Is respiratory protection appropriate in the Ebola response?

We write to express our concern about one aspect of the response to the current epidemic of Ebola that has, so far, received little attention, lacks an evidence base, and might be counterproductive.

The primary mode of transmission of Ebola virus is through contact with infected patients’ secretions (such as blood, vomit, or faeces) directly and indirectly (for example, from contaminated needles). This transmission occurs via close family contact or in health-care settings, particularly when placing orotracheal intubation or when caring for a patient who is vomiting or bleeding. Ebola is rarely transmitted via an airborne route. Although these routes of transmission are well known, most agencies, including governmental agencies responsible for repatriating western patients, apply infection-control measures appropriate for airborne diseases.

Excessive precautions could offer reassurance to those responding to Ebola, yet complete respiratory protection is expensive, uncomfortable, and unaffordable for countries that are the most affected. Worse, such an approach suggests that the only defence is individual protective equipment, which is inaccessible to the general population. Moreover, the image of workers with spectacular protective clothing might contribute to the panic in some communities. If this leads people to flee affected areas it could increase the spread of infection. It also reinforces the view that some lives are more valuable than others, and that infectious droplets might reach. Exceptional precautions, such as pressurised suits with oxygen tanks, should be reserved for interventions that generate aerosols (invasive explorations or intubations), specific situations (eg, massive haemorrhage), or in laboratories where the virus is cultivated. They are unnecessary in the settings where the virus is most rampant.

In western Africa now there is a need for rational and efficient use of protective equipment. This can only be achieved by communicating a consistent message that the disease is essentially transmitted through direct contact.

In control of infectious diseases, more is not necessarily better and, very often, the simplest answer is the best.

We declare no competing interests.

*Jose M Martin-Moreno, Gilberto Llinás, Juan Martínez Hernández

dr.martinmoreno@gmail.com

Department of Preventive Medicine and Public Health, University of Valencia, 46010 Valencia, Spain (JMM-M, GL); and Preventive Medicine and Public Health Service, Hospital La Paz-Carlos III, Madrid, Spain (JMH)


