

# Ebola Conference Call for Healthcare Providers

Wednesday, December 3, 2014  
10:00 a.m. - 11:00 a.m. Central

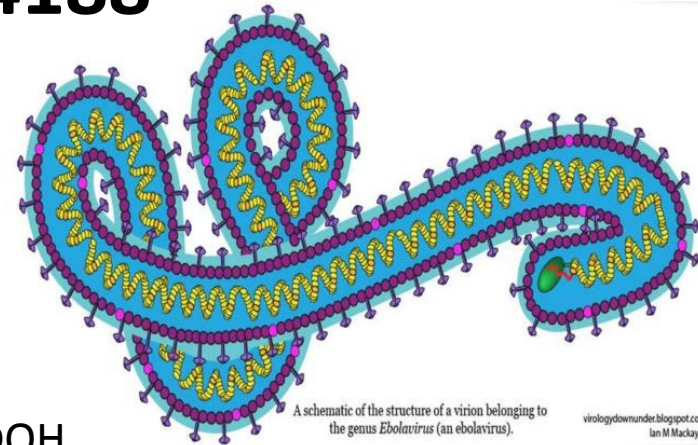
**Call in Number: 866-644-4188**

**Passcode: 41002632.**



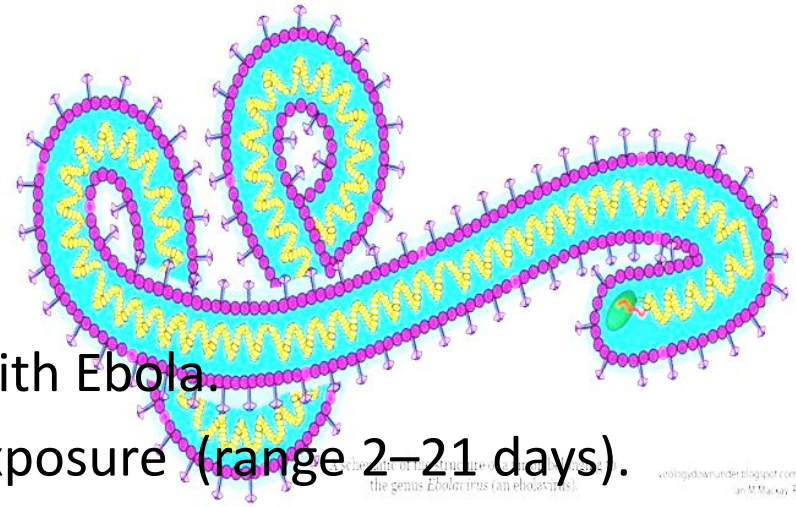
- **Agenda**

- Welcome - Overview; Doneen Hollingsworth, SD DOH
- Situation Update; Dr. Lon Kightlinger, SD DOH
- Identify - Isolate - Inform - "Hold"; Colleen Winter, SD DOH
- Personal Protective Equipment; Angela Jackley, SD DOH
- EMS Transport; Bill Chalcraft, SD DOH
- Designated receiving / treatment facility; Dr. Wierda-Suttle, Sanford Health System
- Laboratory Update; Joan Adam, SD DOH
- Question & Answer



