

# Department of Defense Armed Forces Health Surveillance Center West Africa Ebola Surveillance Summary (2 APR 2015)



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# DEPARTMENT OF DEFENSE (AFHSC)

## West Africa Ebola Surveillance Summary #93

### 2 APR 2015 (next report 9 APR 2015)



**CASE REPORT:** Since the previous summary (26 MAR), there has been an increase of 59 confirmed and 426 suspected and/or probable Ebola virus disease (EVD) cases, (+124 total deaths), bringing the total to 25,449 cases (10,498 deaths). Guinea, Liberia, and Sierra Leone reported suspected cases, but only Guinea and Sierra Leone reported new confirmed cases for this time period. The total includes past cases and deaths from Senegal, Nigeria, the United States, Spain, Mali, and the United Kingdom. The [United Kingdom](#), which was declared EVD-free on 10 MAR, [reported on 12 MAR](#) that one of its soldiers was diagnosed with EVD in Sierra Leone and was flown to London for treatment. **That soldier was the first EVD patient to receive an experimental Chinese drug, MIL-77, during her treatment.** On 13 MAR, an American [healthcare worker](#) was moved via non-commercial air transport to the NIH Clinical Center for treatment after testing positive for EVD in Sierra Leone. **This healthcare worker is currently in fair condition.** Seventeen contacts of this case have been [evacuated](#) to the U.S. for active monitoring since 13 MAR; **eight were released on 1 APR.**

According to WHO's 1 APR 2015 [situation report](#), in the week ending 29 MAR confirmed case incidence in Guinea increased from 45 in the prior week to 57 cases, while Sierra Leone reported a decrease from 53 to 25 cases. In Guinea, Siguiri and Fria prefectures reported new cases and unsafe burials; 20 unsafe burials were discovered in Guinea during the week. Throughout Guinea, unidentified transmission chains continue to drive the outbreak as only 53% of new confirmed cases arise from registered contacts. The only recently confirmed EVD case in Liberia died on 27 MAR in the MMU. Investigation into the confirmed case in Liberia is ongoing; media [reports](#) that the case had sexual contact with a male Ebola survivor.

On 20 JAN 2015, WHO's fourth 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, brincidofovir, and favipiravir, the latter two started [trials in West Africa](#) in JAN 2015. An official trial of ZMapp has [started in Liberia](#); NIAID is negotiating to extend the trial into Sierra Leone. On 20 FEB, WHO approved the [first rapid test for Ebola](#), developed by Corgenix; it is reportedly easy to perform, requires no electricity and gives a result within 15 minutes. **According to WHO, it will be deployed in West Africa during April or May 2015.** 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 25 MAR, WHO [reported](#) on the first efficacy trial of an Ebola vaccine in Guinea; the VSV-EBOV vaccine was administered this week in Coyah prefecture where EVD transmission is ongoing. Ring vaccination occurred in the community of Basse-Guinée, one of the areas where most new EVD cases are found. **BioCryst Pharmaceuticals has won a U.S. government contract to continue development of BCX4430, an Ebola treatment being funded by the NIH and the Biomedical Advanced Research and Development Authority.**

#### Links to Additional Sections of this Report

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

Text updated from the previous report will be printed in red; items in (+xx) represent the change in number from the previous AFHSC summary (26 MAR 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. In Liberia, three USG supported laboratories will reportedly retain full operations (the Liberian Institute of Biomedical Research in Margibi, Cuttington University in Bong, and the ELWA facility in Montserrado). DoD has completed and transferred to USAID all ten planned ETUs. The 48<sup>th</sup> Chemical, Biological, Radiological, and Nuclear Brigade [will deploy](#) to Liberia, replacing the 101<sup>st</sup> Airborne Division as the joint forces' headquarters element, to provide oversight duties. As of 22 MAR, 119 members of [Task Force Iron Knights](#) returned to Fort Bliss and completed the 21-day monitoring period. Additionally, 22 members of the [1<sup>st</sup> Area Medical Laboratory](#) returned to Aberdeen Proving Ground and 32 soldiers of the [82<sup>nd</sup> Civil Affairs Battalion](#) returned to Fort Stewart during the week of 22 MAR.

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. The Roche [LightMix® Ebola Zaire rRT-PCR Test](#) was approved for the presumptive detection of Ebola Zaire virus in individuals with signs and symptoms of Ebola disease, on 23 DEC 2014. 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. **An ongoing European Union project ,DISCOGNOSIS, will focus on developing an easily portable laboratory machine, which can test for several tropical diseases at the same time using pre-set lab disks and a small blood sample. The device will be validated in Senegal and the Democratic Republic of Congo.** On 18 MAR, WHO published the first of the "[Ebola Diaries](#)"; **additional segments of the "Diaries" were released in MAR 2015 detailing risk communication efforts, logistics, and patient treatment.**

**TRAVEL ADVISORY:** The CDC is maintaining its [Warning - Level 3, Avoid Nonessential Travel](#) advisory for Guinea, Sierra Leone, and 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 [begin direct active post-arrival monitoring for 21 days](#) along with other movement restrictions based on a traveler's exposure risk category using CDC definitions. On 20 JAN 2015, WHO reaffirmed the need to avoid unnecessary interference with international travel and trade.

