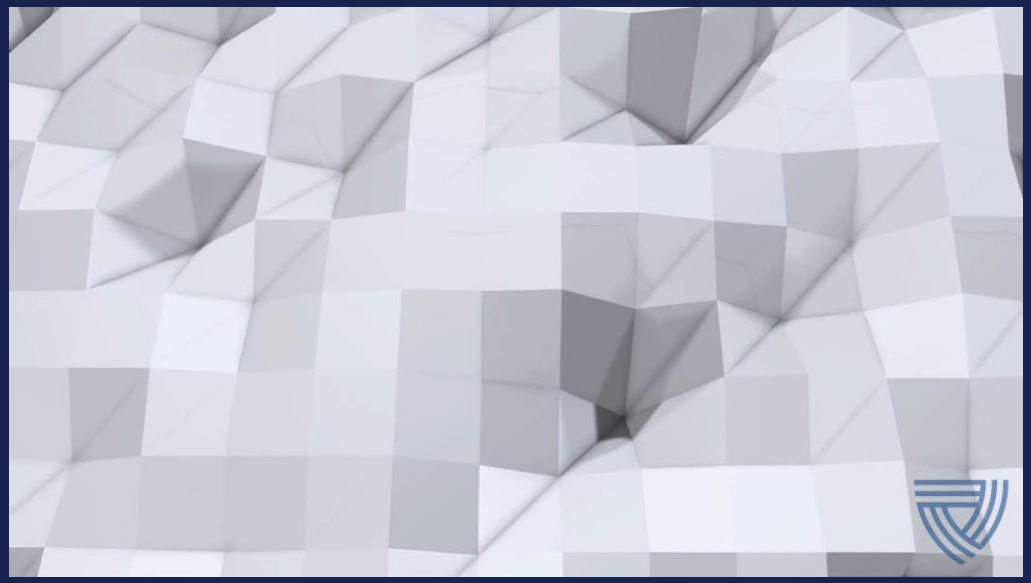
Extend gloves to cover the wrist of the isolation gown

Donning PPE Video

National Ebola Training and Education Center
https://netec.org/



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Safe Practices

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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

Sequence for Doffing PPE - CDC

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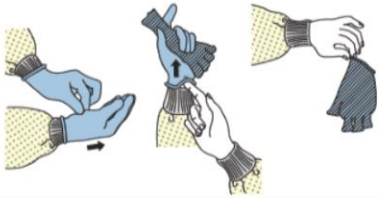
HOW TO SAFELY REMOVE PERSONAL PROTECTIVE EQUIPMENT (PPE) EXAMPLE 1

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

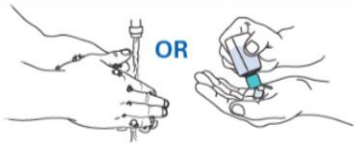
3. GOWN

- 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

CDC

Doffing
Step 1: Gloves

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- Using a gloved hand, grasp the palm area of the other gloved hand and peel off first glove
- Hold the removed glove in the gloved hand
- Slide fingers of ungloved hand under remaining glove at wrist and peel off second glove over first glove
- Discard in waste container

Doffing
Step 2: Goggles/Face Shield

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- Remove googles 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

Doffing
Step 3: Gown

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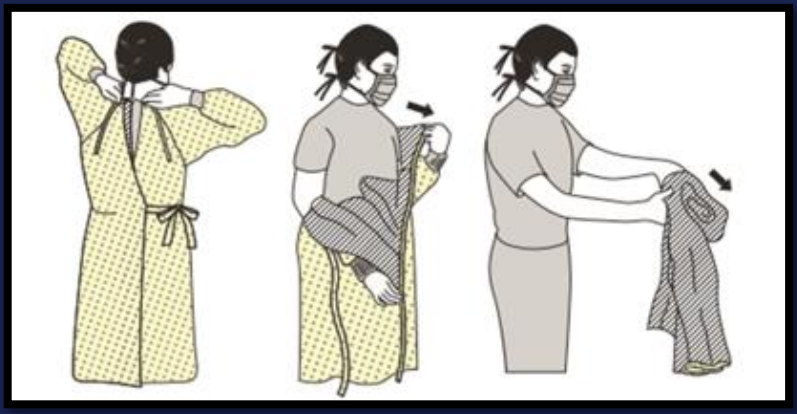
- Unfasten gown ties, taking care that sleeves do not contact your body
- Pull gown away from neck and shoulders, touching inside of gown only



- Turn gown inside out
- Fold or roll into a bundle away from your body
- Discard in a waste container

