Caring for Patients with Ebola in U.S. Hospitals: A Nursing Perspective

Clinician Outreach and Communication Activity (COCA) Conference Call
November 24, 2014
TODAY’S MODERATOR

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Centers for Disease Control and Prevention
TODAY’S PRESENTER (2)

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Lead RN, Nebraska Biocontainment Unit (NBU)

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention
The Focus
100% ED Screening

- All EDs are a little different
- Identify the strategies that work for your ED and hospital

Where will they go?

- Separate location area, move out of main thoroughfare
- Bathroom adjacency is important
- Extra room located in zone for trash staging or family needs
- Ability to close off- egress option?
- Run through the “what if’s”…
- What will your process/workflow look like?
  - Nebraska Medicine Example:
    - **ED Ebola Protocol**
The ED Tools

- **PPE**
  - Slow Down…
  - Practice like you play…
  - Roles (must have donning and doffing partner)!
  - PPE Kit

- **Go Kit**
  - Laminated CDC case definition and risk algorithm
  - IV Start Kits X 2
  - Appropriate lab tubes
  - Bleach wipes
  - Disposable stethoscope

- **Lab**
  - See Health Alert Network Advisory Oct. 24, 2014
  - Nebraska Medicine ED Algorithm example
  - Nebraska Medicine ED Protocol example
NBU Staff Selection Process

The NBU Team includes: Nurses, Respiratory Therapists and Patient Care Techs who hold primary positions within Nebraska Medicine and volunteer to become members of our team

- Each individual undergoes a selection and training process that involves:
  - A formal interview
  - Validation process with home unit manager
  - Employee health screening
  - NBU specific orientation
- During the interview, individuals are evaluated for:
  - Passion for new knowledge
  - Self directed mindset
  - Critical thinking skills
  - Teamwork capabilities

Team members are selected from all clinical backgrounds to provide diversity and a high level of clinical skill mix.

The NBU staff comprises clinicians from intensive care, emergency department, medical/surgical, operating room, labor and delivery, infusion center etc…

This diversity of knowledge and skills stimulates the team to problem solve and challenge each other on unique strategies to consider.
Staff Roles within the NBU

Each staff member is trained to perform all tasks within the NBU with the exception of patient care activities that only registered nurses may perform.

• **Primary RN**
  - Coordinates all patient care activities with the other RN’s and provides a nursing report to oncoming staff

• **RN’s**
  - Support the primary RN and rotates within the other roles

• **Doffing Partner (RN, RT or PCT):**
  - An active participant who assists with the doffing of PPE following specific guidelines
  - Performs tasks in the designated dirty zone

• **Autoclaver (RN, RT or PCT)**
  - Responsible for processing trash and linens

• **Tasker (RN, RT or PCT)**
  - Performs tasks (stocking, cleaning, donning partner…). Stays in the clean zone
The Nursing Care of a patient in the NBU is not significantly different than caring for a patient in any other unit

Nurses in the NBU continue to:

- Chart in the EHR
- Complete the nursing care plan
- Provide patient education
- Coordinate all care needs
- Bar-code scan Medications
- Process and complete medical orders
- Count the Narcotics in the Automated Dispensing System
- Consult and communicate with the medical team
- Provide support to the patient’s family etc…

The difference is performing our duties while adhering to strict Infection Control Procedures
Infection Control Procedures

• Donning and Doffing PPE procedures
• Designated donning and doffing PPE areas
• Designated clean and dirty zones
• Designated zones in which staff performing their roles can enter
• Daily cleaning checklists with dedicated cleaning equipment for each zone
• Designated areas to keep ‘clean’ equipment vs equipment that has been in the patient care area i.e. x-ray machine
• Designated pathways for removing waste and used linen
• A method for transferring equipment, medications and other supplies from ‘clean to dirty’ and ‘dirty to clean’
• A method for communication ‘Provider to Provider’ ‘Provider to Patient’ ‘Patient to Family or SO’
Standard Operating Procedures:

- Intravenous access; peripheral vs central line
- Obtaining and processing laboratory tests
- Obtaining and processing diagnostic services
- Protocols and agreements in place for specialized care i.e. dialysis, mechanical ventilation
- Protocols and agreements with public utilities i.e. waste management
- Plans for care of the deceased i.e. crematorium, transport to the crematorium

Plan, Practice, Learn and Adapt for your unique situation
NBU Team Self Care

- Shared Governance: Staff involved in decision making. Builds team confidence.
- Hydration and nutrition
  - Meals, Drinks and Snacks available in the staff lounge
- Clothing
  - Scrubs, Underwear, Socks, Shoes
- A place to shower
  - With quality hygiene products
- A place to rest
- Coaching and support as needed
- Self-scheduling is used. Leadership assists in balancing the schedule
- Schedules are set-up in advance of activation
- Daily communications/huddle information shared and emailed each day
- Leadership connects with day and night shift every day during activation
- Team email address used for updates, interesting information sharing, etc.
Nebraska Ebola Method App

- The two courses, The Nebraska Ebola Method for Clinicians and The Nebraska Ebola Method for General Public, provide instruction and information through videos and printable documents.

