

LETTER TO THE EDITOR

THE CURRENT EBOLA OUTBREAK IN THE DEMOCRATIC REPUBLIC OF THE CONGO: LESSONS FOR GLOBAL HEALTH SECURITY

Dear Editor,

The current outbreak of Ebola virus disease in the Democratic Republic of the Congo (DRC) poses an urgent challenge to public health at the national, regional, and global levels. Internal seminars and operational briefings at the Centers for Disease Control and Prevention (CDC, Atlanta, GA, USA, 2026) underscore that managing epidemics of highly dangerous infectious diseases in destabilized regions cannot be viewed in isolation as a purely medical problem. Current developments in the DRC demonstrate that the success of epidemiological measures is directly dependent on the security situation and on the ability to effectively coordinate the activities of healthcare, humanitarian, and military actors.

Although a local outbreak in Kasai Province was successfully eliminated by the end of 2025, in 2026 the DRC faces a new and epidemiologically highly complex situation. The current outbreak is caused by the *Bundibugyo ebolavirus* strain, for which there is currently no approved vaccine or specific therapy. This significantly impedes efforts to control the spread of the disease and underscores the importance of standard epidemic control measures, the implementation of which, however, is severely limited under local conditions.

The epidemic is unfolding in an environment characterized by protracted armed conflicts, large-scale population displacement, and limited executive control by state institutions over parts of the territory. The most affected provinces—Ituri, North Kivu, and South Kivu - have long been plagued by security instability, the asymmetric activities of non-state armed groups, and repeated targeted attacks on critical healthcare infrastructure. The spread of the pathogen here therefore does not occur in an isolated socio-economic vacuum, but rather synergistically exacerbates the existing humanitarian and security crisis.

These adverse factors fundamentally hinder the implementation of standard epidemiological protocols. The capacity for effective contact tracing remains marginal, reaching only a fraction of the required level (20%) in some regions. Security risks limit the mobility of epidemiological teams, the isolation of infected individuals, the safe transport of high-risk clinical samples, and the distribution of medical supplies. The health crisis thus transforms into a security crisis, as managing the biological threat depends on ensuring safe access to contaminated or high-risk areas.

Delayed surveillance and late detection of index cases have likely further exacerbated the spread of the infection. According to available epidemiological data, the virus had been spreading undetected within the population for several weeks prior to its final laboratory confirmation. Diagnostic difficulties associated with the lower prevalence of the *Bundibugyo ebolavirus* strain compared to the epidemiologically dominant *Zaire ebolavirus* strain - for which rapid laboratory detection kits are primarily calibrated - demonstrably contributed to this situation.

Ethnocultural and social factors play a key role in the dynamics of virus transmission. Ebola virus transmission is traditionally linked to animistic funeral rituals requiring direct postmortem contact with the body of the deceased. Retrospective epidemiological investigations indicate that one of the main super-spreading events of the current outbreak was a large-scale ritual funeral in the Mongbwalu area, which followed the death of one of the first symptomatic patients. The exposure of dozens of individuals to highly infectious biological material triggered a sharp increase in incidence within the community.

Socio-cultural tensions were also illustrated by an incident following the death of a young athlete, Eli Munongo Wangua. The victim's family refused to accept the diagnosis provided by health authorities and vehemently demanded the return of the body for a traditional burial. The subsequent conduct of a safe and dignified funeral by specialized teams sparked a wave of civil unrest that culminated in an organized attack on the Rwampara health facility near Bunia, the capital of Ituri Province. The destruction of isolation units and the subsequent intervention of security forces clearly demonstrate that managing epidemics of highly dangerous diseases is not merely a matter of medical and biological procedures. It requires a robust capacity to ensure the protection of healthcare personnel and infrastructure, while simultaneously conducting effective informational and psychosocial campaigns to counter misinformation targeting the local population.

A strict ban on traditional funeral rituals generates long-term distrust of medical interventions, a phenomenon well known from the widespread Ebola epidemic in West Africa (2013–2016). Misinformation narratives denying the existence of the virus often persist in communities, or the situation is interpreted as a tool for political struggle or economic gain. This deep cognitive barrier paralyzes epidemiological surveillance and case-finding efforts, creating ideal conditions for the endemic spread of the disease.

From a biological and medical perspective, the current crisis is characterized by the genomic distinctiveness of the *Bundibugyo ebolavirus* strain (first isolated in Uganda in 2007, with a case fatality rate of 25–50%). Significant genetic divergence from the *Zaire ebolavirus* species limits the effectiveness of countermeasures developed to date. While modern medicine utilizes approved vaccines (e.g., Ervebo) and effective monoclonal antibodies (Ebanga, Inmazeb) against the *Zaire* strain, valid options for specific prophylaxis or treatment for the *Bundibugyo* strain remain absent in clinical practice.

The focus of clinical management therefore remains on aggressive symptomatic and supportive care, such as rehydration, oxygen therapy, hemodynamic support, and the prevention of secondary bacterial superinfections. The WHO, the Coalition for Epidemic Preparedness Innovations (CEPI), the Africa Centres for Disease Control and Prevention, and the U.S. CDC are currently bolstering regional capacities in molecular-biological diagnostics, epidemiological surveillance, and accelerated research. This situation highlights the global vulnerability of biological defense systems to minor or less frequent ebolavirus taxons.

The facts presented here raise once again the question of the importance and doctrinal foundation of civil-military cooperation in addressing large-scale cross-border biological crises. Experience from past decades has clearly demonstrated that strategic logistics, force protection, the establishment of modular field medical capabilities, and ensuring the viability of humanitarian corridors form the foundation of a successful operation. In the context of the DRC, military units can provide critical capabilities for the transport of biological material and highly contagious patients while adhering to strict biosafety parameters (BSL-3/4), securing the perimeter of medical facilities, and coordinating operations in conflict gray zones. This is not an undesirable militarization of public health, but rather a pragmatic and necessary utilization of military capabilities, without which healthcare cannot be delivered in the given operational environment.

This methodological approach fully aligns with the concept of global health security, which has long been championed by the CDC and transnational security forums. The successful elimination of highly dangerous biological agents requires the integration of epidemiological, logistical, intelligence, security, and civilian structures. The mere existence of advanced diagnostics or therapeutics is irrelevant if the tactical capabilities for their safe deployment in contaminated or hostile terrain are lacking. The systemic synergy of crisis management and military-medical logistics forms the cornerstone of modern biological defense.

Africa CDC and the WHO have consistently warned that violence directed against epidemiological teams directly correlates with an increase in secondary outbreaks. The forced evacuation of personnel and the suspension of surveillance lead to a loss of control over the spread of the pathogen. Although the WHO currently assesses the risk of global pandemic spread of this specific strain as relatively low, the regional threat remains critical. Intense cross-border population movement between the DRC and Uganda, uncontrolled migration, and brisk cross-border trade create a permanent risk of importing the disease into neighboring countries, a fact already confirmed during past Ebola epidemics.

In conclusion, the Ebola epidemic in the DRC serves as a prime example of a crisis in which medical, anthropological, and security factors are rigidly intertwined. The ability to confront epidemics of highly dangerous diseases in conflict zones is determined by the depth of integration between public health, crisis management, and the support of armed forces. As emphasized during the CDC briefings, global health security cannot be achieved by reducing efforts to mere biomedical research. It is necessary to simultaneously build robust, interoperable mechanisms capable of effectively and safely applying these scientific findings in collapsing socio-political systems.

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