Department of Defense
Armed Forces Health Surveillance Center
West Africa Ebola Surveillance Summary
(26 MAR 2015)

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DEPARTMENT OF DEFENSE (AFHSC)

West Africa Ebola Surveillance Summary #92

26 MAR 2015 (next report 2 APR 2015)

CASE REPORT: Since the previous summary (19 MAR), there has been an increase of 109 confirmed and 154 suspected and/or probable Ebola virus disease (EVD) cases, (+180 total deaths), bringing the total to 24,964 cases (10,374 deaths). The new cases are reported from Guinea, Liberia, and Sierra Leone; only Guinea and Sierra Leone reported new deaths 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, a health care worker, was diagnosed with EVD in Sierra Leone and was flown to London for treatment. The WHO requires a country to have 42 days elapse since the last EVD positive patient tests negative twice before that country can be declared "EVD-free"; subsequent cases diagnosed elsewhere and brought in for treatment do not remove this status. 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. Seventeen contacts of this case have returned to the U.S. for monitoring as of 18 MAR; so far no additional positive cases are reported by CDC.

According to WHO's 25 MAR 2015 situation report, in the week ending 22 MAR confirmed case incidence in Guinea decreased from 95 in the prior week to 45 cases, while Sierra Leone reported a decrease from 55 to 53 cases. In Guinea, unsafe burials (26 during the week) and unidentified transmission chains continue to drive the outbreak; only 38% of new confirmed cases arise from registered contacts. Liberia reported its first confirmed case on 20 MAR, after three consecutive weeks without a confirmed case. Investigation into the newly reported case in Liberia is ongoing; the Associated Press reports that the case had contact with a male Ebola survivor. Media sources report that the Liberian Deputy Ebola Incident Manager, Mr. Sieh, announced two additional suspect EVD cases on 25 MAR.

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. WHO, with Guinea, Sierra Leone, and Liberia, continues to develop capacity to collect and use convalescent sera from recovered Ebola patients to experimentally treat ill patients in West Africa. 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. 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.

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 (19 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 48th Chemical, Biological, Radiological, and Nuclear Brigade will deploy to Liberia, replacing the 101st 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 1st Area Medical Laboratory returned to Aberdeen Proving Ground and 32 soldiers of the 82nd 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. On 18 MAR, WHO published the first of the "Ebola Diaries," a series of firsthand accounts written by scientists and healthcare workers involved in the early days of the current Ebola epidemic. On 15 MAR, the CDC released a press statement on the EVD-positive American physician undergoing treatment at the NIH Clinical Center.

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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26 MAR 2015

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 (24 MAR)	3,459 (+70) / 3,032 (+66)	2,273 (+49) / 1,875 (+46)	180 (+2) / 93 (+2)	2,925
Liberia (24 MAR)	9,604 (+78) / 3,151 (+1)	4,322 (+58) / NA	372 / 180	71
Sierra Leone (24 MAR)	11,866 (+115) / 8,529 (+42)	3,764 (+73) / 3,398 (+73)	302 / 221	5,548
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	24,964 (+263) / 14,745 (+109)	10,374 (+180) / 5,286 (+119)†	872 (+2) / 501 (+2)	8,544

Case Fatality Proportion: As of 25 MAR 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 50% and 65%. For hospitalized patients, the case fatality rate is 50% in Guinea, 50% in Liberia, and 65% 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	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
Favipiravir	Drug	Toyama Chemical	Guinea	Phase 2
Brincidofovir	Drug	Chimerix, Inc.	Liberia	Halted/cancelled
ZMapp	Drug	Mapp Pharmaceuticals	Liberia	Phase 2
TKM-Ebola	Drug	Tekmira Pharmaceuticals	Guinea, Sierra Leone	Phase 2
Convalescent Plasma Therapy	Procedure	ClinicalRM with multiple partners	Liberia, Guinea, Sierra Leone	Phase 1/2

