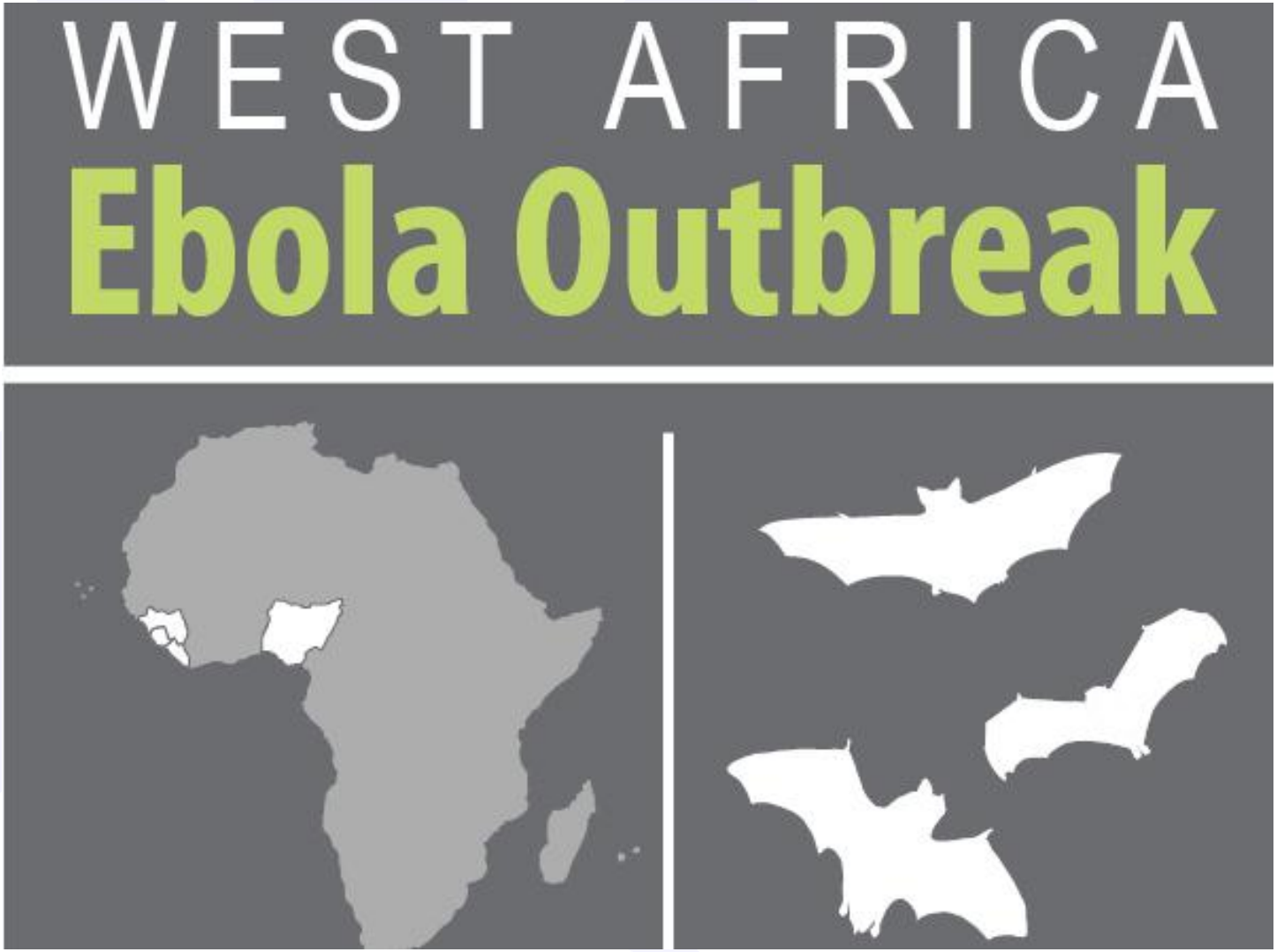
Office of Public Health
Ebola Virus Disease (EVD) Preparedness