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All information has been verified unless noted otherwise. Sources include DoD, White House Press Office, WHO, CDC, and USAID DART team.



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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 (31 MAR)	3,494 (+35) / 3,073 (+41)	2,320 (+47) / 1,906 (+31)	186 (+6) / 94 (+1)	2,657
Liberia (31 MAR)	9,898 (+294) / 3,151	4,353 (+31) / NA	372 / 180	185
Sierra Leone (31 MAR)	12,022 (+156) / 8,547 (+18)	3,810 (+46) / 3,444 (+46)	303 (+1) / 221	4,696
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
<b>Total</b>	<b>25,449 (+485) / 14,804 (+59)</b>	<b>10,498 (+124) / 5,363 (+77)†</b>	<b>879 (+7) / 502 (+1)</b>	<b>7,538</b>

**Case Fatality Proportion:** As of 1 APR 2015, the WHO said the case fatality rate in the three intense-transmission countries among cases for whom a definitive outcome is recorded is between 49% and 64%. For hospitalized patients, the case fatality rate is 49% in Guinea, 49% in Liberia, and 64% in Sierra Leone.

†Excluding Liberia / \*Imported from Liberia / \*\*1 imported from Guinea / \*\*\*Imported from Sierra Leone / NA = Not Available

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
cAd3-EBO Z	Vaccine	GlaxoSmithKline partnered with NIAID	<a href="#">Liberia</a> , Guinea (WHO)	Phase 2/3
VSV-ZEBOV	Vaccine	Public Health Agency Canada/ Newlink Genetics Corp partnered with Merck	<a href="#">Liberia</a> , <a href="#">Guinea</a> , <a href="#">Sierra Leone</a>	Phase 2/3
Ebola Ad26, MVA-BN-filo	Vaccine	Johnson & Johnson partnered with Bavarian Nordic A/S	<a href="#">Britain</a>	Phase 1
Ebola GP Vaccine	Vaccine	Novavax, Inc.	<a href="#">Australia</a>	Phase 1
MVA Ebola Zaire Vaccine	Vaccine	Oxford University, GlaxoSmithKline, NIAID	<a href="#">Britain</a>	Phase 1
<a href="#">Ad5-EBOV</a> , Zaire Ebola 2014 strain	Vaccine	Beijing Institute of Biotechnology, Jiangsu Province CDCP	<a href="#">China</a>	Phase 1
Favipiravir	Drug	Toyama Chemical	<a href="#">Guinea</a>	Phase 2
Brincidofovir	Drug	Chimerix, Inc.	<a href="#">Liberia</a>	Halted/ <a href="#">cancelled</a>
ZMapp	Drug	Mapp Pharmaceuticals	<a href="#">Liberia</a>	Phase 2
TKM-Ebola	Drug	Tekmira Pharmaceuticals	Guinea, <a href="#">Sierra Leone</a>	Phase 2
<b>BCX4430</b>	<b>Drug</b>	<b>BioCryst Pharmaceuticals partnered with NIH, <a href="#">HHS</a></b>	<a href="#">United States</a>	<b>Phase 1</b>
Convalescent Plasma Therapy	Procedure	<a href="#">ClinicalRM</a> with multiple partners	Liberia, Guinea, Sierra Leone	Phase 1/2

