Review Article

The global Ebola threat: A review of India's healthcare preparedness in response to the rising African health crisis

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Abstract

Ebola virus disease, formerly known as Ebola haemorrhagic fever, is a zoonotic viral infection affecting humans and non-human primates. The incubation period spans from two days to three weeks post-infection. Historically, Ebola outbreaks exhibit a case fatality rate ranging from 25% to 90%, with a mean mortality rate of approximately 50%. A new Ebola outbreak emerged during the last week of April 2026. However, early infections are theorized to have begun as early as February 2026 in the town of Mongbwalu. Since then, imported cases from Ituri have been reported in both North Kivu Province and Uganda's capital, Kampala. On May 21, 2026, a case in South Kivu was epidemiologically linked to Tshopo Province. The ongoing Ebola outbreak is caused by the Bundibugyo virus. This specific virus has caused only two recorded outbreaks in the past: the first in the Bundibugyo district of Uganda during 2007–2008, from which the virus derives its name, and the second in Isiro, Democratic Republic of the Congo (DRC), in 2012. As of June 26, 2026, a total of 1,138 confirmed Ebola cases and 293 deaths have been reported across the DRC and Uganda with a case fatality rate of 25.7%.

Keywords: Bundibugyo virus disease, Ebola outbreaks, healthcare preparedness *Orthoebolavirus.*

Introduction

Ebola disease (EBOD), formerly known as Ebola haemorrhagic fever, is a severe and often fatal illness affecting humans and other primates. Ebola disease is caused by viruses belonging to the genus *Orthoebolavirus* within the *Filoviridae* family. Six species of *Orthoebolavirus* have been identified to date, three of which are known to cause major outbreaks in humans: Ebola virus or Zaire ebolavirus (EBOV), Sudan virus (SUDV), and Bundibugyo virus (BDBV). The fourth species is the Tai Forest Virus (TAFV), which has only one recorded human case in history. In 1994, a scientist in the Ivory Coast contracted the virus after performing an autopsy on an infected chimpanzee; fortunately, the patient eventually made a full recovery. Among the four viruses, EBOV is the most lethal and is most frequently associated with outbreaks.[1] Although harmless to humans, the fifth and sixth viruses (Reston virus and Bombali virus) have been shown to cause disease in other primates. All six viruses are closely related to the Marburg virus.

The ongoing Ebola outbreak in the Democratic Republic of the Congo (DRC) marks the 17th epidemic since the virus was first discovered in the region in 1976. Historically, most outbreaks have been caused by the highly virulent Zaire ebolavirus, the most lethal ebolavirus species, with a remarkably high human case fatality rate. While the current epidemic is caused by the Bundibugyo virus, a species known to be relatively less virulent, it still poses a severe health threat. The lower comparative virulence of the Bundibugyo virus must not lead to complacency. Public health authorities should maintain maximum vigilance and execute full-scale preparedness, prevention, and control protocols to contain this deadly disease effectively.

Around three million individuals of Indian ancestry live on the African continent, forming part of a 30-million-strong global Indian diaspora.[2] Beyond this civilian population, nearly 4,500 Indian soldiers are currently deployed across Africa under various United Nations peacekeeping missions. Furthermore, over 80,000 Indians reside across the DRC and Uganda. Because Indians frequently relocate to African nations to pursue lucrative business opportunities, secure employment, and engage in bilateral trade, migration between India and Africa remains highly active. Keralites, in particular, regularly travel to and from many of the countries, in search of higher education, superior career opportunities, and a better living.

The high volume of travel has become a point of critical concern. The DRC and Uganda are currently the epicentres of an ongoing Ebola outbreak, which the World Health Organization (WHO) warns is spreading faster than containment efforts can manage.[3] Because of frequent movement between these Ebola-affected regions and India, particularly the state of Kerala, authorities have to remain on high alert. To prevent the virus from entering the country, strict precautionary protocols are necessary. Consequently, both the Central and State Governments of India have proactively implemented comprehensive preparedness and monitoring measures.

