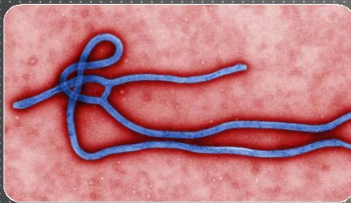


EBOLA PREPAREDNESS AND PROCEDURES

University of Toledo Medical Center
And University of Toledo Main
Campus

BACKGROUND



- ▶ This is the largest Ebola outbreak in history
- ▶ The disease has infected and killed people in four West African nations
 - ▶ Guinea, Liberia, Sierra Leone and Nigeria
 - ▶ As well as a number of aid workers that were involved with providing healthcare from around the globe
- ▶ Its arrival in America was both planned and unplanned for by the CDC
- ▶ Spread through direct contact with body fluids (not through the air, food, or water)
- ▶ Infected persons are not contagious until symptoms appear
- ▶ UTMC has been actively meeting on Ebola since July of 2014.

INITIAL SCREENING IN LATE JULY

- ▶ International students were screened via questionnaire
- ▶ The screening revealed no students returning from endemic areas and having contact with EVD patients

Early Symptoms:

Ebola can only be spread to others after symptoms begin. Symptoms can appear from 2 to 21 days after exposure.

- Fever
- Headache
- Diarrhea
- Vomiting
- Weakness
- Stomach pain
- Lack of appetite
- Unexplained bleeding
- Joint & muscle aches

TRAVEL REGISTRY



- ▶ Student, faculty and staff travelling outside of the U.S. are currently being asked to complete an online travel registry
- ▶ <http://www.utoledo.edu/cisp/alerts.html>
- ▶ In addition the Transportation Security Administration (TSA) is also updating local health authorities regarding travel to endemic areas.
- ▶ ODH has implemented a “strengthened quarantine” strategy
- ▶ Web Page for Ebola
- ▶ <http://www.utoledo.edu/depts/infectioncontrol/Current4orTopics.html>

SCREENING IN THE ED AND CLINICS



Instructions for Initial Assessment and Isolation of Patients at Risk for Ebola Viral Disease (EVD)

UTMC Clinics

Common EVD Signs/Symptoms	Some Patients May also experience
Fever (subjective or $\geq 100.4^{\circ}\text{F}$ or $\geq 38^{\circ}\text{C}$)	Bleeding inside and outside of the body
Headache	Rash
Joint and muscle aches	Red eyes
Weakness	Hiccups, Cough
Vomiting	Sore throat
Diarrhea	Chest pain

Initial Assessment and Isolation:

1. Immediately ask about high risk exposures in the past 21 days:
 - a. Travel to Africa or
 - b. Contact with a patient known to have Ebola
2. Patient presents with symptoms noted above.
3. If symptoms are present **but NO high risk exposure in the past 21 days**, please proceed with routine assessment and evaluation for more typical infectious disease using routine infection control guidelines.
4. If symptoms are present **AND high risk exposure in the past 21 days exists**, please proceed as noted below:
 - a. Immediately hand a surgical mask to the patient.
 - b. Isolate the patient in a separate room.
 - c. Contact Mo Smith at 419-345-4794 (or backup Deanna Montanaro 419-350-7878 or Paul Rega at 419-779-4423). They will make the decision to call a Code Orange.
 - d. Close the clinic and take the names of everyone in the waiting room. Ask them to remain in the waiting room until further instructions are given.
 - e. After additional details of the case are reviewed, decisions will be made with Toledo Lucas County Health Department (TLCHD) about transportation of the patient to UTM ED.
 - f. DO NOT Clean the room or any part of the clinic. Decisions on decontamination will be determined after the information on exposure is reviewed.

CODE ORANGE

- ▶ Upon notification of EVD patient, a Code Orange will be called
- ▶ Code orange procedures will be followed (w/Ebola additions)
- ▶ Triage personnel will put PPE (located in triage room) on themselves and the patient.
- ▶ Patient must remain in the triage room until relocation.
- ▶ Holding of patient takes place in Room #21 of ED for ~48hours
- ▶ Long term holding will be on 6CD

SO WHO HAS BEEN TRAINED AND WHY?

- ▶ The ED staff nurse and doctors have been trained a number of times on PPE procedures in Simulation Center
- ▶ ED residents and others have also been trained but will not care for a confirmed EVD patient.
- ▶ We have a core team of ED docs and nurses that will care for the patient in the short term in the ED
- ▶ Attending faculty and nurses (mainly the ED) have volunteered to care for patients that may be held for an extended period on 6CD.
- ▶ Volunteers will continually be accepted and training will continue for this core group on a on-going basis.
- ▶ We have plans to extend our response if a more aggressive outbreak occurs in the region.
- ▶ Drills and simulations have been conducted and will continue to be performed to test our response capabilities.

