

# Department of Defense Armed Forces Health Surveillance Center West Africa Ebola Surveillance Summary (7 MAY 2015)



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# DEPARTMENT OF DEFENSE (AFHSC)

## West Africa Ebola Surveillance Summary #98

### 7 MAY 2015 (next report 14 MAY 2015)



**CASE REPORT:** Since the previous summary (30 APR), there has been an increase of 20 confirmed and 308 suspected and/or probable Ebola virus disease (EVD) cases, (+117 total deaths), bringing the total to 26,653 cases (11,022 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 includes past cases and deaths from Senegal, Nigeria, the United States, Spain, Mali, and the United Kingdom (UK).

According to WHO's 6 MAY 2015 [situation report](#), in the week ending 3 MAY Guinea reported 9 new confirmed cases; down from 19 in the prior week. Sierra Leone reported 9 cases in the week ending 3 MAY; down from 11 cases in the prior week. All 9 confirmed cases in Guinea are from the Forecariah prefecture. In Sierra Leone, Western Area Urban and Kambia experienced new confirmed cases. According to WHO, Liberia will be eligible for EVD free status on or about 9 MAY 2015. In Liberia and Sierra Leone, treatment capacity exceeds demand and both countries are closing selected EVD care facilities. In Guinea, only 44% of new cases arose from registered contacts. WHO reported 36 unsafe burials in seven Guinean prefectures in the week to 3 MAY. In Sierra Leone, only 22% of new cases arose from registered contacts, although 55% had epidemiological links with previous cases upon further investigation. EVD test specimen transport is a growing concern as the MAY-OCT rainy season begins. 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](#). TKM-Ebola-Guinea [appears efficacious](#) in trials with Rhesus monkeys. 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 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. 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. On 8 APR, the University of Texas and Profectus Biosciences [announced success](#) in developing a single dose Ebola vaccine that produces fewer side effects than other options and was [tested](#) with the current outbreak strain. 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. 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.

#### 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 (30 APR 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 48<sup>th</sup> Chemical, Biological, Radiological, and Nuclear Brigade has [replaced](#) the 101<sup>st</sup> 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. DoD has completed and transferred to USAID all ten planned ETUs. **On 30 APR, the Monrovia Medical Unit was formally closed by the Liberian government. The USAID Disaster Assistance Response Team (DART) team will continue to work with partners in Liberia to decontaminate and decommission the site over the coming weeks. 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. On 25 APR, the UN Secretary General [announced](#) that Peter Jan Graaff is the new Head of the UN Mission for Ebola Emergency Response (UNMEER). As of 22 APR, the Liberian MOH, WHO, and USAID DART teams visited eight Liberian counties to discuss the ETU decommissioning process and timeline. The team will visit the six remaining counties in the coming weeks to identify gaps in country-level capacity to isolate, triage, test, and refer EVD suspects in the absence of an ETU.

**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 [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.**

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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<br>All / Lab Confirmed | Deaths<br>All / Lab Confirmed | EVD Cases in HCW /<br>Deaths | Contacts<br>Being<br>Followed |
|-------------------------|----------------------------------|-------------------------------|------------------------------|-------------------------------|
| Guinea (6 MAY)          | 3,592 (+11) / 3,170 (+11)        | 2,387 (+6) / 1,972 (+6)       | 187 / 94                     | 1,084                         |
| Liberia (3 MAY)         | 10,564 (+242) / 3,151 ††         | 4,716 (+108) / NA             | 374 / 188                    | 0                             |
| Sierra Leone (4 MAY)    | 12,462 (+75) / 8,597 (+9)        | 3,904 (+3) / 3,538 (+3)       | 303 / 221                    | 475                           |
| 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                   | 26,653 (+328) / 14,951 (+20)     | 11,022 (+117) / 5,523 (+9)†   | 882 / 510                    | 1,559                         |

**Case Fatality Proportion:** As of 6 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 63%. For hospitalized patients, the case fatality proportion is 51% in Guinea, 49% in Liberia, and 63% in Sierra Leone.

