

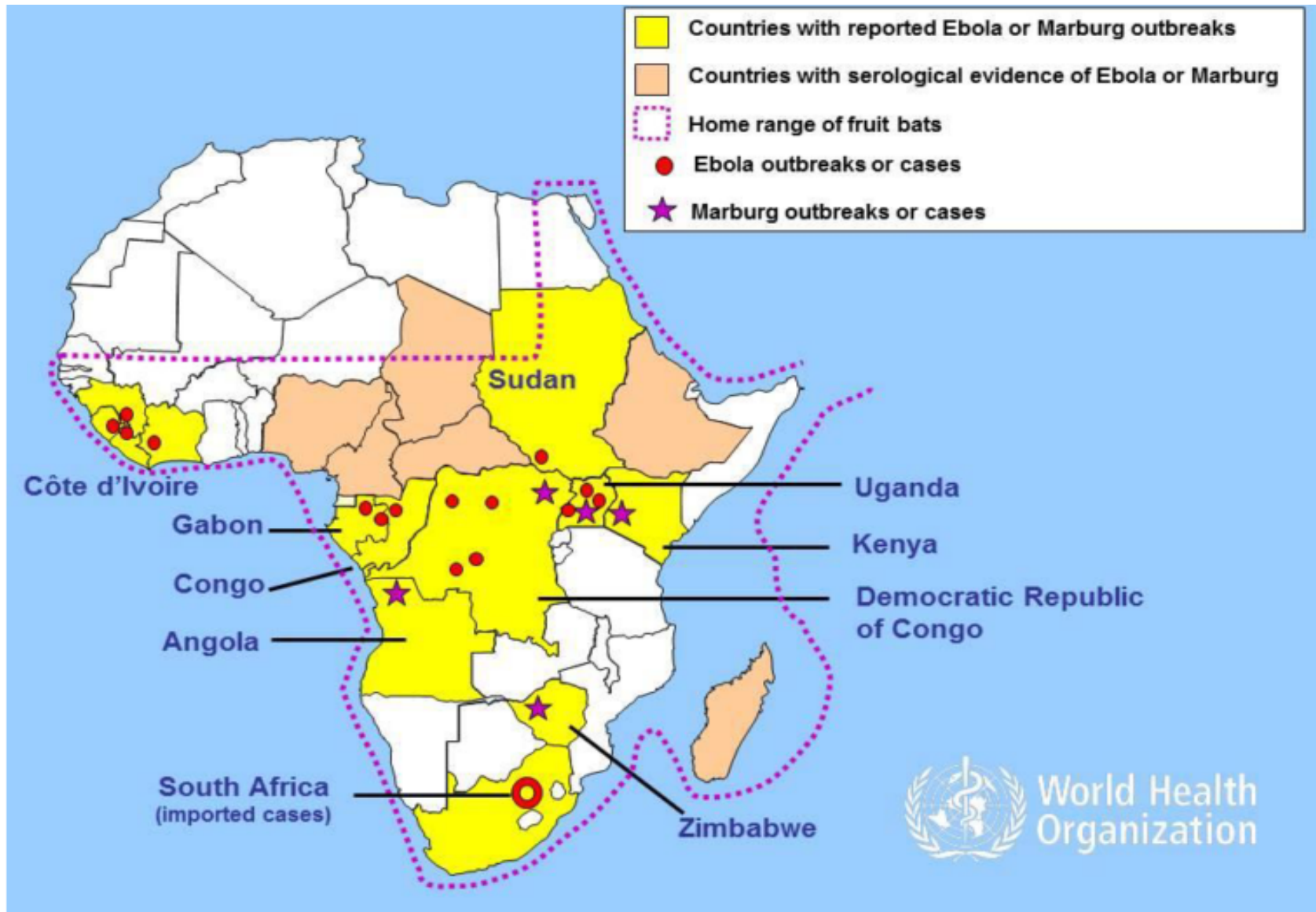
Ebola Virus Disease

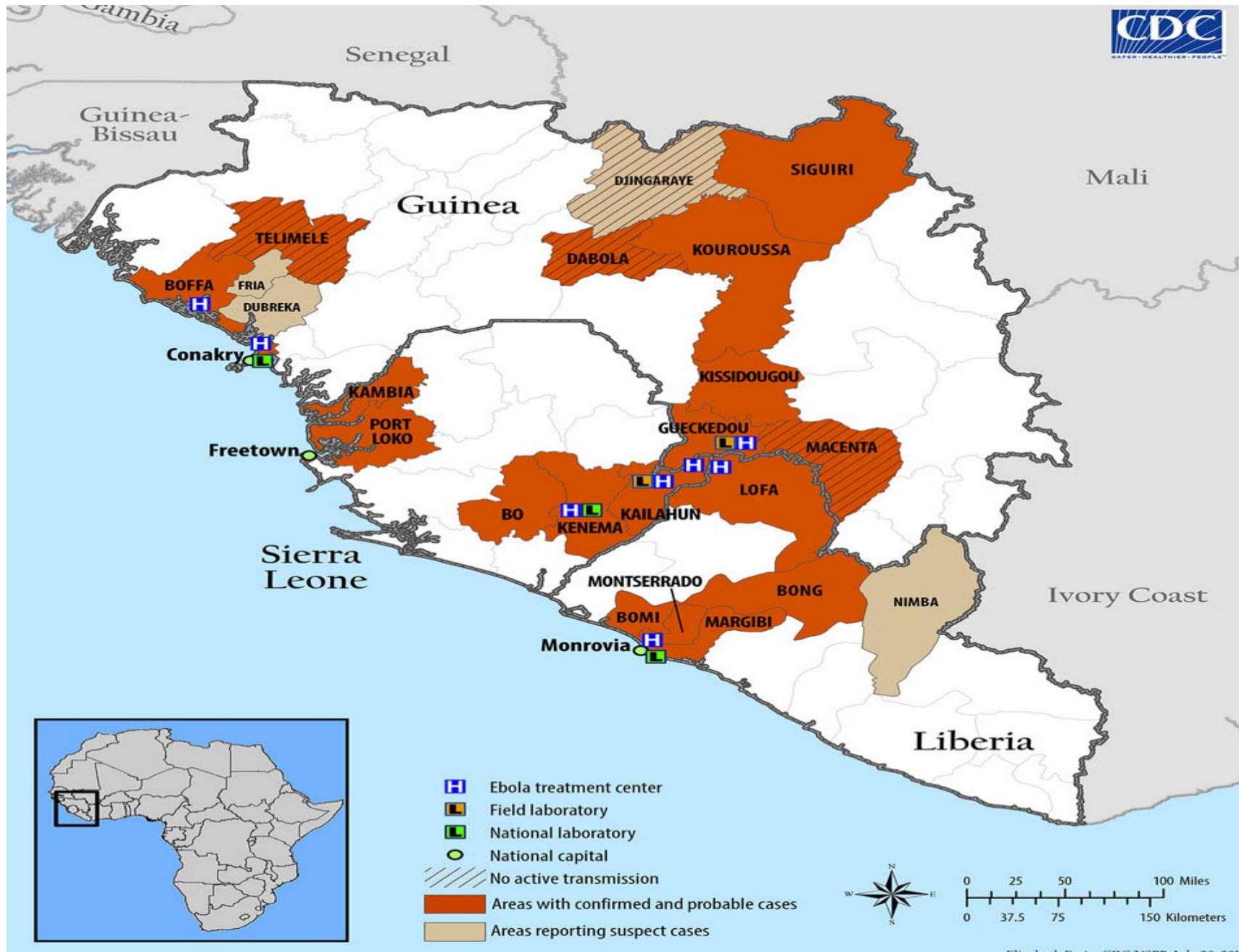
Ebola Virus Disease

- Ebola Virus Disease (formerly known as Ebola haemorrhagic fever) is a severe, often fatal illness, with a death rate of up to 90%.
- The illness affects humans and nonhuman primates (monkeys, gorillas and chimpanzees)
- The disease was first identified in 1976 in two simultaneous outbreaks, one in a village near the Ebola River in the Democratic Republic of Congo, and the other in a remote area of Sudan.

Ebola Virus Disease-Current Status

	Guinea	Liberia	Sierra Leone	Nigeria	Total
Cases	510	670	783	12	1975
Deaths	377	355	334	3	1069





The Infectious Agent

- A member of a family of RNA viruses called the Filoviridae
- Subtypes
 - Ebola-Zaire
 - Ebola-Sudan
 - Ebola-Ivory Coast
 - Ebola-Bundibugyo
 - Ebola-Reston.

Transmission

- Ebola virus occurs by handling of infected chimpanzees, gorillas and forest antelopes, both dead and alive.
- After the index case in an outbreak setting is infected, the virus can be transmitted in several ways.

Direct contact with blood and /or secretions of an infected person.

Through contact with objects, such as needles, those have been contaminated with infected secretions.

