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
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
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
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.
ASM: Testing should be limited to iSTAT or equivalent POC testing systems and performed in the patient’s room
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
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, PhD1*

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.
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

“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
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 confidentiality 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
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