†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                        |
|----------------------------------------------------|-----------|-------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------|
| cAd3-EBO Z                                         | Vaccine   | GlaxoSmithKline partnered with NIAID                                    | <a href="#">Liberia</a> , Guinea (WHO),<br><a href="#">Uganda</a> , Nigeria     | 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>                                                           | <a href="#">Phase 1</a>           |
| rVSV-ZEBOV (second generation VSV-ZEBOV)           | Vaccine   | University of Texas - Galveston and Profectus Biosciences               | <a href="#">United States</a>                                                   | Animal testing                    |
| 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-Guinea                                   | Drug      | Tekmira Pharmaceuticals                                                 | Guinea, <a href="#">Sierra Leone</a>                                            | <a href="#">Phase 2</a> (resumed) |
| BCX4430                                            | Drug      | BioCryst Pharmaceuticals partnered with NIH, <a href="#">HHS</a>        | <a href="#">United States</a>                                                   | Phase 1                           |
| 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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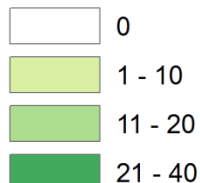
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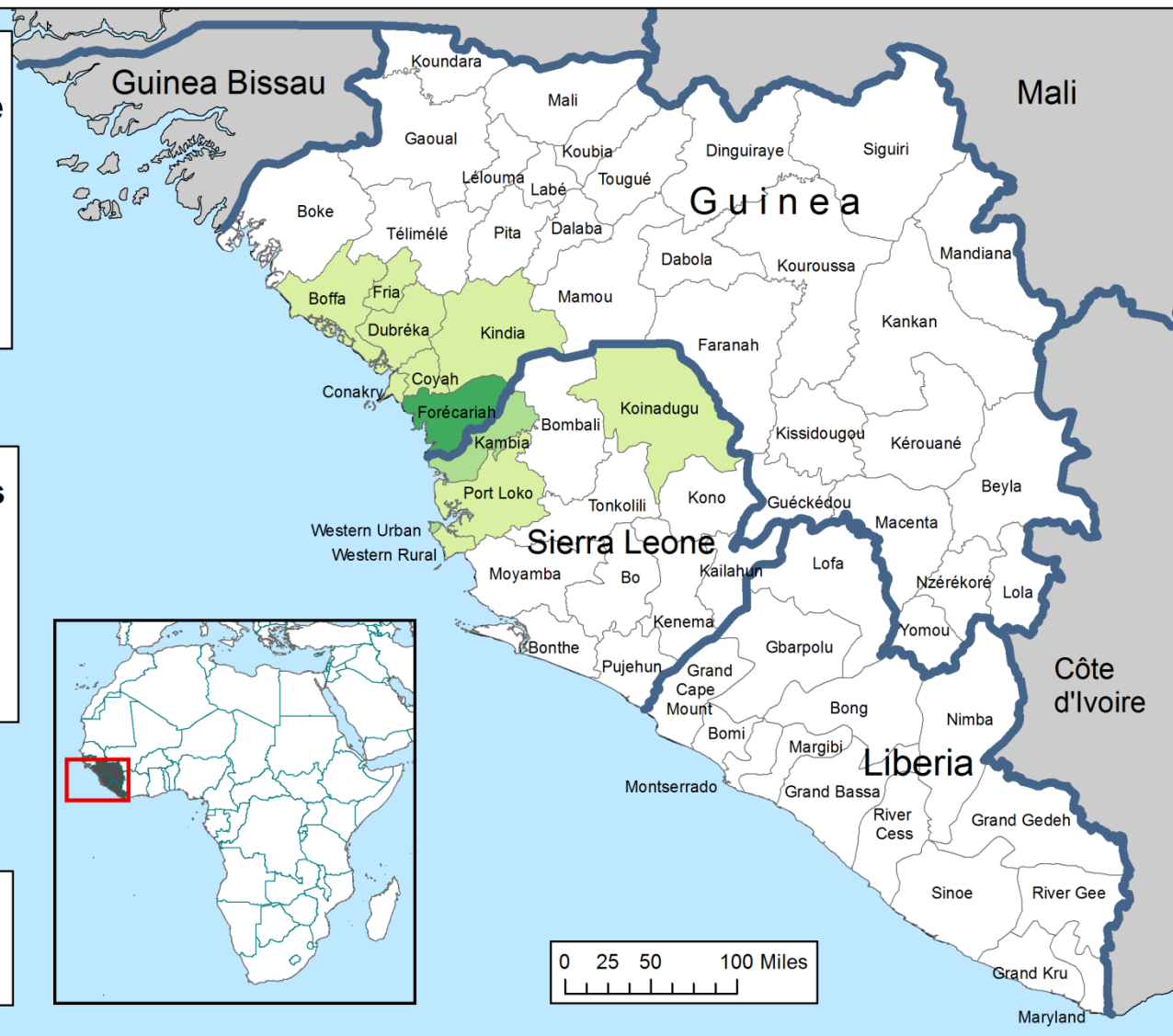


