

Ebola Preparedness and Response



SOUTH DAKOTA
DEPARTMENT OF HEALTH

Healthcare Provider Webinar

October 29, 2014

1-800-592-1861

1-605-773-3737

Agenda

Welcome and DOH Response Overview.....	Doneen Hollingsworth, Secretary of Health
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Does this person have Ebola?.....	Colleen Winter, R.N. Division Director SDDOH
What to do if you suspect Ebola.....	Colleen Winter, R.N. Division Director SDDOH
EMS Response.....	Kristi Turman, Emergency Mgmt. Director
Sample Collection and Submission.....	Danette Hoffman, Public Health Laboratory
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South Dakota Containment Authority.....	Tom Martinec, Deputy Secretary
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Closing Comments / Further Guidance.....	Doneen Hollingsworth, Secretary of Health

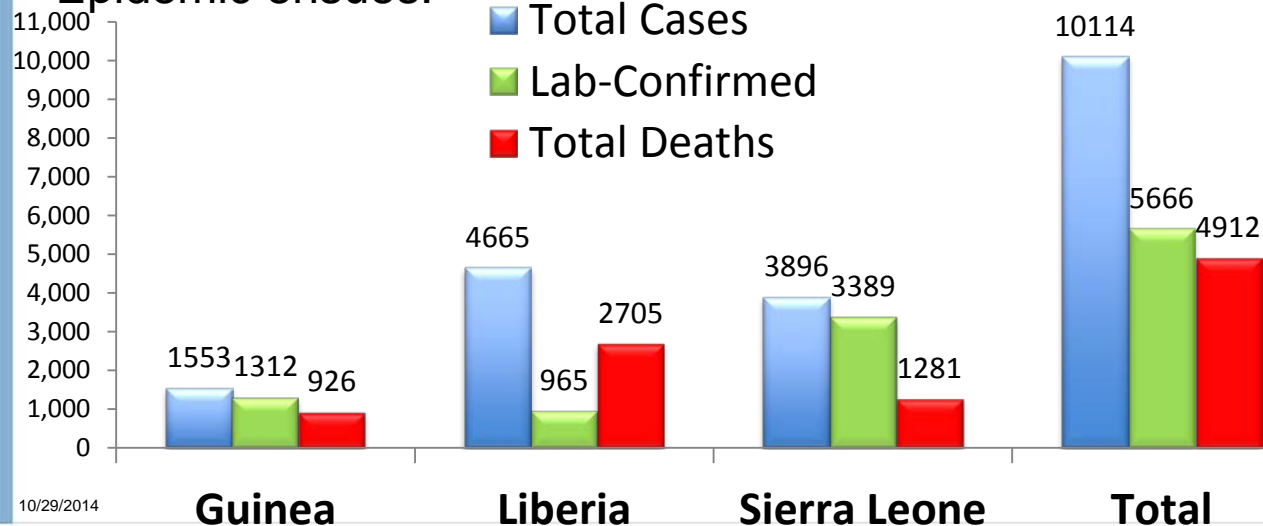


Situation Update

Lon Kightlinger, MSPH, PhD
State Epidemiologist
SD Department of Health

Ebola situation update: 28 October 2014

- Ebola is a zoonotic Filovirus disease likely reservoired in fruit bats and spreads to primates and other mammals - - - - and occasionally spills over to humans.
- 1976: first known outbreaks in Sudan and ex-Zaire.
- The 2014 Ebola epidemic in West Africa is the largest and most complex in history.
- 6 December 2013: Index case, near Gueckedou, Gambia, 2 year old boy died with fever, vomiting and diarrhea.
- Secondary cases: child's mother, grandmother and health worker, who where thought to have had falciparum malaria or typhoid.
- Ebola recognized March 2014 (3 months later) dozens of people had died; cases were occurring in Liberia and Sierra Leone.
- Epidemic ensues:



Ebola situation update: 28 October 2014



- **Countries with intense transmission: Guinea, Liberia, and Sierra Leone.**
- Other countries with cases associated with this epidemic.
 - Senegal: 1 confirmed, travel-associated. October 17, WHO declares end of Ebola transmission.
 - Nigeria: 20 cases (8 deaths) in Lagos area. No new cases reported since September 5. WHO declares end of Ebola transmission October 19 .
 - Mali: October 23, 1 case in child who traveled from Guinea.
 - Spain: October 6, 1 case in healthcare worker who worked West Africa.
 - United States: 4 case onsets: 2 West African exposures (1 death) and 2 United States transmissions.
- Other countries with unrelated Ebola outbreaks.
 - Democratic Republic of the Congo: 68 cases (49 deaths).