# Ebola virus disease

Filoviridae: enveloped RNA viruses



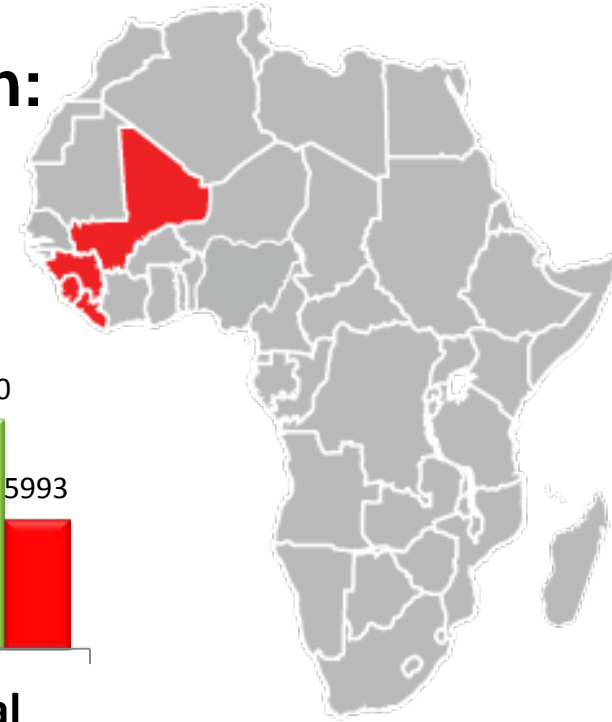
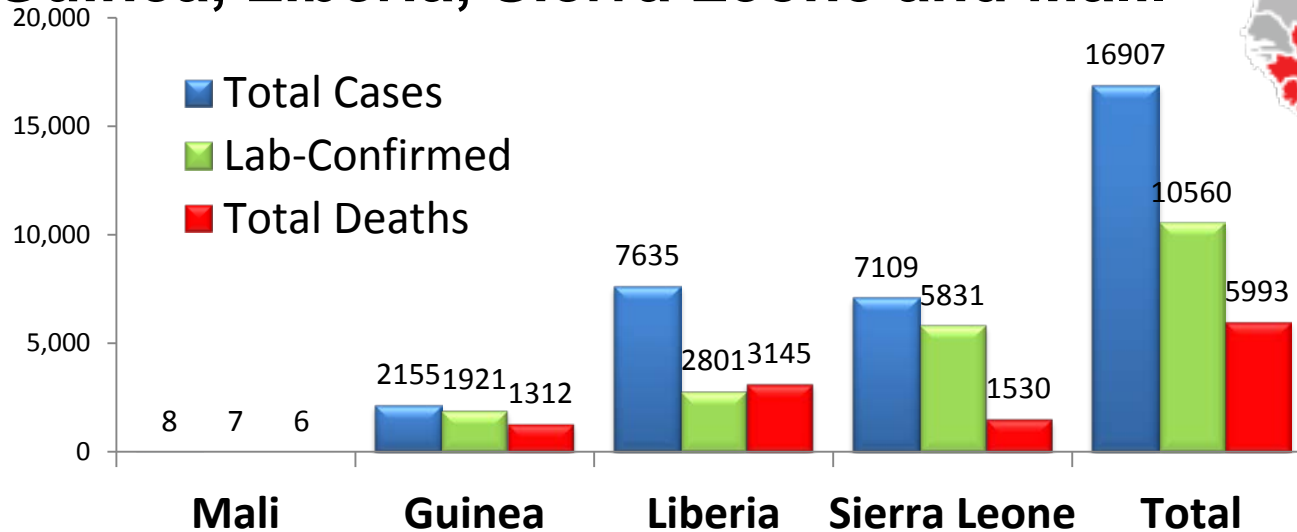
- **Transmission:** direct contact with blood and body fluids of a person who is sick with Ebola.
- **Acute onset:** typically 8–10 days after exposure (range 2–21 days).
- **Signs and symptoms**
  - Initial: Fever, chills, myalgias, malaise, anorexia.
  - After 5 days: GI symptoms, nausea, vomiting, watery diarrhea, abdominal pain.
  - Nonspecific early symptoms progress to hypovolemic shock and multi-organ failure, hemorrhagic disease (hemorrhagic symptoms in 18% of cases).
- Non-fatal cases typically improve 6–11 days after symptoms onset.
- Fatal disease associated with more severe early symptoms:
  - Fatality rates of 70% have been reported in rural Africa.
  - Intensive care, especially early intravenous and electrolyte management, may increase the survival rate.

