

Department of Defense Armed Forces Health Surveillance Center West Africa Ebola Surveillance Summary (23 APR 2015)



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DEPARTMENT OF DEFENSE (AFHSC)

West Africa Ebola Surveillance Summary #96

23 APR 2015 (next report 30 APR 2015)



CASE REPORT: Since the previous summary (16 APR), there has been an increase of 34 confirmed and 230 suspected and/or probable Ebola virus disease (EVD) cases, (+106 total deaths), bringing the total to 26,097 cases (10,828 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 22 APR 2015 [situation report](#), in the week ending 19 APR Guinea reported 21 new confirmed cases, down from 28 in the prior week. Sierra Leone reported 12 cases in the week ending 19 APR, up from 9 cases in the prior week. WHO said stronger community engagement, improved contact tracing, and earlier case identification are needed to reach zero cases. Liberia reported no new confirmed cases. According to WHO, Liberia will be eligible for EVD free status on or about 8 MAY 2015. In Liberia and Sierra Leone, treatment capacity exceeds demand and both countries have begun decommissioning selected EVD care facilities. In Guinea, unidentified transmission chains continue to drive the outbreak. As of 12 APR, WHO said that only 44% of new confirmed cases arose from registered contacts, while the CDC reported that up to 62% of new cases may be from known contacts.

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](#); 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. 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.

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 (16 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. 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. As of 20 MAR, the 48th Chemical, Biological, Radiological, and Nuclear Brigade has [replaced](#) the 101st Airborne Division as the joint forces' headquarters element providing oversight duties.

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. WHO and [CDC](#) have extended the recommended duration for Ebola survivors to practice safe sex after they [discovered a male survivor](#) with traces of Ebola virus in his semen almost six months after recovery. Samples were sent to the CDC to evaluate whether the semen is infectious. A [joint statement](#) on the Ebola response was released from WHO leadership on 16 APR, emphasizing the need to strengthen the International Health Regulations and reform the way the WHO routinely responds to outbreaks. On 17 APR, the World Bank released an [update](#) to the Economic Impact of the 2014-2015 Ebola Epidemic on Liberia, Sierra Leone, and Guinea.

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.

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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 (19 APR)	3,565 (+17) / 3,136 (+19)	2,358 (+12) / 1,943 (+11)	187 / 94	1,648
Liberia (19 APR)	10,212 (+128) / 3,150 ††	4,421 (+13) / NA	374 / 188	0
Sierra Leone (20 APR)	12,285 (+77) / 8,580 (+15)	3,882 (+20) / 3,516 (+20)	303 / 221	570
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	26,097 (+264) / 14,899 (+34)	10,828 (+106) / 5,472 (+31)†	882 / 510	2,218

