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WEST AFRICA'S EBOLA EPIDEMIC IS OUT OF CONTROL, BUT NEVER HAD TO HAPPEN

PROF. LAWRENCE GOSTIN, FACULTY DIRECTOR, O'NEILL INSTITUTE, PROPOSES A \$200 MILLION DEDICATED WORLD HEALTH ORGANIZATION (WHO) "HEALTH SYSTEM FUND"

O'NEILL INSTITUTE

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A public health crisis is unfolding in three of the world's poorest countries facing an unprecedented Ebola epidemic—Guinea, Sierra Leone, and Liberia. A U.S. diplomat also brought Ebola to Lagos, Africa's most populous city, when he boarded a flight from Monrovia, Liberia visibly sick. With more than 2,200 people infected to date (and over 1,200 deaths), the toll will continue to rise. The WHO acknowledges, moreover, that this far underestimates the scale of the problem due to under-identification and under-reporting of cases.

The West African Ebola epidemic is out of control, but never had to happen. There is a way to contain the crisis and, more importantly, prevent large-scale future Ebola outbreaks, while building the domestic capacity for all health threats. A dedicated "*Health Systems Fund*" at the World Health Organization would rebuild broken trust in West Africa, and offer hope for the future. And the returns of longer and healthier lives, and of economic development, would far exceed the costs.

WHY EBOLA IS OUT OF CONTROL

Ranked lowest in global development, the affected countries in West Africa do not have the basic infrastructure to contain the Ebola epidemic. Even with international help, it will take minimally six months to bring the crisis under control.



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Ebola virus disease (EVD) is spreading unchecked because of fragile health systems, cultural practices, and deep-seated distrust.

Broken Health Systems

Being treated, or working, in a hospital in affected states is extremely hazardous. Hospitals have become amplification points for fueling EVD transmission. Health professionals are most susceptible, working in awful conditions. They care for infected patients without personal protective equipment and infection controls; they lack training in diagnosis of and treatment for EVD; there are few safe and sterile isolation units; and they are underpaid. At least 170 local health workers have been infected, with more than 80 deaths. Liberia has lost about 5% of its physicians to the disease. It is small wonder that many do not report for work, compounding an already dire health worker shortfall.

Patients have learned that hospitals are unsafe places, rife with Ebola contamination. They realize that no effective treatment exists for their disease. If patients do go to a hospital, they may be confined in unhygienic rooms, without amenities, unable to communicate with their families. Consequently, patients with Ebola-type symptoms stay away, fuelling spread of infection in their communities. Patients who need treatment for myriad health hazards – from AIDS and malaria to cancer and heart disease – also stay away, suffering or dying prematurely for lack of care. In this atmosphere, patients become frustrated and can lash out with violence. What has transpired is a vicious cycle of treacherous health facilities, low morale and mutual distrust, and trepidation—all fueling EVD transmission.

Traditional Cultures: A Failure of Public Education

Ministries of health have ordered cremation of bodies, but traditional burial and other cultural practices persist. Traditional West African burial services pose major transmission risks. Loved ones come in close contact with the deceased, including ritual touching and bathing of the body. Burials, which bring family members and friends together, create the conditions for transmitting EVD, which then can be spread throughout the community—creating a dangerous dynamic. As the traditional caregivers, women are more likely to come into close contact with those affected, and thus are more likely to contract the virus.

Fruit bats likely carry Ebola virus, with humans infected by close contact with infected body fluids and through preparing and consuming “bush meat” of primates, forest antelope, wild pigs, and bats. Human-to-human transmission occurs only by close contact with infected body fluids. Especially for poor Africans, bush meat – the cooked, dried, or smoked remains of a host of wild animals – is the food of their forefathers, and also contains life-sustaining protein. Domesticated animals can be rare and expensive in sub-Saharan Africa, so bush meat (even if legally banned) flourishes in local markets.

Common misperceptions about Ebola abound, with public education neglected, and governments curtailing accurate news reporting. Epidemic control requires trust and an



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informed public, so risk communication is a basic public health tool.

The Ethics of Scarce Drugs and Vaccines

Albert Camus in *The Plague* wrote, “Everybody knows that pestilences have a way of recurring in the world; yet somehow we find it hard to believe in ones that crash down on our heads.” Since 1976, more than 20 Ebola outbreaks have erupted in sub-Saharan Africa, yet the world was woefully unprepared for the current tragedy, with no licensed vaccines or treatments. An experimental drug called ZMapp, which has neither been proven effective nor tested for safety in humans, was administered to two U.S. aid workers and reportedly to a Spanish priest.

