

# Location, Location, Location! Transporting Infectious Patients Within Your Facility

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## Disclosures

- ▶ Nothing to disclose



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## Learning Objectives

- ▶ Identify unique challenges to infection control in each setting
- ▶ Formulate effective strategies to protect healthcare providers and staff



## Goals of This Presentation

- ▶ Describe the process for planning transport of a highly infectious patient
- ▶ Describe the process for ensuring the safe transport of patients with highly resistant organisms
- ▶ Describe the proper process for PPE donning and doffing





"The patient in the next bed is highly infectious. Thank God for these curtains."



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## Transport of Ebola Patient—The Extreme

- ▶ Takes a well thought-out plan
- ▶ What will the care team hand-off look like?
- ▶ How to get from the ED to the receiving unit
- ▶ Route with shortest distance
- ▶ Route with least amount of potential contact
- ▶ Coordination with security, environmental services, nursing, infection prevention, engineering, and emergency preparedness
- ▶ Need to run the route
- ▶ Prepare for the unexpected

CDC. [www.cdc.gov/vhf/ebola/healthcare-us/emergency-services/patient-handoff.html](http://www.cdc.gov/vhf/ebola/healthcare-us/emergency-services/patient-handoff.html).



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## PPE for Transport



## PPE for Transport (cont.)



## PPE for Transport (cont.)



## SARS and MERS

- ▶ Patients should not leave room unless absolutely necessary
- ▶ Diagnostic tests that will not change the course of treatment of the patient should not be performed if they require transporting the patient
- ▶ Risk-benefit of moving patient through facility
- ▶ Plan the route
- ▶ Plan how to handle the equipment
- ▶ Assess need for number of transporters
- ▶ What needs to travel with the patient?
- ▶ Take the route that has least amount of risk of traffic
- ▶ Only patient and the transporter should be in the elevator

## Transporting Patients With SARS/MERS

- ▶ Staff should ready patient for transport
  - ▶ Patient to perform hand hygiene
  - ▶ Clean gown
  - ▶ Mask patient (surgical mask)
- ▶ Staff to contact receiving department
- ▶ Stretcher/wheelchair should be draped with clean linen
- ▶ Transporter to perform hand hygiene and put on PPE (gown, gloves, N95) to enter room
- ▶ Assist patient to stretcher or wheelchair
- ▶ Wrap patient in clean linen (do not take anything from bed)
- ▶ Wipe areas of stretcher/wheelchair with disinfectant wipe

CDC. [www.cdc.gov/sars/guidance/i-infection/healthcare.html](http://www.cdc.gov/sars/guidance/i-infection/healthcare.html).



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## Transporting Patients With SARS/MERS (cont.)

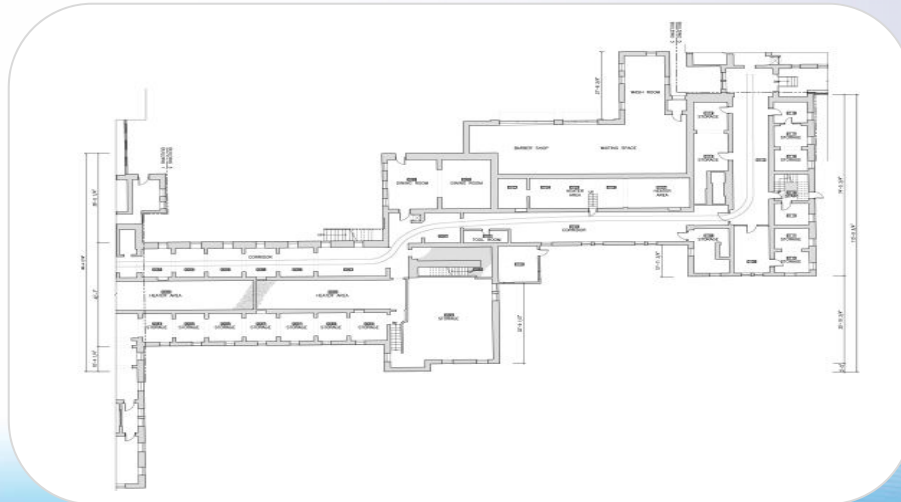
- ▶ Remove PPE and perform hand hygiene
- ▶ Transport patient by route with least amount of traffic and potential exposure
- ▶ Patient should be taken directly into testing area and not be held in a waiting area with other patients
- ▶ Staff receiving patient should have appropriate PPE on to assist patient
- ▶ Transporter should perform hand hygiene and don PPE to remove linen and clean stretcher
- ▶ Remove PPE and perform hand hygiene

CDC. [www.cdc.gov/sars/guidance/i-infection/healthcare.html](http://www.cdc.gov/sars/guidance/i-infection/healthcare.html).



