



EBOLA VIRUS DISEASE (EVD) - West Africa Outbreak Update

Week 38,
September 14-20, 2014

COUNTRY	CASES	DEATHS	Death/Total Cases (%)
LIBERIA	2710 (172)	1459 (85)	53.8
SIERRA LEONE	1673 (74)	562 (31)	33.6
GUINEA	942 (61)	601 (30)	63.8
NIGERIA	21 (11)	8 (5)	38.1
SENEGAL	1	0	0
TOTAL	5347 (318)	2630 (151)	49.1
DR CONGO *	71	40	51.9
OMAN	0	0	0

Case Count:
Source - CDC



Latest News - Headline

Source - Internationalsos.com, CDC, WHO, Health Map, Promed

19 September:

CDC issues Advice for Humanitarian Aid Organizations - <http://wwwnc.cdc.gov/travel/page/advice-humanitarian-aid-organizations-ebola>

U.N. Security Council passes historic resolution to confront Ebola. WHO welcomes the decision to establish UN Mission for Ebola Emergency Response

Sierra Leone begins three-day Ebola lockdown (September 19-21, 2014)

CDC recommendations for Breastfeeding/Infant Feeding in the Context of Ebola –

- When safe alternatives to breastfeeding and infant care exist, mothers with probable or confirmed EVD should not have close contact with their infants (including breastfeeding).
- In resource-limited settings, non-breastfed infants are at increased risk of death from starvation and other infectious diseases. These risks must be carefully weighed against the risk of Ebola virus disease.

18 September:

France: MSF announced that a French staff working in Liberia has tested positive for Ebola & she will be evacuated for treatment in France.

China: A team of 59 HCW's from the **Chinese CDC** have joined 115 Chinese HC staff already working in Sierra Leone.

17 September

Nigeria: The Ministry of Health has reported that a week has passed since the last Ebola case was reported.

WHO has released an interim guidance for management of Ebola cases at points of entry and surveillance in a non-affected country (PDF).

16 September:

United States: 3000 U.S. military will lead \$750 million fight against Ebola in West Africa. Plans to set up 17 treatment centres in Liberia – each with a 100-bed capacity. Will send Trained 500 HCW's and 65 PHSC Corps Officers to assist other HCW's.

WHO issues new Ebola case-classification criteria for suspect, probable and confirmed cases http://apps.who.int/iris/bitstream/10665/133546/1/roadmapupdate16sept14_eng.pdf?ua=1

Sierra Leone: The International Federation of Red Cross and Red Crescent Societies (IFRC) has opened a treatment center in Kenema.

UN Security Council will hold an emergency meeting on 18 September to discuss the Ebola crisis. U.N. Sees Need for \$1 Billion to Fight Ebola.

* **Virological analysis:** No link between Ebola outbreaks in west Africa & DRC - Situation assessment September 2, 2014 - Gabon Laboratory Report (Data from Promed)
Note: Numbers in the parenthesis denote affected HCW's (WHO)

15 September:

Sierra Leone: A 4th doctor has been lost to Ebola before evacuation for Rx.. The 3 other doctors infected with Ebola earlier have all died.

CDC: Health Care Facility Preparedness and Health Care Provider Preparedness Checklist for EVD posted on CDC website. CDC to conduct Safety Training Course for HCW's Going to West Africa. At least 10 such sessions to be held in Anniston, Alabama starting 6 October.

WHO is concerned about the illicit trade of Ebola survivors blood. Convalescent serum – from someone who has survived an infectious disease has been used to treat Ebola victims

14 September:

Netherlands: Two Dutch doctors with possible Ebola exposure have arrived in the Netherlands from Sierra Leone. They will be monitored at the Leiden University Medical Centre.

International Business Times: "Air travel to the affected countries should not be cancelled or restricted," Dan Epstein, a spokesperson for

MoH Response:

- EDC, DCDCSC joint simulation exercise at Muscat International Airport
- PoE surveillance established at Muscat International Airport. The surveillance started on 12th Sept. 2014
 - > PoE: Self-declaration for passengers at Muscat International Airport for direct African Oman Air flights
 - > Currently 8 travellers from West Africa are being followed for 21 days for fever and any other symptoms of EVD. There is no history of exposure to a suspect case and have not developed any symptoms.
- Circular regarding guidelines and SOP's for contact management and quarantine sent to the Governorates
- Revised Action Algorithms posted on website:
 - ◆ Reporting and investigation, PoE surveillance, Infection Prevention & Control,
 - ◆ Clinical management and Contacts management
- Governorates involved in regional preparedness plan and conduct drill and simulation exercise

Research:

Vaccines show promise in treating Ebola
Two experimental vaccines against the deadly Ebola virus ravaging West Africa could be available as soon as November. Ebola cAd3 and VSV-EBOV would first be given to health care workers most at risk



Ebola virus: Outer membrane is studded with glycoprotein (GP) which binds to host cell to enable infection

Ebola cAd3: Developed by U.S. National Institute of Allergy and Infectious Diseases (NIAID) and GlaxoSmithKline. 10,000 doses available by end of year

Vaccine uses genetically modified chimpanzee "cold" virus – **chimpanzee adenovirus type 3 (cAd3)** – to deliver non-infectious Ebola GP gene to human cells. Gene produces glycoprotein that triggers immune system to fight viral infection

VSV-EBOV: Developed by Canada's National Microbiology Laboratory. 800 doses of vaccine – donated to World Health Organization

Vaccine based on weakened strains of **vesicular stomatitis virus**, a common animal pathogen. Glycoprotein of VSV is replaced with Ebola GP. Protects both before and after exposure. **Profectus Biosciences** is also developing a VSV vaccine

TKM-Ebola: Tekmira vaccine gave 100% protection in non-human primates to otherwise lethal dose of Zaire Ebola virus

Vaccine uses **RNA interference** – known as **RNAi** – which silences disease by causing genes to block Ebola replication within cells of infected person

Prime-boost vaccine: Netherlands-based **Crucell** and Denmark-based **Bavarian Nordic**, (J&J's vaccine division) are working with NIAID to produce a two-shot, prime-boost vaccine

First shot uses **adenovirus-based** vaccine to get harmless Ebola gene into cells to prime immune system. Second shot contains **smallpox-based** vaccine which boosts immune response

ZMapp: Vaccine developed by **Mapp Biopharmaceutical** has successfully treated five of seven Ebola victims – two fatalities

Cocktail of three genetically modified mouse **monoclonal antibodies** – molecules that neutralize GP protein on surface of Ebola virus

Sources: Pharmaceutical companies, Centres for Disease Control, Virology Blog © GRAPHIC NEWS