Case Fatality Proportion: As of 19 APR 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%. For hospitalized patients, the case fatality proportion is 52% 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 / ††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	Liberia , Guinea (WHO)	Phase 2/3
VSV-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 partnered with Bavarian Nordic A/S	Britain	Phase 1
Ebola GP Vaccine	Vaccine	Novavax, Inc.	Australia	Phase 1
MVA Ebola Zaire Vaccine	Vaccine	Oxford University, GlaxoSmithKline, NIAID	Britain	Phase 1
Ad5-EBOV , Zaire Ebola 2014 strain	Vaccine	Beijing Institute of Biotechnology, Jiangsu Province CDCP	China	Phase 1
rVSV-ZEBOV (second generation VSV-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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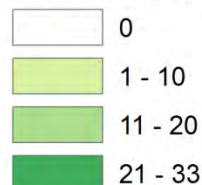
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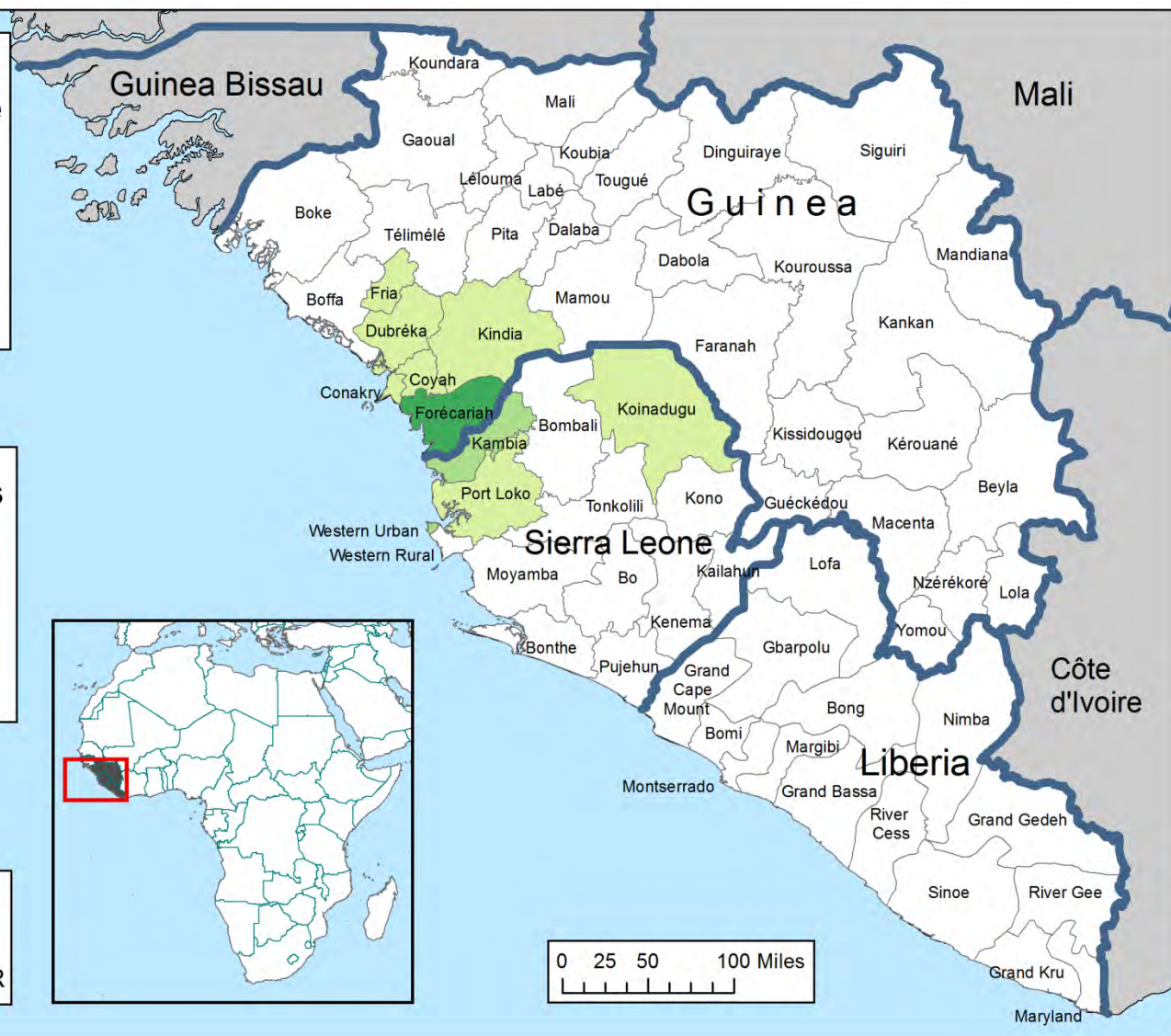


New confirmed Ebola virus disease cases by district in West Africa, during the most recently reported three-week period

New Confirmed Cases



As of dates:
Guinea, 31 MAR - 21 APR
Liberia, 29 MAR - 19 APR
Sierra Leone, 30 MAR - 20 APR



