Preparing for Ebola: What U.S. Hospitals Can Learn From Emory Healthcare and Nebraska Medical Center

Clinician Outreach and Communication Activity (COCA) Webinar

October 14, 2014

Office of Public Health Preparedness and Response
Division of Strategic National Stockpile

TODAY'S PRESENTER

RADM Steve Redd
Senior Advisor
CDC Ebola Response

TODAY'S PRESENTER (2)

Bruce S. Ribner, MD, MPH
Director
Emory's Serious Communicable Disease Unit
Emory Healthcare

TODAY'S PRESENTER (3)

Alexander P. Isakov, MD, MPH
Director
Section of Prehospital and Disaster Medicine
Emory Healthcare

TODAY'S PRESENTER (4)

Phillip W. Smith, MD
Medical Director
Biocontainment Unit
University of Nebraska Medical Center

TODAY'S PRESENTER (5)

Angela Hewlett, MD
Associate Director
Biocontainment Unit
University of Nebraska Medical Center

Planning to Transport Patients with Ebola Virus Infection in the U.S.

Alexander P. Isakov, MD, MPH
Director
Section of
Prehospital and Disaster Medicine
Emory Healthcare

"My brother just returned from Liberia and has fever and diarrhea"

- Screening
  - PSAP
  - HCWs
- Safety
- Destination
- Mission recovery
  - Disinfection, infectious waste, follow-up

PPE/Infection control

Ambulance Disinfection Mission recovery

- Driver compartment isolation and patient compartment barrier drapes
- Decon, disinfection of ambulance, PPE doffing and waste removal ALL SUPERVISED
- Surveillance

Planning to Treat Patients with Ebola Virus Infection in the U.S.

Bruce S. Ribner, MD, M.P.H.

On behalf of the

Emory Serious Communicable Diseases Unit team

Planning

Involves every department in your facility

- Emergency Medical Services (AIM 9/23/14)
- Medical staff- ID, critical care, anesthesiology, medical subspecialties
- Nursing
- Environmental management
- Facilities
- Security
- Media relations

Laboratory Testing

CDC: Recommendations for laboratory testing by staff: Any person testing specimens from a patient with a suspected case of Ebola virus disease should wear gloves, water-resistant gowns, full face shield or goggles, and masks to cover all of nose and mouth, and as an added precaution use a certified class II Biosafety cabinet or Plexiglass splash guard with PPE to protect skin and mucous membranes. All manufacturer-installed safety features for laboratory instruments should be used.

Laboratory Testing (2)

ASM: Testing should be limited to iSTAT or equivalent POC testing systems and performed in the patient's room

Laboratory Testing (3)

Reality check:

- **if a lab specimen spills in the main lab we would have to close the lab down for hours to decontaminate**
- **if a lab specimen from a patient with EVD comes to the main lab, few technologists would process it**

A Dedicated Lab Space

The SCD unit established a small point of care lab within the unit

- Dedicated lab equipment for our patients
- Staffed by laboratory volunteers

EMORY

Laboratory Test Support for Ebola Patients Within a High-Containment Facility

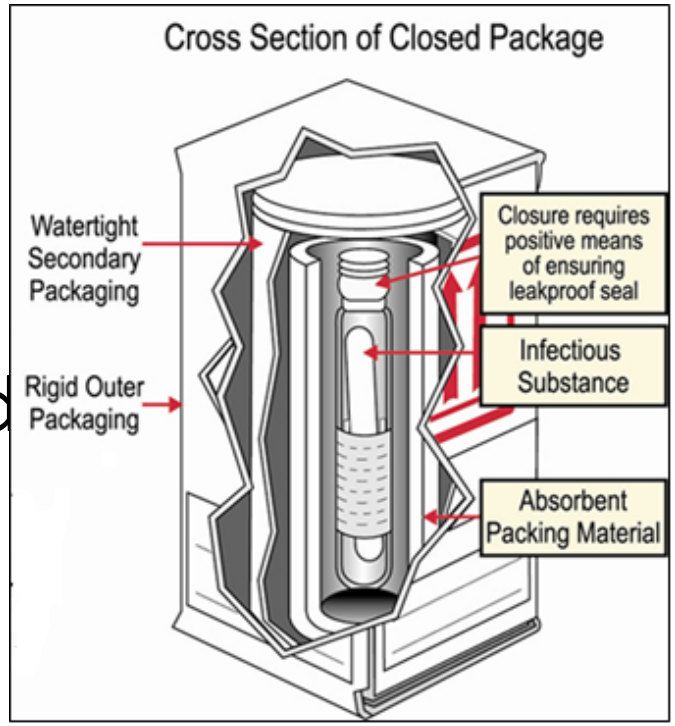
*Charles E. Hill, MD, PhD,[1] Eileen M. Burd, PhD,[1] Colleen S. Kraft, MD,[1] Emily L. Ryan, PhD,[1] Alexander Duncan, MD,[1] Anne M. Winkler, MD,[1] John C. Cardella,[2] James C. Ritchie, PhD,[1] Tristram G. Parslow, MD, PhD[1]**

