

# Some health care workers lack gear to protect from HIV, other bloodborne infections

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Health care workers in some of the world's poorest countries lack basic equipment to shield them from HIV and other bloodborne infections during surgical and other procedures, new research from the Johns Hopkins Bloomberg School of Public Health suggests. The findings underscore the lack of adequate protective supplies in nations at the center of the current Ebola outbreak.

In Liberia, one of the countries most affected by Ebola, 56 percent of hospitals had protective eyewear for its doctors and nurses, while 63 percent had sterile gloves, the study found. In Sierra Leone, just 30 percent of hospitals had [protective eyewear](#), while 70 percent had sterile gloves. The results of the research are reported online this month in the journal *Tropical Medicine and International Health*, and are based on data compiled between 2008 and 2013, before the current outbreak.

The Ebola virus is spread through direct contact through broken skin or mucous membranes with the blood, secretions, organs or other bodily fluids of infected people, and indirect contact with environments contaminated with such fluids. More than 1,300 have died during the current West-African outbreak and transmission has frequently occurred when [health care workers](#) treating patients with suspected or confirmed Ebola have been infected. This has often occurred through close contact with patients when infection control precautions are not strictly practiced.

"Sadly, one of the only benefits of the Ebola crisis in West Africa may

be to highlight the baseline lack of personal [protective equipment](#) such as eye protection, gloves and aprons for health care workers," says study leader Adam L. Kushner, MD, MPH, an associate in the Johns Hopkins Bloomberg School of Public Health's Department of International Health. "These items are crucial to protect health care workers today, but were lacking long before the current crisis. We've seen this for many years with HIV."

Despite the billions of dollars that have been spent on HIV, one area that has remained relatively ignored is [protective gear](#), the researchers write. In west and central Africa, as many as 5 percent of the population are HIV positive, making the dearth of protective gear all the more striking.

For their study, Kushner and his colleagues reviewed surveys from 399 hospitals in 13 low- and middle-income countries – Afghanistan, Bolivia, Gambia, Ghana, Liberia, Mongolia, Nigeria, Sierra Leone, Solomon Islands, Somalia, Sri Lanka, Tanzania and Zambia.

Overall, only 29 percent of hospitals always had eye protection, 64 percent always had sterilizing equipment and 75 percent always had sterile gloves. The range was wide among countries. For example, in Afghanistan, only one-quarter of hospitals had sterile gloves, while 100 percent of facilities in Nigeria and Bolivia had sterile gloves.

No country surveyed had 100 percent availability of all items. In the United States, this type of protective equipment is standard.

The necessity of protection for health care workers, especially those in surgical settings, has been well documented. One study showed that double gloving of health care workers during surgery resulted in an 80 percent reduction in perforations to the inner glove, preventing exposure to blood through openings in the skin. The same study found that more than half of the exposures to blood in sites other than the hand would

have been prevented by the use of face shields, waterproof gowns and waterproof boots.

The World Health Organization has made it a priority to combat HIV, malaria and other bloodborne diseases. One neglected area in that effort is protecting [health care](#) workers from being placed at risk for infection, Kushner says. The Ebola outbreak highlights this dearth of critical and basic medical supplies. While the focus of the new study was HIV, Ebola can be spread in the same manner and the findings are just as relevant – if not more so – during the current epidemic, he says.

"We can all learn from this new epidemic and be better prepared for the next one by remembering that inexpensive protective equipment can keep doctors and nurses safe from infection – and better able to care for patients who need them," Kushner says. "It is imperative that we make this a priority."

**More information:** "Scarcity of protective items against HIV and other bloodborne infections in 13 low- and middle-income countries," was written by Shailvi Gupta, Evan G. Wong and Adam L. Kushner.

Provided by Johns Hopkins University Bloomberg School of Public Health

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