



Ebola virus response: issues pertinent to Wisconsin local health departments

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Ebola Virus Disease, Clinical Presentation

Incubation typically 8-10 days (range 2-21 days)

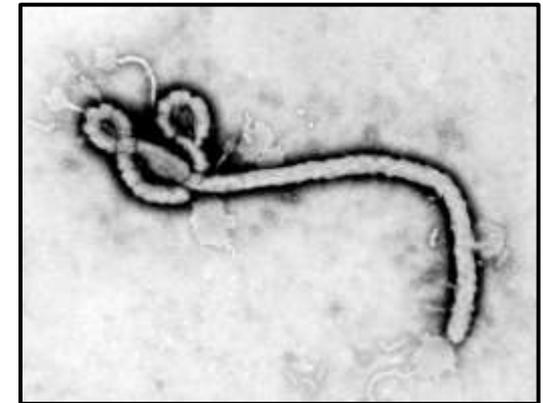
- Fever
- Headache
- Joint & muscle aches
- Weakness
- Diarrhea
- Vomiting
- Abdominal pain
- Lack of appetite
- Abnormal bleeding





Transmission of Ebola Virus

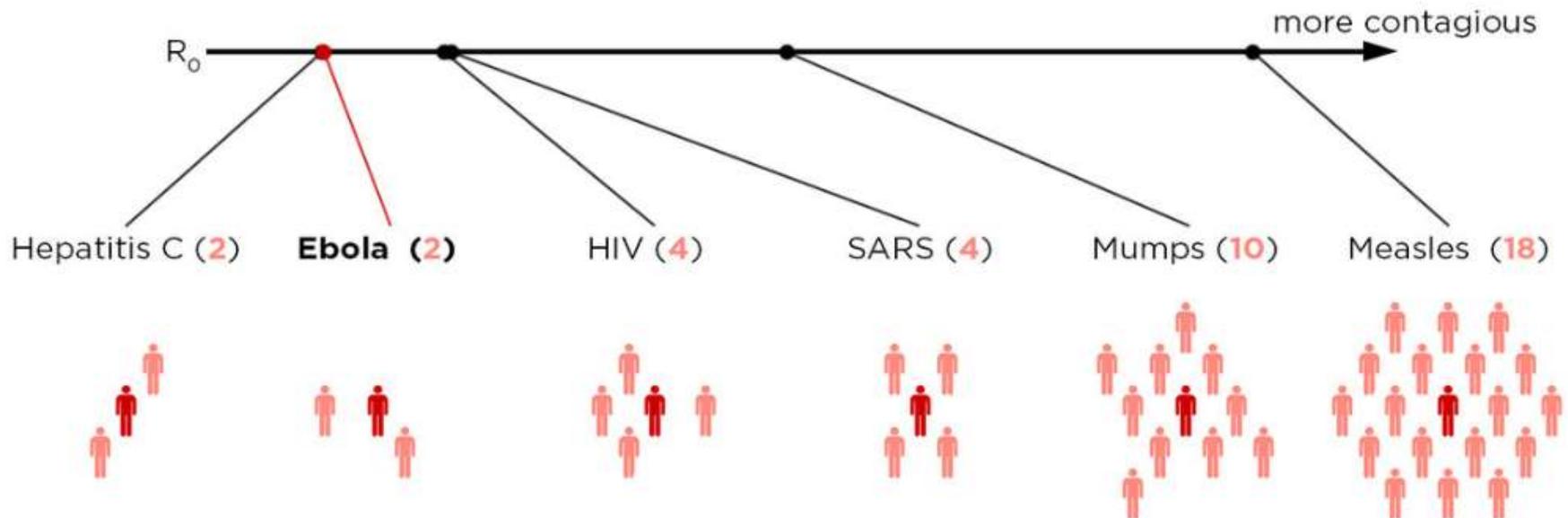
- Direct contact with the blood or secretions of an infected person who is ill (blood, urine, feces, saliva, sweat and other secretions)
- Exposure to objects (such as needles) that have been contaminated with infected secretions
- Funeral or burial rituals that require handling the body of someone who has died from Ebola virus disease
- Contact with infected wildlife – bats and primates
- NOT transmitted via air, food, or water
- R_0 for Ebola = 1.5 to 2



Persons who are not symptomatic are not contagious.