Natural hosts

Although the definitive natural reservoir of EBOV remains unconfirmed, cumulative data from African field studies, laboratory research, and epidemiological surveys strongly implicate fruit bats as the principal animal reservoir. Notably, current evidence indicates that certain bat species serve as asymptomatic carriers, harbouring the virus without manifesting clinical illness. Animal outbreaks are often triggered by shifting fruit production and animal behaviour. A key source of infection is partially eaten fruits contaminated by infected bats.[4]

Ebola viruses have also been detected in species such as duikers (a small wild antelope) and non-human primates including apes and monkeys. However, because these primates are highly sensitive to the virus and suffer a high mortality rate when infected, they are not considered natural hosts. While it remains unclear exactly how non-human primates and duikers contract the virus infection, most evidence points to direct contact with one or more natural hosts or their secretions. Evidence indicates that both domestic dogs and pigs can be infected with EBOV. While dogs appear to remain asymptomatic carriers, infected pigs can transmit the virus to at least some primates.

However, there is currently no evidence that domestic animals play an active role in transmitting the disease to humans. [5]

Mode of transmission

Ebola spreads from person to person through direct contact with infected individuals or their body fluids. These fluids include saliva, mucus, vomit, faeces, sweat, tears, breast milk, urine, and semen. However, transmission occurs most frequently through blood, faeces, and vomit. The virus enters the body through the eyes, nose, mouth, or any breaks in the skin, such as cuts, wounds, and abrasions.[6] Ebola disease is frequently transmitted during patient care and traditional funeral practices; health care workers are often infected while treating patients, and burial ceremonies involving direct contact with the deceased further drive transmission.

Men who have recovered from EBOD should be aware that seminal fluid may remain infectious for at least three months after the onset of symptoms. While there are currently no reports of the live virus persisting in the vaginal secretions of recovering women, the risk of sexual transmission cannot be entirely ruled out. Because of this, both men and women who have recovered from EBOD should abstain from at least three months from the onset of symptoms. Likewise, it is important for recovering patients to maintain strict personal hygiene including washing with soap and water after sexual activity. [7]

Ebola is not transmitted through air, water, or generally by food. Additionally, there is no evidence that mosquitoes or other insects can spread the virus. The transmission of EBOV in Africa is frequently linked to the hunting, processing, and consumption of infected wildlife. This bushmeat is often consumed raw or inadequately cooked, posing a severe health risk.[8]

Clinical features

Following an incubation period of 2 to 21days, the disease begins abruptly with early symptoms like fever, fatigue, malaise, muscle pain, headache, and sore throat. This initial phase quickly progresses to vomiting, diarrhoea, abdominal pain, and a rash, alongside signs of impaired kidney and liver function. In advanced stages, some patients experience severe internal and external bleeding, manifesting as blood in vomit and faeces, or haemorrhaging from the nose, gums, and vagina, while central nervous system involvement can cause confusion, irritability, and aggression.[9]

Ebola symptoms can easily be mistaken for other illnesses, such as malaria, cholera, typhoid fever, meningitis, and various viral haemorrhagic fevers. Therefore, accurate diagnosis is crucial to confirm the disease, which is achieved by testing blood samples for viral RNA, specific antibodies, or the virus itself. [10]

Ebola outbreaks: A historical timeline

The EBOV was first identified in 1976 during two simultaneous outbreaks: one in Nzara, South Sudan, and the other in Yambuku, a village near the Ebola River in the DRC. [11] Since then, approximately 44 Ebola outbreaks have been reported globally, with most occurring in Central and West Africa. Over the past 50 years, more than 35,013 Ebola cases and 15, 458 deaths were reported worldwide, resulting in a case fatality rate of 44.1%. Most confirmed Ebola cases were concentrated in the DRC, Gabon, the Republic of Congo, Sudan, and Uganda. During this period, the DRC alone reported

Table 1: Chronology of Ebola virus disease outbreaks, showing the numbers of cases, deaths and case fatality rates worldwide during 1976–2025.

