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US Radiology Departments Prepare for Ebola

A special report on radiology preparedness for handling cases of the Ebola virus has been released by radiologists from the US National Institutes of Health (NIH) and Emory University School of Medicine in Atlanta (GA, USA). The authors discuss their protocols and recommendations in the report which is published online in *Radiology*.

“Clear and frequent communication with the healthcare staff is essential during this time of heightened public concern and understandable caution,” said report co-author Carolyn C. Meltzer, MD, from the Departments of Radiology and Imaging Sciences, Psychiatry and Behavioral Sciences, and Neurology at Emory University School of Medicine. “For example, at Emory University Hospital, open Town Hall information sessions, the wide dissemination of standardised screening protocols, and close intra- and interdepartmental communication have supported a safe environment in caring for patients with Ebola virus.”

US health authorities are placing a major emphasis on Ebola preparedness training at medical facilities across the nation. The lack of proper procedures to diagnose and treat patients with the Ebola virus was cited as a major reason for infection of medical personnel in Dallas.

Currently, there are four biocontainment facilities in the US with specialised isolation rooms and staff trained to treat Ebola patients: NIH Clinical Center in Bethesda, Md., Emory University Hospital in Atlanta, St. Patrick Hospital in Missoula, Mont., and Nebraska Medical Center in Omaha. Other tertiary care institutions are also preparing staff and facilities to handle patients with the Ebola virus.

Portable X-ray units and bedside ultrasound imaging have been used in biocontainment units. “Medical imaging does not provide diagnosis of Ebola virus disease, but patient assessment in the emergency department and treatment isolation care unit is likely to require imaging services,” explained the report’s co-author, David A. Bluemke, MD, PhD, director of the Department of Radiology and Imaging Sciences at the NIH Clinical Center.

The role of medical imaging in Ebola care is to exclude other diagnoses or assess complications of the virus. For the radiology team to provide the best possible medical care for the patient while maintaining full protection of the medical staff, the report recommends that medical imaging exams of Ebola patients should be performed within a specialised isolation unit.

At the NIH, training sessions for the radiology staff directly involved in Ebola patient care include in-depth information on the background and spread of the virus, as well as isolation unit procedures.

Radiology departments must develop standard operating procedures for performing imaging in an isolation unit. Details of the standard operating procedures will vary, depending on the type of equipment available, whether the facility is equipped for wired or wireless image transmission, and complexity of the examination.

The report mentions two different strategies:

1. Radiologic technologists do not enter the patient’s room, known as the Hot room. In this approach, medical technologists instead stay in the Warm room (anteroom) and provide verbal instructions for equipment use to physicians or nurses in the Hot room.
2. Radiologic technologists enter the Hot room to help with using the imaging equipment. This approach is needed when the equipment may be somewhat more complex.

Every effort should be made to perform general X-ray procedures in the isolation room rather than transporting the patient to the radiology department, the authors emphasise.

CT and MRI equipment are not designed for imaging of patients with Ebola or other highly contagious diseases. Small crevices in the gantry table and moving parts are extremely difficult to protect with plastic covers, and bodily fluids can accumulate in narrow recesses that are inaccessible to surface cleaning, the authors explain.

Source: ADVANCE Healthcare Network
Image Credit: Michael Freeman/Corbis (published in The Guardian)

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