Ebola situation update: 28 October 2014

- **United States:**

- September 30: first case in person who traveled from Liberia to Texas. Patient died October 8.
 - October 10: nurse for index patient tested positive for Ebola. Now Ebola virus free.
 - October 15, second nurse for index patient tested positive for Ebola. Now Ebola virus free.
 - Most Texas contacts have healthily completed their 21-day monitoring period.
- October 23: New York City case in physician returned from Guinea.
- South Dakota: No cases, no one tested.
 - 21-day active monitoring in place.

International Travel notices

wwwnc.cdc.gov/travel/diseases/ebola

- **LIBERIA:** Warning - Avoid nonessential travel.
- **GUINEA:** Warning - Avoid nonessential travel.
- **SIERRA LEONE:** Warning - Avoid nonessential travel.
- **DEMOCRATIC REPUBLIC of the CONGO:** Alert - Practice enhanced precautions.
- **Advice for Humanitarian Aid Organizations**
wwwnc.cdc.gov/travel/page/advice-humanitarian-aid-organizations-ebola

Does this person have Ebola?

What to do if you suspect Ebola

Colleen Winter, R.N.
Division Director
SD Department of Health

THINK “EBOLA” IF

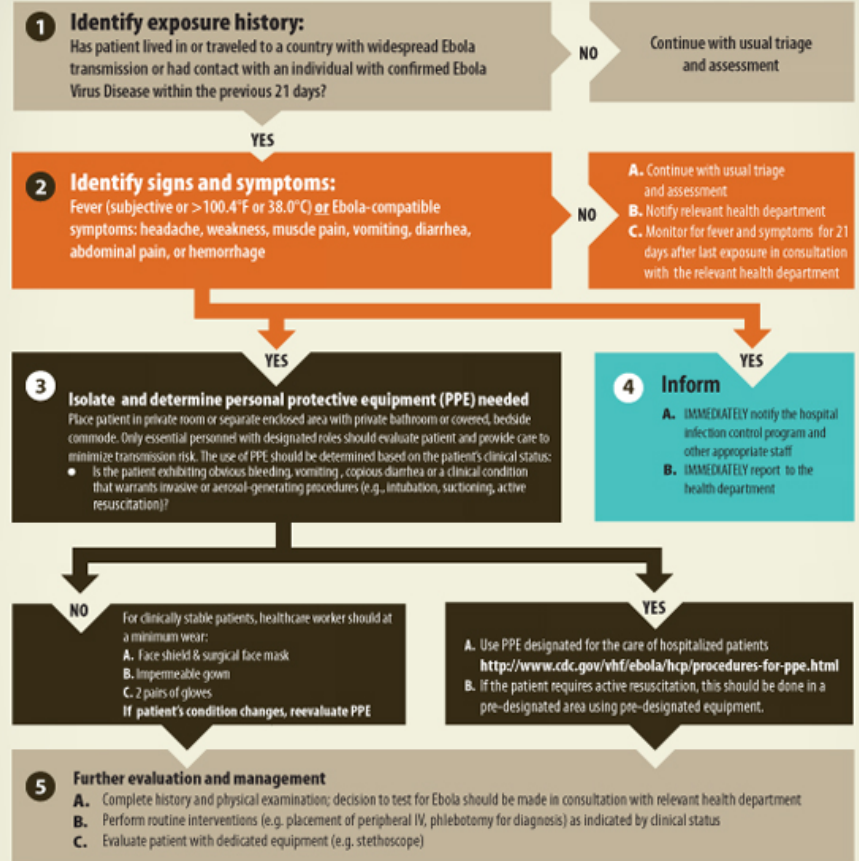
- Patient has a TRAVEL HISTORY to **Sierra Leone, Guinea, Liberia (in West Africa)** in the past 21 days



- Patient has history of exposure to person with Ebola
- Fever (subjective or > 100.4 F or >38 C)
- Symptoms: headache, muscle pain, weakness, diarrhea, vomiting, abdominal pain, unexplained hemorrhage (bleeding or bruising)

IDENTIFY ISOLATE INFORM

Identify, Isolate, Inform: Emergency Department Evaluation and Management of Patients with Possible Ebola Virus Disease



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

CS_10407

IDENTIFY

ASK: EVERYONE, EVERY TIME

ASK: About travel history in past 21 days to the 3 countries of Interest: (Sierra Leone, Guinea, or Liberia)

ASK: About symptoms

- Fever >100.4 F or 38.0 C
- Ebola-compatible symptoms
 - Headache
 - Weakness
 - Muscle pain
 - Diarrhea
 - Vomiting
 - Abdominal (stomach pain)
 - Unexplained hemorrhage (Bleeding or bruising)

Who should ask: MDs, nurses, triage staff, first responders, front office staff, local public health



ASK about EBOLA

ASK ABOUT

TRAVEL to West Africa (or other countries where Ebola has been reported by WHO) in the past 21 days.