The number of **people** that **one sick person** will infect (on average) is called R_0 . Here are the maximum R_0 values for a few viruses.



Graphic acknowledgement – NY Times



Case Counts as of 10/8/14

Total suspected & confirmed: 8376

Total deaths: 4024

Guinea

Suspected & Confirmed Case Count: 1350

Suspected & Confirmed Case Deaths: 778

Liberia

Suspected & Confirmed Case Count: 4076

Suspected & Confirmed Case Deaths: 2316

Nigeria

Suspected & Confirmed Case Count: 20

Suspected & Confirmed Case Deaths: 8

Sierra Leone

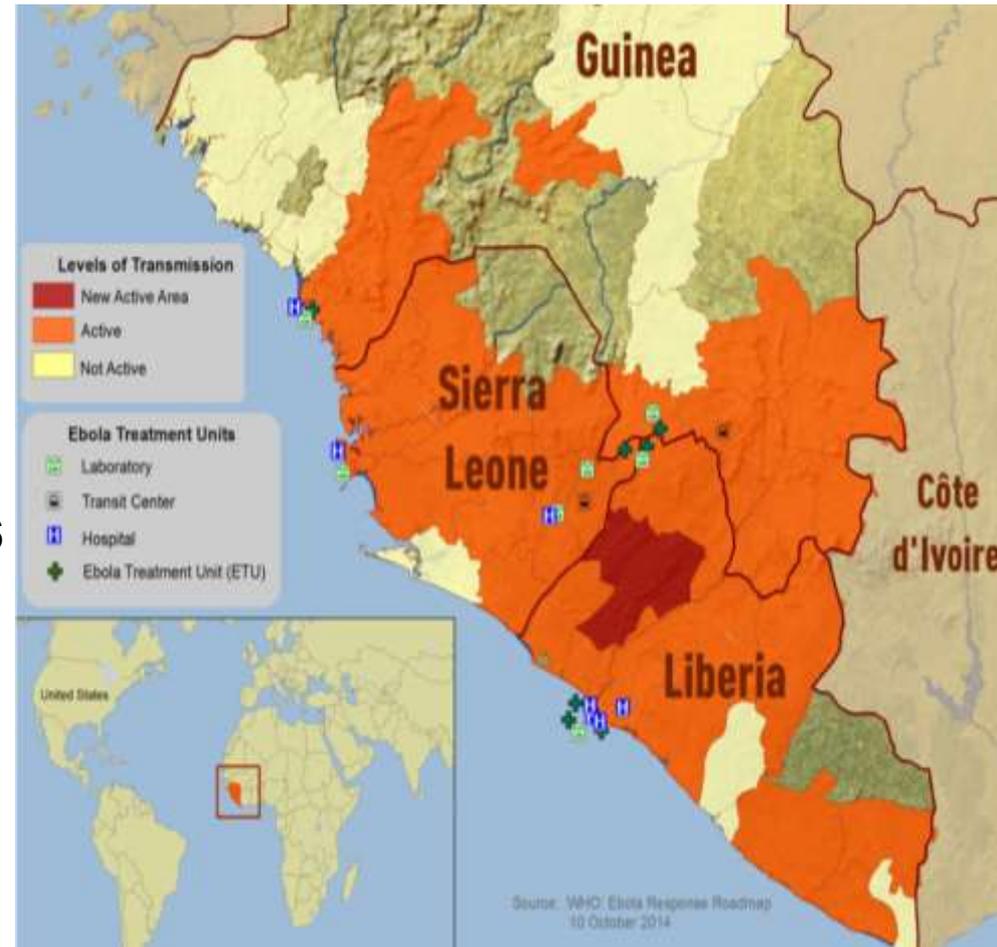
Suspected & Confirmed Case Count: 2950

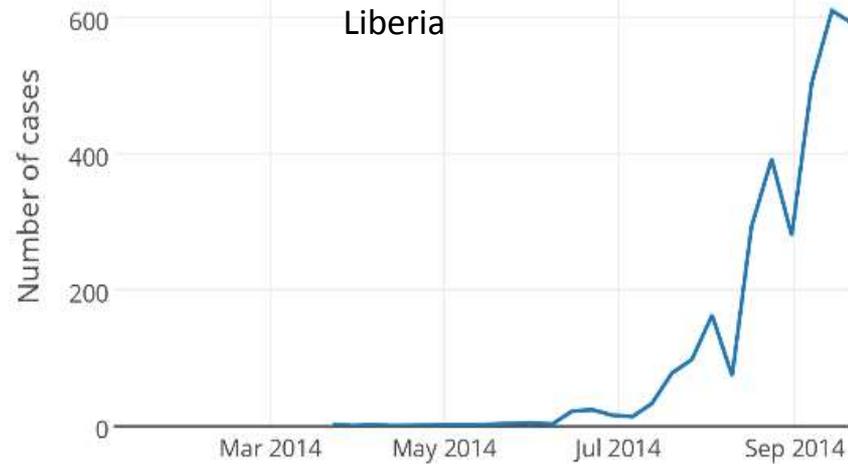
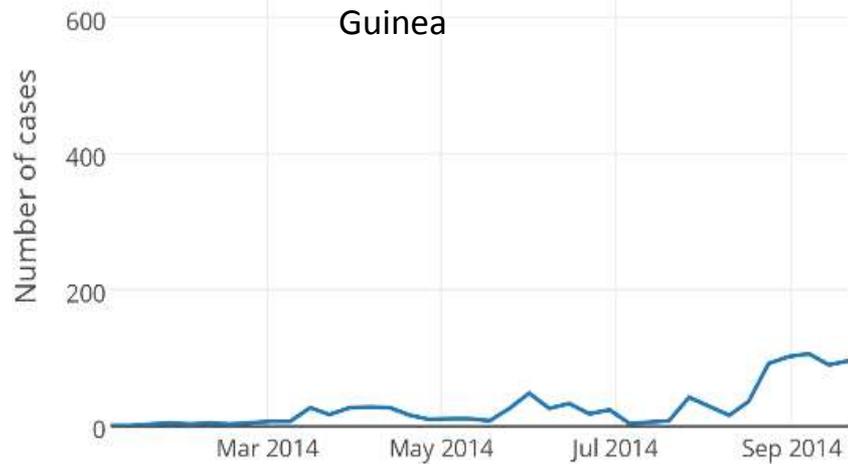
Suspected & Confirmed Case Deaths: 930

