

Health and Safety Precautions for Mass Care Service and Shelters

County public health leadership and responders should work closely with subject matter experts during incidents to identify risks posed by the hazard and implement appropriate controls to provide a safe and secure environment in mass care field settings, shelters, and worksites. The potential for employee exposures to hazards exists in field settings and administrative measures and personal protective equipment (PPE) should be used for protection. The principles of infection prevention and control in Standard Precautions and Transmission-Based Precautions for health care settings found in the [HICPAC 2007 Guideline for Isolation Precautions](#) can be adapted for use by county public health staff in field settings.

Summary of HICPAC Guidelines (last update September 2024):

Type of Precautions	Protective Measures
Standard Precautions	Hand hygiene, respiratory hygiene, cough etiquette, gloves, gowns, masks, goggles and face shields based on anticipated exposures (used for all exposures to blood/body fluids)
Contact Precautions	Gowns and gloves for public health workers when interacting with patients and their environment, patient cohorting, or single room (used for protection against organisms on skin surfaces or shed in feces such as methicillin-resistant <i>Staphylococcus aureus</i> (MRSA), norovirus, <i>Clostridium difficile</i>)
Droplet Precautions	Surgical mask for public health workers and source patient, patient cohorting, or single room (used for protection against infections transmitted via respiratory droplets >5 microns (µm), such as plague, seasonal influenza, mumps)
Airborne Precautions	Fit tested N-95 respirator, airborne isolation room if available (used for infectious diseases transmitted via airborne droplets <5 microns (µm) in size such as tuberculosis, SARS-associated coronavirus, measles.)

Detailed information on isolation precautions for selected infections and conditions can be found on the [CDC Guideline for Isolation Precautions: Appendix A](#). Information on when to report an illness to the local health department (LHD) can be found in the [Guidance for Shelters on Communicable Disease Reporting](#) document. Detailed information for safe donning and removal of PPE in healthcare settings is included at the end of this document in [Appendix A](#).

Mass Care Services and Shelters

Mass care shelters are set up on a temporary basis during incidents that require large-scale evacuations. Shelters will have varying degrees of sanitary infrastructure with shared living spaces and crowded conditions. Shelter residents may have health problems including traumatic injuries, infectious diseases and chronic illnesses. Respiratory infections, gastrointestinal illnesses, and skin infections or infestations can spread rapidly and may be introduced into shelter situations by individuals with mild or subclinical symptoms. Public health responders have an important role in the control of these and other infections when they occur. County health departments should implement communicable disease surveillance to identify infectious diseases and implement measures to prevent exposure and transmission in the shelter setting. County public health staff should use the following measures when working with patients in mass care services and shelters.

Administrative Measures

1. Surveillance: County public health staff and volunteers should ensure that shelter residents and visitors are screened for symptoms of contagious disease on arrival and periodically for as long as the shelter is in operation. These symptoms include fever, acute respiratory symptoms (e.g., cough, runny nose, sore throat, and eye discharge), acute gastrointestinal symptoms (e.g., nausea, vomiting, diarrhea, fever, jaundice) and an acute or new rash or wound.
2. During an outbreak of disease in a shelter, or community-wide outbreak of a disease that may affect individuals who seek shelter, signage with information regarding symptoms of concern should be posted so that individuals can self-identify and self-refer for public health/medical attention.

Hand Hygiene and Standard Precautions

1. [Hand hygiene](#) should be practiced in all shelters and alcohol-based hand rubs should be readily available to both staff and residents.
2. Residents and staff should be encouraged to practice hand hygiene before eating, after using the bathroom, after handling an animal or animal waste, after handling garbage, and as part respiratory etiquette.
3. Public health staff (and public health/health care volunteers working in health-related roles) should practice hand hygiene before and after tending to someone who is ill, before and after contact with wounds, after removing gloves or eye protection, before and after donning respirators or masks, and after cleaning up spills of body fluids, vomit, or contaminated environmental surfaces.
4. Public health staff should use Standard Precautions when any contact with blood, body fluid, non-intact skin, or mucous membranes is anticipated.

Personal Protective Equipment

1. County public health staff should use PPE in shelter situations to protect healthcare providers from infection and prevent the spread of infection.
2. Staff should wear gloves for any contact with blood, body fluids, non-intact skin, or mucous membranes.
3. Gloves should be changed to prevent cross-contamination of body sites (such as after examining a wound and before examining another body part) and between contact with each individual patient in the health care/first-aid area of shelter.
4. Isolation or procedure gowns (disposable if possible) should be worn if splashing or spraying clothing or body with blood or body fluids is anticipated.