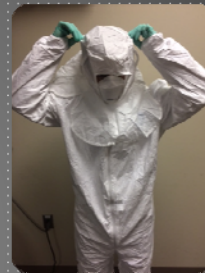
CHANGES TO PPE BASED ON CDC AND OTHER GUIDANCE

- ▶ Addition of blue booties
 - ▶ These are placed on after Tyvek suit
 - ▶ Attach strap to prevent bootie from slipping down
- ▶ Addition of pull over hood



CHANGES TO N-95 KITS

- ▶ Addition of unattached hood
 - ▶ The Tyvek's attached hood must now be rolled and tucked into suit
 - ▶ Unattached hood is placed over head and shoulders and tied in back
 - ▶ Yellow gown goes overtop shroud of hood
 - ▶ When removing hood, grasps top of hood, pulling upward and away from face



SEQUENCE FOR PUTTING ON PERSONAL PROTECTIVE EQUIPMENT (PPE)

Remove all personal items before starting (phones, jewelry, badges, etc.)

HAIR TIE/NET and N-95

- Tie hair back into tight bun, use hair net if long hair
- Place N-95 straps behind head, one high/one low
- Fit flexible band to nose bridge
- Fit snug to face and below chin



TYVEK, BOOTIES, GLOVES, GOWN

- Step into white Tyvek, roll attached hood into suit, zip up Tyvek
- Put on booties, attach Velcro strap
- Put external hood over head and tie
- If needed, tape back/top of hood for better fit
- Put on pair of green long cuff gloves
- Push hole through cuff of Tyvek suit with thumb
- Put arms into yellow isolation gown
- Fasten at back of neck and waist ensuring complete coverage



FACE SHIELD

- Place face shield over face
- Pull off adhesive tabs at bottom of shield bib
- Tilt head back adhere bib to front of yellow gown to allow for free movement



GLOVES

- Put on pair of blue long cuff gloves over green gloves
- Pull glove cuff overtop of yellow sleeve



Use an Isolation Buddy to help you dress with the proper PPE

- Check each other after each step to ensure complete coverage



SEQUENCE FOR REMOVING PERSONAL PROTECTIVE EQUIPMENT (PPE)

BOOTIE STRAP and OUTER GLOVES

- Spray gloves with bleach, undo Velcro strap of booties, spray again
- 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 infectious waste bin, spray inner gloves with bleach

FACE SHIELD

- To remove, handle by head band pulling back from head
- Let hang down from gown
- If it does not stick to gown, place directly into infectious waste bin

YELLOW GOWN

- Spray outer gloves with bleach
- Use Iso. Buddy to untie upper gown strap and then lower
- Grab clean inside part of gown, pull away from body
- Roll up gown and face shield, place in infectious waste bin

HOOD and TYVEK

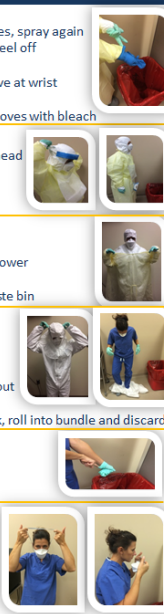
- Spray arms and hands with bleach
- Untie and grab hood by top, pull over head away from face, discard in red infectious waste bin
- Unzip Tyvek, remove by pulling down and stepping out
- Boots will be removed with suit simultaneously
- Step to yellow side of room, grab clean side of Tyvek, roll into bundle and discard

INNER GLOVES

- Spray inner gloves with bleach,
- Remove in same fashion as outer gloves
- Wash hands with soap and water

N-95 and HAIR NET/TIE

- Pull bottom strap over head, let hang
- Grab top strap, slowly pull over head and away from face
- Discard N-95 in infectious waste bin
- Remove hair net, place in infectious waste bin
- Wash hands with soap and water



OPTION OF PAPR GEAR

- ▶ The option of PAPR gear has been added
- ▶ It will be used with a blue outer gown
- ▶ It has a hood with built in face shield
- ▶ Used during prolonged periods in patient room
- ▶ N-95 PPE kits are still primary option when potential EVD patient presents as they are staged in triage



SEQUENCE FOR **PUTTING ON** PERSONAL PROTECTIVE EQUIPMENT (PPE) with PAPR

Remove all personal items before starting (phones, jewelry, badges, etc.)

