

Department of Defense Armed Forces Health Surveillance Center West Africa Ebola Surveillance Summary (21 MAY 2015)



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DEPARTMENT OF DEFENSE (AFHSC)

West Africa Ebola Surveillance Summary #100

21 MAY 2015 (next report 28 MAY 2015)



CASE REPORT: Since the previous summary (14 MAY), there has been an increase of 36 confirmed and 165 suspected and/or probable Ebola virus disease (EVD) cases, (+55 total deaths), bringing the total to 26,974 cases (11,135 deaths). Guinea, Liberia, and Sierra Leone reported suspected and/or probable cases, but only Guinea and Sierra Leone reported new confirmed cases during this time period. The total case count includes cases and deaths from Italy, Senegal, Nigeria, the United States, Spain, Mali, and the United Kingdom.

According to [WHO reporting](#) for the week ending 17 MAY, Guinea reported 27 new confirmed cases; up from seven in the prior week. A new cluster of five cases were located in Boke; initial findings suggest they originated from Conakry. Nine of the 27 cases were from unknown sources, indicating that contact tracing continues to be a challenge in Guinea. Sierra Leone reported eight confirmed cases in the week to 17 MAY; up from two cases in the prior week. In Sierra Leone, the three new cases in Port Loko are linked to the new case in Kambia, while the four new cases from Freetown were linked to Moa Warf, the same neighborhood of the two new cases reported last week.

WHO [declared](#) Liberia EVD free on 9 MAY 2015, as 42 days have passed since the burial of the last confirmed case. On 12 MAY, Italy reported one [imported case](#), a nurse returning from working in Sierra Leone. The patient started experiencing symptoms on 10 MAY, 72 hours after arriving in Italy; therefore contact tracing of the flight passengers was deemed unnecessary. This case was isolated at a Sardinian hospital on 11 MAY, then securely transported to Rome's National Institute for Infectious Diseases on 12 MAY. **There are 19 contacts of this case currently being monitored in Sardinia, Italy.**

On 10 APR 2015, WHO's fifth Emergency Committee meeting on the 2014 EVD outbreak [unanimously agreed](#) that the outbreak continues to constitute a Public Health Emergency of International Concern (PHEIC) and that all previous temporary recommendations remain in effect with some additional advice.

DoD SURVEILLANCE GUIDELINES: On 31 OCT 2014, the Under Secretary of Defense for Personnel and Readiness (USD(P&R)) [issued a memorandum](#) providing guidance for training, screening, and monitoring for DoD personnel deployed to Ebola outbreak areas. The USD(P&R) also published electronic versions of the [Ebola risk evaluation form](#) (DD2990) and [redeployment risk assessment form](#) (DD2991). On 5 JAN 2015, the Armed Forces Health Surveillance Center published [updated guidelines](#) for the detection and reporting of DoD cases of EVD.

MEDICAL COUNTERMEASURES There are no approved vaccines or specific treatments for EVD. On 9 DEC 2014, [HHS offered liability protections](#) to drug makers developing Ebola vaccines. Of [four drug candidates](#), ZMapp, TKM-Ebola-Guinea, brincidofovir, and favipiravir, the latter two started [trials in West Africa](#). An official trial of ZMapp has [started in Liberia](#). A comparison of the six Ebola vaccines being actively tested can be found on page 4 of this report, along with the current pharmaceutical treatments. On 14 APR, the CDC released a report saying that the [STRIVE](#) trial will begin in Sierra Leone, vaccinating up to 6,000 healthcare workers and EVD responders. Testing of ChAd3-EBOZ has expanded to [Uganda](#) and Nigeria according to the Walter Reed Army Institute of Research. The PREVAIL vaccine trials [completed](#) phase II in Liberia on 30 APR, phase III is likely to be carried out in Sierra Leone or Guinea. On 12 MAY, WHO Assistant Director-General for Health Systems and Innovation, Dr. Kieny, said it would be difficult to prove the efficacy of the two vaccines (rVSV-ZEBOV and ChAd3-EBO Z) due to a low number of EVD positive cases. Kieny said there would be some [limited results](#) from the studies of the drugs Zmapp and TKM-Ebola-Guinea.

Links to Additional Sections of this Report

DoD, USG and Global Response & Travel Advisories	Latest Case Counts	Medical Countermeasures in Development
New Cases (Last 21 days) by Admin Area (map)	New Confirmed Cases with Trend Line	Additional Resources

Text updated from the previous report will be printed in red; items in (+xx) represent the change in number from the previous AFHSC summary (14 MAY 2015).