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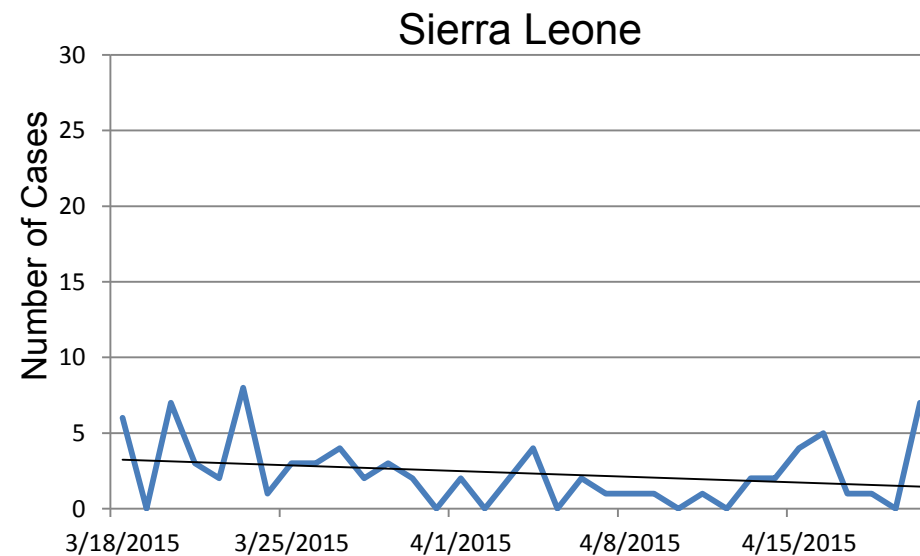
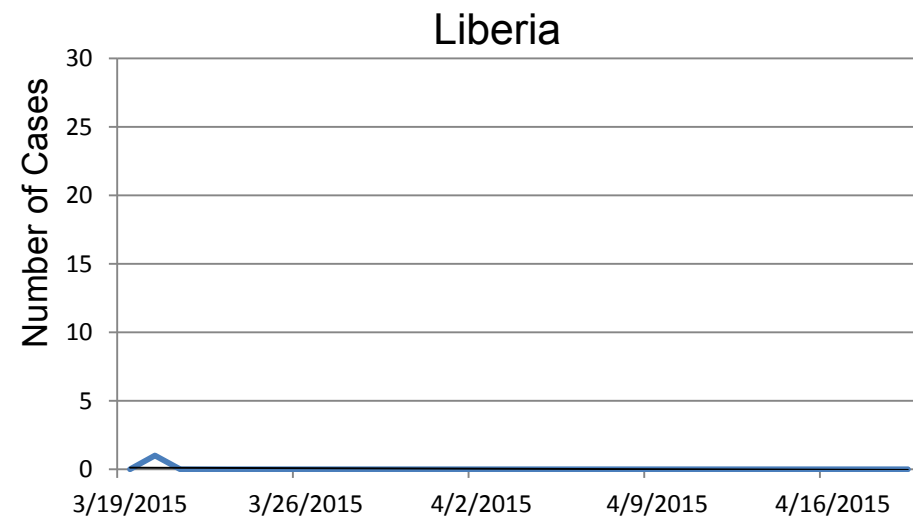
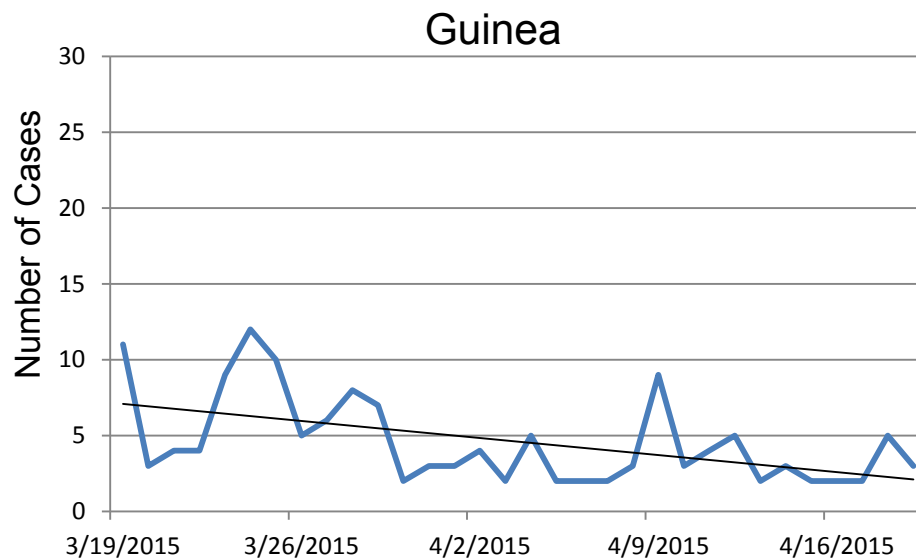
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Daily Reported Confirmed EVD Cases, with Trend Line, for Guinea, Liberia, and Sierra Leone



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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 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

- [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)
- [Two new Ebola vaccines pass important early test, researchers say](#) (The NY Times, 8 APR)
- [Sierra Leone says Kailahun Ebola case report was mistaken](#) (Reuters, 7 APR)
- [Guinea may provide answers on Ebola vaccine](#) (Global News, 7 APR)
- [Yes, we were warned about Ebola](#) (The NY Times, 7 APR)
- [An Ebola doctor's answer to life-or-death question of who to admit for treatment](#) (Washington Post, 6 APR)