

# 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

EMORY



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

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

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“My brother just returned from Liberia and has fever and diarrhea”

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





# PPE/Infection control





# Ambulance Disinfection

## Mission recovery

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



EMORY



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

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

On behalf of the  
Emory Serious Communicable Diseases Unit  
team



# Planning

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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

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**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)

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



## Laboratory Testing (3)

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### **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**



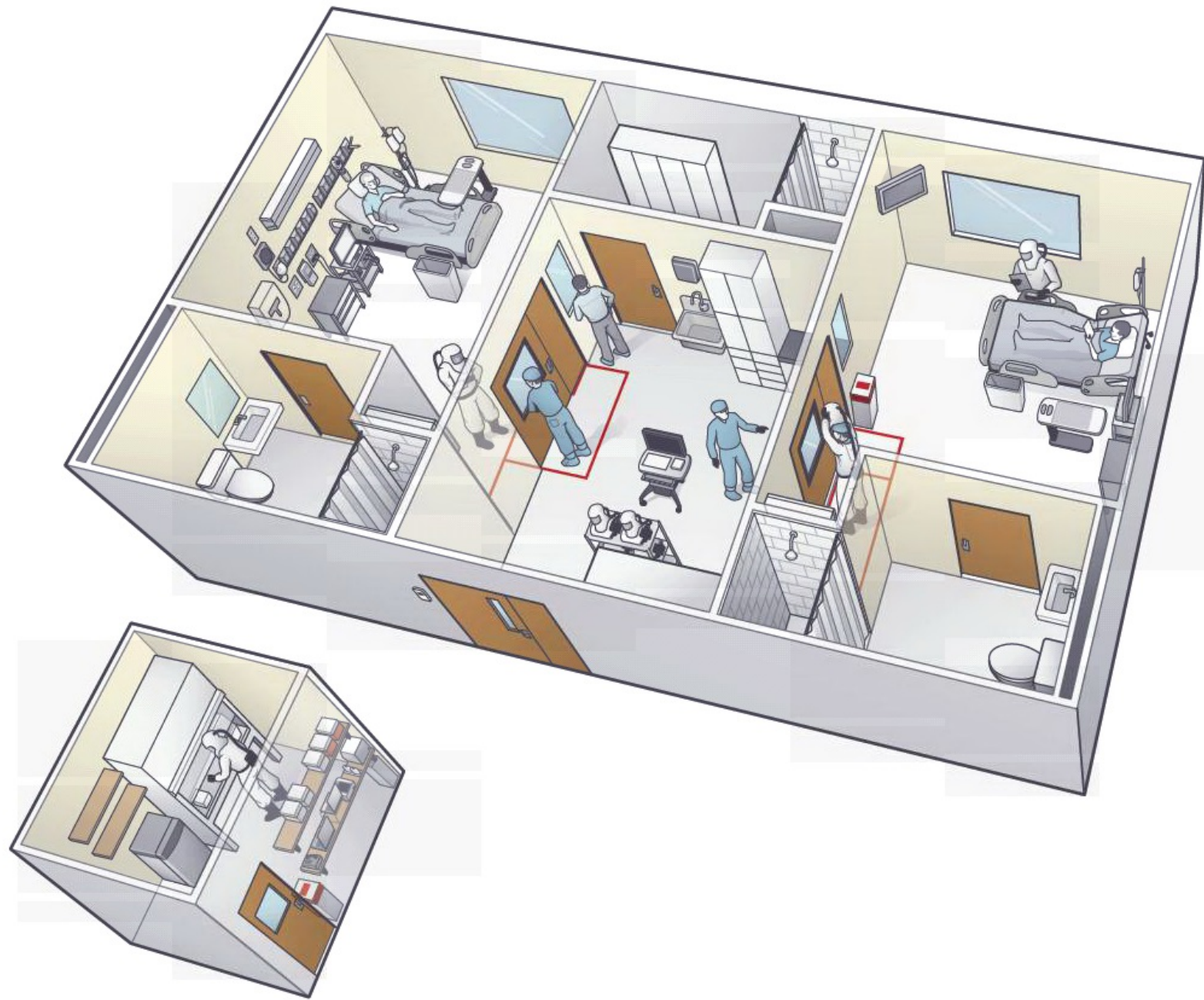
# A Dedicated Lab Space

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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,<sup>1</sup> Eileen M. Burd, PhD,<sup>1</sup> Colleen S. Kraft, MD,<sup>1</sup> Emily L. Ryan, PhD,<sup>1</sup>  
Alexander Duncan, MD,<sup>1</sup> Anne M. Winkler, MD,<sup>1</sup> John C. Cardella,<sup>2</sup> James C. Ritchie, PhD,<sup>1</sup>  
Tristram G. Parslow, MD, PhD<sup>1\*</sup>*

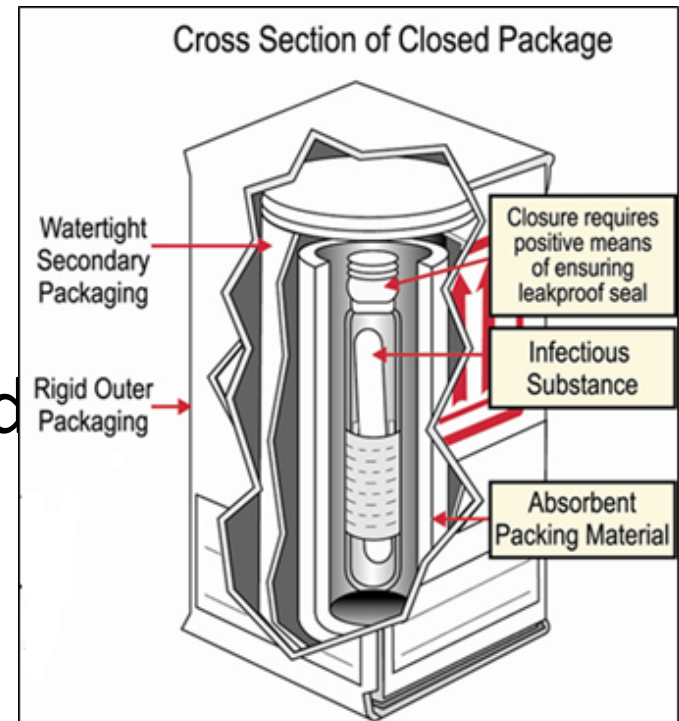
*Lab Med Summer 2014 45:e109-e111*

- 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



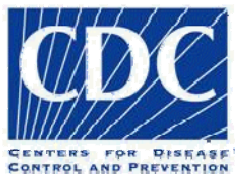
Category A Shipping Containment



# List of Regulations Associated with the Ebola Response



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





# Personal Protective Equipment

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## Followed CDC Recommendations for Precautions for Prevention of Ebola Transmission

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- 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





## 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



# Considerations for PPE in our Unit

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- 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

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- **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)

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- **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

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- 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)

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- 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](mailto:coca@cdc.gov)**



**Centers for Disease Control and Prevention**  
**Atlanta, Georgia**

Clinician Outreach and Communication Activity (COCA)

# Join Us on Facebook

CDC Facebook page for Health Partners! “Like” our page today to receive COCA updates, guidance, and situational awareness about preparing for and responding to public health emergencies.

## CDC Health Partners Outreach



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Government Organization  
Health Partners Outreach Team is with the CDC Emergency Risk Communication Branch For official info go to <http://emergency.cdc.gov/cdcpreparedness/eoc/index.asp>. Disclaimer: Posted

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What's going on CDC Health Partners Outreach?

CDC Health Partners Outreach shared a link via CDC.  
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[go.usa.gov](http://go.usa.gov)

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