Year	Countries involved	Species	Cases	Deaths	CFR %
1976	The DRC	*Orthoebolavirus zairense*	318	280	88.1
	Sudan	*Orthoebolavirus sudanense*	284	151	53.2
	United Kingdom	*Orthoebolavirus zairense*	01	0	0.0
1977	DRC	*Orthoebolavirus zairense*	01	01	100
1979	Sudan	*Orthoebolavirus sudanense*	34	22	64.7
1989	The Philippines*	*Orthoebolavirus restonense*	03[1]	0	NA
	United States*	*Orthoebolavirus restonense*	04[1]	0	NA
1992	Italy*	*Orthoebolavirus restonense*	0	0	
1994	Cote d'Ivoire	*Orthoebolavirus taiense*	01	0	0.0
	Gabon	*Orthoebolavirus zairense*	51	31	60.8
1995	The DRC	*Orthoebolavirus zairense*	315	254	80.6
1996	Russia	*Orthoebolavirus zairense*	01	01	100.0
	The Philippines*	*Orthoebolavirus restonense*	0	0	0.0
	United States*	*Orthoebolavirus restonense*	0	0	0.0
	South Africa	*Orthoebolavirus zairense*	02	01	50.0
	Gabon	*Orthoebolavirus zairense*	91	66	72.5
2000	Uganda	*Orthoebolavirus zairense*	425	224	52.7
2001	The DRC	*Orthoebolavirus zairense*	59	44	74.6
	Gabon	*Orthoebolavirus zairense*	65	53	81.5
2003	The DRC	*Orthoebolavirus zairense*	178	157	88.2
2004	Russia	*Orthoebolavirus zairense*	01	01	100.0
	Sudan	*Orthoebolavirus sudanense*	17	07	41.2
2005	The DRC	*Orthoebolavirus zairense*	12	10	83.3
2007	Uganda	*Orthoebolavirus bundibugyoense*	131	42	32.1
	The DRC	*Orthoebolavirus zairense*	264	187	70.8
2008	The DRC	*Orthoebolavirus zairense*	32	15	46.9
	The Philippiens*	*Orthoebolavirus restonense*	06[1]	0	NA
2011	Uganda	*Orthoebolavirus sudanense*	01	01	100.0

Table 1: Contd…

Year	Countries involved	Species	Cases	Deaths	CFR %
2012	Uganda	*Orthoebolavirus sudanense*	17	07	41.2
	The DRC	*Orthoebolavirus bundibugyoense*	36	13	36.1
2014	The DRC	*Orthoebolavirus zairense*	69	49	71.0
	Guinea,	*Orthoebolavirus zairense*	3,814	2,544	66.7
	Liberia,	*Orthoebolavirus zairense*	10,678	4,810	45.0
	Sierra Leone	*Orthoebolavirus zairense*	14,124	3956	28.0
	Italy	*Orthoebolavirus zairense*	01	0	0.0
	Mali	*Orthoebolavirus zairense*	08	06	75.0
	Nigeria	*Orthoebolavirus zairense*	20	08	40.0
	Senegal	*Orthoebolavirus zairense*	01	0	0.0
	Spain	*Orthoebolavirus zairense*	01	0	0.0
	United Kingdom	*Orthoebolavirus zairense*	01	0	0.0
	United States	*Orthoebolavirus zairense*	04	01	25.0
2017	The DRC	*Orthoebolavirus zairense*	08	04	50.0
2018	The DRC	*Orthoebolavirus zairense*	3,524	2,320	65.8
2020	The DRC	*Orthoebolavirus zairense*	130	55	42.3
2021	The DRC	*Orthoebolavirus zairense*	23	15	65.2
	Guinea	*Orthoebolavirus zairense*	23	12	52.2
2022	Uganda	*Orthoebolavirus sudanense*	164	55	33.5
	The DRC	*Orthoebolavirus zairense*	06	06	100.0
2025	The DRC	*Orthoebolavirus zairense*	64	45	70.3
	Uganda	*Orthoebolavirus sudanense*	14	04	28.6

**Infections without illness in people; 1Asymptomatic cases; NA=Not Applicable; CFR=Case fatality rates; DRC=Democratic Republic of the Congo (The data presented in the table were compiled from various published sources listed in the references)*

4,790 cases and 3,229 deaths, resulting in a notably high case fatality rate of 67.4%. Between 2014 and 2016, a severe Ebola epidemic ravaged West Africa (primarily Guinea, Liberia, and Sierra Leone), with localized transmissions reaching Mali, Nigeria, Senegal, and several Western countries, including Spain, Italy, the United Kingdom, and the United States. An Ebola outbreak also occurred in the DRC in 2014.[11] Annual Ebola outbreaks, cases and death counts, and case fatality rates from 1976 to 2025 are detailed in Table 1.

