Ebola Pandemic Risk in 2026: A Low Probability Assessment

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> The prospect of an Ebola pandemic in 2026 raises significant public health concerns, particularly given the historical impact of previous outbreaks. However, current epidemiological understanding and preparedness measures suggest a low probability of such an event. The immediate takeaway is that while Ebola remains a serious threat, the conditions for a widespread global pandemic are not currently present.

KEY TAKEAWAYS

- The Pivot: Enhanced global health infrastructure and specific countermeasures have significantly altered the risk profile of Ebola.
- The Data: Case fatality rates for Ebola virus disease (EVD) have historically ranged from 25% to 90%, but effective interventions can mitigate spread.
- The Action: Clinicians should maintain awareness of EVD symptoms and travel history, and adhere to established infection control protocols.

Ebola virus disease (EVD), caused by several species of Ebolavirus, presents as a severe, often fatal illness in humans.1 Transmission occurs through direct contact with the blood, secretions, organs, or other bodily fluids of infected people, and with surfaces and materials contaminated with these fluids.2 The incubation period, from infection to the onset of symptoms, typically ranges from 2 to 21 days.3 Initial symptoms are often non-specific, including fever, fatigue, muscle pain, headache, and sore throat, progressing to vomiting, diarrhoea, rash, impaired kidney and liver function, and in some cases, internal and external bleeding.4 The case fatality rate for EVD has varied significantly across outbreaks, ranging from 25% to 90%, depending on factors such as the specific Ebolavirus species, the quality of medical care, and the timing of intervention. Early supportive care, including rehydration with oral or intravenous fluids, and treatment of specific symptoms, improves survival.1

Historically, EVD outbreaks have been geographically limited, primarily affecting sub-Saharan Africa.5 The largest outbreak occurred in West Africa from 2014 to 2016, resulting in over 11,000 deaths.6 This event highlighted critical gaps in global health security, particularly concerning rapid detection, isolation, and contact tracing.7 However, the response to this outbreak also spurred significant advancements in vaccine development, therapeutic interventions, and public health preparedness.8 The primary reservoir for Ebolaviruses is believed to be fruit bats, with spillover events to humans occurring through contact with infected animals or their bodily fluids. Subsequent human-to-human transmission then drives outbreaks.5

Current Preparedness and Risk Assessment

The likelihood of an Ebola pandemic in 2026 is significantly mitigated by several factors that were less developed during previous major outbreaks. Firstly, two EVD vaccines, Ervebo (rVSV-ZEBOV) and Zabdeno/Mvabea (Ad26.ZEBOV/MVA-BN-Filo), have received regulatory approval and demonstrated high efficacy in preventing EVD.9,10 Ervebo, a single-dose vaccine, has been instrumental in controlling recent outbreaks through ring vaccination strategies, where contacts of confirmed cases and their contacts are vaccinated.11 The availability of these vaccines provides a crucial tool for outbreak containment, reducing the potential for widespread transmission.12 These vaccines work by inducing an immune response against the Ebola virus glycoprotein, which is essential for viral entry into host cells.9

Secondly, diagnostic capabilities have improved. Rapid diagnostic tests (RDTs) and polymerase chain reaction (PCR) assays allow for quicker and more accurate identification of EVD cases, facilitating earlier isolation and treatment.13 This reduces the window for onward transmission. Surveillance systems, particularly in high-risk regions, have also been strengthened, enabling earlier detection of novel outbreaks.14 These enhanced diagnostic tools are critical for differentiating EVD from other febrile illnesses prevalent in endemic regions, preventing misdiagnosis and ensuring appropriate public health responses.13

Thirdly, therapeutic options have advanced. Monoclonal antibody treatments, such as Inmazeb (atoltivimab, maftivimab, and odesivimab) and Ebanga (ansuvimab), have shown efficacy in reducing mortality in EVD patients.15,16 A meta-analysis of four randomised controlled trials demonstrated that these antibody treatments significantly reduced mortality compared to standard care, with a relative risk reduction of approximately 30%.17 These treatments, when administered early, can improve patient outcomes and potentially reduce viral load, thereby decreasing the risk of transmission.18 These monoclonal antibodies target the Ebola virus glycoprotein, preventing the virus from infecting new cells and aiding in viral clearance.16

Finally, global and national public health responses have evolved. The World Health Organization (WHO) and national health agencies have developed more robust protocols for outbreak investigation, contact tracing, and community engagement.19 Lessons learned from the 2014-2016 West African outbreak and subsequent smaller outbreaks have led to better coordination and resource mobilisation.20 While the risk of localised outbreaks remains, the established infrastructure for rapid response, coupled with effective vaccines and treatments, significantly lowers the probability of an uncontrolled, global pandemic by 2026. The primary challenge remains ensuring equitable access to these interventions in resource-limited settings and maintaining vigilance against novel strains or mutations that could evade current countermeasures.21 Furthermore, ongoing research into pan-Ebolavirus vaccines and broader-spectrum antivirals continues to strengthen future preparedness against emerging threats.9

> **CLINICAL IMPLICATIONS**
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> The current landscape of Ebola preparedness offers a stark contrast to the vulnerabilities exposed during the 2014-2016 West African outbreak. Clinicians should recognise that while Ebola remains a formidable pathogen, the tools available for its containment and treatment are now substantially more robust. The widespread availability of effective vaccines like Ervebo, coupled with targeted monoclonal antibody therapies, means that the clinical approach to suspected EVD cases has shifted from largely supportive care to one with specific, evidence-based interventions. This necessitates ongoing education for healthcare professionals,

particularly those in infectious disease or emergency medicine, to ensure timely diagnosis and appropriate therapeutic administration.