Burial ceremonies

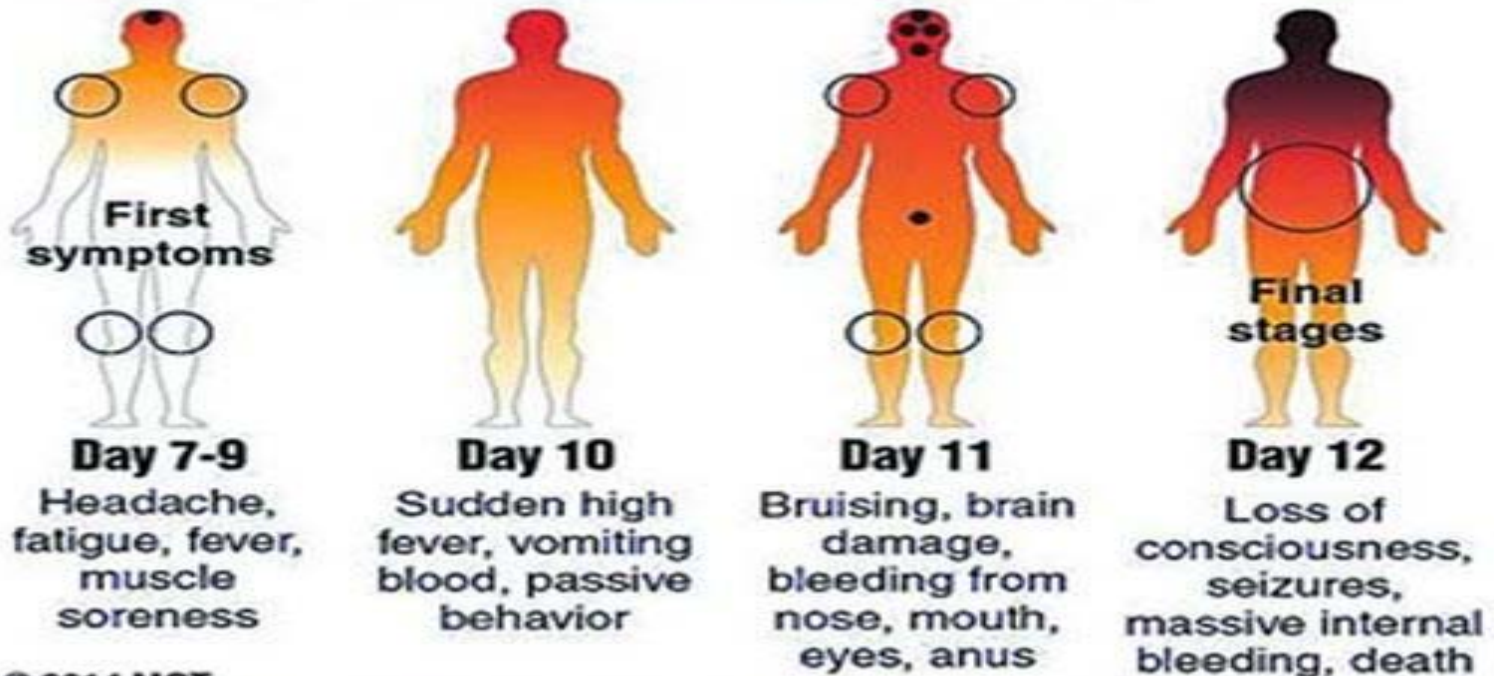
Nosocomial transmission

Incubation Period

- The incubation period for Ebola HF ranges from 2 to 21 days

Symptoms

Ebola virus' typical path through a human being



© 2014 MCT
Source: U.S. Centers for Disease and Control, BBC

Graphic: Melina Yingling



© CD-ROM ILLUSTRATED LECTURE NOTES ON TROPICAL MEDICINE









Clinical Diagnosis

- Diagnosing Ebola HF during the first few days is difficult because of nonspecific early symptoms, such as red eyes and skin rash. However, if a person has the constellations of symptoms described above with corroborating epidemiological evidence, Ebola virus infection can be suspected.

Laboratory Diagnosis

- Early
 - Serology [Antigen-capture enzyme-linked immunosorbent assay (ELISA) testing, IgM ELISA]
 - PCR
 - virus isolation
- Late
 - IgM and IgG antibodies.
- Post humus
 - Immuno-histochemistry testing,
 - Virus isolation
 - PCR

Laboratory findings

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

Treatment

- There is no specific treatment for Ebola HF. Patients receive supportive therapy. This consists of balancing the patient's fluids and electrolytes, blood pressure and treating them symptomatically and treating for any complicating infections.

Prevention



Prevention

- Suspected cases should be isolated from other patients
- Inform MoH, Epidemiology Unit and RDHS immediately.
- All hospital staff should be briefed on the nature of the disease and its mode of transmission.
- Strict barrier nursing techniques should be implemented.

Prevention...

- Particular emphasis should be placed on ensuring that invasive procedures such as placing of intravenous lines and handling of blood, secretions, catheters and suction devices are carried out under strict barrier nursing conditions.
- Hospital staff should have individual gowns, gloves, masks, closed resistant shoes (e.g. boots) and goggles etc. Non-disposable protective equipment must be reused only after they have been properly disinfected.
- Perform hand hygiene before and after direct patient care

Prevention...

- Infection may also spread through contact with soiled clothing or bed linen from a patient with Ebola.
- Protective clothing should be worn when handling soiled linen and soiled linen should be disinfected with an effective disinfectant (e.g. 1% Sodium Hypochlorite Solution) in addition to the normal cleaning procedures. Contaminated surfaces should be disinfected with an effective disinfectant (e.g. 1% Sodium Hypochlorite Solution).

Prevention...

- Contacts

Contact tracing and case finding interviews should be conducted outdoors whenever possible and a distance of more than one metre should be maintained between interviewer and interviewee. Protective equipment is not required if this distance is assured.

Protective equipment is not required when interviewing asymptomatic individuals

Prevention...

- Burial of the deceased

Post-mortem examination of HF patient remains should be limited to essential evaluations only

Remains should be wrapped in sealed, leak-proof material and should be buried promptly. Only trained personnel should handle the human remains.

Thank You