With 4868 deaths from 9911 cases as of 22 October, according to the World Health Organization, the Ebola outbreak in West Africa—including Guinea, Sierra Leone, and Liberia—shows no signs of diminishing.

Getting Ebola under control is a problem for the world because, as we have seen, viruses do not require a visa to travel. Cases have surfaced in Senegal, Nigeria, and Mali, and Ebola has even extended its reach to Europe and North America. Ebola was long thought to affect only people living in poverty, so it has been neglected by the world. We have too few virologists and vaccinologists working in relevant areas and too little money invested in relevant research. Even if we get this outbreak under control soon—and we believe we will—the world will remain vulnerable to future outbreaks of Ebola and other infections as long as developed countries, with their enormous financial resources, fail to deal with these neglected diseases.

The entire country of Sierra Leone has fewer than 100 registered doctors. In one village of 9000 people, there is no doctor and no way of triaging cases in a timely manner. And because of a lack of facilities, patients—suspected, probable, or even confirmed—cannot be removed immediately and have to be kept in the community or at home, waiting for beds to open up.

The need for material aid is great, but the need for manpower is even larger and more urgent. West Africa needs doctors to run treatment and holding centers; virologists to do laboratory diagnostics; epidemiologists to dissect the major factors affecting the outbreak, which would lead to effective public health measures; public health workers to help implement these measures; and educators to work with the public and improve communications. Only when all this has been implemented in a coordinated way are we likely to see the transmission chain in West Africa cut; hopefully this will happen before Ebola becomes a big problem elsewhere. All this is needed now, on the ground, in every community and village.

Looking to the future, we call on the world to build up an effective public health system in West Africa. The first and obvious need is for strong government leadership to coordinate the region's public health affairs. But more is needed: A younger generation from developed countries must be trained to specialize in African communicable diseases. Some of these people must set up and run training programs for younger West Africans.

We urge young scientists planning their careers to consider studying communicable diseases, especially highly pathogenic ones like Ebola or Lassa fever. Research must be driven not merely by scientists' interests but by the desire—the urgent need—to find solutions for real-world problems. Younger scientists are needed to work in labs in the developed countries but also here on the ground, to talk with the local people, understand their needs and pain, and work bravely to fight deadly viruses like Ebola.

George F. Gao is deputy director general of the Chinese Center for Disease Control and Prevention. Yong Feng is director of the Division of African Affairs in the Department of International Cooperation at China's National Health and Family Planning Commission.

On the ground in Sierra Leone

When you arrive in Sierra Leone, things look pretty normal. Life goes on as usual in many respects. In Freetown, the streets are still busy, and people still go to the market. In the villages, people are doing the same things they always do: sitting and chatting, wandering, playing football. But there is nothing normal about the work we are doing here. We have been in Sierra Leone for more than a month, with a China-based team running a mobile testing laboratory and a holding center for Ebola cases. When you arrive at a clinic or a holding center here, you see immediately how devastating Ebola is and how inadequate the resources are. The local public health system is weak. People die in fields outside of clinics. Many more die inside their homes.

“We have been in Sierra Leone for more than a month, with a China-based team running a mobile testing laboratory and a holding center for Ebola cases.”

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By George F. Gao and Yong Feng

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