Ebola Virus Disease

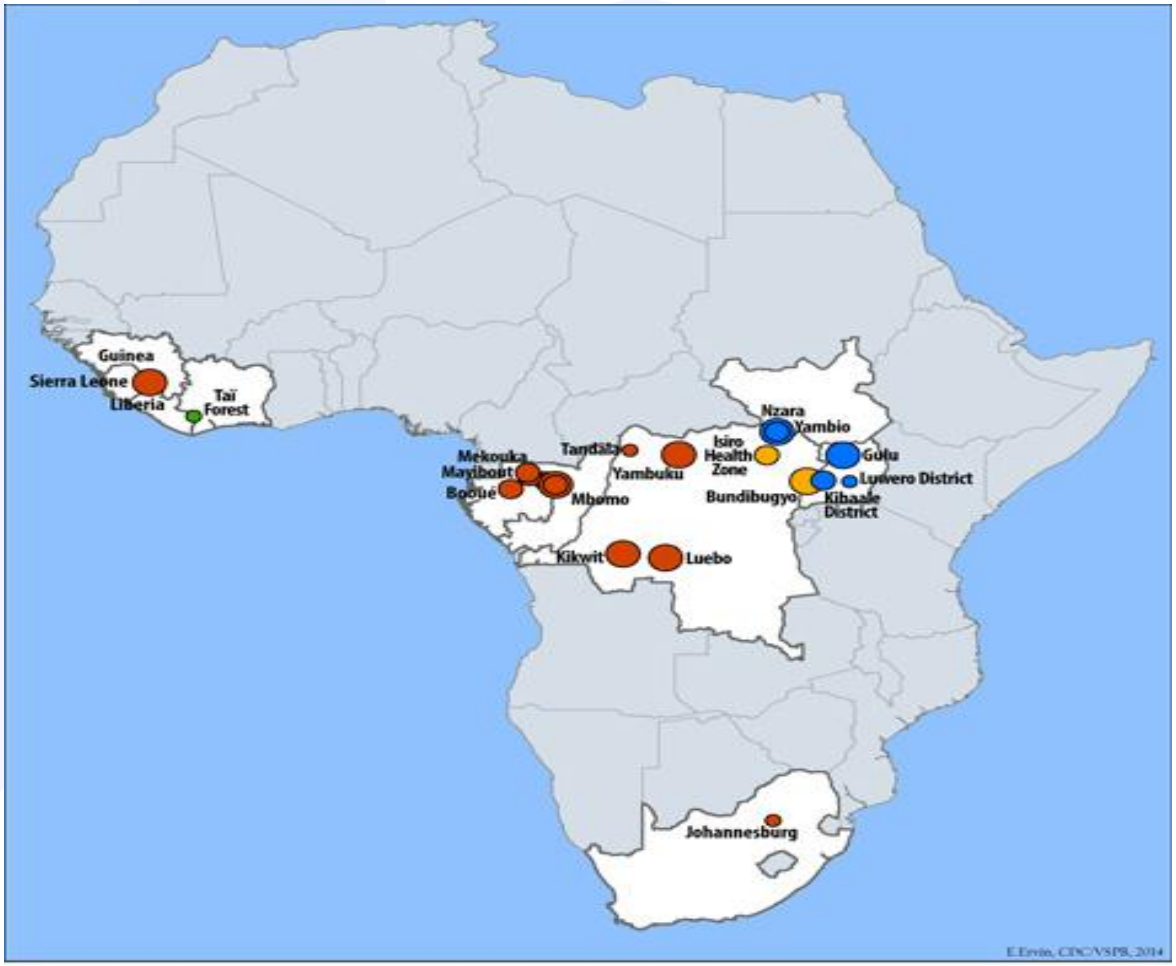


Source: CDC Ebola

Ebola Virus Disease (EVD)

- Ebola Virus Disease (EVD) is a severe viral disease, caused by an infection with a species of Ebola virus.
- In 1976, the first Ebola virus species was discovered in what is now the Democratic Republic of the Congo, near the Ebola River.
- Since 1976, outbreaks have appeared sporadically.

