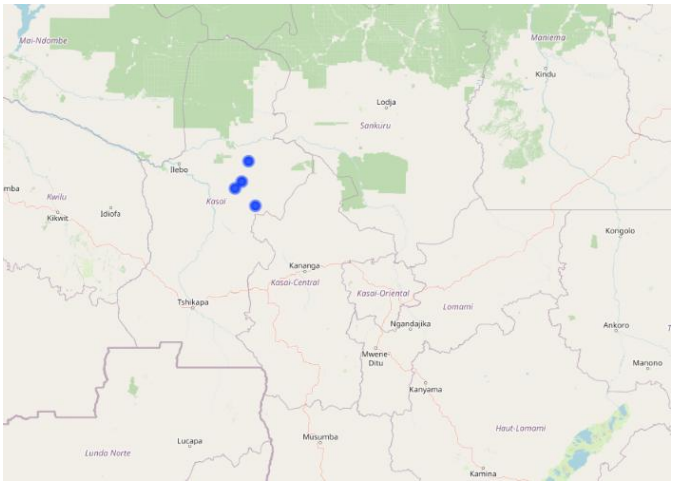
Feedback from operational stakeholders who manage or respond to outbreaks is that they are often too busy to review literature or obtain relevant background information to assist them with acute response. Unlike a traditional analytical outbreak investigation report, ***Watching Briefs*** *are intended as a rapid resource for public health or other first responders in the field on topical, serious or current outbreaks, and provide a digest of relevant information including key features of an outbreak, comparison with past outbreaks and a literature review. They can be completed by responders to an outbreak, or by anyone interested in or following an outbreak using public or open-source data, including news reports.*

Watching brief

Title	Ebola Virus Disease Re-emerges After Three Years in the Democratic Republic of Congo: 16th Outbreak in 49 Years
Authors	Mohana Priya Kunasekaran, Noor Bari, Ashley Quigley, Chandini Raina MacIntyre,
Date of first report of the outbreak	The Democratic Republic of the Congo's Ministry of Health notified the World Health Organisation (WHO) of suspected Ebola cases on September 1, 2025 and declared an outbreak on September 4, 2025, following laboratory confirmation (1).
Disease or outbreak	Ebola virus disease (EVD) is caused by Zaire ebolavirus, first discovered in 1976. It is one of four human-pathogenic *Orthoebolaviruses* in the *Filoviridae* family. Filoviruses are enveloped, non-segmented, negative-sense, single-stranded RNA, pleomorphic viruses (2, 3) Fruit bats (Pteropodidae) are likely reservoir hosts, with transmission occurring through non-human primates, forest antelopes and porcupines (1).

Origin (*country, city, region*)	Democratic Republic of the Congo (DRC), Kasai Province, Bulape Health Zone.
Suspected Source (specify food source, zoonotic or human origin or other)	Whole-genome sequencing indicates this is a new zoonotic spillover event from an unknown reservoir host, not a recrudescence from previous outbreaks in Kasai during 2007 or 2008/09 (4).
Outbreak start date	The index case was a 34-year-old pregnant woman admitted to Bulape General Hospital on August 20, 2025, however symptoms, a began on August 10, 2025 and therefore the infectious period, began prior to admission (5).
Date outbreak was declared over	The mandatory 42-day monitoring period to declare the end of the EVD outbreak began on October 19, 2025, after the last active patient was discharged from the Bulape Ebola Treatment Centre (ETC) (6). No new cases reported as of October 20, 2025. The outbreak was declared contained on December 1, 2025 (7).
Affected countries & regions	 **Figure 1: Map displaying the Health Zones of Kasai Province, DRC, with reported cases (using R version 4.5.0).**

	The affected Health Zones as shown in Figure 1 were Bulape and Mweka, however all confirmed cases were confined to the six health areas in the Bulape Health Zone (Bambalaie, Bulape, Bulape Communautaire, Dikolo, Ingongo and Mpianga). There was also no confirmed spread beyond the DRC (8).
Number of cases (specify at what date if ongoing)	As of December 17, 2025, there were 64 cases (53 confirmed and 11 probable), including 45 deaths. More than 47,500 people have been vaccinated against Ebola (8).
Clinical features	Fever, fatigue, muscle pain, headache and sore throat are early non-specific symptoms that complicate case identification. Vomiting, diarrhoea, a rash, signs of liver and kidney failure, and internal and external bleeding may follow. Red eyes, hiccups, shortness of breath and cough, may develop in later stages (9). Ebola virus replication markers have been detected in the sputum, and inflammatory cells and mediators can contribute to the development of an acute respiratory distress syndrome (10, 11). Confusion, collapse and multi-organ failure were reported in fatal cases (12). Diagnosis is confirmed by nucleic acid amplification testing in laboratory with high levels of biosafety. RT-PCR using the glycoprotein target is more sensitive than the nucleoprotein target (98% vs 94%) (13). Negative tests within the first 72 hours of illness should be repeated due to low early viral levels (14). Available Rapid Antigen Tests show inconsistent performance. The WHO-approved OraQuick test (sensitivity 84%) also falls short of desired test performance (15).
Mode of transmission (dominant mode and other documented modes)	• **Zoonotic:** Initial cases often result from contact with live or dead infected bats, non-human primates, forest antelopes, porcupines, or their blood, body fluids, organs, or secretions (2). This includes the **oral** route by ingesting infected meat. • **Contact:** Human-to-human transmission occurs via direct contact with the patient, or with their body fluids or indirect contact with contaminated surfaces (2).