**New confirmed Ebola virus disease cases by district in West Africa, during the most recently reported three-week period**

### New Confirmed Cases



As of dates:  
Guinea, 15 APR - 6 MAY  
Liberia, 12 APR - 3 MAY  
Sierra Leone, 13 APR - 4 MAY



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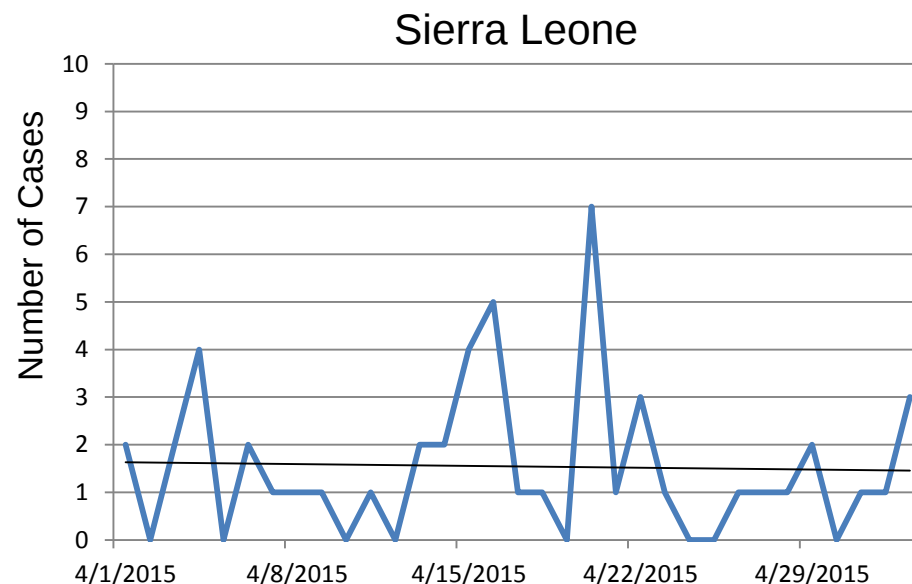
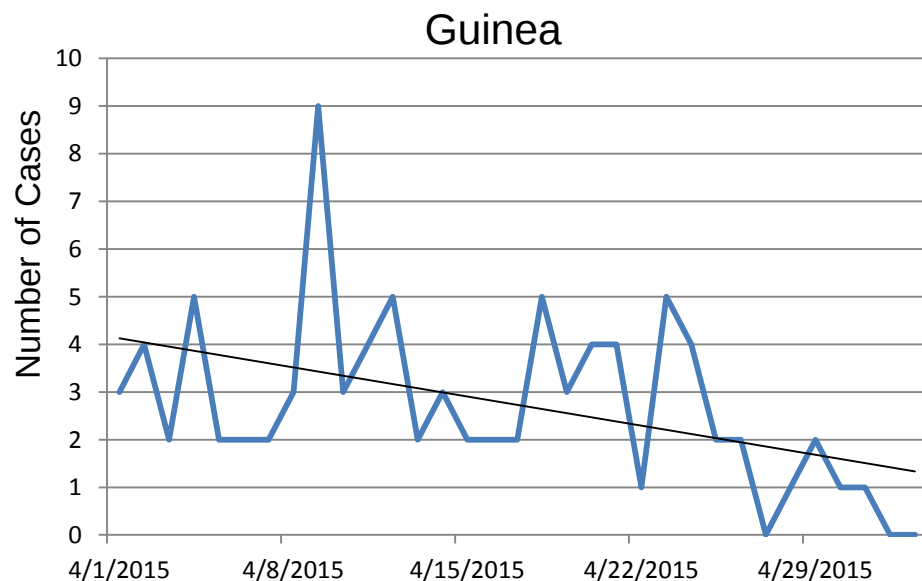
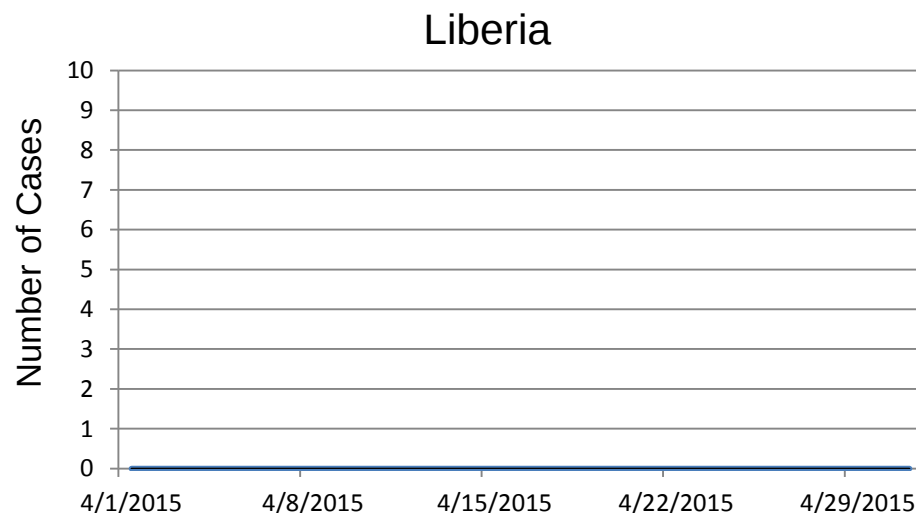
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Daily Reported Confirmed EVD Cases with Trend Line for Guinea, Liberia, and Sierra Leone for the Previous Month