Doffing
Step 4: Mask or Respirator

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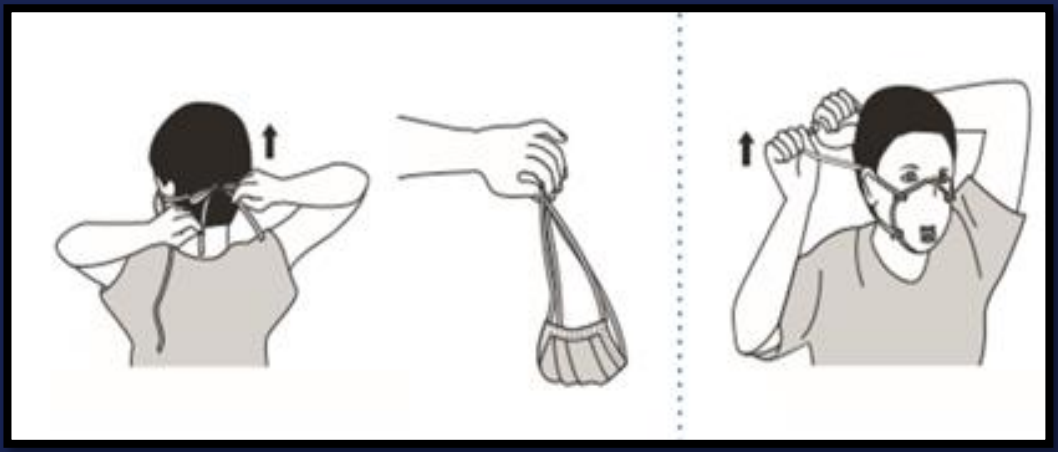
- Grasp bottom ties or elastic of the mask/respirator, then the ones at the top, and remove without touching the front
- Discard in a waste container



Doffing
Step 5: Hand hygiene

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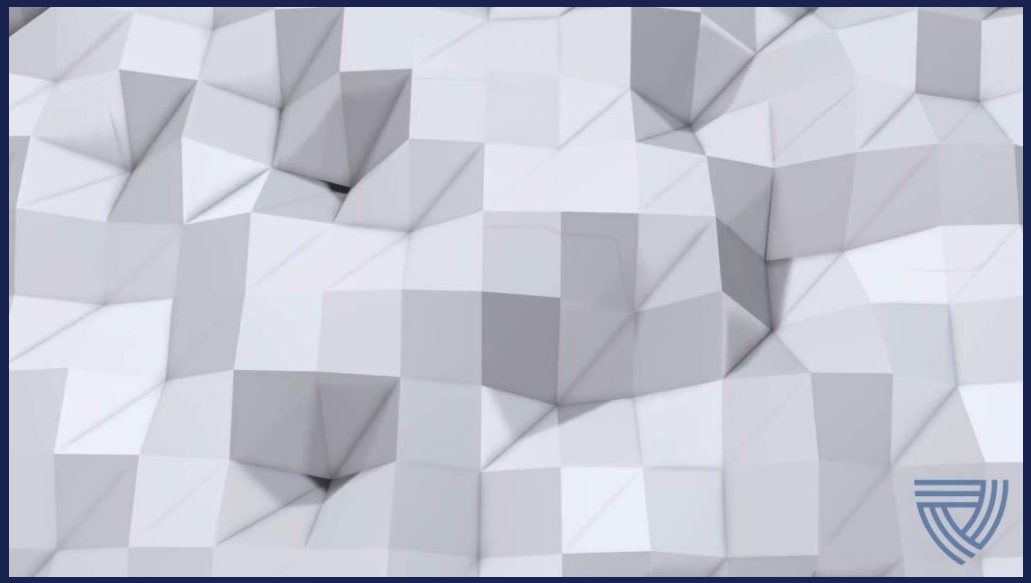
Wash hands or use an alcohol-based hand sanitizer immediately after removing all PPE

Doffing PPE Video

National Ebola Training and Education Center
https://netec.org/



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Social Distancing

Social distancing can save lives!!

Put distance between yourself and others:

- Stay home if possible
- Delivery of groceries and other necessities
- Avoid close contact with people who are sick
- Avoid crowds
- Avoid all non-essential travel

Seek current information from CDC, Texas DSHS, Texas HHSC, CMS and your management and local officials

Questions

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Thank you

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Resources

- Texas Health and Human Services Commission (HHSC)

  https://hhs.texas.gov/

- Texas Department of State Health Services (DSHS)

  http://www.dshs.state.tx.us/

- Local Health Department

  https://www.dshs.state.tx.us/regions/lhds.shtm

- Centers for Medicare and Medicaid Services (CMS)

  https://www.cms.gov/

Resources

- Centers for Disease Control and Prevention (CDC)

  https://www.cdc.gov/

- World Health Organization (WHO)

  https://www.who.int/

- National Ebola Training and Education Center

  https://netec.org/