5. Gowns should be donned and removed correctly, immediately outside the triage/clinical/isolation area (whichever is appropriate) and not worn throughout the shelter.
6. County public health staff who are working in isolation areas or clinical areas should wear surgical/procedure masks when they have contact with individuals who have symptoms of respiratory infections. Staff should don N95 respirators if they are providing care to individuals who may have contagious infections requiring “airborne” isolation precautions as indicated in the [HICPAC 2007 Guideline for Isolation Precautions](#). Note: Individuals suspected of contagious respiratory illness should be referred to a health care facility and/or confined to a designated ‘isolation’ area of the shelter, away from other residents.
7. Staff should perform hand hygiene before and after donning and removing masks and take care to avoid contamination by not touching the surface of the mask.
8. Shelter residents with respiratory symptoms suspected to be due to contagious respiratory infections should be asked to wear surgical masks if they remain in the shelter and need to leave a designated isolation area (assuming one has been established).

The management of an infectious disease outbreak in a temporary shelter situation will require additional measures for disease control and the protection of staff and residents that may include additional screening, cohorting of staff and residents, extensive environmental cleaning, and possibly administration of medical countermeasures such as vaccines or medications. These additional measures will be formulated as needed, in consultation with public health epidemiologists and disease control specialists of the county managing the shelter or North Carolina Public Health Division.

Appendix A - Using Personal Protective Equipment in Health Care Settings

The following [guidelines for safe donning, using, and removing PPE](#) from the Centers for Disease Control and Prevention and the Health Care Infection Control Practices Advisory Committee are relevant for use in public health field settings.

Recommendations for Donning and Removing PPE

General points about using PPE

- Don PPE before contact with patients, generally before entering clinical settings.
- Use PPE carefully – don't spread contamination.
- Remove and discard carefully, either at the doorway or immediately outside a patient care area. Remove respirator outside of room.
- Immediately perform hand hygiene after PPE removal (includes gloves).

How to use PPE safely

- Keep gloved hands away from face.
- Avoid touching or adjusting other PPE.
- Remove gloves if they become torn; perform hand hygiene before donning new gloves.
- Limit surfaces and items touched.

Sequence for donning PPE

- Gown first
- Mask or respirator
- Goggles or face shield
- Gloves

Sequence for removing PPE

- Gloves (they are considered the most contaminated pieces of PPE so are removed first)
- Face shield or goggles (they might interfere with removal of other PPE)
- Gown
- Mask or respirator

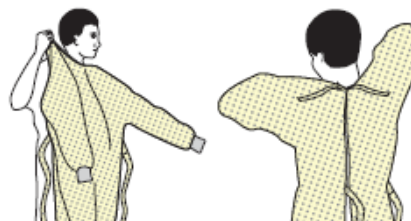
These recommendations for donning and removing PPE are summarized in the graphics on the following pages.

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



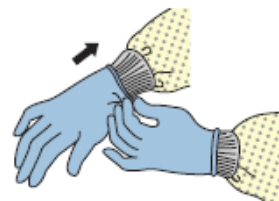
3. GOGGLES OR FACE SHIELD

- 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



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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



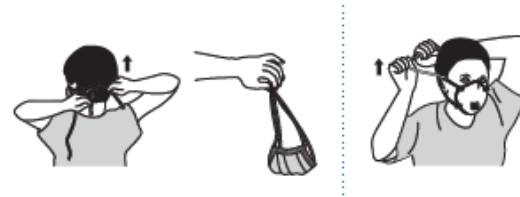
3. GOWN

- 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

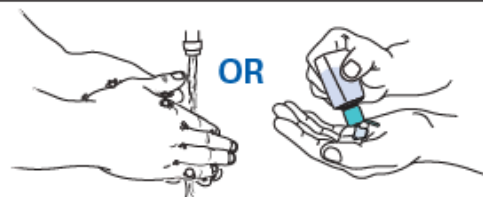


4. MASK OR RESPIRATOR

- 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



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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

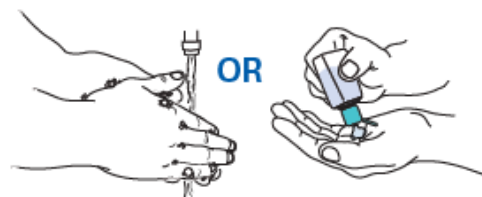


3. MASK OR RESPIRATOR

- 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**



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