Intermittent Ebola outbreaks continued to emerge across the continent. From 2017 to 2022, the DRC experienced recurring outbreaks of varying scales, and Guinea reported a resurgence in 2021. In 2018, an Ebola outbreak in the DRC caused more than 3,524 cases and 2,320 deaths, continuing into the following years with slightly lower severity. Driven by the escalating scale of the epidemic, the WHO declared the crisis a Public Health Emergency of International Concern on July 17, 2019.[12] More recently, Uganda faced two distinct outbreaks caused

by the Sudan virus strain: the first running from September 2022 to January 2023, and the second from January to April 2025. On September 4, 2025, the DRC Ministry of Public Health, Hygiene and Prevention officially declared an Ebola outbreak in the remote Bulape health zone of Kasai province, making the country's 16th outbreak since the virus was first recorded there in 1976. Of the 44 Ebola outbreaks reported between 1976 to 2025, the vast majority (81.8%) were caused by the Zaire ebolavirus. The remaining outbreaks were attributed to Sudan ebolavirus (11.4%), Bundibugyo ebolavirus (4.5%), and Tai Forest ebolavirus (2.3%). Case fatality rates vary drastically between Ebola virus species; across all outbreaks, the average rate is approximately 50%, with a range spanning from 25% to 90%. Key Ebola virus species and their human fatality rates are detailed in Table 2.

Ebola Outbreak, 2026

Recently, an outbreak of illness with an unknown etiology emerged in the DRC in April 2026. The first cases were reported in the Mongbwalu Health Zone, which continues to account for a large portion of the case count. Response and commitment efforts face severe challenges due to violent conflicts involving militant factions driven by

Table 2: Characteristics and fatality rates of major Ebola virus species

EBOV Species	Outbreaks	Case Fatality Rate	Characteristics
Zaire ebolavirus (*O. zairense*)	2014-2016[West Africa] 2018-2020 [DRC] 2025 [DRC]	50% to 90% (Average 83%)	Most deadly and widespread species, Responsible for largest Ebola virus disease outbreaks.
Sudan ebolavirus (*O. sudanense*)	Outbreaks primarily in Sudan and Uganda	40% to 60% (Average 50%)	Second most common species. Responsible for initial outbreaks in 1976.
Bundibugyo ebolavirus (*O. bundibugyoense)*	2007 [Uganda] 2012 [DRC]	30% to 55%	First identified in Uganda in 2007. Slightly lower fatality rate than Zaire species.
Tai Forest ebolavirus (*O. taiense*)	Single recognized case [Ivory Coast]	0% to 20%	Causes mild to moderate illness in humans. It is highly pathogenic to Chimpanzees, from whom the sole human case was reported in 1994.

(The data presented in the table were compiled from various published sources listed in the References section)

Table 3: Details of Bundibugyo virus disease outbreak reported in the Democratic Republic of the Congo, as of June 8, 2026

Province/Zone	Confirmed cases	Confirmed deaths	CFR %
ITURI:			
Bunia	163	15	9.2
Rwampara	122	20	16.4
Mongbwalu	114	40	35.1
Nyankunde	32	01	3.1
Bambu	05	02	40.0
Aru	03	01	33.3
Kilo	04	01	25.0
Nizi	05	0	0.0
Mangala	01	0	0.0
Damas	03	0	00
Aungba	02	01	50.0
Gety	01	0	0.0
Komanda	03	0	0.0
Lita	04	0	0.0
Logo	02	0	0.0
Mambasa	02	01	50.0
Rimba	03	0	0.0
Autres ZS	94	10	10.6
Sub Total	**563**	**92**	**16.3**
NORD-IVU:			
Katwa	12	08	66.7
Beni	09	07	77.8
Butembo	06	04	66.7
Oicha	02	02	100.0
Kalunguta	01	01	100.0
Kyondo	01	0	0.0
Goma	01	0	0.0
Sub Total	**32**	**22**	**66.8**
SUD-KIVU:			
Miti- Murhesa	03	01	33.3
Sub Total	**03**	**01**	**33.3**
TOTAL	**598**	**115**	**19.2**