Senegal

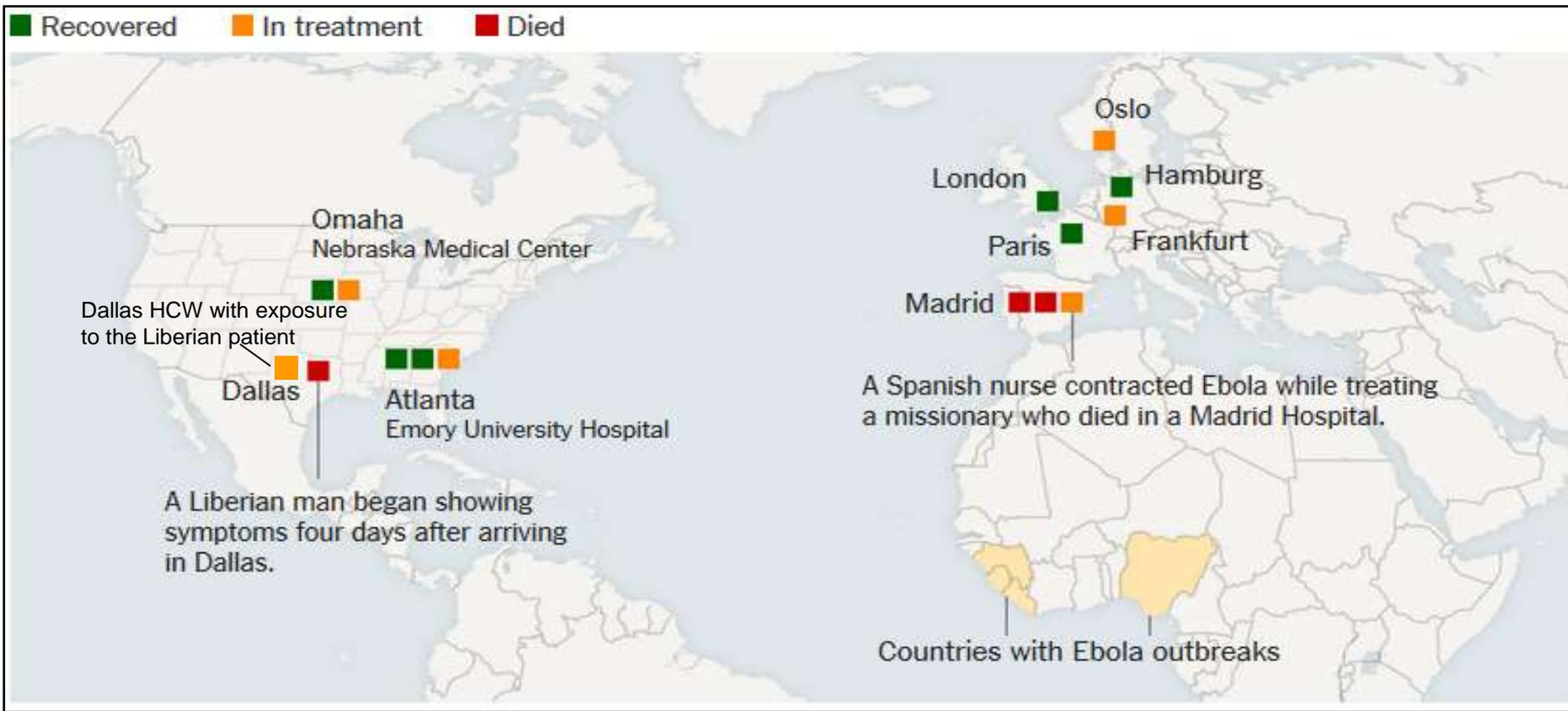
Suspected & Confirmed Case Count: 1

Suspected & Confirmed Case Deaths: 0





Cases of Ebola Outside of West Africa



Cases of Ebola Outside of West Africa (as of Oct. 8, 2014)

United States		
	Arrival date	
Aid worker	Aug. 2	Recovered
Missionary	Aug. 2	Recovered
Doctor	Sept. 5	Recovered
Doctor	Sept. 9	In treatment
Visitor	Sept. 30*	Died
NBC cameraman	Oct. 6	In treatment
France		
Nurse	Sept. 19	Recovered
Britain		
Nurse	Aug. 24	Recovered

Spain		
	Arrival date	
Missionary	Aug. 7	Died
Priest	Sept. 22	Died
Nurse	Oct. 6*	In treatment
Germany		
Doctor	Aug. 27	Recovered
Doctor	Oct. 3	In treatment
Norway		
Aid worker	Oct. 6	In treatment

*Date of Ebola diagnosis.

Modified from source graphics and table - NY Times



- Exit screenings performed for outbound passengers at airports in Guinea, Sierra Leone, Liberia, and Nigeria including a fever check and visual screening
- During the last 2 months since exit screening began, among 36,000 people screened, 77 were denied boarding a flight because of the health screening process. None of the 77 passengers were diagnosed with Ebola virus infection
- CDC has issued:
 - a level 3 travel warning - notice for U.S. citizens to avoid nonessential travel to Guinea, Liberia, & Sierra Leone.
 - a level 2 travel alert to advise enhanced precautions for people traveling to Nigeria.