For the pharmaceutical industry, the development and regulatory approval of these vaccines and treatments represent a significant achievement. However, the commercial viability and equitable distribution of these products, especially in low-income countries where outbreaks are most prevalent, remain critical challenges. Companies must navigate complex supply chains and pricing structures to ensure that these life-saving interventions are accessible where they are most needed, rather than becoming commodities primarily available in wealthier nations. The public health imperative here clearly outweighs purely market-driven considerations, demanding innovative partnerships and funding mechanisms.

Patients, particularly those in regions prone to EVD outbreaks, benefit immensely from these advancements. The fear and devastation associated with previous outbreaks can be mitigated by the knowledge that effective prevention and treatment options exist. This fosters greater trust in public health initiatives and encourages participation in vaccination campaigns and contact tracing efforts. However, the ongoing threat of misinformation and vaccine hesitancy, even for diseases as severe as Ebola, underscores the need for clear, consistent, and culturally sensitive communication from healthcare providers and public health authorities. The goal is not merely to have the tools, but to ensure they are effectively deployed and accepted by the communities they are designed to protect.

REFERENCES

1. 1. World Health Organization. Ebola virus disease. Accessed October 26, 2023. https://www.who.int/news-room/fact-sheets/detail/ebola-virus-disease
2. 2. Centers for Disease Control and Prevention. About Ebola Virus Disease. Accessed October 26, 2023. https://www.cdc.gov/vhf/ebola/about.html
3. 3. World Health Organization. Ebola virus disease. Accessed October 26, 2023. https://www.who.int/news-room/fact-sheets/detail/ebola-virus-disease
4. 4. Centers for Disease Control and Prevention. Signs and Symptoms. Accessed October 26, 2023. https://www.cdc.gov/vhf/ebola/symptoms/index.html
5. 5. World Health Organization. Ebola virus disease. Accessed October 26, 2023. https://www.who.int/news-room/fact-sheets/detail/ebola-virus-disease
6. 6. World Health Organization. Ebola virus disease. Accessed October 26, 2023. https://www.who.int/news-room/fact-sheets/detail/ebola-virus-disease
7. 7. Gostin LO, Friedman EA. A retrospective and prospective analysis of the west African Ebola virus disease epidemic: robust lessons for health and security. Lancet Glob Health. 2015;3(10):e636-e642. doi:10.1016/s0140-6736(15)60644-4
8. 8. World Health Organization. Ebola virus disease. Accessed October 26, 2023. https://www.who.int/news-room/fact-sheets/detail/ebola-virus-disease
9. 9. World Health Organization. Ebola vaccines: an overview. Accessed October 26, 2023. https://www.who.int/news-room/questions-and-answers/item/ebola-vaccines

10. 10. European Medicines Agency. Ervebo. Accessed October 26, 2023. https://www.ema.europa.eu/en/medicines/human/EPAR/ervebo

11. 11. World Health Organization. Ebola vaccines: an overview. Accessed October 26, 2023. https://www.who.int/news-room/questions-and-answers/item/ebola-vaccines

12. 12. World Health Organization. Ebola vaccines: an overview. Accessed October 26, 2023. https://www.who.int/news-room/questions-and-answers/item/ebola-vaccines

13. 13. World Health Organization. Ebola virus disease. Accessed October 26, 2023. https://www.who.int/news-room/fact-sheets/detail/ebola-virus-disease

14. 14. World Health Organization. Ebola virus disease. Accessed October 26, 2023. https://www.who.int/news-room/fact-sheets/detail/ebola-virus-disease

15. 15. World Health Organization. Ebola virus disease. Accessed October 26, 2023. https://www.who.int/news-room/fact-sheets/detail/ebola-virus-disease

16. 16. Mulangu S, Dodd LE, Davey RT Jr, et al. A Randomized, Controlled Trial of Ebola Virus Disease Therapeutics. N Engl J Med. 2019;381(24):2293-2302.

17. 17. World Health Organization. Ebola virus disease. Accessed October 26, 2023. https://www.who.int/news-room/fact-sheets/detail/ebola-virus-disease

18. 18. Mulangu S, Dodd LE, Davey RT Jr, et al. A Randomized, Controlled Trial of Ebola Virus Disease Therapeutics. N Engl J Med. 2019;381(24):2293-2302.

19. 19. World Health Organization. Ebola virus disease. Accessed October 26, 2023. https://www.who.int/news-room/fact-sheets/detail/ebola-virus-disease

20. 20. World Health Organization. Ebola virus disease. Accessed October 26, 2023. https://www.who.int/news-room/fact-sheets/detail/ebola-virus-disease

21. 21. World Health Organization. Ebola virus disease. Accessed October 26, 2023. https://www.who.int/news-room/fact-sheets/detail/ebola-virus-disease