HAIR TIE/NET

- Tie hair back into tight bun, use hair net if long hair

GLOVES and TYVEK

- Put on pair of green long cuff gloves
- Step into white Tyvek and proceed to pull up
- Zip up halfway in order to tuck hood in later
- Push hole through cuff of Tyvek suit with thumb
- Put on booties, pull up all the way, attach strap

PAPR

- Turn PAPR on (hose will already be connected and flow tested by PPE Tech)
- Buckle PAPR around waist and slightly to side of body
- Put on Hood, tucking first layer under Tyvek
- Zip up Tyvek, pull outer shroud down around shoulders
- Connect hose to hood

Blue Gown and Gloves

- Put on Blue Gown, fasten at back of neck
- Tie inside waist and outer waist to ensure complete coverage
- Put on pair of blue long cuff gloves over green gloves
- Pull glove cuff overtop of blue sleeve



Use an Isolation Buddy to help you dress with the proper PPE

- Check each other after each step to ensure complete coverage



SEQUENCE FOR **REMOVING** PERSONAL PROTECTIVE EQUIPMENT (PPE) with PAPR

OUTER GLOVES/BOOT STRAP

- Spray gloves with bleach, remove boot strap, spray gloves again
- 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 infectious waste bin, spray inner gloves with bleach

BLUE GOWN

- Spray gloves with bleach
- Use Isolation Buddy to untie gown straps
- Grab clean inside part of gown, pull away from body
- Roll up gown place in infectious waste bin

PAPR

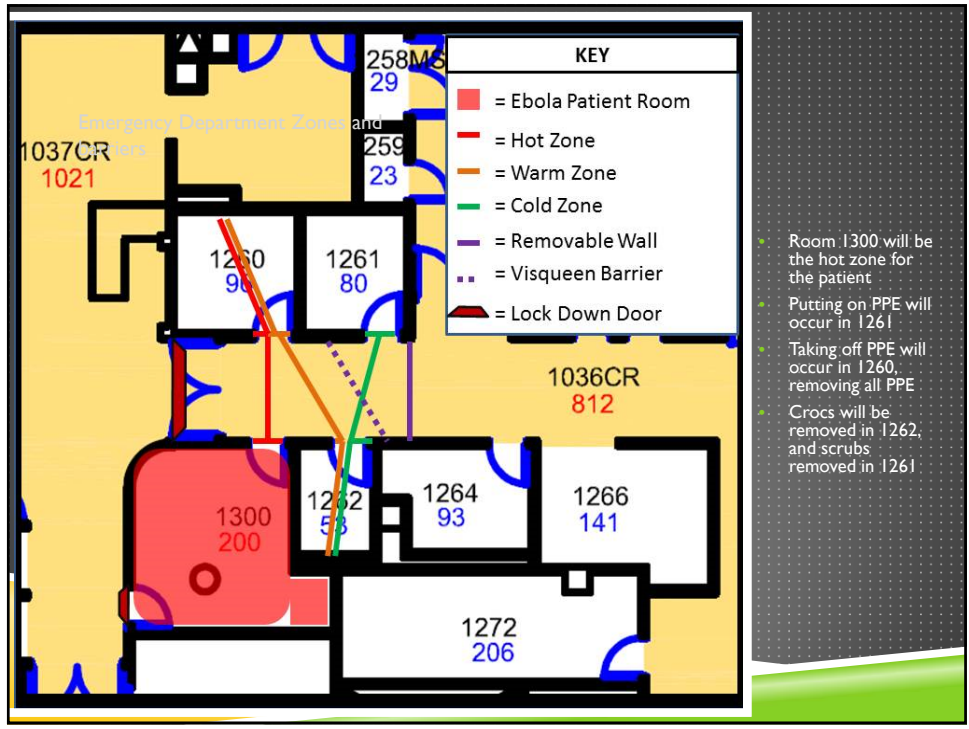
- Spray gloves with bleach
- Shut off PAPR, use Isolation Buddy to remove tube from hood
- Unbuckle PAPR and set on Decontamination Mat

HOOD, TYVEK, and BOOTIES

- Spray gloves with bleach
- Grab hood by top, pull over head away from face and dispose of in infectious waste bin
- Unzip, and step out of Tyvek (including booties) onto clean portion of floor
- Place in infectious waste bin

INNER GLOVES

- Spray inner gloves with bleach,
- Remove in same fashion as outer gloves
- Wash hands with soap and water



- Room 1300 will be the hot zone for the patient
- Putting on PPE will occur in 1261
- Taking off PPE will occur in 1260, removing all PPE
- Crocs will be removed in 1262, and scrubs removed in 1261