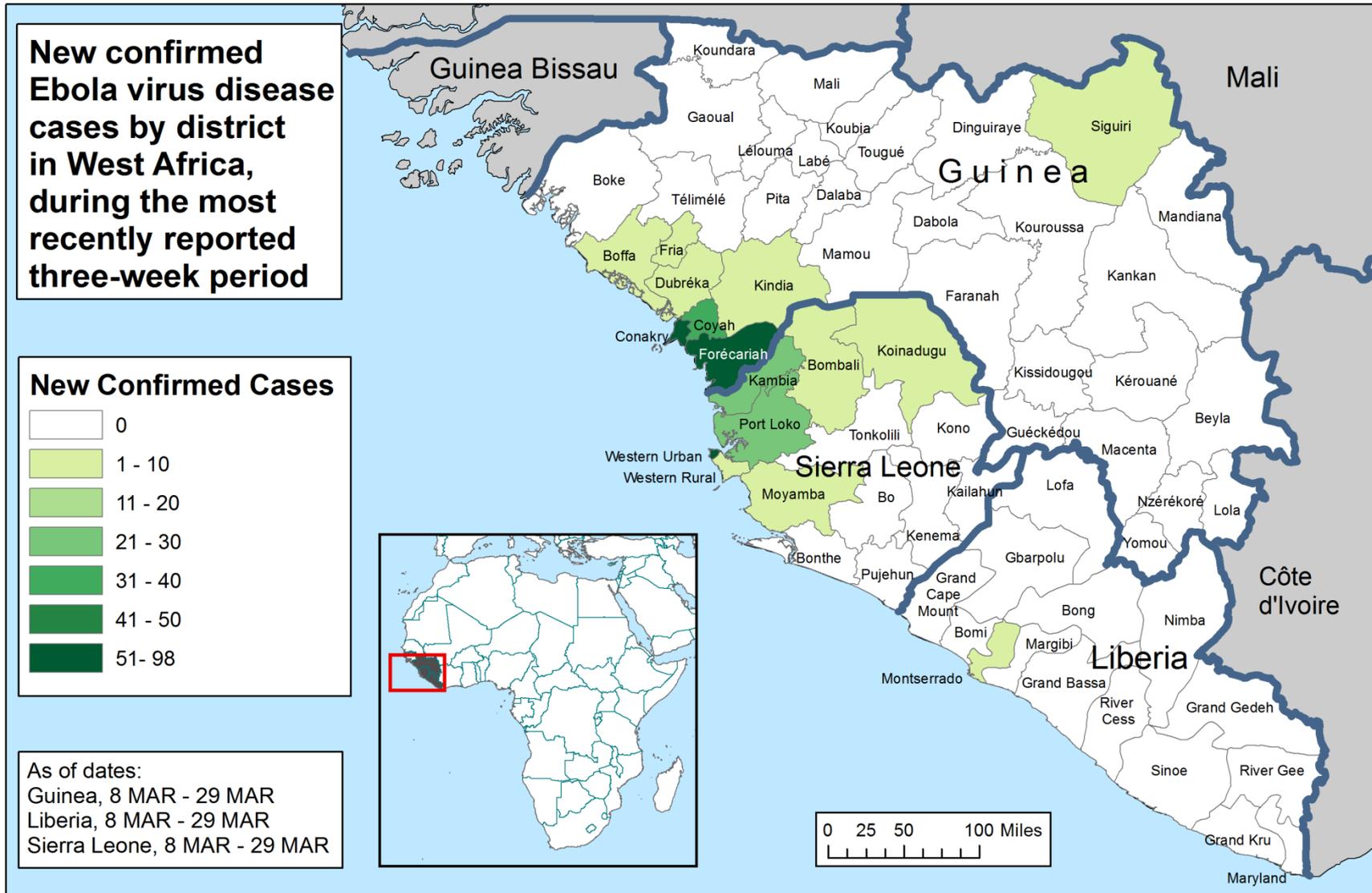
All information has been verified unless noted otherwise. Sources include WHO, NIAID, CDC, FDA, NIH, and open source news.