Lab Med Summer 2014 45:e109-e111

- Chemistry analyzer
- Hematology analyzer
- Blood-gas analyzer
- Automated urinalysis analyzer
- Coagulation analyzer
- Malaria POC device

Surprises in Shipping

- We had lab staff trained in Category A shipping
- Commercial couriers, even those certified in Category A shipping, refused to pick up anything from Emory labelled as containing ebola virus and destined for CDC



Category A Shipping Containment

List of Regulations Associated with the Ebola Response

- OSHA Bloodborne Pathogens Standard (29 CFR 1910)
- CDC/NIH Biosafety in Microbiological and Biomedical Laboratories (BMBL) 5th Ed.
- Department of Transportation (DOT) Hazardous Materials Regulations (Division 6.2 Biological Agents)
- National Science Foundation (NSF)/ American National Standards Institute (ANSI) 49 (Biosafety Cabinetry Certification)
- Georgia Environmental Protection Division (EPD)

Personal Protective Equipment

Followed CDC Recommendations for Precautions for Prevention of Ebola Transmission

- Personal Protective Equipment (PPE)

- All persons entering the patient room should wear at least:
  - Gloves
  - Gown (fluid resistant or impermeable)
  - Eye protection (goggles or face shield)
- Facemask

- Additional PPE might be required in certain situations depending on patient and environment, including but not limited to:
  - Double gloving
  - Disposable shoe covers
  - Leg coverings

http://www.cdc.gov/vhf/ebola/hcp/infection-prevention-and-control-recommendations.html

Annals of Internal Medicine | Ideas and Opinions

Protecting Health Care Workers From Ebola: Personal Protective Equipment Is Critical but Is Not Enough

William A. Fischer II, MD; Noreen A. Hynes, MD, MPH; and Trish M. Perl, MD, MSc

- "Although PPE is effective at decreasing exposure to infected bodily fluids among health care workers, its presence is simply not enough"
- PPE itself can introduce risk
  - Proper training and competency in donning and doffing of PPE key for safety

http://annals.org/article.aspx?articleid=1900481

Considerations for PPE in our Unit

- Dedicated staff with years of training
- We required all staff to undergo refresher training from qualified instructors
- Removing PPE properly key to preventing contamination
- All donning and doffing of PPE was observed by another team member
  - Placed check lists in rooms to remind staff of proper protocols

Unexpected Adventures in Waste Management

- **CDC**: Sanitary sewers may be used for the safe disposal of patient waste.
- **County Watershed Department**: if ebola virus is placed in the sanitary sewers they would disconnect our service
- **Result**: All patients' liquid wastes were disinfected with bleach or quaternary disinfecting detergents for > 5 minutes prior to flushing

Unexpected Adventures in Waste Management (2)

- **CDC**: disposable materials and linens should be placed in leak-proof containment and discarded as regulated medical waste
- **Our contractor**: all waste needed to be certified as free of ebola virus before they would transport to their incinerator
- **Result**: we autoclaved all regulated medical waste before contractor picked it up

Communications

- Primary goal: to educate and to allay fears
- Key messages
  - **We have expertise in treating patients with serious infectious diseases**
  - **We are trained and prepared for these patients**
  - **We will protect our patients, our staff and our communities**
- Patient confidentially and respect is paramount
  - **"To act in the best interests of our patients"**

Communications (2)

- Hospital staff:
  - Town hall meetings with the hospital staff
  - Email updates to all staff
- Maintaining confidence and honesty with our other patients
  - Letter given to each inpatient and all new admission explaining the situation and our key messages

To Ask a Question

- **On the Phone**
  - Press Star (*) 1 to enter in the queue to ask a question
  - State your name
  - Listen for the operator to call your name
  - State your organization and then ask your question

Thank you for joining!
Please email us questions at coca@cdc.gov

Centers for Disease Control and Prevention
Atlanta, Georgia

Clinician Outreach and Communication Activity (COCA)

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[CDC Health Partners Outreach]