# What you really need to know about EBOLA



# Ebola situation update: 3 December 2014

## Countries with active Ebola transmission: Guinea, Liberia, Sierra Leone and Mali.



- Other countries with associated cases with this epidemic.
  - **Senegal:** 1 case (now Ebola free).
  - **Nigeria:** 20 cases/8 deaths (now Ebola free).
  - **Spain:** 1 case (healthcare worker).
  - **United States:** 4 case onsets: 2 West African exposures (1 death) and 2 homeland transmissions.

# Ebola exposure risk determines public health actions: summary table

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

- ✓ Referrals to SD Dept of Health by CDC from airport screenings, other state HD or internal.
- ✓ SD-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. Face-to-face meetings every third day.
- ✓ SD-DOH provides thermometers, printed educational materials, iPhone, temperature log sheets, intervention order and referral information.
- ✓ Monitoring by iPhone FaceTime, phone, text, email, office visit or home visit.
- ✓ During the 21 day incubation period low risk person not quarantined. Determined on case-by-case situation.
- ✓ Travel monitored.
- ✓ If travel to another state: interstate notification will be done.

**ALERT: Temperature 100.4°F or 38°C or higher. Fever, diarrhea, vomiting, stomach pain, bleeding eyes, bleeding nose, headache, muscle pain.**

# Ebola risk monitoring, South Dakota 2014



## **South Dakota Travelers** (as of 3 December 2014)

- Traveler #1: low risk, cooperative, healthy, finished 8 November.
- Traveler #2: low risk, cooperative, healthy, finished 10 November.
- Traveler #3: low risk, cooperative, healthy, finished 28 November.

# IDENTIFY ISOLATE INFORM “HOLD”

**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
    - Fatigue
    - 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/f7dV>
- 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.

For more information on how to care for a person under investigation for Ebola, please visit: <http://www.cdc.gov/ebola>



# Is it Flu or Ebola?



## Flu (influenza)



The flu is a common contagious respiratory illness caused by flu viruses. The flu is different from a cold. Flu can cause mild to severe illness, and complications can lead to death.

## Ebola



Ebola is a rare and deadly disease caused by infection with an Ebola virus. Sporadic outbreaks have occurred in some African countries since 1976.

## How Flu Germs Are Spread



The flu is spread mainly by droplets made when people who have flu cough, sneeze, or talk. Viruses can also spread on surfaces, but this is less common. People with flu can spread the virus before and during their illness.

## How Ebola Germs are Spread



Ebola can only be spread by direct contact with blood or body fluids from

- A person who is sick or who has died of Ebola.
- Objects like needles that have been in contact with the blood or body fluids of a person sick with Ebola.

Ebola cannot spread in the air or by water or food.

## Who Gets The Flu?



Anyone can get the flu. Some people—like very young children, older adults, and people with some health conditions—are at high risk of serious complications.

## Who Gets Ebola?



People most at risk of getting Ebola are

- People with a travel history to countries with widespread transmission or exposure to a person with Ebola.
- Healthcare providers taking care of patients with Ebola.
- Friends and family who have had unprotected direct contact with blood or body fluids of a person sick with Ebola.

## Signs and Symptoms of Flu

The signs and symptoms of flu usually develop within 2 days after exposure. Symptoms come on quickly and all at once.

## Signs and Symptoms of Ebola



The signs and symptoms of Ebola can appear 2 to 21 days after exposure. The average time is 8 to 10 days. Symptoms of Ebola develop over several days and become progressively more severe.

- *People with Ebola cannot spread the virus until symptoms appear.*



- Fever or feeling feverish
- Headache
- Muscle or body aches
- Feeling very tired (fatigue)
- Cough
- Sore throat
- Runny or stuffy nose



- Fever
- Severe headache
- Muscle pain
- Feeling very tired (fatigue)
- Vomiting and diarrhea develop after 3–6 days
- Weakness (can be severe)
- Stomach pain
- Unexplained bleeding or bruising

For more information about the flu and Ebola, visit [www.cdc.gov/flu](http://www.cdc.gov/flu) and [www.cdc.gov/ebola](http://www.cdc.gov/ebola).

