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August, 2014

Sources:
• WHO: www.who.int
• CDC: www.cdc.gov
History

• Ebola first appeared in 1976 in 2 simultaneous outbreaks, in Nzara, Sudan, and in Yambuku, Democratic Republic of Congo. The latter was in a village situated near the Ebola River, from which the disease takes its name.
### Chronology of previous Ebola virus disease outbreaks (1)

<table>
<thead>
<tr>
<th>Year</th>
<th>Country</th>
<th>Ebolavirus species</th>
<th>Cases</th>
<th>Deaths</th>
<th>Case fatality</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>Democratic Republic of Congo</td>
<td>Bundibugyo</td>
<td>57</td>
<td>29</td>
<td>51%</td>
</tr>
<tr>
<td>2012</td>
<td>Uganda</td>
<td>Sudan</td>
<td>7</td>
<td>4</td>
<td>57%</td>
</tr>
<tr>
<td>2012</td>
<td>Uganda</td>
<td>Sudan</td>
<td>24</td>
<td>17</td>
<td>71%</td>
</tr>
<tr>
<td>2011</td>
<td>Uganda</td>
<td>Sudan</td>
<td>1</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>2008</td>
<td>Democratic Republic of Congo</td>
<td>Zaire</td>
<td>32</td>
<td>14</td>
<td>44%</td>
</tr>
<tr>
<td>2007</td>
<td>Uganda</td>
<td>Bundibugyo</td>
<td>149</td>
<td>37</td>
<td>25%</td>
</tr>
<tr>
<td>2007</td>
<td>Democratic Republic of Congo</td>
<td>Zaire</td>
<td>264</td>
<td>187</td>
<td>71%</td>
</tr>
<tr>
<td>2005</td>
<td>Congo</td>
<td>Zaire</td>
<td>12</td>
<td>10</td>
<td>83%</td>
</tr>
<tr>
<td>2004</td>
<td>Sudan</td>
<td>Sudan</td>
<td>17</td>
<td>7</td>
<td>41%</td>
</tr>
<tr>
<td>2003 (Nov-Dec)</td>
<td>Congo</td>
<td>Zaire</td>
<td>35</td>
<td>29</td>
<td>83%</td>
</tr>
<tr>
<td>2003 (Jan-Apr)</td>
<td>Congo</td>
<td>Zaire</td>
<td>143</td>
<td>128</td>
<td>90%</td>
</tr>
</tbody>
</table>
## Chronology of previous Ebola virus disease outbreaks (2)

<table>
<thead>
<tr>
<th>Year</th>
<th>Country</th>
<th>Ebolavirus species</th>
<th>Cases</th>
<th>Deaths</th>
<th>Case fatality</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001-2002</td>
<td>Congo</td>
<td>Zaire</td>
<td>59</td>
<td>44</td>
<td>75%</td>
</tr>
<tr>
<td>2001-2002</td>
<td>Gabon</td>
<td>Zaire</td>
<td>65</td>
<td>53</td>
<td>82%</td>
</tr>
<tr>
<td>2000</td>
<td>Uganda</td>
<td>Sudan</td>
<td>425</td>
<td>224</td>
<td>53%</td>
</tr>
<tr>
<td>1996</td>
<td>South Africa (ex-Gabon)</td>
<td>Zaire</td>
<td>1</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>1996 (Jul-Dec)</td>
<td>Gabon</td>
<td>Zaire</td>
<td>60</td>
<td>45</td>
<td>75%</td>
</tr>
<tr>
<td>1996 (Jan-Apr)</td>
<td>Gabon</td>
<td>Zaire</td>
<td>31</td>
<td>21</td>
<td>68%</td>
</tr>
<tr>
<td>1995</td>
<td>Democratic Republic of Congo</td>
<td>Zaire</td>
<td>315</td>
<td>254</td>
<td>81%</td>
</tr>
<tr>
<td>1994</td>
<td>Cote d'Ivoire</td>
<td>Tai Forest</td>
<td>1</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>1994</td>
<td>Gabon</td>
<td>Zaire</td>
<td>52</td>
<td>31</td>
<td>60%</td>
</tr>
<tr>
<td>1979</td>
<td>Sudan</td>
<td>Sudan</td>
<td>34</td>
<td>22</td>
<td>65%</td>
</tr>
<tr>
<td>1977</td>
<td>Democratic Republic of Congo</td>
<td>Zaire</td>
<td>1</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>1976</td>
<td>Sudan</td>
<td>Sudan</td>
<td>284</td>
<td>151</td>
<td>53%</td>
</tr>
<tr>
<td>1976</td>
<td>Democratic Republic of Congo</td>
<td>Zaire</td>
<td>318</td>
<td>280</td>
<td>88%</td>
</tr>
</tbody>
</table>
Current outbreak: Total Reported Cases
(As per Aug 19, 2014)

• Suspected and Confirmed Case Count: 2240
• Suspected Case Deaths: 1229
• Laboratory Confirmed Cases: 1383
• Fatality rate: 54.8%
Reported Cases by Country  (As per Aug 19, 2014)