All information has been verified unless noted otherwise. Sources include WHO, CDC, and health agencies in Guinea, Liberia, and Sierra Leone.

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DoD RESPONSE: On 11 FEB, President Obama said that approximately 100 DoD personnel would remain as the response transitions to support provided mostly by civilian employees of government agencies and volunteers. As of 20 MAR, the 48th Chemical, Biological, Radiological, and Nuclear Brigade [replaced](#) the 101st Airborne Division as the joint forces' headquarters element providing oversight duties. In Liberia, three USG supported laboratories (the Liberian Institute of Biomedical Research in Margibi, Cuttington University in Bong, and the ELWA facility in Montserrado) remain operational. On 30 APR, the Monrovia Medical Unit was formally closed by the Liberian government. The Defense Threat Reduction Agency is supporting one laboratory in Guinea and one in Sierra Leone; both are operational as of 6 MAY according to WHO.

On 8 JAN 2015, SECDEF signed a memo delegating authority to use DoD aircraft to transport Ebola symptomatic or exposed DoD personnel. On 17 DEC 2014, the CJCS issued an updated [CJCSI 4220.01A](#), implementing SECDEF's 21-day controlled monitoring policy. The updated policy lays out who is affected and how the monitoring will be conducted, including naming seven monitoring sites: Ft. Bliss, TX; JB Langley-Eustis, VA; Ft. Hood, TX; Ft. Bragg, NC; and JB Lewis-McCord, WA in CONUS, plus USAG Baumholder, Germany and Caserma Del Din, Vicenza, Italy, OCONUS. On 7 NOV 2014, [DoD issued guidance](#) on medical care of DoD civilians deployed to Ebola outbreak areas.

FDA has issued [Emergency Use Authorizations \(EUA\)](#) for several in vitro diagnostics for detection of Ebola virus. Under the EUAs, the DoD EZ1 real time RT-PCR Ebola Zaire virus detection assay developed by USAMRIID is approved for human diagnostic testing at the following DoD labs: USAMRIID, Landstuhl RMC, NIDDL at NMRC, NHRC, NAMRU-3, NAMRU-6, William Beaumont AMC, Carl R. Darnall AMC, Madigan AMC, Tripler AMC, and SAAMC. In Liberia, the Navy's mobile lab and the USAMRIID-supported Liberian Institute for Biological Research in Monrovia are qualified to perform Ebola diagnostic testing on U.S. personnel. Joint Base Langley-Eustis, Carl R. Darnall AMC, Wright-Patterson MC, WRNMMC, SAAMC, Madigan AMC, Womack AMC, Landstuhl RMC, Eisenhower AMC, and NIDDL have been approved as BioFire FilmArray NGDS BT-E Assay testing sites. The Corgenix ReEBOV Rapid Antigen Test was the most recent assay approved under the EUA on 24 FEB. As of 24 MAR, Cepheid [announced](#) that it received an EUA from the Food and Drug Administration for its Xpert Ebola molecular diagnostic test that gives results within two hours; it requires the use of Cepheid's GeneXpert bench top system.

USG AND GLOBAL RESPONSE: Current information and guidance is available at the [CDC](#) and [WHO](#) Ebola web sites. A [vaccination campaign](#) lead by the Liberian Ministry of Health with the support of UNICEF, WHO, and CDC started immunizing children for polio and measles in Liberia on 8 MAY. The campaign is estimated to reach over 600,000 children in a seven day time period. WHO completed a similar preventative [health campaign](#) in Sierra Leone on 1 MAY. **WHO started efforts on 18 MAY to set up a \$100 million [emergency fund](#), financed by voluntary contributions, to ensure resources are available to mount the initial response to any future epidemics like the current Ebola outbreak. As of 13 MAY, CDC changed Liberia's [country classification](#) to "country with former widespread EVD transmission and current, established control measures".**

TRAVEL ADVISORY: The CDC is maintaining its [Warning - Level 3, Avoid Nonessential Travel](#) advisory for Guinea and Sierra Leone. On 4 MAY, Liberia's travel advisory was reduced to a [Warning - Level 2, Practice Enhanced Precautions](#) since there are presently no known cases of Ebola in Liberia. [All flights carrying travelers from the affected West African nations](#) must enter the U.S. through one of the five designated airports that are conducting enhanced screening for EVD (JFK, Newark Liberty, Washington Dulles, Chicago O'Hare, and Atlanta Hartsfield-Jackson). U.S. military aircraft do not need to be re-routed to one of these airports, provided that Customs and Border Protections has been assured that the established DoD screening protocols will take place at the arrival location. On 28 OCT 2014, the CDC recommended that state public health departments [implement active post-arrival monitoring for 21 days](#) along with other movement restrictions based on a traveler's exposure risk category using CDC definitions.