EXPOSURE to persons with Ebola.

SYMPTOMS fever, headache, joint & muscle aches, weakness, fatigue, diarrhea, vomiting, stomach pain, loss of appetite, sometimes bleeding.

ISOLATE

place the person in a **private room** if travel or exposure criteria are met and the person has symptoms of Ebola.

CONTACT US

NOTIFY health facility leadership per protocol and **CALL** the SD Department of Health at 1-800-592-1861.

doh.sd.gov/diseases/Ebola.aspx
originally created by the Colorado Department of Public Health & Environment



SOUTH DAKOTA DEPARTMENT OF HEALTH

“ISOLATE”

- ✓ Symptoms – Yes
- ✓ Travel history – Yes

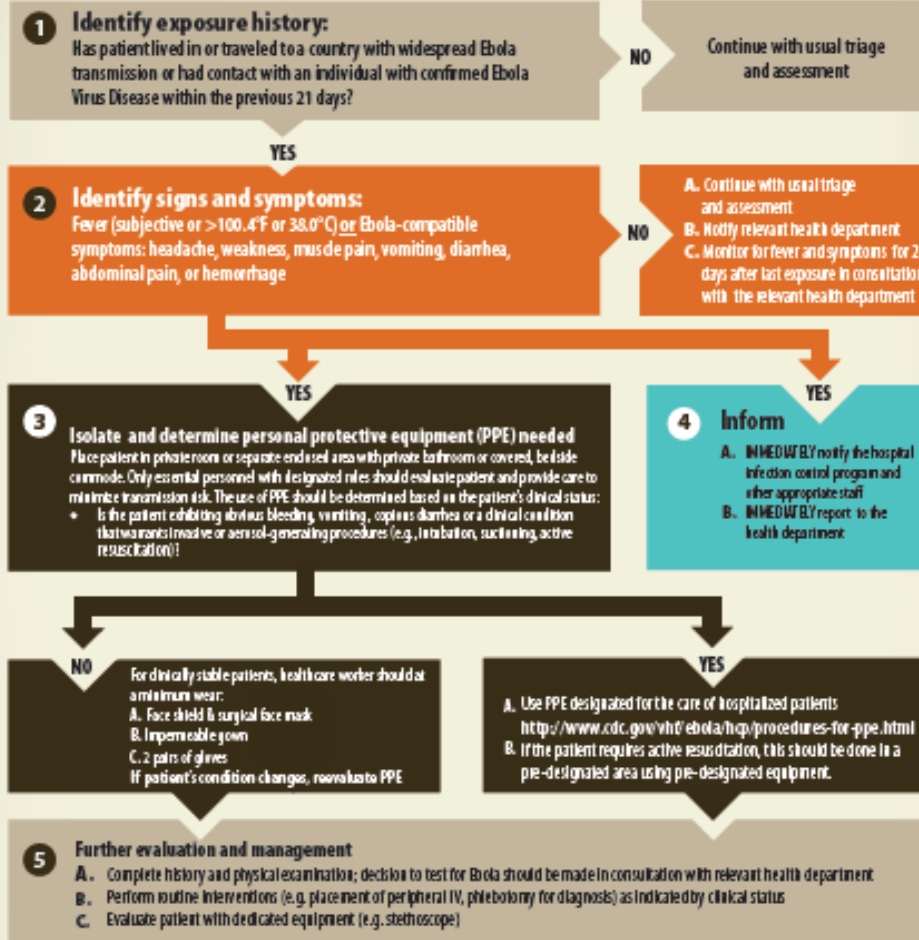


ISOLATE

- Isolate in a separate room with a private bathroom & door to hallway closed.
- Maintain a log of all persons entering the patient’s room
- Consider personnel to monitor patient’s door to ensure appropriate and consistent use of PPE

Determine Personal Protective Equipment (PPE) needed based on patient's clinical status.