Department of Health Services



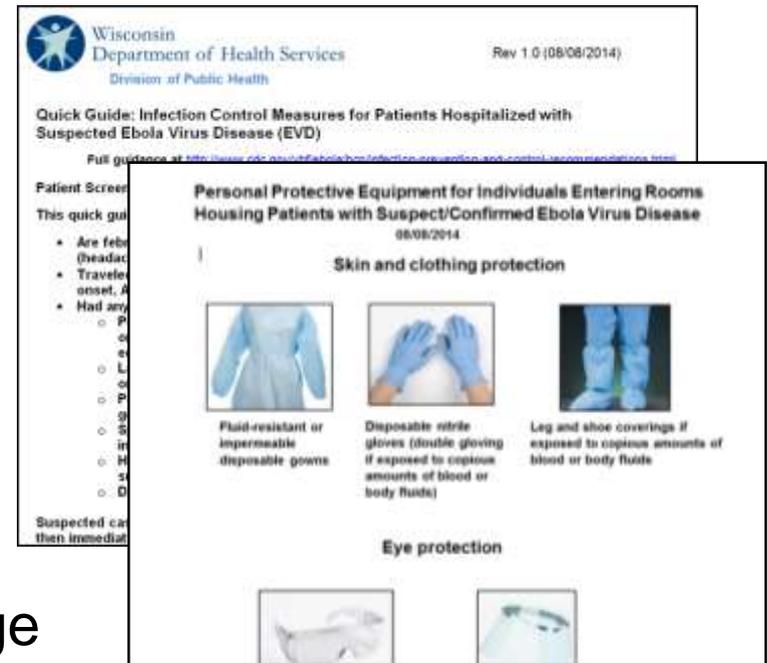
- CDC and its partners at five U.S. airports will perform enhanced screening of passengers traveling from the affected countries: New York's Kennedy Airport, New Jersey's Newark, Washington's Dulles, Chicago's O'Hare and Atlanta's Hartsfield-Jackson.
- These account for > 94% of travelers arriving in the United States from Guinea, Sierra Leone and Liberia
- Enhanced screening consists of visual and temperature checks and completion of a CDC questionnaire





Overview: What is Wisconsin DPH doing?

- **Recommendations to HCWs**
 - ✓ Clinical guidance
 - ✓ IC precautions
 - ✓ EMS recommendations
 - ✓ Coroners and MEs
- Recommendations and talking points to **LHDs**
- With assistance from LHDs and college health services, established **surveillance** for travelers who recently returned to WI from West Africa
- Respond to media and other inquiries





Wisconsin DPH Surveillance Activities: Monitoring of recent travelers arriving from endemic areas

- Travelers' health status monitored for 21 days and possible movement restrictions may be imposed based on level of exposure risk in West Africa
 - Travelers identified and reported by various mechanisms: employers, college health services, LHDs, health care workers, self-report
 - **The true percentage of recent travelers to West Africa being identified is unknown**
 - Once identified, travelers are interviewed to determine dates and location of travel, risk factors and health status
 - LHDs, college health services perform active surveillance
- 41 travelers have been monitored and have passed 21 days
- 1 additional traveler is still being monitored as of 10/13/14
- None have had high risk exposures; none had movement restrictions





Wisconsin DPH Surveillance Activities: Preparing for cases

Interim internal DPH guidelines for management of asymptomatic travelers from endemic countries are based on nature of exposure

- High risk exposures

- Percutaneous or mucous membrane exposure to body fluids of Ebola patient
- Direct care of an Ebola patient or exposure to body fluids without appropriate PPE
- Laboratorian processing body fluids of confirmed Ebola patients without appropriate PPE or standard biosafety precautions
- Participation in funeral rites which include exposure to remains without appropriate PPE
- Household member of an Ebola patient
- Providing patient care in healthcare facilities in which Ebola patients were treated (regardless of whether PPE was used)
- Contact with bats or non-human primates

- Public health actions: Restriction from work/school; restriction from public gatherings (e.g. church, theaters, shopping malls) except to obtain essential items like food and medicine; local public health to monitor for fever and other symptoms twice daily for 21 days after last exposure; travel by public conveyance (bus, taxi, airplane) not permitted