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Latest Available Ebola Case Counts in or Related to West Africa, 2014-2015

Country (as of date)	EVD Cases All / Lab Confirmed	Deaths All / Lab Confirmed	EVD Cases in HCW / Deaths	Contacts Being Followed
Guinea (18 MAY)	3,635 (+38) / 3,201 (+27)	2,407 (+15) / 1,988 (+11)	187 / 94	1078
Sierra Leone (18 MAY)	12,637 (+101) / 8,606 (+9)	3,907 (+3) / 3,541 (+3)	304 (+1) / 221	578
Liberia (17 MAY)	10,666 (+62) / 3,151 ^{††}	4,806 (+37) / NA	378 (+4) ^{††} / 192 (+4) ^{††}	0
Italy (19 MAY)	1 / 1 ^{***}	0 / 0	1 / 0 ^{***}	19
United Kingdom (22 JAN)	1 / 1 ^{***}	0 / 0	1 / 0 ^{***}	0
United States (4 DEC)	4 / 4 ^{* **}	1 / 1	3 / 0	0
Mali (21 DEC)	8 / 7	6 / 5	2 / 2	0
Nigeria (17 SEP)	20 / 19	8 / 7	11 / 5	0
Senegal (20 SEP)	1 / 1 [*]	0 / 0	0 / 0	0
Spain (2 DEC)	1 / 1	0 / 0	1 / 0	0
Total	26,974 (+201) / 14,992 (+36)	11,135 (+55) / 5,542 (+14) [†]	888 (+5) / 514 (+4)	1,675

Case Fatality Proportion: As of 20 MAY 2015, the WHO said the case fatality proportion in the three intense-transmission countries among cases for whom a definitive outcome is recorded is between 49% and 64%. [†]Excluding Liberia / ^{*}Imported from Liberia / ^{**}1 imported from Guinea / ^{***}Imported from Sierra Leone / NA = Not Available / ^{††}Liberia data reclassified

Shaded countries have been declared Ebola transmission-free by WHO.

The total number of cases is subject to change due to reclassification, retrospective investigation, consolidation of cases and laboratory data, and enhanced surveillance.

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Ebola Medical Countermeasures In Development, 2014-2015

Name	Type	Company	Testing Location	FDA Status
ChAd3-EBO Z	Vaccine	GlaxoSmithKline partnered with NIAID	Liberia , Guinea, Uganda , Nigeria, Sierra Leone , Ghana , Mali , Senegal , Cameroun	Phase 2/3
rVSV-ZEBOV	Vaccine	Public Health Agency Canada/ Newlink Genetics Corp partnered with Merck	Liberia , Guinea , Sierra Leone	Phase 2/3
Ebola Ad26, MVA-BN-filo	Vaccine	Johnson & Johnson with Bavarian Nordic A/S	Britain	Phase 2
Ebola GP Vaccine	Vaccine	Novavax, Inc.	Australia	Phase 1
MVA Ebola Zaire Vaccine	Vaccine	Oxford University, GlaxoSmithKline, Emergent BioSolutions	Britain	Phase 1 (new study)
Ad5-EBOV , Zaire Ebola 2014 strain	Vaccine	Beijing Institute of Biotechnology, Jiangsu Province CDCP	China	Phase 1
rVSV-ZEBOV (second generation rVSV-ZEBOV)	Vaccine	University of Texas- Galveston and Profectus Biosciences	United States	Animal testing
Favipiravir	Drug	Toyama Chemical	Guinea	Phase 2
Brincidofovir	Drug	Chimerix, Inc.	Liberia	Halted/ cancelled
ZMapp	Drug	Mapp Pharmaceuticals	Liberia	Phase 2
TKM-Ebola-Guinea	Drug	Tekmira Pharmaceuticals	Guinea, Sierra Leone	Phase 2 (resumed)
BCX4430	Drug	BioCryst Pharmaceuticals partnered with NIH, HHS	United States	Phase 1
Convalescent Plasma Therapy	Procedure	ClinicalRM with multiple partners	Liberia, Guinea, Sierra Leone	Phase 1/2

All information has been verified unless noted otherwise. Sources include WHO, NIAID, CDC, FDA, NIH, and open source news.