Identify, Isolate, Inform: Emergency Department Evaluation and Management of Patients with Possible Ebola Virus Disease



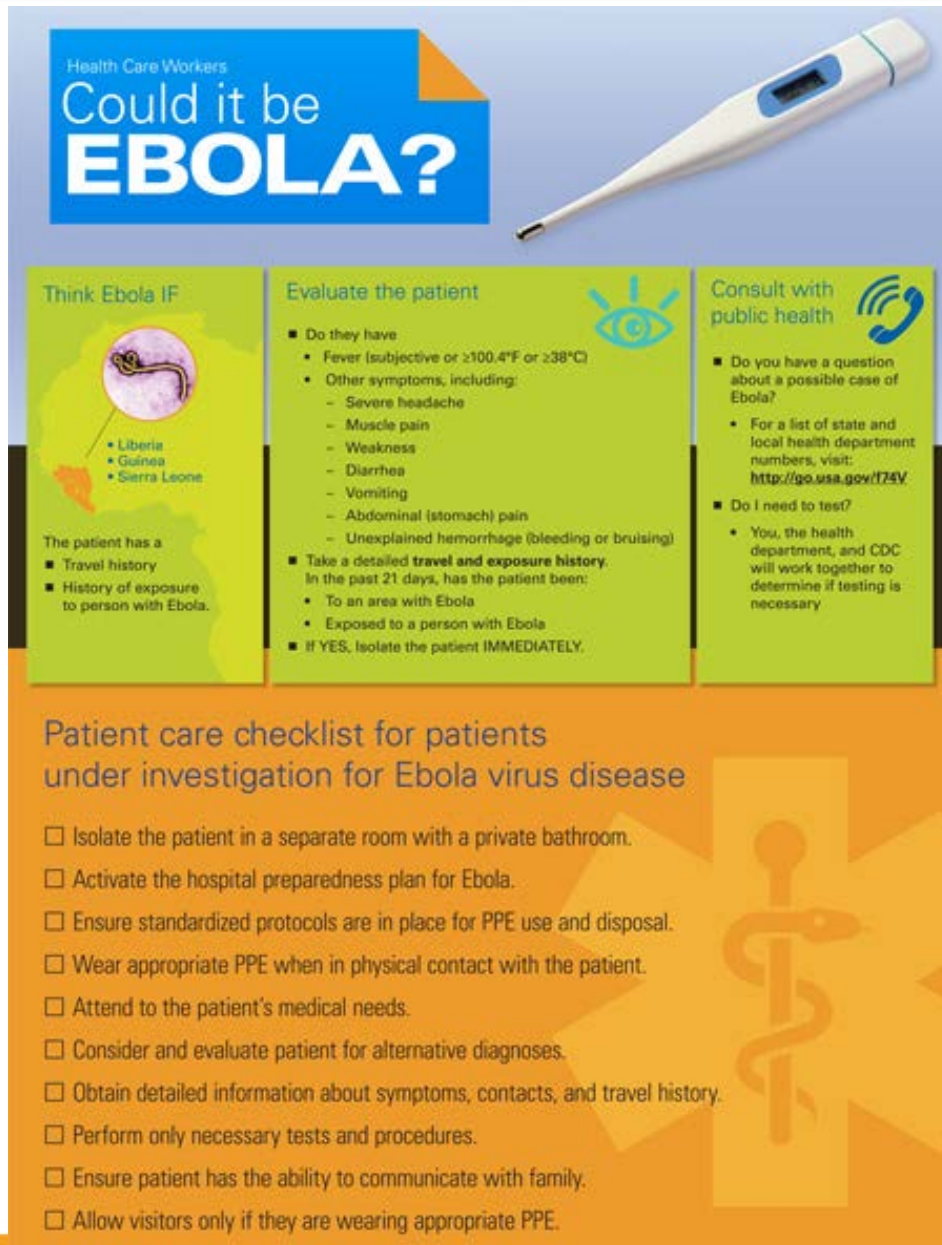
U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

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“INFORM”

IMMEDIATELY CALL local infection control or health facility leadership per protocol.

IMMEDIATELY CALL the South Dakota Department of Health 24/7 on call line: **1-800-592-1861**



Health Care Workers
Could it be EBOLA?

Think Ebola IF

- Liberia
- Guinea
- Sierra Leone

The patient has a

- Travel history
- History of exposure to person with Ebola.

Evaluate the patient

- Do they have
 - Fever (subjective or $\geq 100.4^{\circ}\text{F}$ or $\geq 38^{\circ}\text{C}$)
 - Other symptoms, including:
 - Severe headache
 - Muscle pain
 - Weakness
 - Diarrhea
 - Vomiting
 - Abdominal (stomach) pain
 - Unexplained hemorrhage (bleeding or bruising)
- Take a detailed **travel and exposure history**. In the past 21 days, has the patient been:
 - To an area with Ebola
 - Exposed to a person with Ebola
- If YES, isolate the patient IMMEDIATELY.