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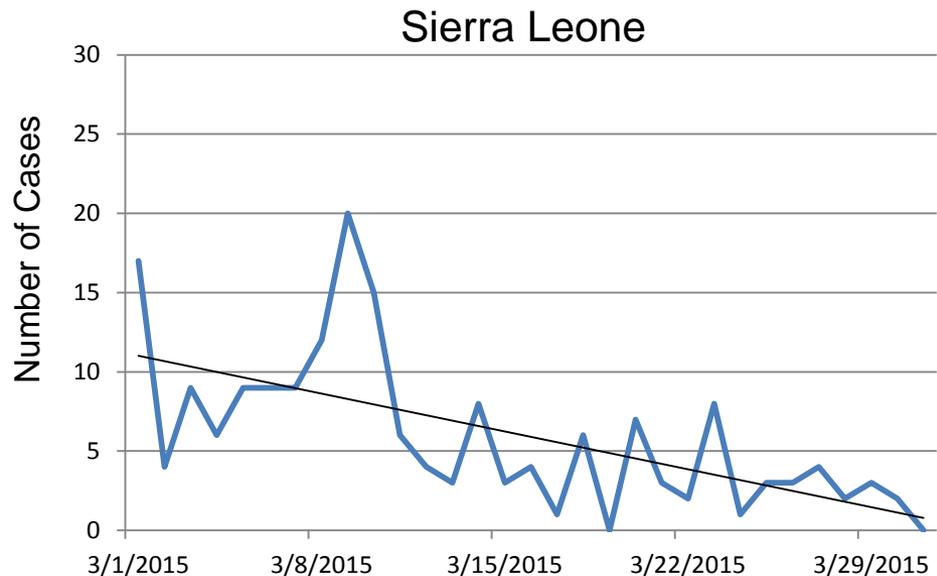
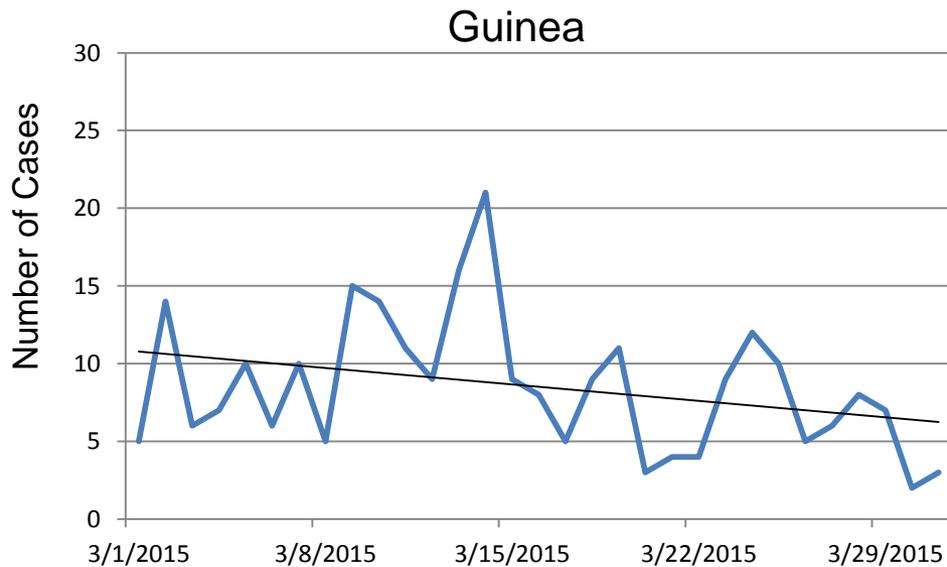
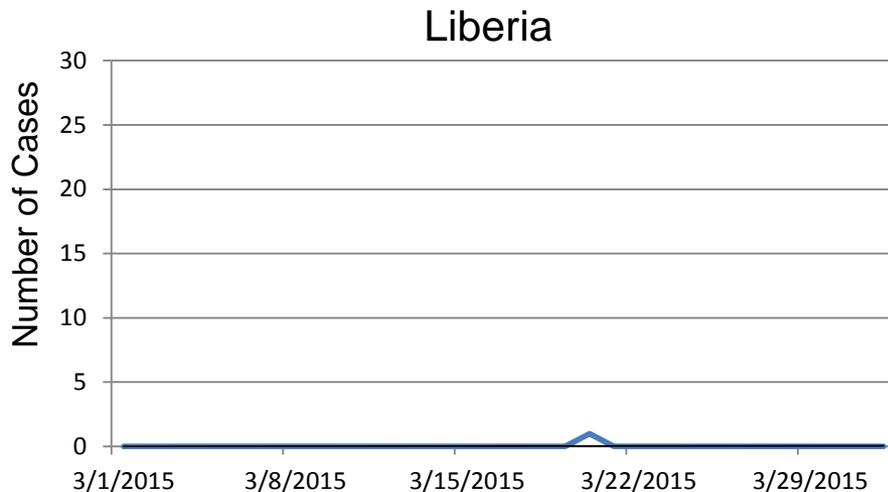
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Daily Reported Confirmed EVD Cases, with Trend Line, for Guinea, Liberia, and Sierra Leone



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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](#)
- [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

- [Merck, NewLink Ebola vaccine appears safe, effective in new studies](#) (Reuters, 1 APR)
- [Guinea finds three Ebola cases in the alumina hub of Fria](#) (Reuters, 31 MAR)
- [Sierra Leone Ebola lockdown exposes hundreds of suspected cases](#) (Fox News, 31 MAR)
- [Ebola virus: Sexual contact may be causing it to spread, WHO says](#) (ABC, 31 MAR)
- [Guinea: Govt Declares 45-Day Ebola 'Health Emergency'](#) (AllAfrica.com 29 MAR)
- [Military healthcare worker Cpl Anna Cross free of Ebola](#) (BBC, 28 MAR)
- [NIH study finds no evidence of accelerated Ebola virus evolution in West Africa](#) (NIH, 26 MAR)
- [Ebola is most deadly among babies, young children, study finds](#) (Reuters, 25 MAR)
- [Official: Ebola survivor may have infected new Liberia case](#) (AP, 24 MAR)
- [Exposure concerns grow in Liberia after diagnosis of first Ebola case in weeks](#) (NY Times, 24 MAR)
- [A year after Ebola discovered, relapses seen in fight to end it](#) (Reuters, 23 MAR)
- [The hunters breaking an Ebola ban on bushmeat](#) (BBC News, 23 MAR)
- [Return of the Iron Knights: Ebola mission accomplished](#) (Army Times, 22 MAR)