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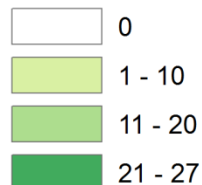
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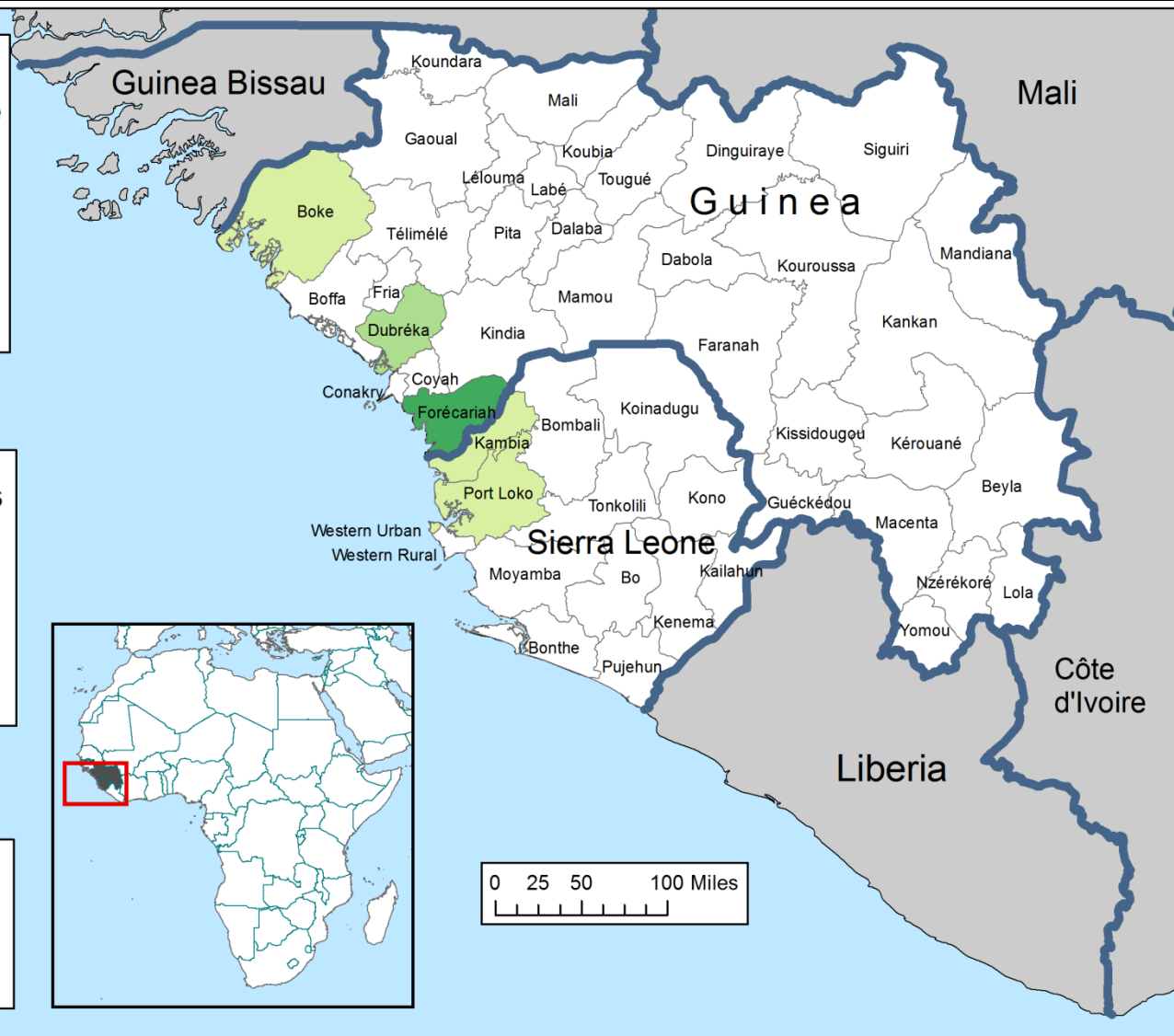
New confirmed Ebola virus disease cases by district in West Africa, during the most recently reported three-week period