Wisconsin DPH Surveillance Activities *Preparing for cases*

Interim internal DPH guidelines for management of asymptomatic travelers from endemic countries are based on nature of exposure (continued)

- Low risk exposures
 - Defined as casual contact to a patient with EVD without high-risk exposure
 - Public health actions/restrictions on a case by case basis
- No known exposures except for travel to endemic countries
 - Self-monitoring to be reported by traveler to local public health for 21 days after leaving West Africa



Wisconsin DPH Surveillance Activities (continued): Preparing for cases – reporting and contact tracing

- All DPH guidance and recommendations remind clinicians and LHD staff to notify us immediately re. any suspected case
 - Both office (608/267-9003) and after-hours #s (608/258-0099) listed
 - Clarifies that DPH must approve of specimen testing for Ebola virus prior to submission
- Module being added to the Wisconsin Electronic Disease Surveillance System (WEDSS) database to allow for epi and clinical data entry
- WEDSS will have ability to track contact tracing efforts. Case contacts must be promptly identified, evaluated, and monitored, and the need for quarantine of close contacts must be considered



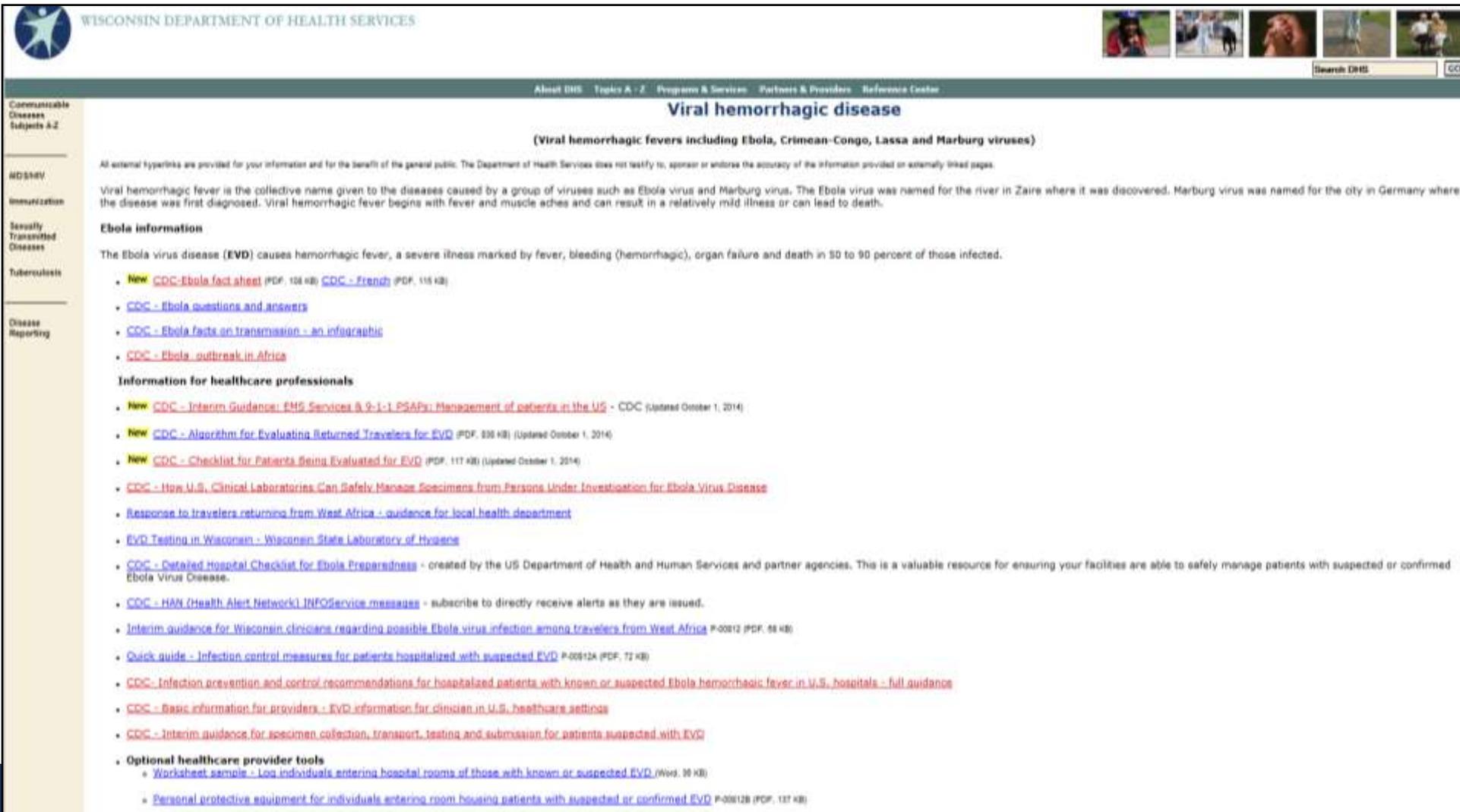
Wisconsin DPH - Preparedness and Information Sharing