Ebola Outbreaks 1976-2014



EBOLAVIRUS OUTBREAKS BY SPECIES AND SIZE, 1976 - 2014

Species

- Zaire ebolavirus
- Sudan ebolavirus
- Taï Forest ebolavirus
- Bundibugyo ebolavirus

Number of Cases

- 1 - 10
- 11 - 100
- 101 - 425

0 250 500 1,000
Miles

Source: CDC Ebola

Current Ebola Situation

Total Cases per CDC, West Africa

(Updated October 3, 2014)
Updated Case Counts available at
http://www.cdc.gov/vhf/ebola/outbreaks/2014-west-africa/index.html

Countries with Outbreaks

Totals for Guinea, Liberia & Sierra Leone

Total Case Count: 7470
Total Deaths: 3431
Laboratory Confirmed Cases: 4087

Countries with Localized Transmission

Nigeria

Total Case Count: 20
Total Case Deaths: 8
Laboratory Confirmed Cases: 19

Source: http://www.gowestafrica.org/explore/

Current Ebola Situation

Total Cases per CDC

(Updated October 3, 2014) Updated Case Counts available at http://www.cdc.gov/vhf/ebola/outbreaks/2014-west-africa/index.html

<u>Countries with Travel-Associated Cases</u>

Senegal

Total Case Count: 1

Total Case Deaths: 0

Laboratory Confirmed Cases: 1

United States (a traveler from Liberia)