New Confirmed Cases



As of dates:
Guinea, 29 APR - 20 MAY
Sierra Leone, 27 APR - 18 MAY

Liberia, EVD free 9 MAY



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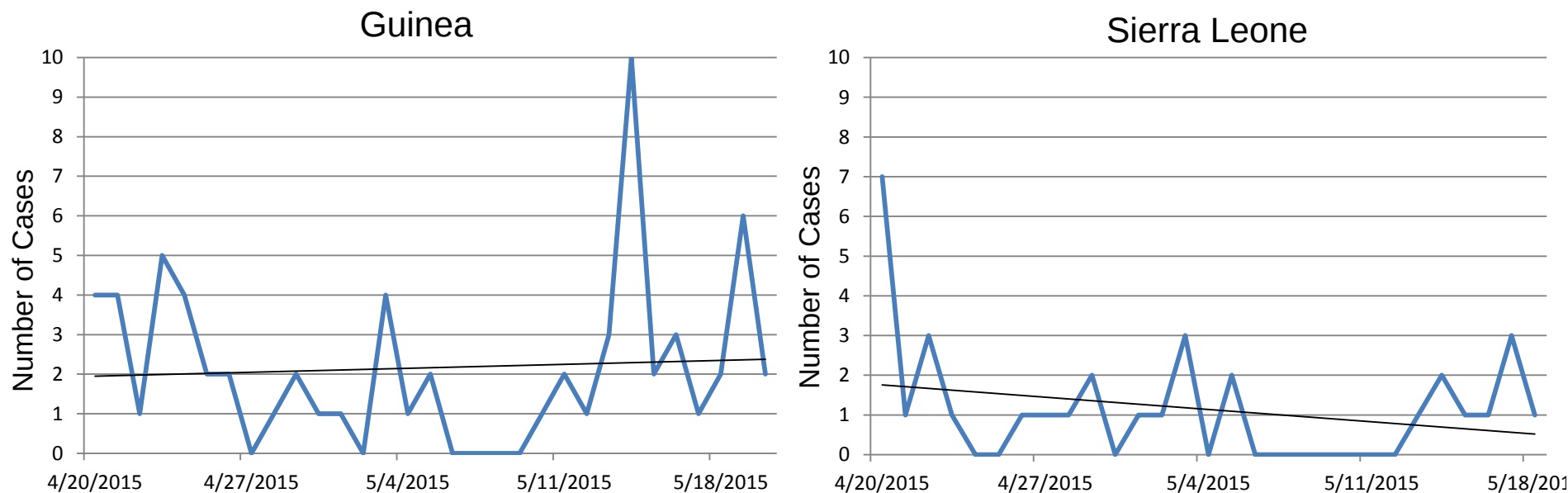
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Daily Reported Confirmed EVD
Cases with Trend Line for Guinea and
Sierra Leone for the Previous Month



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Additional Resources and Media Reports

Ebola Web Sites

- [WHO](#)
- [WHO \(Africa\)](#)
- [CDC](#)
- [UNMEER Sit Reps](#)
- [Liberia MOH](#)
- [Sierra Leone MOH](#)
- [Humanitarian Response \(West Africa\)](#)
Access to MOH, WHO, UN, and other reports
- [AFHSC Guidelines for Detecting and Reporting DoD Cases of Ebola Virus](#)
- [USAMRIID](#)
- [State Department Travel Site](#)
- [USAID Ebola Site](#)
- [DoD News](#)
- [DoD Operation United Assistance Web Portal](#)
- [AFRICOM Operation United Assistance Web Portal](#)

Information and News

- [WHO says Ebola “won’t go quietly” as new case numbers edge up](#) (Reuters, 19 MAY)
- [In fight against Ebola, front-line health workers risked their lives and never got paid](#) (Newsweek, 19 MAY)
- [20th CBRNE soldiers help to halt Ebola in Liberia](#) (DVIDS, 14 MAY)
- [Monitoring of Ebola Virus Makona evolution through establishment of advanced genomic capability in Liberia](#) (EIDJ, 14 MAY)
- [Genetic diversity and evolutionary dynamics of Ebola virus in Sierra Leone](#) (Nature, 13 MAY)
- [Italian nurse who worked in Sierra Leone tests positive for Ebola](#) (NY Times, 13 MAY)
- [Aethlon Medical announces Health Canada approval of Ebola treatment protocol](#) (PRNewswire, 13 MAY)
- [Bavarian Nordic gets 50 million euro EIB loan for Ebola vaccine](#) (Reuters, 12 MAY)
- [Liberia declared Ebola-free after weeks of no cases](#) (BBC, 9 MAY)
- [Persistence of Ebola Virus in Ocular Fluid during Convalescence](#) (NEJM, 7 MAY)
- [Possible Sexual Transmission of Ebola Virus – Liberia, 2015](#) (MMWR Weekly, 8 MAY)
- [Frontline film documentary: Outbreak](#) (PBS, 5 MAY)
- [Solar powered vaccine fridges help Ebola fight](#) (BBC, 3 MAY)