November 13, 2014

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# IDENTIFY


**ASK:** EVERYONE, EVERY TIME

**ASK:** About travel history to a country with widespread illness (Sierra Leone, Guinea, Liberia, Mali) OR contact with a person with confirmed Ebola Virus disease in the past 21 days

**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** with a bathroom or commode if travel or exposure criteria are met and the person has symptoms of Ebola.

implement PPE based on symptoms and recommendations.

**CONTACT US**

**NOTIFY** health facility leadership per protocol and **HOLD** patient for up to 4 to 6 hours if necessary

**CALL** the SD Department of Health at 1-800-592-1861 (after hours 605-280-4810 or State Duty Officer 605-773-3231)

The department will:

- verify recent travel to West Africa and consult with CDC to assess person
- manage travel as appropriate (Rural Metro or Rapid City Fire EMS) to transport to Sanford USD Medical Center
- arrange for laboratory testing

[doh.sd.gov/diseases/Ebola.aspx](http://doh.sd.gov/diseases/Ebola.aspx)

Originally created by the Colorado Department of Public Health & Environment  
Revised 12/1/14



# IDENTIFY, ISOLATE, INFORM, “HOLD”

## Ambulatory Care Evaluation for Possible Ebola


1. Identify travel and direct exposure history
2. Identify signs and symptoms
3. Isolate immediately
4. Inform DOH and prepare for transport

### DO NOT TRANSFER WITHOUT FIRST NOTIFYING THE DEPARTMENT OF HEALTH

### Minimum PPE before patient contact

1. Face Shield & surgical face mask
2. Impermeable gown
3. Two pairs of gloves

### Identify, Isolate, Inform: Ambulatory Care Evaluation of Patients with Possible Ebola Virus Disease (Ebola)



The majority of febrile patients in ambulatory settings do not have Ebola Virus Disease (Ebola), and the risk posed by Ebola patients with early, limited symptoms is lower than that from a patient hospitalized with severe disease. Nevertheless, because early Ebola symptoms are similar to those seen with other febrile illnesses, triage and evaluation processes should consider and systematically assess patients for the possibility of Ebola.

**1 Identify travel and direct exposure history:**  
Has patient lived in or traveled to a country with widespread Ebola virus transmission or had contact with an individual with confirmed Ebola Virus Disease within the previous 21 days?

YES

**2 Identify signs and symptoms:**  
Fever (axillary or  $\geq 100.4^{\circ}\text{F}$  or  $38.0^{\circ}\text{C}$ ) or any Ebola-compatible symptoms: fatigue, headache, weakness, muscle pain, vomiting, diarrhea, abdominal pain, or hemorrhage

NO

Continue with usual triage, assessment, and care

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NO

A. Notify health department that patient is seeking care at this facility  
B. Continue with triage, assessment and care  
C. Advise patient to monitor for fever and symptoms for 21 days after last exposure in consultation with the health department.

YES - Patient may meet criteria for Person Under Investigation for Ebola\*

**3 Isolate patient immediately: Avoid unnecessary direct contact**

- Place patient in private room or area, preferably enclosed with private bathroom or covered cot/bedside.
- Avoid unnecessary direct contact.
- If direct contact is necessary, personal protective equipment (PPE) and dedicated equipment must be used to minimize transmission risk.
- Only essential personnel with designated roles should evaluate patient.
- If patient is exhibiting obvious bleeding, vomiting or copious diarrhea, then do not re-enter room until EMS personnel trained to transport Person Under Investigation for Ebola arrive.
- Do not perform phlebotomy or any other procedures unless urgently required for patient care or stabilization.
- Consult with the health department before cleaning up blood or body fluids. Any reusable equipment should not be reused until it has been appropriately cleaned and disinfected.\*\*

AND

**4 Inform Health Department and prepare for safe transport.**

- Contact the relevant health department IMMEDIATELY.
- Prepare for transfer to a hospital identified by the health department for evaluation of possible Ebola.
- Coordinate with health department regarding:
  - Who will notify the receiving emergency department or hospital about the transfer, and
  - Arrangements for safe transport to accepting facility designated by public health officials.