CFR=Case fatality rate

local mining activities, both within the DRC and across the border into Uganda. Consequently, there are uncertainties regarding the true number of infections and the current geographic spread of the outbreak. Furthermore, the epidemiological links among known and suspected cases remain poorly understood. The earliest identified suspected case involved a 59-year-old man who developed symptoms on April 24 and died at a hospital in Ituri Province, DRC on April 27. By May 4, when health authorities were first alerted to the outbreak *via* social media, 50 deaths had already been recorded. [13]

On May 5, 2026, the WHO received an alert regarding a highly lethal, unknown illness in the Mongbwalu Health Zone of Itri Province,

DRC, where four workers died within four days. Following an in-depth investigation by rapid response teams in the Mongbwalu and Rwampara Health Zones on May 13, the outbreak was confirmed as Bundibugyo virus disease (BVD), caused by Bundibugyo virus (*Orthoebolavirus bundibugyoense*). DRC's Ministry of Public Health, Hygiene and Social Welfare officially declared the country's 17th Ebola outbreak on May 15, 2026, with cases initially concentrated in the Rwampara, Mongbwalu, and Bunia health zones.[14]

As of May 16, 2026, health officials in the DRC's Ituri Province have reported eight laboratory- confirmed cases, 246 suspected cases, and eighty suspected deaths. The outbreak spans at least three health zones including Bunia, Rwampara, and Mongbwalu.[15] The WHO has declared the BVD outbreak in the DRC and Uganda a public health emergency of international concern as of May 17, 2026. By late May 2026, the cumulative number of cases had escalated substantially. The DRC reported a total of 125 confirmed cases including 17 deaths and 906 suspected cases and 223 suspected deaths as of May 27, 2026. Meanwhile, the total number of confirmed cases in both countries reached 134 (including nine in Uganda), with 18 confirmed deaths, one of which was in Uganda.[16]

According to a June 9, 2026 report from the DRC Ministry of Health, confirmed cases have risen to 598 with 115 related deaths, reflecting 48 new cases and 14 new deaths since the previous update (Table 3). Additionally, 297 individuals remained hospitalized in isolation as of June 8, 2026.[17] Investigators traced all infections back to travellers entering the country from the Ituri and North Kivu provinces of the DRC.[17,18]

As of June 23, 2026, the Ebola outbreak in the DRC has spread to three new health zones, bringing the total to 1,118 confirmed cases and 291 deaths. Uganda reported 20 confirmed cases and two deaths up to June 25, 2026 since the beginning of 2026 outbreak. Rather than being localized to a specific province, these cases were concentrated in the Central Region's Kampala and Wakiso districts.[16,19] On June 24, 2026, France confirmed its first case of Ebola, marking the first documented spread of the current outbreak beyond Africa.[16] Due to heavy cross-border movement, the Africa Centres for Disease Control and Prevention (Africa CDC) warns that ten neighbouring and interconnected nations are now at increased risk. These high-risk countries include Angola, Burundi, the Central African Republic, the Republic of Congo, Ethiopia, Kenya, Rwanda, South Sudan, Tanzania, and Zambia.[20]

The DRC and Uganda have emerged as the primary locus for Ebola transmission, including the 2026 outbreak (Figure 1). This pattern is exacerbated by the convergence of significant viral reservoirs in wildlife, cross-border population movement, ongoing regional instability, and limited health infrastructure.[21]

India's preparedness for Ebola virus disease in view of rising cases in parts of Africa

India has never recorded an indigenous case of Ebola, and the current outbreak in Africa poses a minimal risk to the country. However, following recent emergency declarations by the WHO and Africa CDC, the Government of India has proactively intensified nationwide surveillance and preparedness measures as a precautionary step to safeguard

