

NEWS

US issues new guidelines for health workers caring for Ebola patients

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Healthcare providers caring for Ebola patients should wear personal protective gear that leaves no skin exposed and should be rigorously trained in its use, the US Centers for Disease Control and Prevention (CDC) said in new guidance issued on 20 October.¹

The agency issued the new, stricter guidelines after two nurses became infected while caring for a Liberian man in a hospital in Dallas, Texas.² The infections raised questions about the adequacy of US infection control procedures and caused widespread concern among US health workers about their personal safety.

Tom Frieden, CDC director, said in a press briefing that previous US and World Health Organization guidelines had allowed skin to be exposed and that the Texas hospital where the nurses became infected had relied on those guidelines. "We may never know exactly how that happened, but the bottom line is that the guidelines didn't work for that hospital. Dallas showed that taking care of Ebola is hard," he said.

The new guidelines were drawn up in consultation with Médecins Sans Frontières, which has decades of experience in caring for Ebola patients in Africa. It also has experts working at the three high level biocontainment treatment units in the United States, which have successfully treated five US patients who contracted Ebola in west Africa, with no staff infections.

The new guidelines stress the need for intensive training in the use of personal protective gear and repeated, hands-on practice of putting on the gear and removing it safely. Frieden said, "Prior to working with Ebola patients, anyone who is going to work with them must be repeatedly trained in and demonstrate competency performing all of the things that they're going to need to do, specifically putting on and taking off proper personal protective equipment."

In addition, all workers should be supervised by a trained infection control monitor while they put on their gear and take it off, to ensure that they follow proper procedure. Although a

great deal of attention is being paid to the type of equipment being recommended, Frieden noted, the greatest risk to healthcare workers seems to be when they are taking off the gear—underscoring the importance of proper technique.

Previous CDC guidelines had been partly based on experience gained in Africa and might not have considered differences in how care was provided in the US, Frieden added. "The way care is given in this country is riskier than in Africa. There's more hands-on nursing care, and there are more high risk procedures such as intubation," he said.

The personal protective equipment recommended for US healthcare workers caring for patients with Ebola includes:

- Double gloves
- Waterproof boot covers that go to at least mid-calf, or leg covers
- A single use, fluid resistant or impermeable gown that extends to at least mid-calf, or a coverall without an integrated hood
- Respirators, such as N95 respirators or powered air purifying respirators
- A single use, full face, disposable shield
- Surgical hoods to ensure complete coverage of the head and neck, and
- A waterproof apron that covers the torso to the level of the mid-calf, for use if patients have vomiting or diarrhea.

1 US Centers for Disease Control and Prevention. Guidance on personal protective equipment to be used by healthcare workers during management of patients with Ebola virus disease in US hospitals, including procedures for putting on (donning) and removing (doffing). 20 October 2014. www.cdc.gov/vhl/ebola/hcp/procedures-for-ppe.html.

2 McCarthy M. Second US nurse with Ebola had traveled by plane. *BMJ* 2014;349:g6277.

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