Hospital Ebola Preparedness and the Role of Multidisciplinary Team

The Problem
Ebola virus disease (EVD) is a rare disease with a mortality rate of about 50%, which is causing the current outbreak in 3 West African countries. It is spread mainly by direct contact with an EVD patient’s blood or body fluids.

As part of the Ebola preparedness plans, Farr 7 was selected as the unit to house patients undergoing evaluation for possible EVD. Staff who would be caring for the patient felt ill prepared for the care of a suspect EVD patient, including insufficient knowledge about Ebola transmission, use of PPE, and protocols for safe patient care.

Aim/Goal
The goal of this project was to increase the safety of HCWs through improved use of PPE and protocol development.

The Team
- Distribution
- Health Care Quality
- Emergency Management
- Infection Control/ Hospital
- Environmental Health & Safety
- Epidemiology
- Hospital Medicine
- Patient Care Services

The Interventions
- Created 1-hour PPE training which included 10-min demonstration of PPE use and how to access Ebola information on the portal plus 45-min PPE practice for participants.
- Real-time testing of PPE and protocols on 10/12-10/14 with admission of a suspect EVD patient admission.
- Creation of large multidisciplinary groups for continued work on PPE and protocol development.

The Results
67 critical care RNs participated in initial training on 10/8/14; subsequent training of 108 staff and physicians occurred across all disciplines.

- Identified areas for additional improvement:
  - Better communication to Farr 7 before patient transfer
  - Obtain more reliable PPE and train on technique for safe removal
  - Further clarify staff roles and responsibilities
  - Add observer role to ensure safe PPE removal

Lessons Learned
- Perform simulation testing of PPE to identify failures of planned PPE and use an iterative process to make improvements.
- Ensure that all staff are adequately trained and have access to accurate information/education.
- Institute team huddles to determine goals for each room entry prior to putting on PPE to limit total number of room entries and associated staff exposure.
- Develop multidisciplinary processes to account for as many issues as possible prospectively including room cleaning, trash removal, and patient care of both the uncomplicated and critically ill patients. Such protocols were difficult to develop during the event.

Next Steps/What Should Happen Next
- Continue to train all staff and MDs with new PPE and repeat at monthly intervals to maintain staff competency and comfort with the process.
- Complete development of protocols for patient care and perform simulations.
- Plan and complete a drill of evaluation and care of EVD patient from ED to Farr 7.

For more information, contact:
Barbara Donovan NP-C, CNS
bcdonova@bidmc.harvard.edu