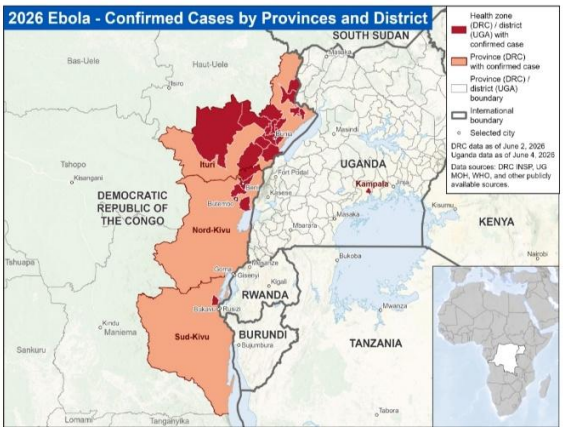

Figure 1: Confirmed cases of Ebola 2026 reported from the DRC and Uganda

public health. These measures were developed in close coordination with key stakeholders, including National Centre for Disease Control (NCDC), Directorate General of Health Services (DGHS), Indian Council of Medical Research (ICMR), Civil Aviation, Immigration authorities, and other relevant Ministries and Departments.[22]

In response to the sudden Ebola outbreaks in the DRC and Uganda, the Government of India has implemented the following urgent and stringent measures.

1. Authorities have launched enhanced screening and surveillance measures at international airports and other entry points. They have also issued Standard Operating Procedures (SOPs) to all States and Union Territories (UTs) to guide laboratory testing, quarantine, clinical management, and infection prevention.

2. On May 21, 2026, the Union Health Ministry issued SOPs on public health preparedness and response to Ebola, which details protocols for international passengers.

3. On May 22, 2026, the Ministry released additional guidelines focussing on hospital infection control, isolation facility preparedness, and the safe and dignified handling of human remains.

4. On May 24, 2026, India issued a travel advisory advising the citizens against non-essential travel to the DRC, South Sudan, and Uganda.

5. Integrated Disease Surveillance Programme (IDSP) units and Airport Health Organizations (APHOs) must closely monitor international travellers for unexplained febrile illnesses and promptly report and manage any suspected cases.

Furthermore, India has been actively supporting the Africa CDC by providing urgent medical supplies, such as protective gear and essential medicines.

Precautionary measures implemented by the Government of Kerala to prevent the import of Ebola

Kerala has stepped up Ebola precautions following the WHO's declaration of a global health emergency over the virus's spread in parts of Africa. The State Health Department is strengthening surveillance and issuing detailed prevention guidelines to stop any potential import of the disease. In addition, health authorities have intensified the screening of international arrivals from Ebola-affected regions, requiring symptomatic travellers to report immediately to health officials at international airports in Kerala. Noticeably, according to a news report published in *The Hindu* on June 26, 2026, Ebola surveillance and precautionary measures are further strengthened at the Cochin International Airport Ltd (CIAL) following an emergency preparedness meeting between the airport management and the Airport Health Organisation. CIAL has implemented enhanced screening measures

under a newly activated special surveillance protocol. Passengers will be subjected to thermal screening, visual inspection, and a review of their travel history over the preceding 21 days. Additionally, international travellers must submit self-declaration forms to immigration authorities. As part of this comprehensive preparedness strategy, round-the-clock surveillance systems and dedicated on-site isolation facilities have also been established. The WHO advises against broad international travel bans. In this context, while complying with mandatory Ebola-related protocols, international travellers have a responsibility to cooperate with public health authorities by adhering to self-monitoring guidelines, as recommended.

As per the quarantine and isolation protocols released by the Kerala State Health Department, travellers arriving from affected countries must undergo a 21-day quarantine or monitoring period. During this time, asymptomatic passengers with no history of contact are placed under home quarantine, while anyone showing symptoms or having a known contact history is immediately moved to hospital isolation wards. According to the daily bulletin from the Kerala Department of Health and Family Welfare dated June 14, 2026, a total of 175 passengers arrived at Kerala Points of Entry (PoE), of whom 68 were cross-notified to other states, for follow-up surveillance. A total of 105 passengers were placed under home quarantine, with the highest numbers in Ernakulam (21), followed closely by Kannur with 20, Thrissur (10) and Malappuram (9) and 16 passengers were released from quarantine as of June 14, 2026.[23] The state has fully equipped dedicated isolation wards and intensive care facilities across all major Government Medical Colleges, including those in Thiruvananthapuram, Ernakulam, Manjeri (Malappuram district), and Kannur. Additionally, quarantine facilities for asymptomatic contacts have been set up in every district (Table 4).[23] Passenger data from affected countries as of June 14, 2026, is detailed in Table 5, reflecting the heightened surveillance measures implemented across all airports since May 22, 2026.[23]

