

Virginia's Preparedness for Ebola Virus Disease (EVD)

Marissa J. Levine, MD MPH FAAFP
State Health Commissioner
October 2014

Ebola: The Basics

- Ebola virus is a type of viral hemorrhagic fever.
- Virus spread person to person mainly by direct contact with bodily fluids (blood, feces, vomit), less commonly by contaminated items (needles).
- Ebola is a severe and often fatal disease; begins with acute fever, progressing to multi-organ involvement.
- Infected person is contagious only once symptoms develop (2 to 21 days after exposure).
- Persons caring for infected persons (healthcare workers, household members) are at highest risk of disease.

Ebola in Africa and the United States

- Mar 2014: Outbreak began in Guinea
- Aug 8: WHO declared international public health emergency
- Sep 30: First case diagnosed in US (Texas); traveler left Liberia Sep 19, arrived US Sep 20, and became symptomatic Sep 24
- Oct 10: Outbreaks in Guinea, Liberia, Sierra Leone, with limited spread in Nigeria and sporadic detection in 3 other countries, account for 8,400 total reported cases and 4,033 deaths



Image source: CDC (October 10, 2014)

EVD Control Measures: Based on Established Core Public Health Actions

- Surveillance
 - Disease Reporting
 - Communication
- Investigation
- Implementation of Control Measures
- Risk Communication

Virginia Reportable Disease List

Reporting of the following diseases is required by state law (Sections 32.1-36 and 32.1-37 of the *Code of Virginia* and 12 VAC 5-90-80 and 12 VAC 5-90-90 of the Board of Health *Regulations for Disease Reporting and Control* - <http://www.vdh.virginia.gov/epidemiology/regulations.htm>). Report all conditions when suspected or confirmed to your local health department within three days, except those listed in **RED**, which must be reported immediately by the most rapid means available.

<ul style="list-style-type: none"> Acquired immunodeficiency syndrome (AIDS) Amebiasis I ANTHRAX Arboviral infection (e.g., dengue, EEE, LAC, SLE, WNV) B BOTULISM I BRUCELLOSIS Campylobacteriosis Chancroid Chickenpox (Varicella) <i>Chlamydia trachomatis</i> infection I CHOLERA Creutzfeldt-Jakob disease if <55 years of age Cryptosporidiosis Cyclosporiasis I DIPHTHERIA DISEASE CAUSED BY AN AGENT THAT MAY HAVE BEEN USED AS A WEAPON Ehrlichiosis/Anaplasmosis A I <i>Escherichia coli</i> infection, Shiga toxin-producing Giardiasis Gonorrhea Granuloma inguinale I HAEMOPHILUS INFLUENZAE INFECTION, INVASIVE Hantavirus pulmonary syndrome Hemolytic uremic syndrome (HUS) HEPATITIS A Hepatitis B (acute and chronic) Hepatitis C (acute and chronic) Hepatitis, other acute viral Human immunodeficiency virus (HIV) infection # Influenza <ul style="list-style-type: none"> I (report INFLUENZA A, NOVEL VIRUS immediately) INFLUENZA-ASSOCIATED DEATHS IN CHILDREN <18 YEARS OF AGE Lead, elevated blood levels Legionellosis Leprosy (Hansen disease) I LISTERIOSIS Lyme disease Lymphogranuloma venereum Malaria MEASLES (RUBEOLA) I MENINGOCOCCAL DISEASE 	<ul style="list-style-type: none"> MONKEYPOX Mumps MYCOBACTERIAL DISEASES (INCLUDING AFB), (IDENTIFICATION OF ORGANISM) AND DRUG SUSCEPTIBILITY Ophthalmia neonatorum OUTBREAKS, ALL (including but not limited to foodborne, healthcare-associated, occupational, toxic substance-related, and waterborne) I PERTUSSIS I PLAGUE I POLIOVIRUS INFECTION, INCLUDING POLIOMYELITIS PSITTACOSIS I Q FEVER RABIES, HUMAN AND ANIMAL Rabies treatment, post-exposure RUBELLA, INCLUDING CONGENITAL RUBELLA SYNDROME I Salmonellosis SEVERE ACUTE RESPIRATORY SYNDROME (SARS) I Shigellosis SMALLPOX (VARIOLA) Spotted fever rickettsiosis <i>Staphylococcus aureus</i> infection, invasive methicillin-resistant (MRSA) and I vancomycin-intermediate or vancomycin-resistant I Streptococcal disease, Group A, invasive or toxic shock <i>Streptococcus pneumoniae</i> infection, invasive, in children <5 years of age Syphilis (report PRIMARY and SECONDARY immediately) Tetanus Toxic substance-related illness Trichinosis (Trichinellosis) I TUBERCULOSIS (TB), ACTIVE DISEASE Tuberculosis infection in children <4 years of age TULAREMIA I TYPHOID/PARATYPHOID FEVER UNUSUAL OCCURRENCE OF DISEASE OF PUBLIC HEALTH CONCERN VACCINIA, DISEASE OR ADVERSE EVENT VIBRIO INFECTION VIRAL HEMORRHAGIC FEVER YELLOW FEVER Yersiniosis
--	---

B These conditions are reportable by directors of laboratories. In addition, these and all other conditions except mycobacterial disease (other than TB) and invasive MRSA infection are reportable by physicians and directors of medical care facilities. Reports may be by computer-generated printout, [Epi-1 form](#), CDC surveillance form, or upon agreement with VDH, by means of secure electronic transmission.