PERSONS UNDER INVESTIGATION FOR EBOLA SHOULD ONLY BE SENT TO HOSPITALS AND FACILITIES SPECIFICALLY DESIGNATED BY PUBLIC HEALTH OFFICIALS.

Do not transfer without first notifying the health department.

**PPE in the ambulatory care setting\*\*\*:**

- **No one should have direct contact** with a Person Under Investigation for Ebola without wearing appropriate personal protective equipment (PPE).
- If PPE is available and direct patient contact necessary, a single staff member (trained in proper donning and removal of PPE) should be designated to interact with the Person Under Investigation.
- At a minimum, health care workers should use the following PPE before direct patient contact:
  - A. Face shield & surgical face mask,
  - B. Impermeable gown, and
  - C. Two pairs of gloves.
- The designated staff member should refrain from direct interaction with other staff and patients; in the office until PPE has been safely removed in a designated, confined area. Examples of safe donning and removal of PPE should be reviewed: [http://www.cdc.gov/hqpsc/2007p/2007p\\_09.html](http://www.cdc.gov/hqpsc/2007p/2007p_09.html)

NOTE: Patients with exposure history and Ebola-compatible symptoms seeking care by phone should be advised to remain in place, minimize exposure of body fluids to household members or others near them, and given the phone number to notify the health department. The ambulatory care facility must also inform the health department. If the clinical situation is an emergency, the ambulatory care facility or patient should call 911 and tell EMS personnel the patient's Ebola risk factors so they can arrive at the location with the correct PPE.

\*Refer to <http://www.cdc.gov/vhf/ebola/> for the most up-to-date guidance on the Case Definition for Ebola, Environmental Infection Control and Ebola-Associated Waste Management

\*\*Refer to <http://www.cdc.gov/hai/settings/outpatient/outpatient-care-guidelines.html> for a summary guide of infection prevention recommendations for outpatient settings.