In scarce supply, the last remaining doses have now been delivered to West Africa, but the initial preference given to white foreign workers fueled a sense of deep injustice. The optics of racial preferences is socially divisive. While administering an unproven drug to African patients conjures up images of unconscionable human experimentation, the failure to meaningfully consult local communities and leaders is a moral failure.

On August 11th, the World Health Organization approved the compassionate use of experimental drugs, but the drug's scarcity raises a fundamental ethical question—who shall live when not everyone can? Although an agonizing choice, priority ought to go to African health workers, who face frightening risks and die in far greater numbers than foreign workers. It is also vital that allocation decisions be made fairly and transparently. African leaders apparently did not approve the use of an investigational drug administered in their territory, which arguably violated Liberian law. The decision was made behind closed doors without transparency and community engagement.

All doses of ZMapp have now been exhausted, but high-resource countries should fund a mass scale-up of drug and vaccine production, while carefully evaluating their safety and efficacy. [Canada has offered limited doses](#) of an untested vaccine while it undergoes evaluation, and the U.S. National Institutes of Health [will commence trials](#) for another candidate vaccine shortly. When supplies of effective vaccines and drugs become available, it is essential that national leaders are integral to the decision on who gets priority. Let's hope they are given to those most suffering from this epidemic.

Militarization of a Disease

Local populations live in dread, not only because of Ebola but also because of the militarization of the disease. Countries have restricted travel, closed schools, and banned public gatherings, including sporting, shopping, and entertainment. They have invoked quarantine, ranging from stay-at-home days for “reflection, education, and prayers” to guarded home confinement. The military has been deployed for house-to-house searches, traveler checkpoints, and *cordon sanitaire* (a guarded line preventing anyone from leaving)—sometimes separating people and regions of the country.



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These *cordons sanitaires* are of the medieval variety practiced during the Black Death. In West African “hotspots” (with uncontrolled transmission) armed troops have established blockades, closed roads, and banned travel beyond the guarded perimeter. The populace is fearful, not only of exposure to EVD, but also of isolation and starvation, as food prices soar. Targeted travel restrictions now may be necessary to prevent spread to other regions—but not by depriving communities of human rights. Governments can implement a “smart” *cordon sanitaire* through humane care and incentives, even if community policing remains necessary. They should provide people with nourishing food, clean water, health care, and psychosocial support. Local residents could use their cellphones (common in Africa) to report unexplained fevers and other symptoms. When they become available, vaccines and drugs should be deployed instead of armed soldiers in volatile regions. Transmission hot zones can't be ignored, but neither can the needs and human rights of frightened communities.

Globalization: The Amplification of Travel, Trade, and Climate Change

Ebola jumped from Monrovia to Lagos through a single air flight, and the WHO has classified Kenya, despite being across the continent, as high-risk because it is a major transport hub, with many flights from West Africa. A combination of factors – travel, trade, migration, and interchange of people and animals – is fanning infectious diseases across countries and regions. Climate change creates the conditions for pathogens to thrive, while moving disease vectors to new regions of the globe.

Whether it is with this Ebola epidemic or future outbreaks, an infected individual will one day land in a U.S. airport—and not in an isolation pod. It is very likely that a high-resource state such as the U.S. will rapidly contain the threat, given the capacity to isolate infected individuals, trace contacts, and provide intensive care in safe conditions. The real threat is to the rest of the African continent, with porous borders and much travel between states. Previous African outbreaks have been contained to rural areas, but once EVD gains a foothold in cities within Africa, containment becomes poor, with weak health systems and lax public health implementation.

A “Health Systems Fund”: Containing Ebola and Securing Health for the Future of Africa

An effective public health response to the initial outbreak could have prevented it from mushrooming into a regional tragedy that continues to worsen. Instead, we are minimally six months from containing this pandemic. At the root of the problem are weak health systems. Unable to provide all their people basic health services, affected countries are unprepared for the complexities of Ebola, from the disease's technical requirements, such as personal protective equipment for health workers, isolation units, and laboratory capacity, to the most basic community asset, trust. Hospitals have become places of fear and contagion rather than of healing.

Looking ahead, the international community must mobilize to support affected countries and communities in two areas: first, to ensure sufficient funds to build the basic health systems and



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community capacities to respond to the pandemic in affected and neighboring countries; and second, to ensure the transparency and guidance for countries, re-building trust in government and the international community.