Consult with public health

- Do you have a question about a possible case of Ebola?
 - For a list of state and local health department numbers, visit: <http://go.usa.gov/t24V>.
- Do I need to test?
 - You, the health department, and CDC will work together to determine if testing is necessary

Patient care checklist for patients under investigation for Ebola virus disease

- Isolate the patient in a separate room with a private bathroom.
- Activate the hospital preparedness plan for Ebola.
- Ensure standardized protocols are in place for PPE use and disposal.
- Wear appropriate PPE when in physical contact with the patient.
- Attend to the patient's medical needs.
- Consider and evaluate patient for alternative diagnoses.
- Obtain detailed information about symptoms, contacts, and travel history.
- Perform only necessary tests and procedures.
- Ensure patient has the ability to communicate with family.
- Allow visitors only if they are wearing appropriate PPE.

NEXT STEPS

- The SD DOH will work with you and CDC to provide specific guidance.
- Facilities should plan to isolate and provide basic care for a patient for 6-8 hours to allow time for DOH to coordinate transportation.
- DOH is working to establish a coordinated system for transporting patients to appropriate facilities for care and treatment



South Dakota Department of Public Safety

2014 Ebola Response



Major activities:

- Daily coordination with DOH
- Sharing information, including CDC guidance, within DPS and with our stakeholders
- Planning for support roles:
 - SEOC activation
 - Law enforcement support
 - Dwelling decontamination
 - Unmet needs fulfillment



“Suspected Case” Plan Concept

- A suspected Ebola case could enter any clinic or hospital 6-8 hour hold
- Three major healthcare systems have identified primary receiving facilities
- ***EMS may need to transport suspected case***
 - Await test results
- Working to identify, equip and train two advanced ambulance services to perform these transfers statewide

Collection and Submission of Samples from Suspect Ebola Disease

SD Department of Health
Public Health Laboratory
Danette Hoffman, MT (ASCP)

Testing

- The SD Department of Health, Public Health Laboratory currently does not perform any diagnostic testing for Ebola virus. However, DOH has ordered testing equipment and will be working to develop the testing capability as quickly as possible.
- In meantime, DOH has made arrangements with the University of Nebraska Medical Center to conduct testing of specimens meeting criteria.
- Testing will be initiated only after consultation with the DOH to determine risk of Ebola virus disease.
(1-800-592-1861)

Specimen Collection

- Two EDTA blood specimens in plastic collection tubes with a minimum volume of 4 ml. **Do NOT submit specimens in glass containers or in heparinized tubes.**
- Whole blood preserved with sodium polyanethol sulfonate (SPC), citrate, or with clot activator is acceptable. Serum and plasma are also acceptable specimens but do not separate, remove serum or plasma from the primary collection container, or centrifuge the specimen.

Reduce the Risk of Breakage or Leaks

- Specimens should be placed in a durable, leak-proof secondary container for transport within a facility.
- **Do NOT** use any pneumatic tube system for transporting suspected Ebola virus disease specimens.
- Package and ship specimens without attempting to open collection tubes or aliquot specimens.
- Always handle specimens using proper PPE.
- Specimens are to be stored or transported at 2-8 degrees C or frozen on cold packs.

Transport of Specimens

- Suspected EVD specimens must be shipped as a “Suspected Category A” substance.
- Patient specimens approved for testing are classified by the **proper shipping name “infectious substance, affecting humans”** and assigned to **UN2814**.
- Specimens must be properly packed in UN specification packaging according to IATA packaging instruction 620 before being offered for transport.

Transport of Specimens

- Only persons who have been trained and certified to be a category A shipper are allowed to package, mark, label or complete the documentation for packages being offered for Ebola testing.
- It is recommended that facilities review their shipping protocols, shipping training records, and the proper steps needed to safely ship a Category A substance. A review of Category A shipping can be found at <http://www.saftpak.com/>.
- The SD Public Health Laboratory will work with you to get specimens shipped to a determined location.



Contact Tracking 21 Day Monitoring

Lon Kightlinger, MSPH, PhD
State Epidemiologist
SD Department of Health

Ebola transmission

- Virus present in high quantity in blood, feces and body fluids (urine, saliva, sweat, vomit, breast milk, semen, vag fluid) of symptomatic Ebola-infected persons.
- Opportunities for human-to-human transmission:
 - Direct contact (broken skin or mucous membranes) with blood or body fluids.
 - Sharps injury (contaminated needle or other sharp).
 - Direct contact with the corpse of a person who died of Ebola.
 - Indirect contact with infected person's blood or body fluids via contaminated object (soiled linens or utensils).
- Infected persons are not contagious until onset of symptoms.
- Infectiousness of body fluids (e.g., viral load) increases as patient becomes sicker.
- Human-to-human transmission via inhalation (aerosols) has not been demonstrated.
- Ebola can also be transmitted via contact with blood, fluids, or meat of infected animal (African fruit bats or apes and monkeys).
 - No reports of dogs or cats becoming sick with or transmitting Ebola.
- Incubation period (exposure to illness onset): 2-21 days.