Table 4: District-wise Quarantine facilities for asymptomatic contacts in Kerala

District	Quarantine Centre
Thiruvananthapuram	CHC Iranimuttom
Kollam	CHC Nedumpana
Alappuzha	GH Alappuzha FHC Kadavoor
Pathanamthitta	GH Adoor CHC Enadimangalam
Kottayam	GH Pala
Idukki	CHC Vandamedu
Ernakulam	DH Aluva THQH Kothamangalam
Thrissur	GH Thrissur DH Wadakanchery
Palakkad	DH Palakkad THQH Chittur
Malappuram	GMCH Manjeri THQH Tirarangadi
Kozhikode	GH Kozhikode
Wayanad	GTH Nallornadu THQH Sultan Batheri
Kannur	TH Pazhayangadi
Kasaragod	CHC Periya THQH Vellarikkundu Poodamkallu

CHC=Community Health Centre; FHC=Family Health Centre; GH=General Hospital; THQH= Taluk Headquarters Hospital; DH=District Hospital; GMCH=Government Medical College Hospital

Table 5: Ebola surveillance at points of entry in Kerala (as on June 14, 2026)

Points of Entry	Number of passengers from affected countries since May 22, 2026				
	Asymptomatic with no contact	Asymptomatic with contact history	Symptomatic	Quarantine in Kerala	Cross notified to other states
Cochin Airport	24	0	0	24	0
TRV Airport	59	0	0	05	54
Calicut Airport	23	0	0	23	0
Kannur Airport	01	0	0	01	0
Points of entry*	68	0	0	68	0
Total	**175**	**0**	**0**	**121**	**54**

**Points of entry in other states (Destination Kerala); TRV=Thiruvananthapuram*

Disease management

Early Ebola symptoms, such as fever, aches, and fatigue that closely mimic malaria, and typhoid. Because of these overlapping symptoms, prompt and accurate laboratory testing is crucial to distinguish Ebola from other infections. Diagnosis relies primarily on molecular and serological blood tests, including reverse transcription polymerase chain reaction (RT-PCR), antigen-capture enzyme-linked immunosorbent assay (ELISA), antigen detection, and serum neutralization tests. Treatment focuses on intensive supportive care and intravenous (IV) fluid therapy, alongside Food and Drug Administration (FDA)-approved monoclonal antibodies specifically targeted against the Zaire ebolavirus strain.[8] In the absence of an approved vaccine or targeted treatment for the Bundibugyo ebolavirus outbreak in Africa, mitigating human infection and mortality relies heavily on public awareness and preventive measures. Educating communities on risk factors and protective behaviours remains a primary line of defence.

Conclusion

After the recent emergency declarations by the WHO and Africa CDC, the Government of India has proactively intensified nationwide surveillance and preparedness measures to safeguard public health against any importation of Ebola into the country. In Kerala, the State Health Department is strengthening surveillance and issuing detailed prevention guidelines to healthcare institutions to forestall any potential import of the disease. Community engagement is the backbone of Ebola outbreak control. While clinical care, surveillance and laboratory services are vital, educating the public on risk factors and protective steps is one of the most effective ways to reduce human infection and transmission of the disease. Early supportive care through rehydration and symptomatic treatment directly improves patient survival. However, comprehensive studies are still required to map the disease's geographical distribution, to clarify its transmission modes, and also to develop effective vaccines and therapeutics.

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Conflict of interest
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References