Building Health Systems and Rebuilding Trust

The health infrastructure needed to prevent an initial outbreak burgeoning out of control – precisely what has happened – is no secret. It includes sufficient community, laboratory, public health, and clinical personnel; infection control equipment, supplies, and protocols; health worker training, including in differential diagnosis; advanced laboratory facilities, including with higher biosafety capabilities; health facilities, including hygienic isolation units; and communication and information systems. This will enable health workers to rapidly identify potentially affected individuals, quickly and safely isolate them, trace their contacts, and provide them humane – and possibly lifesaving – care. Effective health infrastructure can assist health workers in educating and building trust with communities, while ensuring effective follow-up—at the same time ensuring health workers' own safety. Indeed, the massive loss of life among health workers, already in desperately short supply in West Africa, who heroically put their own lives at risk, is one of the most terrible – and avoidable – aspects of the current outbreak.

This represents a manifest failing of the international community, particularly its wealthier members, which ought to have been generous in supporting poorer countries in developing the disease surveillance and response capacities needed to quickly detect and contain an outbreak. Indeed, the legally binding [International Health Regulations \(2005\)](#) (IHR) require countries to collaborate with the WHO in facilitating the technical support, and mobilizing the financial resources, to build these capacities (article 44), but implementation has been weak.

Too late, the international community has made notable pledges of support. At the end of July, the WHO joined Guinea, Liberia, and Sierra Leone in releasing an [EVD Outbreak Response Plan](#) in West Africa, with a \$71 million financing gap, including \$8 million to build capacities in neighboring countries to prevent Ebola from taking hold. Less than a week later, the World Bank [pledged up to \\$200 million](#), both to meet immediate disease response needs, including for medical supplies and health worker salaries, and to help communities cope with the impact of Ebola. The African Development Bank [plans to disburse \\$60 million](#) to strengthen West African health systems and regional institutions, while [USAID](#) and the [United Kingdom](#) have made pledges of \$26.5 million and \$8.3 million respectively, with the former for personal protective equipment for health workers and disease prevention, surveillance, and detection activities.

What we need now is an assurance that these funds are sufficient and sustained, that they not only curb Ebola where it is presently but also protect against its further spread, and looking to the medium and longer term, that they build the health systems that will be effective at detecting and responding to outbreaks. That will require not only disease surveillance and response, but also a comprehensive approach. This will ensure that when the next outbreak



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strikes there will be sufficient numbers of health facilities and health workers, including community health workers, to reach rural and disadvantaged communities, providing the quality care and community connections that will create trust between communities and their health workers. And such funding will enable countries to respond not only to the headline-grabbing diseases that attract the world's attention, but also the mundane and preventable conditions that cause far more avoidable death, disease, and disability.

Toward a WHO "Health Systems Fund"

We propose an emergency, and then an enduring, "*Health Systems Fund*" administered by the WHO and supported by high-resource countries. Considering the funding needs, an immediate (emergency) down payment of \$200 million is needed for the affected countries and their at-risk neighbors. The money should be spent in ways that will contribute to health system strengthening, so that these funds can support not only Ebola prevention and control, but also community and country health priorities. Additional funds could reward and help motivate the health workers who are on the frontlines of the disease; ensure that communities that may be subject to *cordon sanitaire* have the food, medicine, communications capacity, and other goods to guarantee the most humane conditions possible, and; supplement World Bank and other disease surveillance and response funds.

This *Health Systems Fund* is surprisingly affordable, with the initial tranche of funding representing only 1% of international assistance for health. These should be new funds, not taking away from the many other pressing health needs that remain in sub-Saharan Africa and beyond. Over time, the fund should grow into a multi-billion dollar funding channel for lower-income countries to strengthen their health systems, creating the capacity to respond to Ebola and myriad health threats—thus finally mobilizing the resources envisioned in the IHR to prevent public health emergencies of international concern, along with supporting rights-based universal health coverage, with special attention to the most disadvantaged. The WHO should be charged with administering the Fund, with robust participation of governments and civil society in lower-income countries, and ensuring equitable allocation of money and technical assistance. Eventually, the Health Systems Fund might be merged with the Global Fund to Fight AIDS, Tuberculosis and Malaria into a new [Global Fund for Health](#).

Sustainable funding scalable to needs for strong health systems is a wise and affordable investment. It is in all states' interests to contain health hazards that may eventually travel to their shores. But beyond self-interest are the imperatives of health and social justice—a humanitarian response that would actually work, now and for the long-term.

Additional briefings from the O'Neill Institute can be found at <http://www.law.georgetown.edu/oneillinstitute/resources/briefings.html>.