Contact tracing – 21 day monitoring

- **CDC: Interim U.S. Guidance for Monitoring and Movement of Persons with Potential Ebola Virus Exposure**
www.cdc.gov/vhf/ebola/exposure/monitoring-and-movement-of-persons-with-exposure.html
- Case: sick person and lab confirmed.
- Suspect: sick person, but not tested.
- Contact: well person at various risk level.
- Active monitoring: twice daily temperature/symptom checks.
- Direct active monitoring: directly observed twice daily temperature/symptom checks.
- Controlled movement: travel limitations.
- Isolation: separation of an infectious patient.
- Quarantine: separation of a well but potentially exposed person.
- Public health orders: written instructions to exposed, sick or infectious persons.

Ebola exposure risk categories

- **High risk:** direct exposure to blood or body fluids, contact with dead body, household of Ebola case.
- **Some risk:** direct contact while using appropriate PPE, close contact (1 meter) of Ebola case.
- **Low (but not zero) risk:** in outbreak country during past 21 days, brief contact.
- **No identifiable risk:** contact to an asymptomatic contact.

Ebola exposure risk determines public health actions: summary table

Risk level	Monitoring	Controlled Movement/ Exclusion	Travel restriction
HIGH	21 day, direct active monitoring	Yes	Yes
SOME	21 day, direct active monitoring	Case-by-case assessment	Case-by-case assessment
LOW	21 day, active monitoring	No	None
NONE	None	None	None

www.cdc.gov/vhf/ebola/exposure/monitoring-and-movement-of-persons-with-exposure.html

Ebola monitoring in South Dakota

- Referrals to SD-DOH by major international airport screenings, other states or internal.
- DOH investigates, interviews, educates and monitors all contacts and cases.
- Determine risk category.
- Active-direct or active monitoring period: 21 days following the last exposure, twice daily, morning and evening, for temperature and symptoms.
- DOH provides thermometers, printed educational materials, temperature log sheets, intervention order and referral information.
- All temps and symptoms are logged and monitored by DOH MAVEN case management system.
- Monitoring by phone, text, email, direct patient portal internet, office visit or home visit.
- Inside healthcare facility exposed healthcare workers are under control of the facility and report twice daily to DOH. DOH assists as needed.
- During the 21 day incubation period person is not quarantined as a first option. Determined on a case-by-case situation, based on risk leave.
- No travel by public conveyance.
- If travel to other state: interstate notification will be done.



South Dakota Containment Authority

Tom Martinec
Deputy Director
SD Department of Health



South Dakota Containment Authority

- Monitoring, quarantine, and isolation are all key public health actions used in outbreak prevention.
- In the context of Ebola:
 - Monitoring is when health officials are checking in on well individuals on a daily basis to determine if the person develops a fever or other symptoms of Ebola;
 - Quarantine separates and restricts the movement of well individuals who were exposed to Ebola to see if they become sick; and
 - Isolation separates individuals diagnosed with Ebola from people who are not sick.
- Ample legal authority in SD to issue orders pertaining to monitoring, quarantine, and isolation orders. Statutory authority to enforce those orders.
- Daily monitoring is taking place in the vast majority of the states, including South Dakota.
- Public Health Intervention Order issued when daily monitoring is taking place, and processes are being developed to quickly and effectively enforce orders if necessary.



State Stockpile








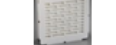


Bill Chalcraft
Public Health Preparedness
SD Department of Health

3 PPE Forward Deployment kits

- Have been completed and are being shipped to three locations in the state for Forward Staging.
- Remain State SNS assets until approval for use provided by DOH.
- Each kit will provide an initial PPE capability for Ebola incidents until such time that we can receive “back-fill” from the Federal SNS.
- Over 50% of state SNS assets still remain in the central warehouse.

Select Ebola Related Medical Response Supplies Forward Deployment kit

(as of Oct 27, 2014)