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## Look at Your Facility Floor Plans



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## Transporting Various Isolation Patients



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## Creating Negative Pressure Environment



## Creating Negative Pressure Environment





## Transporting Patients With CRE or *C. auris*

- ▶ Assess the need for tests; only those that will change the course of therapy should be performed
- ▶ Risk-benefit of moving patient
- ▶ Plan the route
- ▶ What equipment needs to go with the patient?
- ▶ Assess need for number of transporters
- ▶ Take the route that has the least amount of risk of traffic
- ▶ Only the patient and the transporter should be in the elevator



## Transporting Patients With CRE or *C. auris* (cont.)

- ▶ Staff should ready patient for transport
  - ▶ Patient to perform hand hygiene
  - ▶ Clean gown
  - ▶ Any open wounds should be covered with a bandage
- ▶ Staff to contact receiving department
- ▶ Stretcher/wheelchair should be draped with clean linen
- ▶ Transporter to perform hand hygiene and put on PPE (gown, gloves) to enter room
- ▶ Assist patient to stretcher or wheelchair
- ▶ Wrap patient in clean linen (do not take anything from bed)
- ▶ Wipe areas of stretcher/wheelchair with disinfectant wipe
- ▶ If vent or other equipment is traveling, it needs to be disinfected



## Transporting Patients With CRE or *C. auris* (cont.)

- ▶ Remove PPE and perform hand hygiene
- ▶ Transport patient by the route with the least amount of traffic and potential exposure
- ▶ Patient should be taken directly into testing area and not wait in a holding area with other patients
- ▶ Staff receiving patient should have appropriate PPE on to assist patient
- ▶ Transporter should perform hand hygiene and don PPE to remove linen and clean stretcher
- ▶ Remove PPE and perform hand hygiene

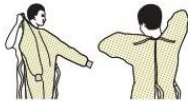


## Sequence for PUTTING ON PPE

- ▶ 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



# Sequence for REMOVING PPE

- ▶ Except for respirator, remove PPE at doorway or in anteroom; remove respirator after leaving patient room and closing door

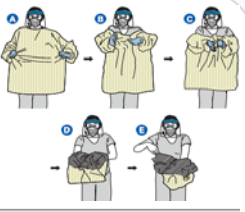



<p><b>1. GLOVES</b></p> <ul style="list-style-type: none"> <li>• Outside of gloves is contaminated!</li> <li>• Grasp outside of glove with opposite gloved hand; peel off</li> <li>• Hold removed glove in gloved hand</li> <li>• Slide fingers of ungloved hand under remaining glove at wrist</li> <li>• Peel glove off over first gloved</li> <li>• Discard gloves in waste container</li> </ul> 	<p><b>3. GOWN</b></p> <ul style="list-style-type: none"> <li>• Gown front and sleeves are contaminated!</li> <li>• Unfasten ties</li> <li>• Pull away from neck and shoulders, touching inside of gown only</li> <li>• Turn gown inside out</li> <li>• Fold or roll into a bundle and discard</li> </ul> 
<p><b>2. GOGGLES OR FACE SHIELD</b></p> <ul style="list-style-type: none"> <li>• Outside of goggles or face shield is contaminated!</li> <li>• To remove, handle by head band or ear pieces</li> <li>• Place in designated receptacle for reprocessing or in waste container</li> </ul> 	<p><b>4. MASK OR RESPIRATOR</b></p> <ul style="list-style-type: none"> <li>• Front of mask/respirator is contaminated — DO NOT TOUCH!</li> <li>• Grasp bottom, then top ties or elastics and remove</li> <li>• Discard in waste container</li> </ul> 

- ▶ Perform hand hygiene between steps if hands become contaminated, and immediately after removing all PPE