- Coordination with numerous partners: LHDs, WSLH, WEM, WHA, DMA and others
- Ebola evaluation, IC precautions and testing algorithm shared with HC facilities
- Specimen handling and submission guidance shared with HC facilities.
- Note: all guidance distributed to HC facilities is shared with LHDs
- Webcasts, teleconferences
- Developed template table top exercise
- Coordinating with WEM to develop table top exercise for Executive Leadership (Governor, Adjutant General, etc.)
- Activated incident command structure
- Identified state spokespersons for media inquiries
- Daily briefing for Governor's Office

Resources

DHS Website – primary Ebola page

www.dhs.wisconsin.gov/communicable/diseasepages/ViralHemorrhagicFever.htm (or select “E” on the A to Z topic list)



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Viral hemorrhagic disease

(Viral hemorrhagic fevers including Ebola, Crimean-Congo, Lassa and Marburg viruses)

All external hyperlinks are provided for your information and for the benefit of the general public. The Department of Health Services does not testify to, sponsor or endorse the accuracy of the information provided on externally linked pages.

Viral hemorrhagic fever is the collective name given to the diseases caused by a group of viruses such as Ebola virus and Marburg virus. The Ebola virus was named for the river in Zaire where it was discovered. Marburg virus was named for the city in Germany where the disease was first diagnosed. Viral hemorrhagic fever begins with fever and muscle aches and can result in a relatively mild illness or can lead to death.

Ebola information

The Ebola virus disease (EVD) causes hemorrhagic fever, a severe illness marked by fever, bleeding (hemorrhagic), organ failure and death in 50 to 90 percent of those infected.

- [New CDC-Ebola fact sheet](#) (PDF, 108 KB) [CDC - French](#) (PDF, 115 KB)
- [CDC - Ebola questions and answers](#)
- [CDC - Ebola facts on transmission - an infographic](#)
- [CDC - Ebola outbreak in Africa](#)

Information for healthcare professionals

- [New CDC - Interim Guidance: EMS Services & 9-1-1 PSAPs: Management of patients in the US](#) - CDC (updated October 1, 2014)
- [New CDC - Algorithm for Evaluating Returned Travelers for EVD](#) (PDF, 836 KB) (Updated October 1, 2014)
- [New CDC - Checklist for Patients Being Evaluated for EVD](#) (PDF, 117 KB) (Updated October 1, 2014)
- [CDC - How U.S. Clinical Laboratories Can Safely Manage Specimens from Persons Under Investigation for Ebola Virus Disease](#)
- [Response to travelers returning from West Africa - guidance for local health department](#)
- [EVD Testing in Wisconsin - Wisconsin State Laboratory of Hygiene](#)
- [CDC - Detailed Hospital Checklist for Ebola Preparedness](#) - created by the US Department of Health and Human Services and partner agencies. This is a valuable resource for ensuring your facilities are able to safely manage patients with suspected or confirmed Ebola Virus Disease.
- [CDC - HAN \(Health Alert Network\) INFOservice messages](#) - subscribe to directly receive alerts as they are issued.
- [Interim guidance for Wisconsin clinicians regarding possible Ebola virus infection among travelers from West Africa](#) P-00812 (PDF, 68 KB)
- [Quick guide - Infection control measures for patients hospitalized with suspected EVD](#) P-00812A (PDF, 72 KB)
- [CDC - Infection prevention and control recommendations for hospitalized patients with known or suspected Ebola hemorrhagic fever in U.S. hospitals - full guidance](#)
- [CDC - Basic information for providers - EVD information for clinician in U.S. healthcare settings](#)
- [CDC - Interim guidance for specimen collection, transport, testing and submission for patients suspected with EVD](#)