Brand/Model Description	Picture	UOM	#/case	# case		Totals
Tyvek Suits - White, Size X-Lg , hood, elastic wrist & ankles, no booties.		case	25	2		50
Tyvek Suits - White, Size 3XL , hood, elastic wrist & ankles, no booties.		case	25	2		50
Tyvek Suits - White, Size 5XL , hood, elastic wrist & ankles, no booties.		case	25	2		50
Biological PPE Suit kit <ul style="list-style-type: none"> • ASTM 1670/1617 approved suit, “Kimberly Clark Kleen-guard A-60” with built-in “bootie” • ASTM F 1670 is a pass/ fail test for visual penetration of a synthetic blood solution at 2psi applied pressure. • Three-layer fabric construction features a middle layer of micro-porous film that allows heat and sweat vapor to escape while protecting against dry particulates and liquid. • 3M 8293, N-100 Mask • Splash Goggles • Heavy Gauge Nitrile outer gloves • Powder free Nitrile inner glove • Heavy Gauge Latex boots (can be removed from kit) • Chem-tape sealing strips 		kit	1 ea.	Med	125	370
				Lg	100	
				XL	25	
				2XL	120	
Tyvek® Boot Covers - <ul style="list-style-type: none"> • Best tear and puncture resistance. • Elastic tops for tight grip. • Serged seams. 18" high. • One Size Fits All.... 100/case 		case	100	4		400
Tyvek® Hood - Box of 100 <ul style="list-style-type: none"> • One Size Fits All • Shoulder length pullover covers head and shoulders. • Elastic around face for snug fit. 		case	100	2		200
Airmate Hoods - Regular		each	1 ea.	140		140
Airmate Filters - HEPA		each	1ea.	240		240
Full Face Shield - Crosstex Anti-fog, Foam Top, Elastic		case	288	4		1,152
Nitrile Gloves un-sterile non-powdered 4 mil thick with rolled cuff		case	1,000	Sm	5	30
				Med	10	
				Lg	10	
				XL	5	

Additional PPE in State Stockpile

- Over 1 million N-95 respirators
- 1.3 million surgical masks
- 7,500 face shields
- a variety of full cover coveralls including 900 Tyvek, 800 Tychem type F, and 2,300 Kleenguard A-60s -- all with hoods;
- Powered air purifying respirator kits in both the 3M Airmate system and the BreathEasy system. The airmate system is designed for a biologic event and the breatheasy is for a chemical event response. Both include; multiples of suits, hoods, face shields.
- Reinforced disaster body bags

Guidance on Personal Protective Equipment To Be Used by Healthcare Workers During Management of Patients with Ebola Virus Disease in U.S. Hospitals, Including Procedures for Putting On (Donning) and Removing (Doffing)

Issued 20 October 2014

Angela Jackley, RN
Healthcare Associated Infections Coordinator
SD Department of Health
29 October 2014

<http://www.cdc.gov/vhf/ebola/hcp/procedures-for-ppe.html>

Key Principles

1. Rigorous and Repeated training
2. PPE To Prevent Skin Exposure
3. Trained monitor

Rigorous and Repeated training

- Receive repeated trainings
- Train healthcare workers on all PPE recommended by the facility's protocols.
- Healthcare providers practice numerous times
- Ensure appropriate use of equipment
- Use a checklist
- Step by step donning and doffing
- Demonstrate competency in performing all Ebola-related infection control practices and procedures while wearing PPE
- Document training of observers and healthcare workers for proficiency and competency in donning and doffing PPE and necessary care-related duties while wearing the PPE

PPE To Prevent Skin Exposure

- No skin exposure when PPE is worn
 - Addition of coveralls and single-use disposable hoods
 - PPE recommended for U.S. healthcare workers
 - Double gloves – outer glove with extended cuff
 - Waterproof Boot covers that go to at least mid-calf or leg covers
 - Single-use fluid resistant or impermeable gown that extends to at least mid-calf or coverall without integrated hood

PPE To Prevent Skin Exposure

- Respirators, including either N95 respirators or powered air purifying respirator (PAPR)
- Surgical hoods to ensure complete coverage of head and neck
- Single-use, full-face shield that is disposable
- Apron that is waterproof and covers the torso to the level of the mid-calf (and that covers the top of the boots or boot covers) should be used if Ebola patients have vomiting or diarrhea

Trained monitor

Ensure each healthcare worker follows step by step processes outlined in the *Guidance on Personal Protective Equipment to be Used by Healthcare Workers during Management of Ebola Virus Disease in U.S. Hospitals.*

- Ensure a trained observer is available during both donning and doffing procedures
- Read aloud each step of procedure checklist
Visually confirm and document
- The observer is available during donning and doffing to ensure the protocol is followed as well as to assess for visible contamination, cuts or tears.