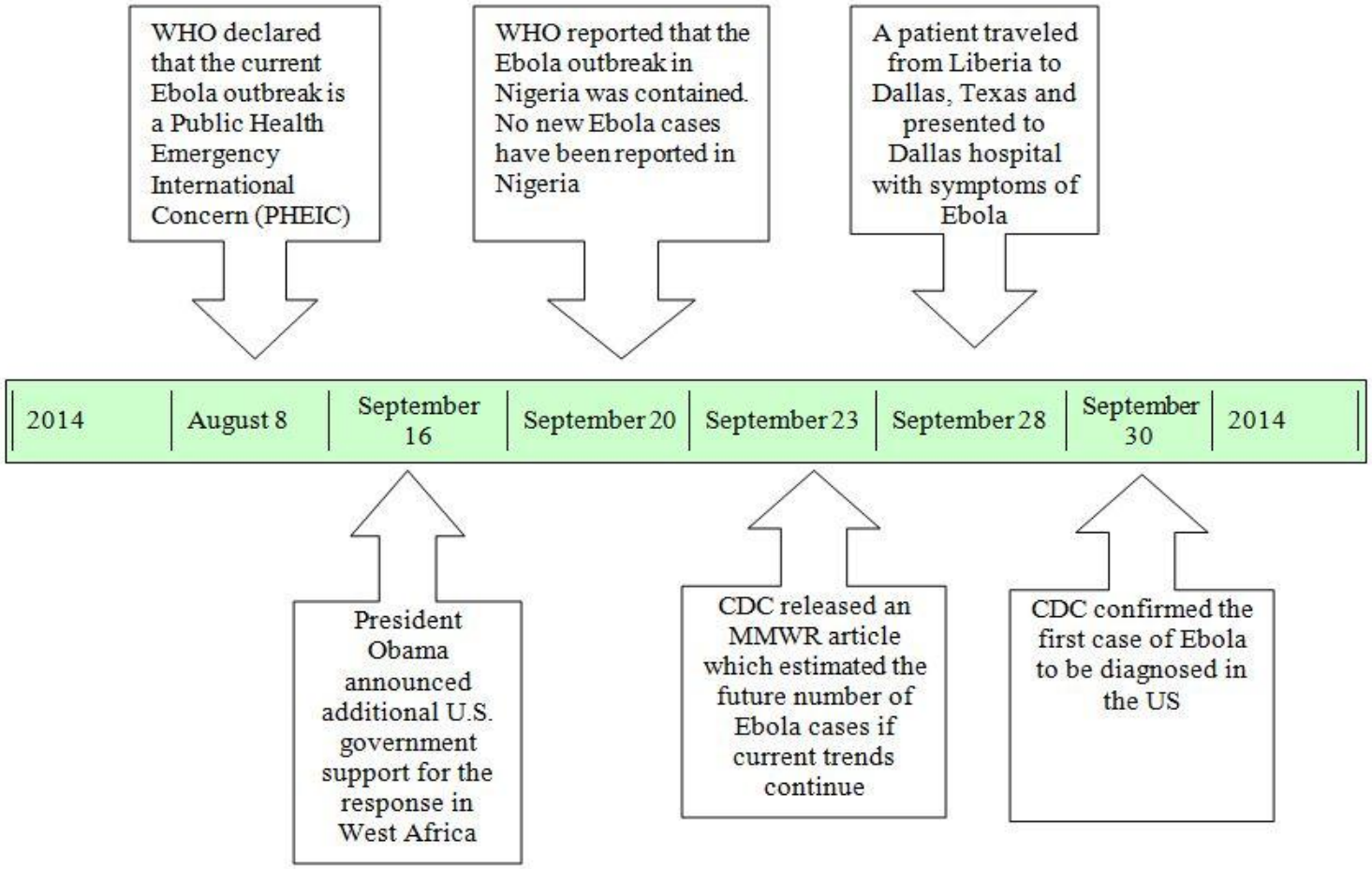
Total Case Count: 1

Total Case Deaths: 0

Laboratory Confirmed Cases: 1

Source:http://conexaoarabe.blogspot.com/2012/04/dakar-senegal.html

Ebola Timeline



Source: Key Messages-Ebola Virus Disease, West Africa 10/2/2014

Transmission

- Ebola is spread by direct contact with:
  - Objects contaminated with the virus (Needles or medical supplies)
  - Infected animals (Contact with blood or fluids)
  - Body fluids of a symptomatic person
    - Blood
    - Saliva
    - Sweat
    - Semen
    - Stool
    - Urine
    - Other bodily fluids