	• **Sexual transmission:** Exchange of body fluids and intimate contact (16). • **Blood-borne/Needlestick:** Sharps contaminated with a patient's body fluid (17). • **Vertical:** The risk of foetal loss or stillbirth is high. Babies born to an acutely infected mother are not known to survive more than a few days. Case numbers remain small but maternal mortality may reach 90% (18). • **Transplant:** Solid organ transplant poses a theoretical risk to recipients and handlers of donor tissues. As of 2015, this mode of transmission had not been reported, Epidemiological screening was suggested as sensitivity of testing may be low in early stages (19). • **Aerosol:** Experimental studies have demonstrated aerosol transmission Transmission has been demonstrated in non -human primates (20) and between pigs and macaques without direct contact (10). Although aerosol only transmission in humans has not been confirmed, precautions are warranted during patient care due to unavoidable exposure to exhaled air. Past outbreaks have reported healthcare worker (HCW) infections despite contact precautions and unexplained transmission, suggesting a possible aerosol route (21). Household studies, however, have shown very low levels of transmission without direct contact (1%) (22).
Demographics of cases	Around 80% of the cases were aged ≥15 years, including the index case, who was a 34-year-old pregnant woman (1). Five HCWs were infected, including three deaths. Females continued to make up the more than half of the cases (57.8%), and children under 10 years (25%) and adults aged 20–29 years (23.4%) remained the most affected groups(23). Deaths were more common among females (57.1%) and children under 10 years (31%) (1). By 5 November 2025, the outbreak had resulted in 64 confirmed or probable Ebola cases, including 45 deaths, with vaccination efforts reaching more than 42,000 people(7).

Case fatality rate	The case fatality ratio (CFR) has shown a steady rise over the course of the outbreak, from about 54% on September 5, 2025 (28 suspected cases, 15 deaths) to 65.6% by the end of September, and further to 70.3% by mid-October 2025, where it remained until the outbreak was declared over (1, 23). Past Zaire ebolavirus outbreaks have ranged between 50–90%(2).
Complications	• Haemorrhage • Shock • Acute Respiratory Distress Syndrome • Multi-organ failure • Pregnancy-associated; preterm labour, foetal loss, stillbirth and maternal death. • High risk of infection to HCW from close contact with patients • Post Ebola virus syndrome (24); arthralgia, myalgia, fatigue, vision (25) and hearing loss (26), neurological symptoms, hair loss, chest pain, and a predisposition to infections were among the many multisystem long-term symptoms suffered by survivors (27). • Long-term Ebolavirus persistence in immune privileged sites (eye, brain and testicles) potentially causing relapse and onward transmission. It may also persist in the placenta, amniotic fluid and products of conception and breastmilk of infected women (28).
Available prevention	Infection prevention requires a multifaceted and layered strategy. • Community engagement and education are essential to promote behaviour change and assist early case identification (2). • Reduce the contact between people and wildlife in endemic areas, including the consumption of raw or undercooked bushmeat (2). • Testing, contact tracing and isolating contacts and in supervised treatment centres for the full duration of the incubation period (21 days) (2).

	• Reducing household transmission by providing dedicated treatment centres for isolation (2). • Offering contacts, and contacts of contacts vaccination as part of a ring vaccination strategy with Ervebo (rVSV-ZEBOV) (29). • Vaccinating HCWs, laboratory staff and other outbreak responders (30). • Providing safe and culturally sensitive burials for the deceased(2).
Available treatment	Monoclonal antibody therapies may be deployed where feasible. Ansuvimab and Inmazeb are both strongly recommended by the WHO (31). REGN-EB3 a triple monoclonal antibody drug has been approved in the United States in 2020 (32). Alongside this, intensive supportive management, which includes rehydration and electrolyte replacement, aids survival (2).
Comparison with past outbreaks	This is the sixteenth recorded EVD outbreak in the DRC since 1976, and the first since 2022 in Équateur Province (five deaths)(33). Kasai Province, where the current outbreak is centred, previously experienced significant outbreaks in 2007 and 2008–2009, both associated with *Orthoebolavirus zairense (34)*. This species is the most virulent and was responsible for the 2018–2020 North Kivu epidemic, which led to almost 2,300 deaths(35). The 2025 outbreak in the Kasai Province, also involves the *Zaire ebolavirus* strain. Of the 16 outbreaks in the DRC, fifteen (94%) have been caused by *Orthoebolavirus zairense* and one in 2012, in Orientale Province was caused *by Orthoebolavirus bundibugyoense* (*Bundibugyo ebolavirus*)(34). *Zaire ebolavirus* outbreaks have occurred predominantly in the central and northwestern provinces, including Équateur, Kasai, Bandundu, North Kivu, Ituri, and Bas-Uele reflecting its entrenched ecological niche within the Congo Basin forest belt(34, 36). Other Ebola species have never been detected in human cases in the DRC (34, 36). This pattern underscores a strong species–geography association, with the Zaire lineage firmly endemic to the Congo Basin.