# How to Safely REMOVE 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:

<p><b>1. GOWN AND GLOVES</b></p> <ul style="list-style-type: none"> <li>• Gown front and sleeves and the outside of gloves are contaminated!</li> <li>• If your hands get contaminated during gown or glove removal, immediately wash your hands or use an alcohol-based hand sanitizer</li> <li>• 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</li> <li>• While removing the gown, fold or roll the gown inside-out into a bundle</li> <li>• 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 an infectious* waste container</li> </ul> 	<p><b>3. MASK OR RESPIRATOR</b></p> <ul style="list-style-type: none"> <li>• Front of mask/respirator is contaminated — DO NOT TOUCH!</li> <li>• If your hands get contaminated during mask/respirator removal, immediately wash your hands or use an alcohol-based hand sanitizer</li> <li>• Grasp bottom ties or elastics of the mask/respirator, then the ones at the top, and remove without touching the front</li> <li>• Discard in an infectious* waste container</li> </ul> 
<p><b>2. GOGGLES OR FACE SHIELD</b></p> <ul style="list-style-type: none"> <li>• Outside of goggles or face shield are contaminated!</li> <li>• If your hands get contaminated during goggles or face shield removal, immediately wash your hands or use an alcohol-based hand sanitizer</li> <li>• Remove goggles or face shield from the back by lifting head band and without touching the front of the goggles or face shield</li> <li>• If the item is reusable, place in designated receptacle for reprocessing. Otherwise, discard in an infectious* waste container</li> </ul> 	<p><b>4. WASH HANDS OR USE AN ALCOHOL-BASED HAND SANITIZER IMMEDIATELY AFTER REMOVING ALL PPE</b></p> 

- ▶ Perform hand hygiene between steps if hands become contaminated and immediately after removing all PPE

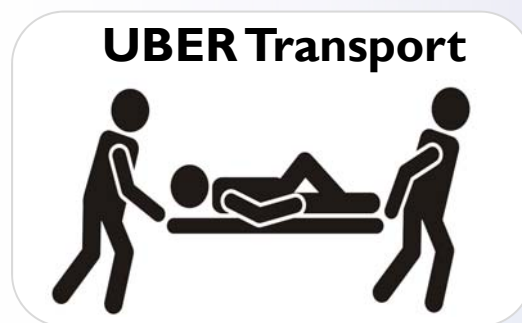
\*An infectious waste container is used to dispose of PPE that is potentially contaminated with Ebola virus.



## Key Points

- ▶ Look at your facility and plan ahead
- ▶ Educate staff to proper PPE donning and doffing
- ▶ Consider all the moving parts
- ▶ Remember we are a 24-hr operation
- ▶ Always disinfect your hands

Perhaps this will be next??





## Additional Resources

- ▶ 2014 Donning and Doffing PPE Competency Validation Checklist.  
[http://apic.org/Resource\\_/TinyMceFileManager/Topic-specific/Donning\\_and\\_Doffing\\_PPE\\_COMPETENCY\\_VALIDATION\\_CHECKLIST.pdf](http://apic.org/Resource_/TinyMceFileManager/Topic-specific/Donning_and_Doffing_PPE_COMPETENCY_VALIDATION_CHECKLIST.pdf)
- ▶ Guidance on Personal Protective Equipment (PPE) To Be Used By Healthcare Workers during Management of Patients with Confirmed Ebola or Persons under Investigation (PUIs) for Ebola who are Clinically Unstable or Have Bleeding, Vomiting, or Diarrhea in U.S. Hospitals, Including Procedures for Donning and Doffing PPE. Centers for Disease Control and Prevention. [www.cdc.gov/vhf/ebola/healthcare-us/ppe/guidance.html](http://www.cdc.gov/vhf/ebola/healthcare-us/ppe/guidance.html)
- ▶ Guidance for Developing a Plan for Interfacility Transport of Persons Under Investigation or Confirmed Patients with Ebola Virus Disease in the United States. Centers for Disease Control and Prevention. [www.cdc.gov/vhf/ebola/healthcare-us/emergency-services/interfacility-transport.html](http://www.cdc.gov/vhf/ebola/healthcare-us/emergency-services/interfacility-transport.html)

