

Personal Protection Equipment

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Public Safety and Risk





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Objectives

- Improve Healthcare and First Responder safety by way of appropriate usage of PPE
- Provide basic information on the selection of PPE
- Offer standardized methods for Donning and Doffing of PPE



Personal Protective Equipment

- (OSHA) PPE is specialized clothing or equipment worn by an employee for protection against infectious materials



Health and Safety Controls

- Training
- Administrative
- Engineering
- Work practice
- PPE



Types of PPE

- Gloves
- Gowns/aprons
- Tyvek suits
- Masks and respirators
- Goggles
- Face Shields



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Selection of PPE

- Type of exposure anticipated
 - Standard Contact
 - Contact/droplet
 - Contact/droplet/airborne
- Durability and appropriateness for the task
- Fit

Gloves

- Purpose
 - Patient care
 - Environmental services
- Materials
 - Nitrile
 - Two pair
 - One pair standard cuff
 - One pair long cuff



Do's and Don'ts

- **Do** - work from clean to dirty
- **Do** - limit opportunities for touch contamination
- **Do** - change gloves if they are torn
- **Do** - change gloves if they are soiled
- **Do** - use proper hand hygiene

Do's and Don'ts

- **Don't** - touch your face or adjust PPE with contaminated gloves
- **Don't** - touch environmental surfaces except as necessary during care
- **Don't** – reuse disposable gloves

Gowns or Aprons

- Factors for choosing
 - Purpose
 - Material, impervious
 - Degree of protection required

Gowns or Aprons

Purpose

- If limited contamination is anticipated an apron may be appropriate
- If contamination of the arms are anticipated... use gown
 - Fit comfortably
 - Fully cover the torso
 - Long sleeves that snugly fit around the wrists

Gowns or Aprons

Clean or Sterile

- Clean gowns are generally used for pre-hospital settings
- Sterile gowns for invasive procedures
 - Benefits patient and Healthcare worker

Face Protection

- Masks
- Face Shield



Face Protection

- Masks
 - Protects nose and mouth
- Face Shield
 - Protects face, eyes, nose, and mouth
 - Should cover forehead, extend below chin and wrap around side of face
 - Used when irrigating a wound, suctioning, intubation

Head Protection

- Impervious head cover
- Hooded Tyvek Suit
- Hood PAPR

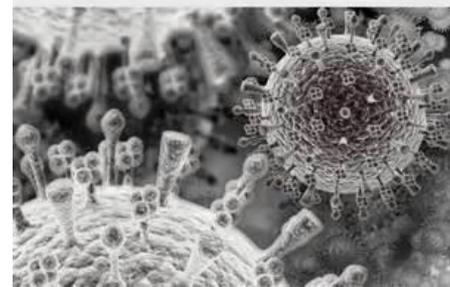
Respiratory Protection

Purpose

- Protection from inhalation of infectious aerosols (mycobacterium Tuberculosis, aerosolizing procedures, e.g. suctioning, intubation.)

Types

- N95
- Powered air purifying respirators (PAPR)



Donning and Doffing PPE

- Key Points
 - Use check lists
 - Use a buddy to supervise process
 - Don before patient contact
 - Use Carefully
 - Maintain hand hygiene
 - Remove and discard carefully
 - Go slowly

Donning Sequence

- Gown or suit
- Mask
- Goggles / face shield
- PAPR
- Gloves

Be Practical

Donning Steps

- Donning a Gown
 - Select appropriate size
 - Opening on back
 - Secure at neck and waist



Donning Steps

- Donning a Mask
 - Place over mouth, nose and chin
 - Fit Flexible nose piece over bridge of nose
 - Secure on head with ties or elastic (upper / lower)
 - Adjust for fit
 - Fit testing for N95 masks



Donning Steps

- Donning Eye and Face protection
 - Position goggles over eyes
 - Secure using ear pieces or headband
- Position Face Shield over face and secure on brow with headband
 - Adjust to fit comfortably



Donning Steps

- Don Gloves last
- Select the correct type and size
- Extend gloves over the isolation gown
- Key Points
 - Keep gloved hands away from face
 - Avoid touching or adjusting other PPE
 - Remove gloves if they are torn
 - Perform hand hygiene before donning new gloves
 - Limit surfaces and items touched

Preparing for Doffing PPE

- Clean areas of PPE
 - Inside PPE
 - Outside back of gowns, coveralls, etc.
 - Ties and Elastic straps on head as well as back
 - Positioned sanitary wipes
- Contaminated areas of PPE
 - Areas that have or likely to have been in contact

Doffing PPE Sequence

- Gloves
- Gown
- Head Cap
- Face Shield or Goggles
- Mask / respirator

Doffing PPE Sequence

- Gloves (#1) outer
 - Hand hygiene
 - Pinch the outside near edge of glove
 - Insert finger (using beak method) pull exposed clean side over the fingers
 - Use “beak gloved” hand to pinch and peel off opposite glove (should be inside out)
 - Hand hygiene

Doffing PPE Sequence

- Gown / Apron / Coveralls
 - Remove while avoiding touching outside of gown
 - Discard in appropriate receptacle
 - Hand hygiene
- PAPR (if applicable)
 - Carefully remove
 - Discard in appropriate receptacle
 - Hand hygiene

Doffing PPE Sequence

- Face shield
 - Grasp and remove
 - Avoid touching your skin or hair
 - Hand hygiene
- Mask / respirator
 - Grasp and remove
 - Avoid touching your skin or hair
 - Hand hygiene

Doffing PPE Sequence

- Gloves (#2) inner
 - Pinch the outside near edge of glove
 - Insert finger (using beak method) pull exposed clean side over the fingers
 - Use “beak gloved” hand to pinch and peel off opposite glove (should be inside out)
 - Hand hygiene

Donning and Doffing PPE



Helpful Links

<http://www.cdc.gov/vhf/ebola/index.html>

<http://www.emoryhealthcare.org/ebola-protocol/videos.html>



thank you!