U.S. Centers for Disease Control and Prevention November 6, 2014 CS\_201407

# IDENTIFY, ISOLATE, INFORM, “HOLD”

## Emergency Department Evaluation for Possible Ebola

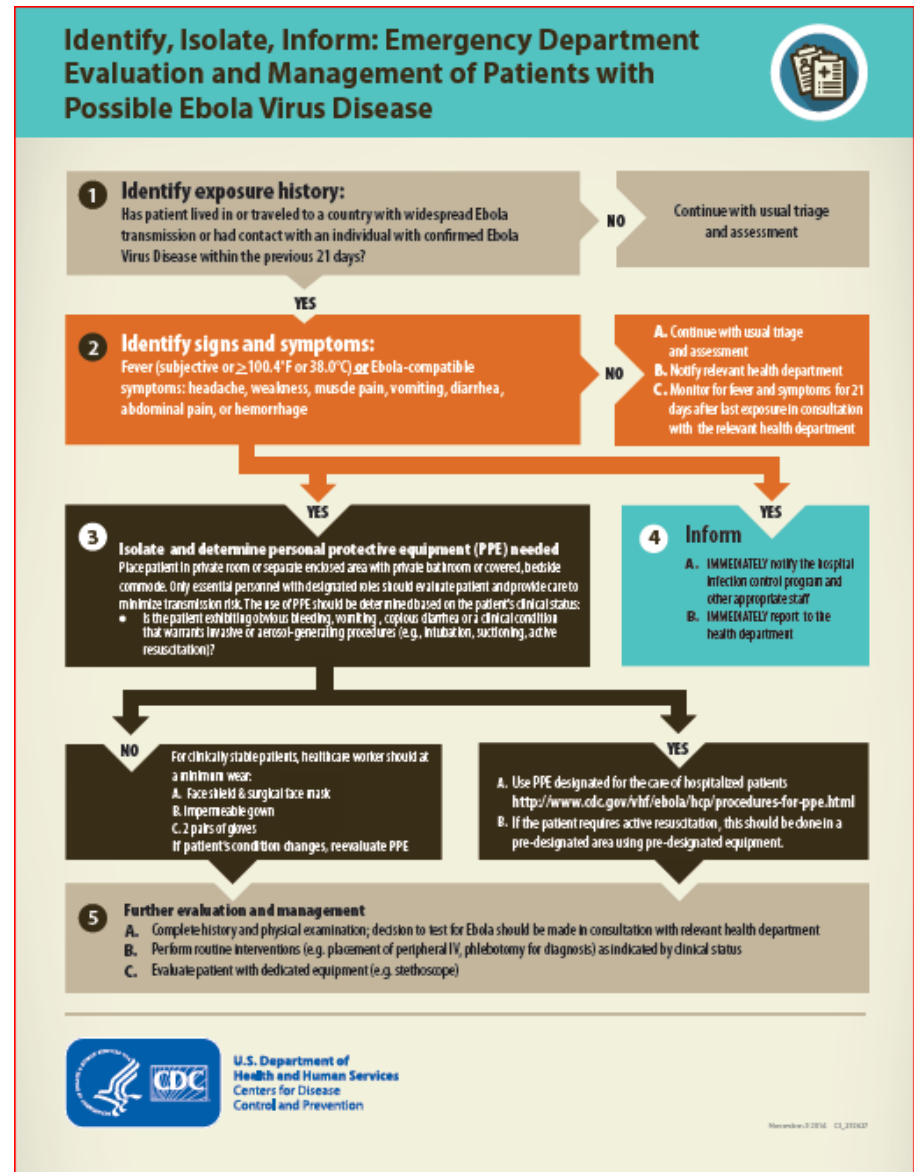
1. Identify travel and direct exposure history
2. Identify signs and symptoms
3. Isolate immediately
4. Inform DOH & hospital leadership per facility policy

**DO NOT TRANSFER WITHOUT FIRST  
NOTIFYING THE DEPARTMENT OF  
HEALTH**

## Minimum PPE before patient contact

1. Face Shield & surgical face mask
2. Impermeable gown
3. Two pairs of gloves

**If patient condition changes, reevaluate  
PPE**



# ISOLATE

✓ Symptoms – Yes



**ISOLATE**

✓ Travel history – Yes

- Isolate in a separate room with a private bathroom or commode & door to hallway closed.
- Only essential personnel with designated roles should evaluate patient.
- PPE

# 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**

or

**605-280-4810**

Or

**State Duty Officer**

**605-773-3231**



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# HOLD

- Facilities should plan to isolate and provide basic care for a patient for 4-6 hours.
- The Department of Health will:
  - ✓ Notify receiving facility (Sanford Medical Center)
  - ✓ Arrange for transport to Sanford Medical Center
- **Reminder: If the medical situation warrants emergency transport, utilize your normal EMS but be sure to inform them this is a suspect Ebola virus disease patient so they may take necessary PPE precautions.**

# **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

Dr. Allison Wierda-Suttle,  
Sanford Hospital,  
Sioux Falls, South Dakota

# **Considerations for Hospitals Designated to Receive Suspected or Confirmed Ebola Patients**

- A. Pre-Hospital Transport Plans, Emergency Medical Services, Emergency Department Preparedness.**
- B. Staffing of Ebola Patient Care Team.**
- C. Patient Transport from Point of Entry to Designated Ebola Treatment Area.**
- D. Patient Placement.**
- E. Personal Protective Equipment and Procedures for Donning and Doffing.**
- F. Monitoring Healthcare Personnel and Managing Exposures.**
- G. Laboratory Safety.**
- H. Environmental Infection Control and Equipment Reprocessing.**
- I. Management of Waste.**
- J. Communications.**
- K. Management of the Deceased.**