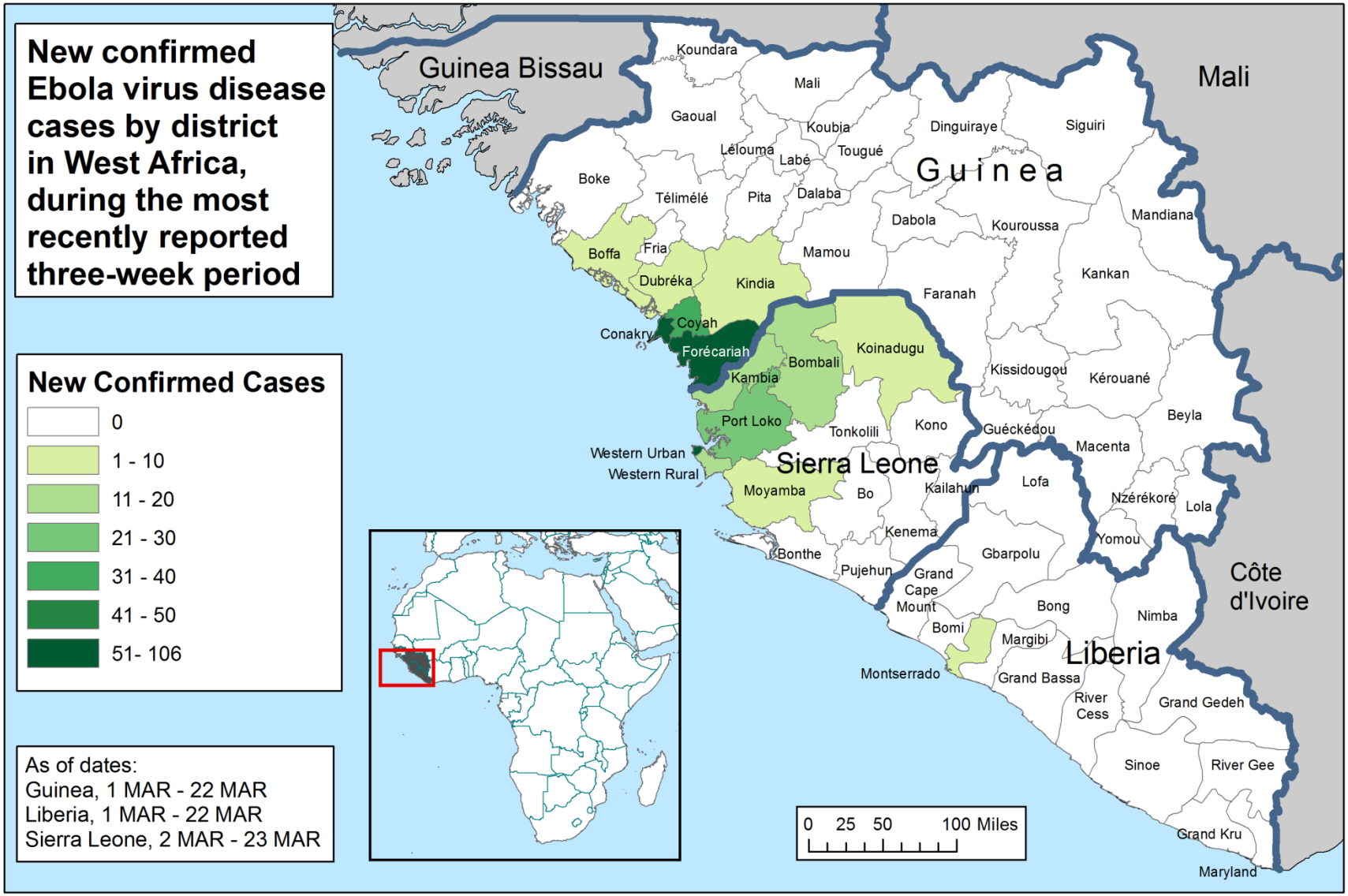
All information has been verified unless noted otherwise. Sources include WHO, NIAID, CDC, FDA, NIH, and open source news.