	The index case in the current outbreak was a 34-year-old pregnant woman at 34 weeks of gestation who developed haemorrhagic complications and died during delivery, similar to that of the 2007 outbreak, where maternal infection initiated an outbreak (37) and in Boende Inkanamongo (2014), when a pregnant woman was exposed to contaminated bushmeat (38). These events highlight the vulnerability of women during Ebola outbreaks. Pregnancy increases the risk of severe disease, while caregiving and food preparation may increase exposure to infection. Unlike earlier outbreaks, thousands of doses of the Ervebo (rVSV-ZEBOV) vaccine were pre-stockpiled and rapidly deployed for ring vaccination, reflecting significantly stronger preparedness and coordination achieved since the 2014–2016 West Africa epidemic. In earlier epidemics such as Yambuku in 1976 (Équateur; 318 cases; CFR 88%), Kikwit in 1995 (Bandundu; 315 cases; CFR 81%), and Kasai-Occidental in 2007 (264 cases; CFR 71%), HCWs were infected early as patients present late to formal healthcare facilities (34, 39). Delayed diagnosis increases the risk of exposure for community and HCW, particularly where infection-control measures are limited. In contrast, the 2025 outbreak has been detected earlier, geographically limited, and effectively contained with only five HCW infections, owing to improvements in diagnostics, surveillance, and infection-prevention practices (34, 39).
Unusual features	The 2025 Ebola outbreak in Kasai Province shows several unusual features compared to previous outbreaks. Genomic sequencing confirms that this event is the result of a new zoonotic spillover, with no connection to the 2007 or 2008/09 Kasai outbreaks (40). The last new zoonotic spillover occurred in 2022 in Mbandaka, resulting in limited transmission to four other individuals (34).

	This outbreak coincided with other major health emergencies in the DRC, including mpox, cholera and measles, placing extraordinary strain on an already fragile health system(40). The outbreak occurred in a remote, rural part of Kasai Province, typical of zoonotic-spillover events. While remoteness may have limited wider transmission, it also slowed sample transport, supply chains and response activities. Unlike earlier outbreaks where vaccines were introduced late or experimentally, this time the Ervebo vaccine were already stockpiled and rapidly deployed for ring vaccination, which led to the outbreak being rapidly confined to a single Health Zone (41).
Critical analysis	This outbreak highlights the persistent risk of zoonotic spillovers in Central Africa, where close human-animal contact continues against a backdrop of fragile health systems. Rapid detection, laboratory confirmation, and early deployment of vaccines demonstrate improved preparedness compared to earlier outbreaks, reflecting lessons learned from the 2014–2016 West Africa epidemic and the 2018–2020 DRC outbreak(41). The availability of the Ervebo (rVSV-ZEBOV) vaccine has further strengthened response capacity. Evidence from the "Ebola Ça Suffit!" trial demonstrated near-complete protection when administered early in a ring vaccination strategy, and real-world effectiveness during the 2018–2020 DRC outbreaks was estimated at 84%(42). Long-term data suggest immunity persists for up to five years, and the vaccine's safety profile is favourable, with very few serious adverse events reported(43). Despite these advances, outbreak control still relies on classical public health measures, including case finding, isolation, contact tracing, safe burials, and treatment facilities, because the disease remains highly lethal and warrants stringent controls and most of the population are not immune.

	Significant logistical and security challenges remain. Kasai's remoteness delayed sample transport, delivery of medical supplies and movement of response teams. The outbreak is also unfolded alongside multiple other public health emergencies, which further stretched already limited resources. The early deaths among HCW highlight persistent gaps in infection prevention and control. Protecting frontline staff remains a critical priority, as their loss undermines both immediate and long-term response capacity and community trust. Taken together, the outbreak illustrates both progress and vulnerability: faster mobilisation and vaccine access on the one hand, but persistent issues with public trust, multiple disease outbreaks, difficult terrain, and the infection of HCW.
Key questions	• Can modelling show how effective ring vaccination was in impeding this outbreak? • What can be learned from this outbreak response that can be applied to other outbreaks in resource limited settings? • Will genomic sequencing reveal further insights into reservoir hosts and re-emergence risk? • How will overlapping outbreaks affect DRC's ability to sustain control?
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