Guinea
- Suspected and Confirmed Cases: **543**
- Suspected Case Deaths: **394**
- Laboratory Confirmed Cases: **396**

Liberia
- Suspected and Confirmed Cases: **834**
- Suspected Case Deaths: **466**
- Laboratory Confirmed Cases: **200**

Nigeria
- Suspected and Confirmed Cases: **15**
- Suspected and Confirmed Case Deaths: **4**
- Laboratory Confirmed Cases: **12**

Sierra Leone
- Suspected and Confirmed Cases: **848**
- Suspected and Confirmed Case Deaths: **365**
- Laboratory Confirmed Cases: **775**
EBOLA

SIGNS AND SYMPTOMS

IF YOU HAVE
FEVER,
DIARRHOEA
AND VOMITING
WITH OR WITHOUT
BLEEDING

Go Immediately to the Nearest HEALTH FACILITY

For more Information Call: 117 (Toll Free)
What is Ebola?

- Ebola virus is a viral hemorrhagic fever disease from the *Filoviridae* family (filovirus)
- **Incubation period:** 2 to 21 days after exposure, although 8-10 days is most common.
- **Signs & symptoms:**
  Sudden onset of fever, intense weakness, muscle pain, headache and sore throat, followed by vomiting, diarrhea, rash, impaired kidney and liver function, and in some cases, internal and external bleeding.
- People are infectious as long as their blood and secretions contain the virus.
Laboratory findings & differential diagnosis

• Low white blood cell and platelet counts and elevated liver enzymes.

• Differential diagnosis include other HF, malaria, some diarrheal diseases...

• EVD outbreaks have a case fatality rate of up to 90%.

• PCR lab test is done outside Lebanon (France)
How is Ebola transmitted? (1)

- Ebola is introduced into the human population through close contact with the blood, secretions, organs or other body fluids of infected animals.
- In Africa, infection has been documented through the handling of infected animals (such as chimpanzees, gorillas, fruit bats, monkeys, forest antelope and porcupines found ill or dead or in the rainforest).
- Human-to-human transmission, with infection resulting from direct contact (through broken skin or mucous membranes) with the blood, secretions, organs or other body fluids of infected people, and indirect contact with environments contaminated with such fluids.
How is Ebola transmitted? (2)

- Burial ceremonies with direct contact with the body of the deceased person can also play a role in the transmission of Ebola.
- Men who have recovered from the disease can still transmit the virus through their semen for up to 7 weeks after recovery from illness.
Can Ebola be transmitted through the air or via contaminated food and water?

• **No.** Ebola is not a respiratory disease like the flu, so it is not transmitted through the air, and it is not a foodborne nor a waterborne illness.
Can Ebola be transmitted from a person who is infected but doesn’t have any symptoms?

• **No.** A person infected with Ebola virus is not contagious until symptoms appear.
VACCINE & TREATMENT
Vaccine and treatment

• No licensed vaccine for EVD is available. Several vaccines are being tested, but none are available for clinical use.

• Severely ill patients require intensive supportive care. Patients are frequently dehydrated and require oral rehydration with solutions containing electrolytes or intravenous fluids.

• No specific treatment is available. New drug therapies are being evaluated.
Are there any cases of individuals contracting Ebola in Lebanon?

• **No.** As of August 20, no confirmed Ebola cases have been reported in Lebanon.

• Two Patients under investigation in Lebanon have tested negative for Ebola.
What is being done to prevent ill passengers in West Africa from getting on a plane?

- WHO and local authorities are collaborating together in West Africa to prevent sick travelers from getting on planes. In addition, airports in Guinea, Liberia, and Sierra Leone are screening outbound travelers for Ebola symptoms, including fever, and passengers are required to respond to a health questionnaire.
What is the MOH doing in the Lebanon? (1)

• On the remote possibility that an ill traveler arrives the Lebanon, the MOH has protocols in place to protect against further spread of disease. These include: notification of ill travelers on a plane before arrival, evaluation of ill travelers isolation and transport to a medical facility if needed (RHGH is designated as referral hospital for Ebola and it is been prepared to admit such patients)

• An update of the case definition was done and disseminated
What is the MOH doing in the Lebanon? (2)

• The MOH, along with the Director of the Airport, have also provided guidance to airlines for managing ill passengers and crew.

• The MOH has issued some circulars and letters reminding healthcare workers of the importance of taking steps to prevent the spread of this virus: Letter to the MOFA, letter to the MOT, circular to private and public hospitals, letter and circular to the airport.
What is the MOH doing in the Lebanon? (3)

• Five ID specialists were designated in all mohafaza as referral focal persons to any potential outbreak
• Preventive and Control measures were disseminated to all hospitals
• The MOH has also done trainings to all hospitals on infection control measures
• An awareness note is distributed to travelers going and coming to and from infected countries
• The website of the MOH was updated and all info related to the disease are displayed on the web (www.moph.gov.lb)
Thank you