Selection of PPE for Healthcare Workers during Management of Ebola Patients

- Recommended PPE options
 - Powered Air Purifying Respirator (PAPR)
 - N95
- Standardizing attire under PPE
- Designated areas for putting on and taking off PPE
- Trained observer available and ready
- Step by step PPE removal instructions
- Disinfection of gloved hands

Emergency Department

- Limit to essential workers
- For clinically stable patients use:
 - Face shield & surgical face mask
 - Impermeable gown
 - 2 pairs of gloves
- Unstable patients (exhibiting obvious bleeding, vomiting, copious amounts of diarrhea)
 - Refer to the PPE designated for the care of hospitalized patients as outlined in the guidance referenced at the end

Designating areas with signage for Donning and Doffing

- Designate clean vs potentially contaminated areas
- Remind healthcare workers to wait for trained observer before donning and doffing
- Reinforce need to slow and deliberate removal of PPE to prevent self-contamination
- Remind healthcare workers to perform disinfection of gloved hands in between steps of the doffing procedure

PPE Storage and Donning Area

- Outside Ebola patient room
- Do not store potentially contaminated equipment, used PPE, or waste removed from the patient's room
- Donning activities must be directly observed by a trained observer

PPE Removal Area

- Close proximity to patient room
- Separate from clean area
- Chairs for doffing
- Leak proof infectious waste containers
- Stock supplies
 - Gloves
 - EPA registered disinfectant wipe
 - Alcohol based hand rub

Ebola Cleanup & Waste Management

Department of Environment and Natural
Resources

Kim McIntosh – Ground Water Quality Program

Jim Wendte – Waste Management Program

773-3296

DENR Assistance

- Department of Environment and Natural Resources is prepared to assist in response efforts by providing advice and direction on the cleanup and disposal of materials impacted with Ebola.
- Continued coordination with SD Department of Health, State Office of Emergency Management, the Federal Environmental Protection Agency, Occupational Health and Safety Administration (OSHA), CDC, and our other response partners.

Assistance

- Working closely with environmental cleanup contractors, to perform Ebola cleanup activities in South Dakota.
 - West Central Environmental
 - Environmental Protection Agency's – Emergency Response Teams
 - Other professionals that may assist
 - Civil Support Team out of Ellsworth AFB
 - CDC and EPA toxicologists
 - Local Health Departments/ Hazardous Materials Team

Cleanup Activities

- Evaluate each situation to determine the most appropriate response to the incident.
- Isolate the area
- Fragile virus – Bleach (10% solution) or other hospital approved products can be used to destroy viruses. Other chemicals being evaluated.
- OSHA Fact Sheet – Cleaning and Decontamination of Ebola on Surfaces:

https://www.osha.gov/Publications/OSHA_FS-3756.pdf

Medical Waste Management

- In-state management and disposal highly unlikely
- Ebola waste is considered a Category A regulated medical waste requiring special transportation, storage, de-activation and disposal
- USDOT special permitting
- National waste management companies servicing SD already pursuing special permits

Further Guidance



CDC 2014 Ebola guidance and updates

- CDC Ebola main site: <http://www.cdc.gov/vhf/ebola/index.html>
- Interim U.S. Guidance for Monitoring and Movement of Persons with Potential Ebola Virus Exposure www.cdc.gov/vhf/ebola/exposure/monitoring-and-movement-of-persons-with-exposure.html
- Guidance on Personal Protective Equipment To Be Used by Healthcare Workers During Management of Patients with Ebola Virus Disease in U.S. Hospitals, Including Procedures for Putting On (Donning) and Removing (Doffing) www.cdc.gov/vhf/ebola/hcp/procedures-for-ppe.html
- Recommendations for Safely Performing Acute Hemodialysis in Patients with Ebola Virus Disease in U.S. Hospitals www.cdc.gov/vhf/ebola/hcp/guidance-dialysis.html
- Questions and Answers about Ebola and Pets www.cdc.gov/vhf/ebola/transmission/qas-pets.html
- Ebola Waste Management www.cdc.gov/vhf/ebola/hcp/medical-waste-management.html
- Factsheet: Healthcare Workers – Could It Be Ebola? www.cdc.gov/vhf/ebola/pdf/could-it-be-ebola.pdf
- Checklist for Patients Being Evaluated for Ebola Virus Disease. www.cdc.gov/vhf/ebola/pdf/checklist-patients-evaluated-us-evd.pdf
- Outbreak Update www.cdc.gov/vhf/ebola/outbreaks/2014-west-africa/index.html
- Facts about Ebola Infographic www.cdc.gov/vhf/ebola/pdf/facts-about-ebola.pdf

References and Resources

- **APIC: Updated Ebola Infection control and prevention guidance**
<http://www.apic.org/Resources/Topic-specific-infection-prevention/Ebola>
- **Ebola Education Session - Personal Protective Equipment (PPE) Demo**
<http://vimeo.com/109626204> (video begins at 3:08)
- **Emergency Department Evaluation and Management of Patients with Possible Ebola Virus Disease** - <http://www.cdc.gov/vhf/ebola/hcp/ed-management-patients-possible-ebola.html>
- <http://www.cdc.gov/vhf/ebola/pdf/ed-algorithm-management-patients-possible-ebola.pdf>

Thank you