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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
- [NCMI](#) (CAC required)
- [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

- [Frontline film documentary: Outbreak](#) (PBS, 5 MAY)
- [Tracing the Ebola outbreak, scientists hunt a silent epidemic](#) (NY Times, 5 MAY)
- [Solar powered vaccine fridges help Ebola fight](#) (BBC, 3 MAY)
- [Improved blood systems in Ebola-affected countries expected to be positive outcome](#) (WHO, 28 APR)
- [UN says it will try to identify all Ebola cases by June](#) (NY Times, 28 APR)
- [Troops get malaria during Ebola deployment](#) (Military Times, 23 APR)
- [Promising Ebola drug protects rhesus monkeys](#) (LA Times, 23 APR 2015)
- [Eleven handed life sentences over Guinea Ebola worker murders](#) (Reuters, 22 APR)
- [Ebola Survivors: Read This Before You Have Sex](#) (CDC, 21 APR)
- [Ebola laying in wait](#) (NY Times, 20 APR)
- [Challenges in Guinea spur increase in Ebola cases](#) (CIDRAP, 15 APR)
- [As Ebola retreats, Obama urges vigilance and preparation in West Africa](#) (NY Times, 15 APR)
- [Liberia audit report questions \\$673,000 in Ebola spending](#) (AP, 15 APR)
- [Sierra Leone schools reopen after long closure due to Ebola](#) (Reuters, 14 APR)
- [Ebolavirus is evolving but not changing: No evidence for functional change in EBOV from 1976 to the 2014 outbreak](#) (Virology, 14 APR)
- [Empty Ebola clinics in Liberia are seen as misstep in U.S. relief effort](#) (The NY Times, 11 APR)