Nursing Practice & Patient Advocacy Alert

Treatment of Patients with Ebola

Many of our members are reporting that their hospitals are not doing enough to adequately protect patients and health care workers, and fully inform nurses of proper Ebola infection control procedures. This document focuses on educating nurses with respect to what facilities should be doing to mitigate the risks and the potential harm to nurses and providers who may be assessing, treating and evaluating patients who might be infected with the Ebola virus.

1. **Highest standard of personal protection for Health Care Workers**
2. **Extensive training and education on use of protective clothing, equipment and infection control protocols**
3. **Adequate numbers of appropriately prepared nursing staff to safely meet patient needs**

Ebola is an extremely hazardous disease and as such warrants being treated by the most conservative methods available. It is not always possible to identify patients with Ebola early because initial symptoms may be non-specific.

For this reason, it is important that health-care workers apply universal precautions and practices consistently with all patients – regardless of their diagnosis – in all work settings, at all times. These include meticulous hand hygiene before and after patient contact and the use of personal protective equipment (to protect against aerosolized and droplet secretions, risk of splashes and drainage exposure or other contact with infected materials) when providing care, including end-of-life, environmental and body care practices.

**NNU supports the Center for Disease Controls guidelines on treating patients with Ebola with one caveat:** NNU believes that the highest standard of protection offered to those treating patients diagnosed with Ebola includes the use of Haz-Mat suits. The rationale is based on provider observations that those suffering from Ebola may become debilitated, lose protective reflexes, and begin coughing productively, choking/vomiting, become incontinent of urine and stool, and have bloody secretions or begin bleeding at any time. This increases the risk of infection for health care workers who are not wearing protective suits.

The CDC also stresses the importance of adequate and appropriate Nursing staff in dealing with infectious diseases. The association of nursing staff shortages with increased rates of Hospital Acquired Infections (HAIs) has been demonstrated in several outbreaks in hospitals and long term care settings. In most cases, when staffing
improved as part of a comprehensive control intervention, the outbreak ended or the HAI rate declined. In two studies the composition of the nursing staff ("pool" or "float" vs. regular staff nurses) influenced the rate of primary bloodstream infections, with an increased infection rate occurring when the proportion of regular nurses decreased and pool nurses increased.

Best protection for Health Care Workers

The Occupational Safety and Health Administration insist that:

- Employers should train workers about the sources of Ebola exposure and appropriate precautions.

- Employers must train workers required to use personal protective equipment on what equipment is necessary, when and how they must use it, and how to dispose of the equipment.

- In addition where workers are exposed to blood or other potentially infectious materials, employers must provide the training required by the Bloodborne Pathogens standard, including information about how to recognize tasks that may involve exposure and the methods to reduce exposure, including engineering controls, work practices, and personal protective equipment.

The Center for Disease Control has issued the following guidelines for hospitals on how to treat patients suspected of carrying the Ebola Infection

Key Components of Standard, Contact, and Droplet Precautions Recommended for Prevention of EHF Transmission in U.S. Hospitals

Patient Placement
- Single patient room (containing a private bathroom) with the door closed
- Facilities should maintain a log of all persons entering the patient's room
- Consider posting personnel at the patient's door to ensure appropriate and consistent use of PPE by all persons entering the patient room

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 (e.g., copious amounts of blood, other body fluids, vomit, or feces present in the environment), including but not limited to:

- Double gloving
- Disposable shoe covers

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• Leg coverings
• Recommended PPE should be worn by HCP upon entry into patient rooms or care areas.
• Upon exit from the patient room or care area, PPE should be carefully removed without contaminating one’s eyes, mucous membranes, or clothing with potentially infectious materials, and discarded
• Hand hygiene should be performed immediately after removal of PPE

For re-useable PPE, cleaned and disinfected according to the manufacturer’s reprocessing instructions and hospital policies.

Patient Care Equipment

• Dedicated medical equipment (preferably disposable, when possible) should be used for the provision of patient care
• All non-dedicated, non-disposable medical equipment used for patient care should be cleaned and disinfected according to manufacturer's instructions and hospital policies

Aerosol Generating Procedures (AGPs)

• Minimize/avoid AGPs for Ebola HF patients.
• If performing AGPs, use a combination of measures to reduce exposures from aerosol‐generating procedures when performed on Ebola HF patients.
• Visitors should not be present during aerosol‐generating procedures.
• Limiting the number of HCP present during the procedure to only those essential for patient-care and support.
• Conduct the procedures in a private room and ideally in an Airborne Infection Isolation Room (AIIR) when feasible. Room doors should be kept closed during the procedure except when entering or leaving the room, and entry and exit should be minimized during and shortly after the procedure.
• HCP should wear gloves, a gown, disposable shoe covers, and either a face shield that fully covers the front and sides of the face or goggles, and respiratory protection that is at least as protective as a NIOSH certified fit‐tested N95 filtering face‐piece respirator or higher (e.g., powered air purifying respiratory or elastomeric respirator) during aerosol generating procedures.
• Conduct environmental surface cleaning following procedures If re‐usable equipment or PPE (e.g. Powered air purifying respirator, elastomeric respirator, etc.) are used, they should be cleaned and disinfected according to manufacturer instructions and hospital policies.
• Collection and handling of soiled re‐usable respirators must be done by trained individuals using PPE as described above for routine patient care.
• Because of the potential risk to individuals reprocessing reusable respirators, disposable filtering face piece respirators are preferred.

Note: As information becomes available, the CDC recommendations will be re‐evaluated and updated as needed. These CDC recommendations are based upon available information (as of July 30, 2014) and the following considerations:

• High rate of morbidity and mortality among infected patients

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• Risk of human-to-human transmission
• Lack of FDA-approved vaccine and therapeutics


For information on symptoms of Ebola Hemorrhagic Fever infection and modes of transmission, see the CDC Ebola Hemorrhagic Fever Website.

If you have further questions, need more information or help please call NNU's Nursing Practice Program at 510/273-2250.