I A laboratory identifying evidence of these conditions shall notify the local health department of the positive culture and submit the initial isolate to the Virginia Division of Consolidated Laboratory Services (DCLS) or, for TB, to DCLS or other lab designated by the Board.

A Laboratories that use a Shiga toxin EIA methodology but do not perform simultaneous culture for Shiga toxin-producing *E. coli* should forward all positive stool specimens or positive enrichment broths to DCLS for confirmation and further characterization.

Physicians and directors of medical care facilities should report influenza by number of cases only (report total number per week and by type of influenza, if known); however, individual cases of influenza A novel virus must be reported immediately by rapid means.

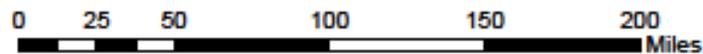
Note: 1. Some healthcare-associated infections are reportable. Contact the VDH Healthcare-Associated Infections Program at (804) 864-8141 or see 12 VAC 5-90-370 for more information.

2. Cancers are also reportable. Contact the VDH Virginia Cancer Registry at (804) 864-7866 or see 12 VAC 5-90-150-180 for more information.

Virginia Department of Health

Emergency Preparedness and Response Regions

Emergency Preparedness
& Response Programs



Prepared by Division of Disease Prevention - Health & Research Informatics, 2008

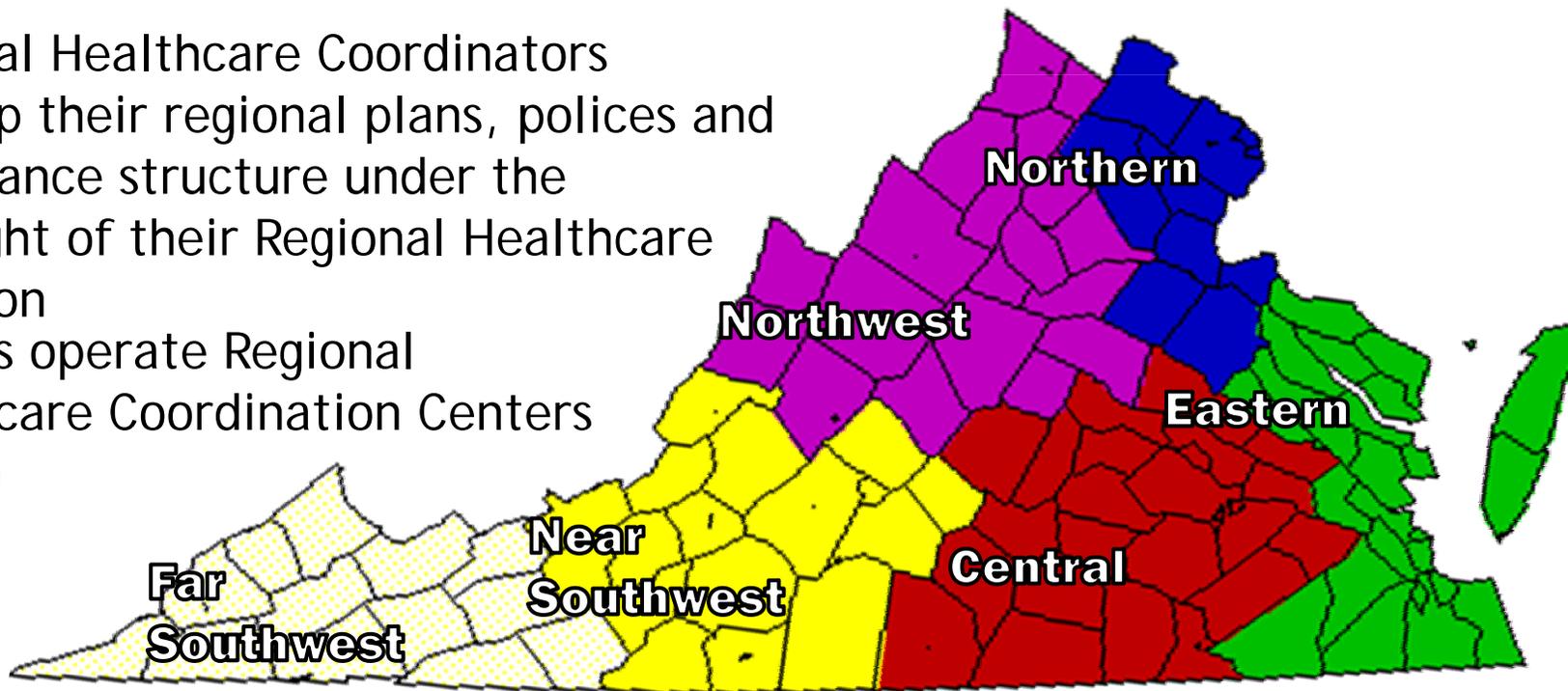
VDH VIRGINIA
DEPARTMENT
OF HEALTH
Protecting You and Your Environment
www.vdh.virginia.gov