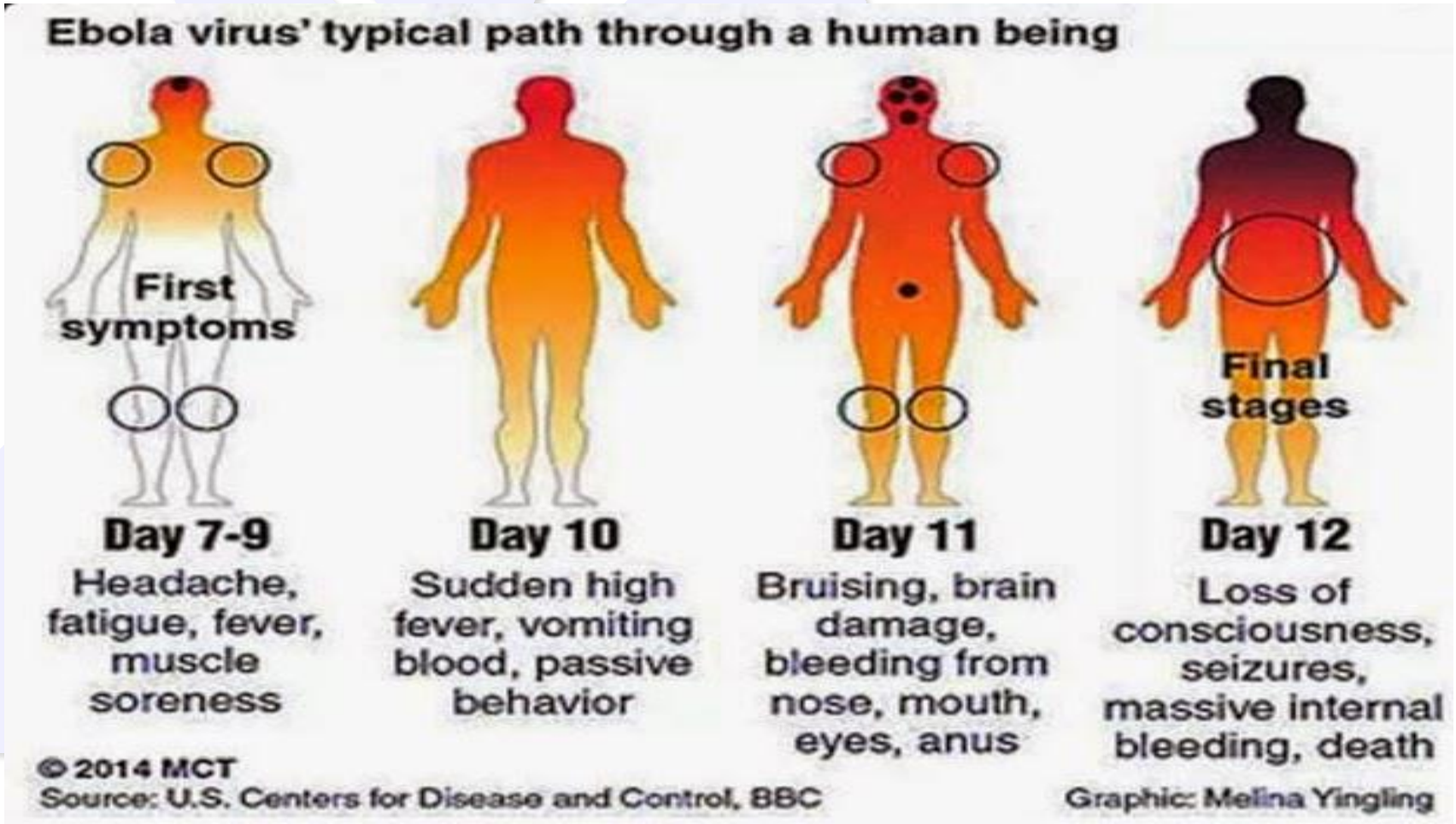
Transmission

- Ebola is **not** spread through the air, food, or by water
- There is no evidence that mosquitos or other insects can transmit Ebola

Symptoms

- Early symptoms include:
  - Fever (greater than 101.5◦F)
  - Weakness
  - Muscle pain
  - Headache
  - Sore throat
  - Followed by vomiting and diarrhea
- Advanced symptoms include:
  - Mental confusion
  - Bleeding inside and outside the body
  - Shock
  - Multi-organ failure

Ebola Symptoms Timeline



Incubation Period

- The incubation period is the time between exposure to the virus until the appearance of the first symptom
- Incubation period for Ebola is from 2 to 21 days

  (average is 8-10 days)
- Ebola virus can survive several hours on dried surfaces (doorknobs, countertops) to several days in body fluids at room temperature

Treatment

- Currently, there is no FDA approved medicine or vaccine for the treatment of Ebola
- Experimental vaccines and treatments for Ebola are under development, but they have not yet been fully tested for safety or effectiveness
- Standard treatment for Ebola is limited to supportive therapy
  - Providing intravenous fluids(IV)
  - Maintaining oxygen status and blood pressure

Prevention

- Avoid contact with blood and body fluids of an infected person
- Wash your hands regularly with soap and water or an alcohol-based hand sanitizer
- Do not handle items that have come in contact with an infected person's blood or body fluids(clothes, bedding, towels, and needles)
- Use protective clothing such as gloves, masks, gowns when caring for an infected person

Source: http://www.fromquarkstoquasars.com/10-interesting-and-important-facts-about-ebola/

Quarantine vs. Isolation

Quarantine (confinement): A non-symptomatic person who has potentially been exposed to the disease; confined for the duration of the incubation period which is 21 days for Ebola, with close monitoring.

Isolation: A person symptomatic with the disease kept isolated from others usually in a medical setting (hospital), and treated by persons wearing personal protective equipment.

Stigma Associated with Ebola

- Stigma involves stereotyping and discriminating against an identifiable group of people, a product, an animal, a place, or a nation.
- Stigma can occur when people associate an infectious disease, such as Ebola, with a population, even though not everyone in that population or from that region is specifically at risk for the disease.
- West Africans in the United States and elsewhere may face stigmatization during the current Ebola outbreak, because the outbreak is associated with a region of the world.

Actions to Minimize Stigma

- Ebola is caused by a virus, not a person.
- Speak out against negative behaviors, including negative social media statements about groups of people, or exclusion of people who pose no risk from regular activities.
- Provide social support for people who have returned from the region or are worried about friends or relatives in the affected region.