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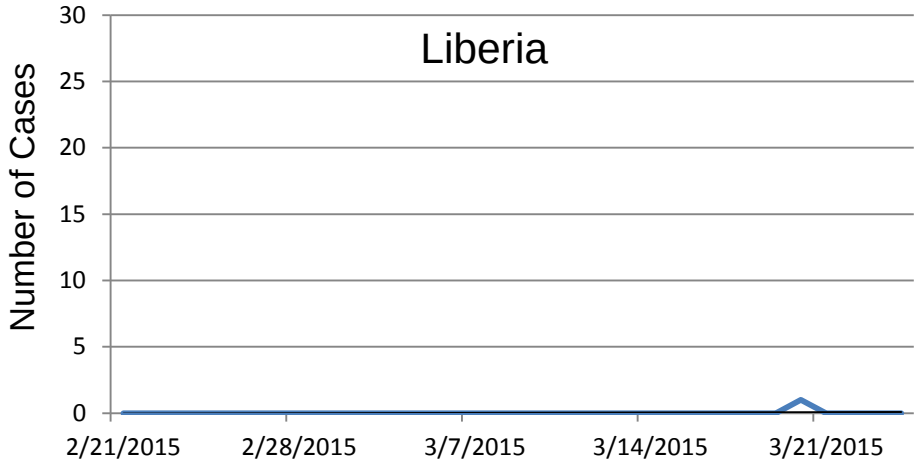
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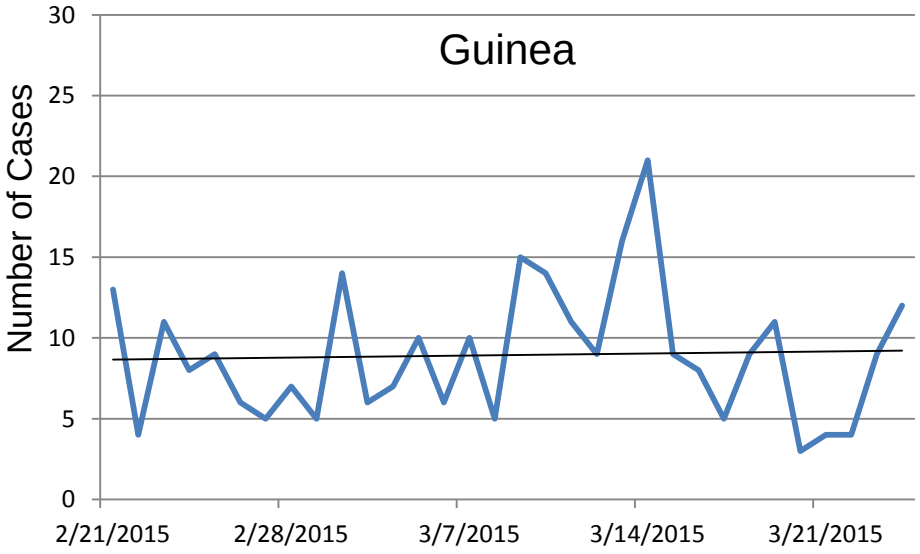
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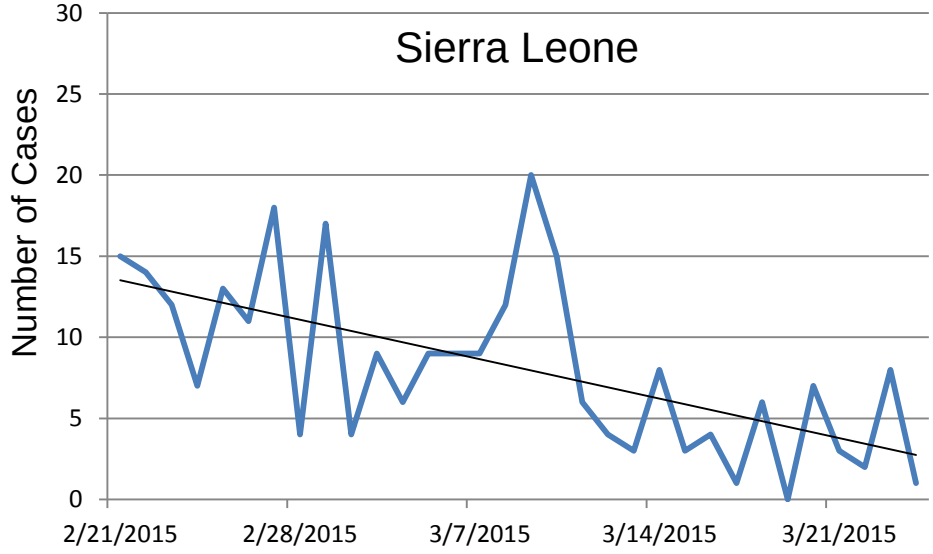


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Daily Reported Confirmed EVD Cases, with Trend Line, for Guinea, Liberia, and Sierra Leone







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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

- 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)
- Liberians overcome fear to volunteer for Ebola vaccine trial (AP, 22 MAR)
- Return of the Iron Knights: Ebola mission accomplished (Army Times, 22 MAR)
- Two more U.S. healthcare workers repatriated for Ebola monitoring (Reuters, 19 MAR)
- In Sierra Leone, Ebola virus means 'school is not safe' (BBC News, 19 MAR)
- FDA panel to discuss Ebola vaccine development in May (Reuters, 18 MAR)
- Sierra Leone plans another three-day, countrywide shutdown to stop Ebola's spread (U.S. News and World Report, 18 MAR)
- Liberians worry Ebola could return from Guinea, Sierra Leone (Voice of America, 18 MAR)
- Resistance, size of population slow Ebola efforts in Guinea, CDC director says (Washington Post, 13 MAR)

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