Statewide Hospital Preparedness Program (HPP)

VDH provides the framework for statewide administration of HPP

VDH works through the Virginia Hospital and Healthcare Association (VHHA) to coordinate governance and initiatives to 6 Healthcare Coalitions with 300+ participating facilities

- Regional Healthcare Coordinators develop their regional plans, polices and governance structure under the oversight of their Regional Healthcare Coalition
- Regions operate Regional Healthcare Coordination Centers (RHCC)



Three EVD Scenarios to Consider in Virginia

- I. Individual arrives at Virginia airport (Dulles most likely) with symptoms consistent with EVD (or likely exposure) and travel history to affected areas

- II. Individual presents to Virginia hospital with symptoms consistent with EVD and a travel history to the affected areas

- III. Individual with EVD identified in another state but had contact with Virginians

Scenario I. Person Arrives at Airport

- Active planning over many years with CDC's Division of Global Migration and Quarantine (DGMQ) for arrival of person with communicable condition
- Airlines trained to notify DGMQ of ill passengers. Captains have a legal responsibility.
- Entry screening will begin at Dulles 10/16/14.
 - Protocols under review
 - Includes communication with local and state public health, EMS and hospitals

Dulles Scenario I, continued:

Four possibilities:

1. Person has fever and EVD exposure
 - a) Will be transported by Airport EMS to accepting hospital
2. Person has no history of EVD exposure but is febrile/symptomatic
 - a) Follow up will need to be arranged based on illness
3. Person has history of EVD exposure but no symptoms
 - a) CDC would provide a conditional release. State may issue quarantine order. NY is considering
4. No exposure history or symptoms
 - a) Released with information sheet

Scenario II. Person Presents to Virginia Hospital

- Hospital staff perform assessment and implement isolation
- Hospital staff report to and consult with local health department and follow the steps for testing approval within VDH and with Virginia's State Lab, DCLS
- DCLS would test patient samples and forward portions to CDC for additional testing

If Patient Tests Positive

- Case patient remains in isolation at hospital.
- VDH initiates investigation
 - includes contact tracing - something we do very regularly.
- On a daily basis, VDH staff would assess contact's compliance with monitoring.
- If activities of well contacts need to be restricted, the VDH district health director would make that recommendation to the Commissioner.
- Commissioner would need to decide on quarantine order issuance

Quarantine Orders

- Legal authority (§ 32.1-43) exists for State Health Commissioner to issue orders of quarantine for disease threats
 - If non-compliant with voluntary agreement, or
 - If such order is necessary to control the disease
- Letters for EVD-related voluntary quarantine and orders for quarantine scenarios have been drafted

Quarantine (continued)

- For persons under order:
 - law enforcement help with delivery
 - least restrictive setting (home quarantine wherever possible)
 - daily monitoring for compliance
 - assurance that essential needs are met
 - will require support and leadership from local jurisdiction, particularly local DSS.
- Ex parte court review required and person has right to appeal the order

Scenario III. If Virginia resident is exposed to a case in another state

- Once VDH receives such notification, efforts will begin immediately to locate the exposed person(s)
- Once located, the person will be asked about exposures and any symptoms of illness
 - if well and exposure confirmed,
 - VDH will actively monitor symptoms daily
 - determine need for Order of Quarantine
 - if ill, VDH will take actions as previously described
 - isolation and testing of patient, assurance of protection of healthcare workers, identification of contacts, interviewing and monitoring health of contacts, providing recommendations for disease control

Additional Issues Addressed to Date

- Laboratory testing and transportation of samples
- Personal protective equipment stockpile
- Emergency medical services' transportation of patients
- Medical waste disposition
- Fatality management
- Healthcare coalition preparedness and response

Issues in Process

- Orders of Quarantine for well persons with high likelihood of exposure
 - Logistical and Financial support issues also
- Hazmat response for environs of EVD patients
 - Awaiting CDC and EPA determination
- Virginia public call center
 - Working with 211

Summary

Ebola is a very serious disease that has not been diagnosed in humans in Virginia before

VDH and our health care partners are as ready to respond as we can be today

- Our staff are trained and capable in the necessary core public health services
- We will continue learning and sharing as new information is obtained

We will assure effective communication within our organization, to Virginia leadership, with our partners across the state and in other states and with the public