- The clinicians course is available now via the iTunes U app for iPad and iPhone, through this direct link -- https://itunesu.itunes.apple.com/enroll/FDL-BXP-WTF -- or by searching in iTunes U. The course also is available through Moodle at http://phtc.unmc.edu/moodle for viewing on a desktop, laptop or other mobile devices.
True heroism is remarkably sober, very undramatic. It is not the urge to surpass all others at whatever cost, but the urge to serve others at whatever cost. ~Arthur Ash

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TODAY’S PRESENTERS (3)

**Nancye R. Feistritzer, DNP, RN**  
Vice President of Patient Care Services  
Chief Nursing Officer  
Emory University Hospital

**Sharon Vanairsdale, MS, APRN**  
Clinical Nurse Specialist  
Emergency Department  
Emory University Hospital
Care of the Patient with Ebola Virus Disease

NANCY R. FEISTRITZER, DNP, RN
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Clinical Care:
Serious Communicable Diseases Unit

This type of facility is NOT necessary for the care of patients with Ebola
SCDU Team

- Nineteen EHC critical care nurses
- Five Infectious Diseases (ID) physicians
- EU Biosafety Office
- Laboratory personnel
- Spiritual Health
- Designated EVS personnel
- Occupational Health
Assumptions

• Only direct care providers in patient room
• No person enters room without mandatory training and demonstrated competence
• Autonomous practice (supported by experts)
  – Ventilator management
  – Continuous renal replacement therapy (CRRT)
  – Physical and occupational therapy
  – Environmental decontamination
Culture of Safety

• Shared accountability for safety
• Effective and assertive communication is central to the safety of the team
• Communication is so important, the team uses rules to govern
  – Direct patient care communication
  – Daily team huddles
Family Rules

• Follow all standard operating procedures to the best of their ability
• Ensure that others follow the standard operating procedures
• Report all accidents and/or near misses
• Report any symptoms that match the pathogen
• Report any new medical conditions
Standard Operating Procedures in the SCDU

• Provide consistency in how procedures are performed in the unit
• Allows staff to identify possible deviations when performing the procedure
• Gave staff confidence knowing they were performing procedures consistently
SCDU SOPs

• The care team train and validate competency in the following areas:
  – Donning and doffing of personal protective equipment (PPE)
  – Utilization of “Buddy System”
  – Waste management protocols
  – Decontamination and containment protocols
  – Specimen handling for diagnostic testing
Standard Operating Procedures

• Donning—patient room and anteroom
• Doffing—patient room and anteroom
• Toileting—ambulatory and non-ambulatory patients
• Waste management
• Spill clean up
• Needle stick
• Creating chemical mats
• Obtaining and handling lab specimens
• X-ray process
• Transferring equipment between patient rooms
• Cleaning durable medical equipment
“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
  - Monitoring of activities by other team members

- Evaluate for and mitigate fatigue, exhaustion and complacency
Considerations for PPE

- All staff undergo training and refresher training from qualified instructors (EHSO + Key Nursing Staff)
  - Including all levels of possible PPE needed
- ALL EHS related SOPs are reviewed and approved by Biosafety, Infection Control, Nursing, and Infectious Disease Physicians.
- Removing PPE properly key to preventing contamination
- All donning and doffing of PPE was observed by another team member
  - Placed visual clues to remind staff of proper protocols
  - Noticed some complacency after several days
- Staff must be comfortable and assured with these procedures to ensure adequate patient care
## PPE Risk Assessment – PPE Algorithm – PPE Matrix
### Ebola Positive - Symptomatic Patient

<table>
<thead>
<tr>
<th>Personnel</th>
<th>Activities/Jobs/Tasks</th>
<th>Clinical Conditions of patients</th>
<th>Potential Exposures/Contamination</th>
<th>PPE requirements</th>
<th>Unexpected events</th>
<th>Additional PPE/Changes</th>
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<tr>
<td>Nurses</td>
<td>Directly in contact with patients (clinical care)</td>
<td>▪ Nausea/Vomiting</td>
<td>▪ Mucous membrane-Eyes/nose/mouth ▪ Feet ▪ Hands ▪ Whole body</td>
<td>▪ Full PAPR ▪ Booties ▪ Double Gloves ▪ Tyvek Suit</td>
<td>▪ Explosive diarrhea ▪ Projectile vomitus</td>
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<td>Physicians</td>
<td>Directly in contact with patients</td>
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<td>Lab techs</td>
<td>Directly in contact with patient samples</td>
<td>▪ Nausea/Vomiting</td>
<td>▪ Mucous membrane-Eyes/nose/mouth ▪ Feet ▪ Hands ▪ Whole body</td>
<td>▪ Full PAPR ▪ Booties ▪ Double Gloves ▪ Tyvek Suit</td>
<td>▪ Sample spill ▪ BSC failure</td>
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<td>Waste techs</td>
<td>Directly in contact with waste generated from patient rooms</td>
<td>▪ Nausea/Vomiting</td>
<td>▪ Mucous membrane-Eyes/nose/mouth ▪ Feet ▪ Hands ▪ Whole body</td>
<td>▪ Procedure Mask with extended shield ▪ Booties ▪ Double Gloves ▪ Tyvek Suit</td>
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# PPE Risk Assessment – PPE Matrix

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<th>Staff Outside patient room (nurse station/resource nurse)</th>
<th>Staff assisting with waste management (SCDU only)</th>
<th>EVS Staff Managing Waste</th>
<th>Patient room staff (RN/MD/NT/Phlebotomist)</th>
<th>EVD Diagnostic Lab Staff (SCDU only)</th>
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<td><strong>Suspected-asymptomatic</strong></td>
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## Notes

- Standard precautions
- Impervious gown
- Booties
- Surgical mask
- Double gloves
- Coverall
- Apron
- Surgical mask
- Face shield (goggles if face shield is not available)
- Double gloves
- PAPR hood
- Impervious hair cover
- Impervious gown
- Face shield (goggles if face shield is not available)
- Double gloves
- Surgical mask
- Face shield (goggles if face shield is not available)
- Double gloves
- *See reference below

**SCDU staff will handle the waste stream and room decontamination**

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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
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
Thank you for joining!

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