Notification

Contact the Louisiana Office of Public Health immediately to discuss a possible exposure, request laboratory testing, or report a suspected case

504-568-8313(Monday – Friday 8am-4:30pm) **or**

800-256-2748(weekdays after 4:30pm and weekends)

Ebola Virus Disease

Source: http://www.independent.co.uk/news/world/africa/west-accused-of-tardiness-over-ebola-outbreak-9644671.html

Current Healthcare Guidance

- Signs and Symptoms
- Transmission
- Risk of Exposure
- Prevention
- Diagnosis
- Treatment
- Infection Control
- Laboratory Testing
- Monitoring and Movement
- Transport
- Personal Protective Equipment
- Hospitals
- Environmental Cleaning
- EMS/911
- Human Remains

Role of DHH/LOPH

- Providing up-to-date Health alerts
- Distributing guidance
- Providing technical assistance to key stakeholders
- Educating community
- Coordinating emergency operations
- Providing technical assistance to suspected cases
- Coordinating of Ebola response

EVD Summary

Ebola virus disease

Ebola, which first appeared in outbreaks in Sudan and DR Congo in 1976, is a severe and often fatal disease with no known specific treatment or vaccine. It has since killed more than 1,500 people in parts of Africa.

SOURCE

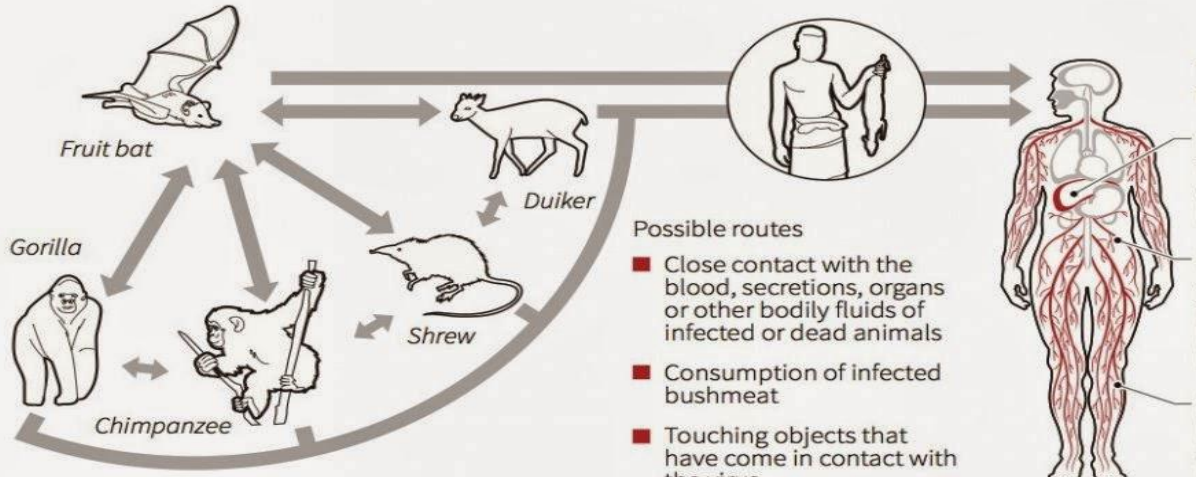
In Africa, particular species of fruit bats are considered possible natural hosts for Ebola virus.

TRANSMISSION

Infected bats are thought to transmit the disease to humans, or indirectly through other animals which are hunted for their meat.

DAMAGE

Incubation period is from two to 21 days. Death from the disease is often caused by multiple organ failure and tissue death.



Possible routes

- Close contact with the blood, secretions, organs or other bodily fluids of infected or dead animals
- Consumption of infected bushmeat
- Touching objects that have come in contact with the virus.

Targets in the body

- Hepatocytes, functional cells of the liver
- Endothelial cells, which form the linings of the blood vessels
- Phagocytes, blood cells that absorb foreign particles

Symptoms

- Fever
- Sore throat
- Severe headache
- Muscle pain
- Intense weakness
- Vomiting
- Diarrhea
- Impaired liver and kidney function
- Internal and external bleeding

Note: List of animals is not exhaustive.

Sources: Centers for Disease Control and Prevention; World Health Organisation

G.Cabrera, 28/03/2014

REUTERS

Source: CDC;WHO

Keeping Up With EVD

CDC

http://www.cdc.gov/vhf/ebola/index.html

DHH

http://www.dhh.state.la.us/index.cfm/page/1974