Optional healthcare provider tools

- [Worksheet sample - Log individuals entering hospital rooms of those with known or suspected EVD](#) (Word, 38 KB)
- [Personal protective equipment for individuals entering room housing patients with suspected or confirmed EVD](#) P-00812B (PDF, 137 KB)

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Resources

DHS

- Primary Ebola Page: www.dhs.wisconsin.gov/communicable/DiseasePages/ViralHemorrhagicFevers.htm
(or select "E" on the A to Z topic list)
- Interim Guidance for Wisconsin Clinicians: www.dhs.wisconsin.gov/publications/P0/P00812.pdf
- Guidance for LHDs regarding travelers returning from West Africa:
www.dhs.wisconsin.gov/forms/F0/F01340.docx
- Infection Control Quick Guide: www.dhs.wisconsin.gov/publications/P0/P00812a.pdf

CDC

- Guidance for U.S. Clinicians
www.cdc.gov/vhf/ebola/hcp/clinician-information-us-healthcare-settings.html
- Specimen Collection and Submission:
www.cdc.gov/vhf/ebola/hcp/interim-guidance-specimen-collection-submission-patients-suspected-infection-ebola.html
- Full Infection Control Guidance:
www.cdc.gov/vhf/ebola/hcp/infection-prevention-and-control-recommendations.html
- Status of West African Outbreak: www.cdc.gov/vhf/ebola/outbreaks/guinea/index.html
- Guidance for EMS Systems:
www.cdc.gov/vhf/ebola/hcp/interim-guidance-emergency-medical-services-systems-911-public-safety-answering-points-management-patients-known-suspected-united-states.html



Wisconsin DPH Activities: Plans and Pending Issues

- Development of waste disposal guidance
- Contingency for alternate housing needs
- Outreach to correctional facilities
- Working with legal counsel, development of quarantine guidance/orders that include defining roles, DPH and LHD authority, and legal templates
252.06(1) The department or the local health officer acting on behalf of the department may require isolation of a patient or of an individual under [s. 252.041 \(1\) \(b\)](#), quarantine of contacts, concurrent and terminal disinfection, or modified forms of these procedures as may be necessary and as are determined by the department by rule.
- Better define conditions that may trigger quarantine and movement restrictions for case contacts. Consider: need to obtain food & medicine, who will monitor compliance, the nature of the risky contact
- Develop tools for identifying and interviewing contacts



Ongoing and Future Activities for Wisconsin Local Health Departments

- Keep abreast of state and federal guidance
- Monitoring health of travelers recently returned from endemic countries
- Will be asked to identify correctional facilities within their jurisdictions and pass along recommendations (in preparation) from DPH
- In the event of a case, may be requested to assist with identifying case contacts, issuance of quarantines and monitoring compliance (may need to involve corporate counsel)
- Respond to inquiries from public and media, referring to DHS as necessary (DHS Media Line: 608/266-1683)
- Communication with healthcare coalition partners (hospitals/clinics, EMS, law enforcement, city/ county officials)



Final Thoughts

- Prompt reporting of suspect cases is crucial and reporting is mandated: “Any illness caused by an agent that is foreign, exotic or unusual to Wisconsin, and that has public health implications” (DHS chapter 145)
- Talking points sent from DPH to LHDs on 8/29 with basic information are still current with information suitable for public inquiries
- We want to know what you would like from us
- DPH mailbox set up for inquiries: dhsresponse@wi.gov