1. World Health Organization. Ebola disease. Key facts. 24 April 2025. Available from: https://www.who.int . [Last accessed on 2026 Jun 03].
2. Badetia VK. The Indian Diaspora is Critical to India's Connections with Africa. International Journal of Advanced Research in Management and Social Sciences 2016; 5(4):353-62.
3. Oman Observer. Ebola Spreading 'fast' in DR Congo warn WHO. June 19, 2026. Available from: https://www.omanobserver.om. [Last accessed on 2026 Jun 20].
4. Gonzalez JP, Pourrut X, Leroy E. Ebolavirus and other Filoviruses. Curr Top Microbiol Immunol 2007; 315:363-87.
5. Weingartl HM, Nfron C, Kobinger G. Review of Ebola virus infections in domestic animals. Dev Biol (Basel) 2013; 135:211- 8.
6. Centers for Disease Control and Prevention. How Ebola Disease Spreads. June 2, 2026. Available from: https://www.cdc.gov. [Last accessed on 2026 Jun 07].
7. World Health Organization. Sexual and reproductive health. Sexual transmission of Ebola Virus: evidence and knowledge gaps. 4 April 2015. Available from: https://www.who.int.in. [Last accessed on 2026 Jun 08].
8. CD Alert. Ebola Virus Disease. National Center for Disease Control, Directorate General of Health Services, Ministry of Health and Family Welfare, Government of India. May 2026. Available from: https://ncdc.mohfw.gov.in. [Last accessed on 2026 Jun 06].
9. Centers for Disease Control and Prevention. Signs and Symptoms of Ebola Disease. April 23, 2024. CDC. ESPANOL. Available from: https://www.cdc.gov. [Last accessed on 2026 Jun 04].
10. Broadhurst MJ, Brooks TJ, Pollock NR. Diagnosis of Ebola Virus Disease: Past, Present, and Future. Clinical Microbiology Reviews 2016; 29(4):773-93. Accessed on 7 June 2026.
11. Centers for Disease Control and Prevention. History of Ebola outbreaks. 29 May, 2026. Available from: https://www.cdc.gov. [Last accessed on 2026 Jun 04].
12. Denise G. Ebola Outbreak in Congo is Declared a Global Health Emergency. The New York Times July 17 2019. Available from: https://www.nytimes.com. [Last accessed on 2026 Jun 10].
13. Asadu C. WHO declares Ebola outbreak in Congo and Uganda a Global Health Emergency. Public Broadcasting Service (PBS) News, Associated Press, May 17, 2026. Available from: https://apnews.com. [Last accessed on 2026 Jun 10].
14. World Health Organization. Disease Outbreak News. Ebola disease caused by Bundibugyo virus, Democratic Republic of the Congo & Uganda. 16 May 2026. Available from: https://www.who.int. [Last accessed on 2026 Jun 10].
15. World Health Organization. Disease Outbreak News. Ebola disease ca World Health Organization. Epidemic of Ebola Disease caused by Bundibugyo virus in the Democratic Republic of the Congo and Uganda determined a public health emergency of international concern. 17 May 2026. Available from: https://www.who.int. [Last accessed on 2026 Jun 10].
16. World Health Organization. Disease Outbreak News. Ebola disease caused by Bundibugyo virus, Democratic Republic of the Congo & Uganda. 29 May 2026. Available from: https://who.int. [Last accessed on 2026 Jun 26].
17. European Center for Disease Prevention and Control (ECDC). Ebola Disease outbreak in the Democratic Republic of the Congo and Uganda. Updated 10 June 2026. Available from: https://www.ecdc.europa.eu. [Last accessed on 2026 Jun 11].
18. World Health Organization. Disease Outbreak News. Ebola disease caused by Bundibugyo virus, Democratic Republic of the Congo &Uganda. 08 June 2026. Available from: https://www.who.int. [Last accessed on 2026 Jun 11].
19. Centers for Disease Control and Prevention. Ebola Outbreak: Current Situation. June 26, 2026. CDC. ESPANOL. Available from: https://www.cdc.gov. [Last accessed on 2026 Jun 26].
20. Yeni Safak. Africa CDC warns 10 countries at risk of Ebola outbreak. 24.05.2026. Available from: https://www.yenisafak.com/en. [Last accessed on 2026 Jun 12].
21. Catholic Relief Services | CRS. Ebola Outbreak in the DRC and Uganda: What's Happening and How to Help. May 27, 2026. Available from: https://www.crs.org. [Last accessed on 2026 Jun 14].
22. Ministry of Health and Family Welfare, Government of India. Union Health Minister Shri. JP Nadda Reviews Preparedness Measures for Ebola Disease in View of Rising Cases in Parts of Africa. 25 May 2026. PIB Delhi. Available from: https://www.pib.gov.in. [Last accessed on 2026 Jun 09].
23. Health & Family Department, Government of Kerala, Outbreak Control and Prevention Sate Cell. Daily Ebola bulletin dated 14.06.2026. Available from: https://health.kerala.gov.in. [Last accessed on 2026 Jun 17].

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