

Use of Personal Protective Equipment in Pediatrics

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Clinical Presentation

- 7 year old male presented to the pediatric emergency department with his aunt at 3am
- Chief complaint – fever
- HPI – diarrhea/4 days; fever/3 days; 3 episodes of vomit; abdominal pain; decreased activity and appetite; fatigue
- Vital signs – temp. 103.5 °F, HR 145, RR 22, BP 110/75, O₂ Sat 100%
- Past medical history – no known significant history





Clinical Presentation

- Travel History – traveled from Monrovia, Liberia to the USA 6 days ago
- Date – 01/15/2015
- Ebola Virus Disease(EVD) epidemic in West Africa
- EVD vaccines not yet developed



Person Under Investigation

- Contact with EVD? –
2 neighbors hospitalized & 1 deceased
- PUI criteria for EVD
 - Contact
 - Incubation period
 - Clinical signs & symptoms



EVD Diagnosis & PPE

- Placed in isolation
- PPE donned by provider before PE
- Limited exposure to patient
- DOH & infection control contacted
- Blood specimens for Ebola PCR, CBC, CMP
- Patient scared & anxious
- Aunt confused & uncooperative

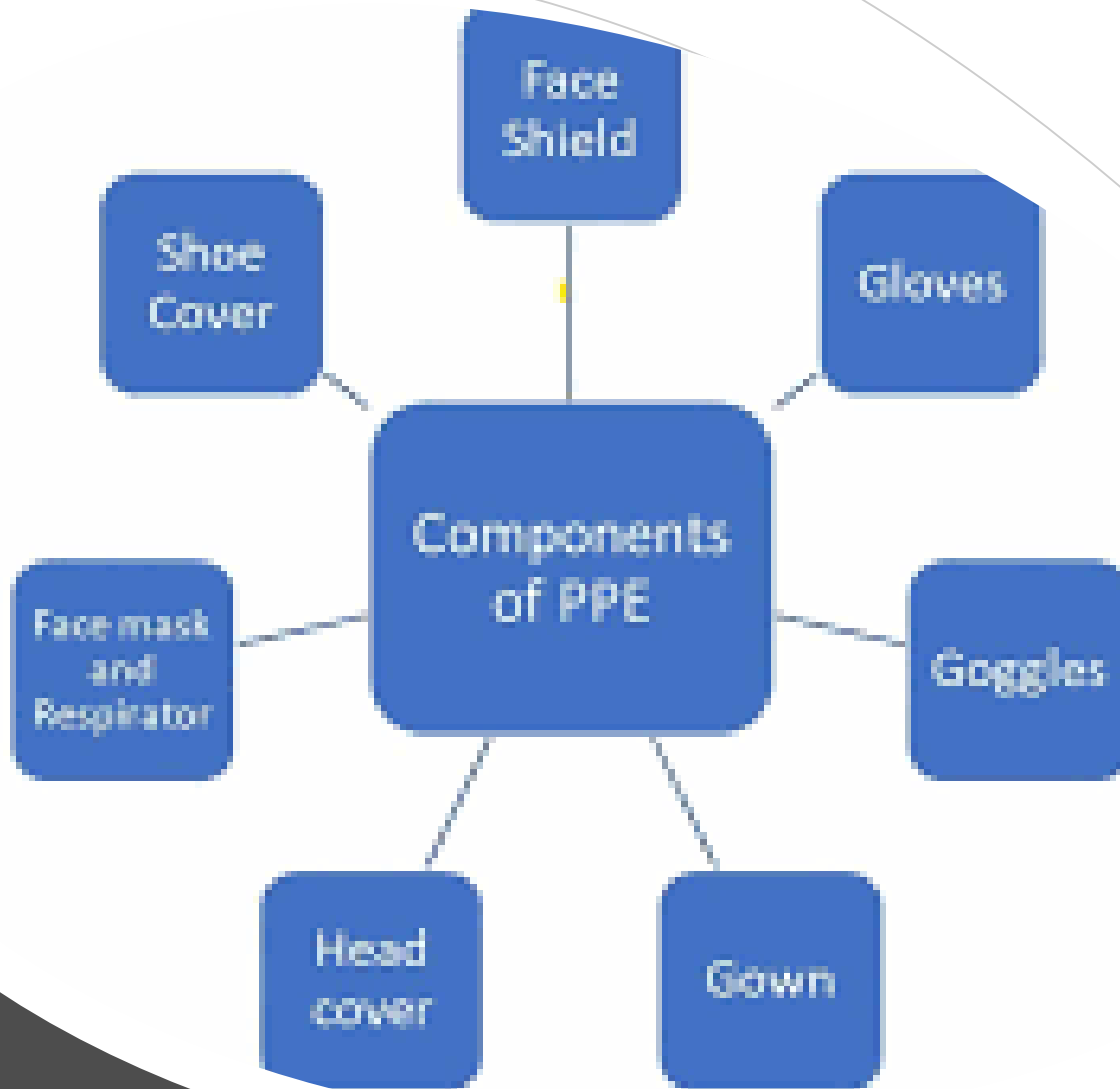


EVD Transmission

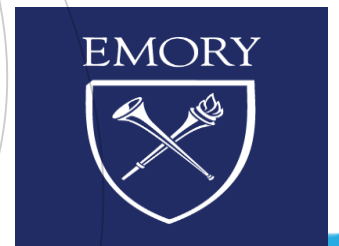
Direct contact with infected/deceased patient:

- Blood & bodily fluids
- Objects, clothing, bedding, medical equipment, needles
- Health care workers, family, friends at close contact are at the highest risk





EVD PPE



Personal Protective Equipment And Just-in-Time Training

The Pediatric Perspective



- Review who's included in this group
- Describe challenges faced with pediatric patients
- Discuss adjustments made for this patient population



Who's a Pediatric Patient?



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Pediatric Patient and Parent



PPE in Pediatrics

- Cumbersome PPE
- Alien appearance
- Poor nonverbal communication
- Voice change





PPE in Pediatrics

- Anatomic make up
- Anxiety and fear
- Caregiver's coping skills
- Children with special needs



- Avoid family separation
- Emotional support (child life, SW, psychiatry)
- Adjustments for special needs





PPE in Pediatrics



Donning and Doffing Training

Partnership- CHOA, OSHA, GA DPPH

- Review and rewriting of training material for hospital decontamination to incorporate pediatric physiology, anatomy, psychology and includes:
 - Donning & doffing training
 - Pediatric PPE challenges
 - Adjuncts used
- 04/26/2022 in Atlanta; Augusta, Macon, Rome, Savannah roll out
- Emergency Operations Center – 770-488-7100



Adjuncts to PPE for Pediatric Decontamination



Shopping cart



Baby bathtub



Laundry basket



References:

- <https://www.cdc.gov/vhf/ebola/hcp/ppe-training/index.html>
- <https://www.cdc.gov/vhf/ebola/hcp/ppe-training/index.html>
- [https://www.cdc.gov/vhf/ebola/hcp/ppe-training/n95Respirator Gown/donning 01.html](https://www.cdc.gov/vhf/ebola/hcp/ppe-training/n95Respirator%20Gown/donning%2001.html)
- Children's Experience of Personal Protective Equipment (PPE) During the COVID-19 Pandemic[abstract]. Ach Dis Child 2020; **105**(Suppl 2):A1-A43 https://adc.bmj.com/content/105/Suppl_2/A16.3
- Pediatric Disaster Response & Emergency Preparedness. College Station, TX: Texas A&M Engineering Extension Service (TEEX), FEMA; 2013, Revised 2014 Version 1.4

