

# WASHOE COUNTY HEALTH DISTRICT AND YOU

WHAT PART **WE** PLAY IN PREPARING AND PROTECTING  
THE CITIZENS AND VISITORS OF NEVADA.

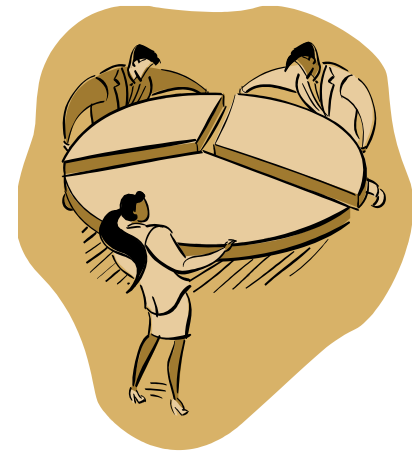
October 24, 2014

# WELCOME...

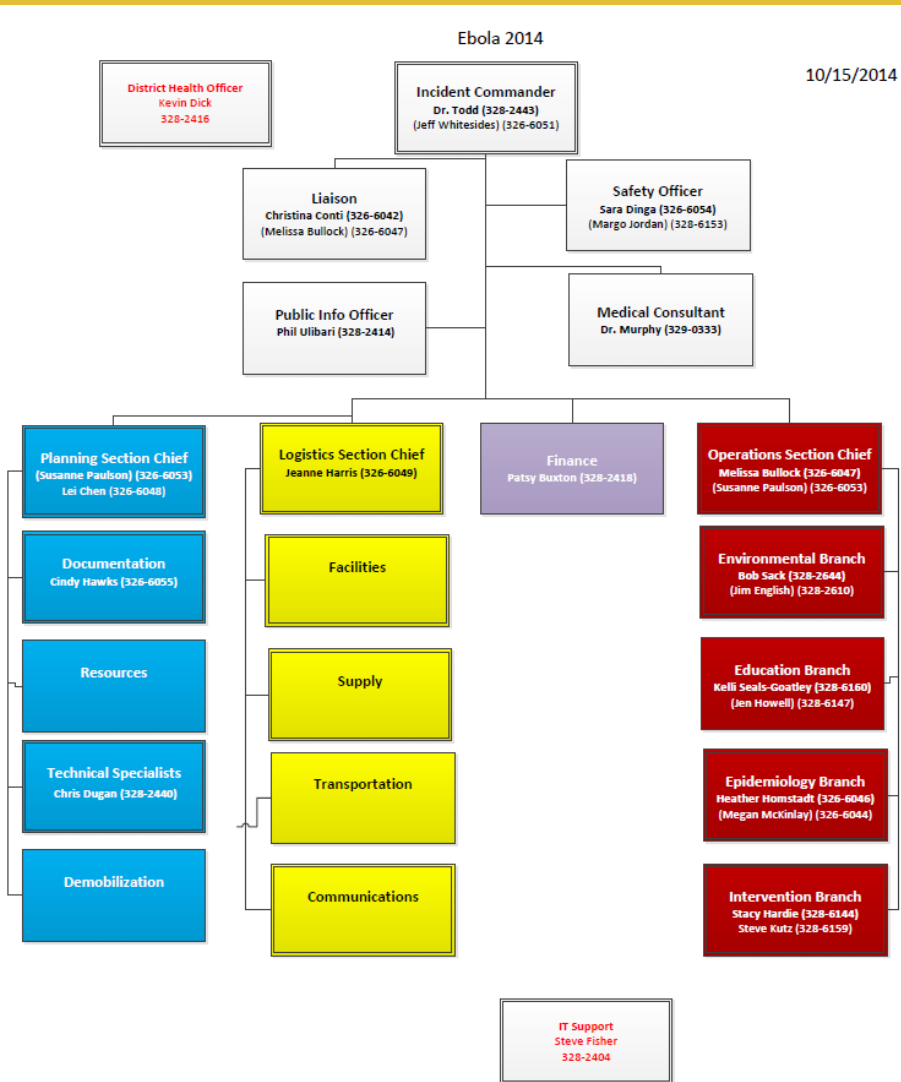
Hello, and welcome to the Washoe County Community Partner Ebola Meeting

The purpose of this meeting is...

- *to provide you with information and resources concerning Ebola*
- *help our community prepare their protocols for handling a potential case or suspect case of Ebola*
- *Inform you about what Washoe County Health District is doing in regards to Ebola preparedness*



# INCIDENT COMMAND SYSTEM



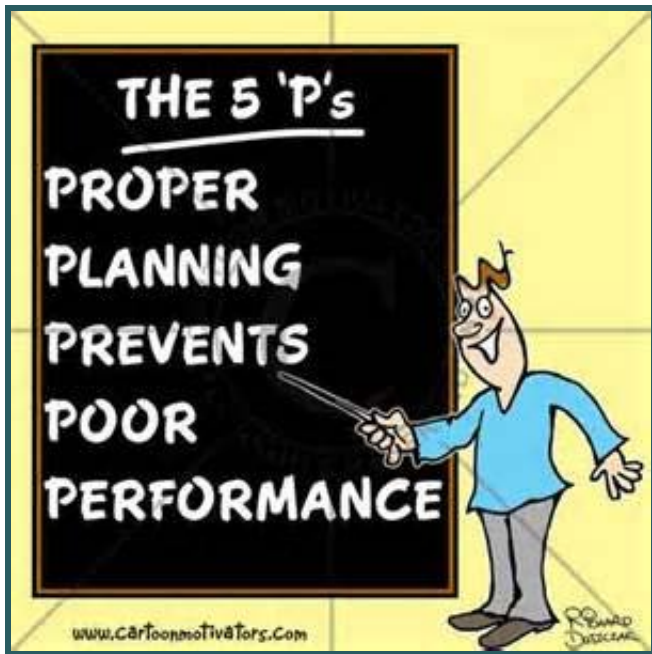
\*Names in parenthesis are deputies for those people in bold.

Choose capable people to lead!

How many people can 1 person lead well?

Not thousands...not hundreds... not fifty...  
yes, five.

# LET'S GET STARTED



## Partner Meeting Agenda:

- Ebola 101, an Overview
- Exposure Assessment and Safety
- Environmental Considerations
- Paradigms – what you hear vs what you see
- Open Floor Q&A Session



# Ebola Virus Disease

**Randall Todd, DrPH**

**Director, Epidemiology & Public Health Preparedness**

**Washoe County Health District**

- Background
- Transmission
- Current Situation
- Response and Control

# EVD Background

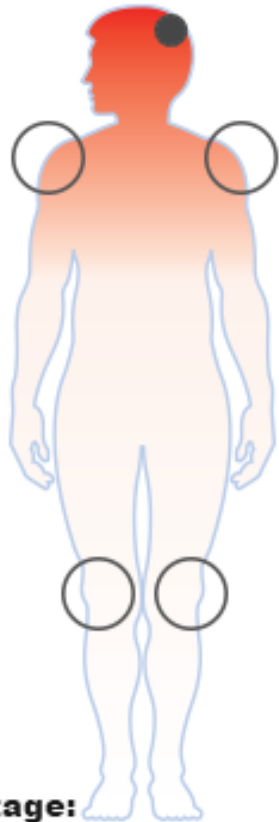
## Key Facts



- Severe, often fatal illness in humans
- Transmitted to people from wild animals  
Spreads through human-to-human transmission
- Average case fatality rate ~ 50% - Range 25% - 90%
- First outbreaks - remote villages in Central Africa
- Current outbreak in West Africa - major urban and rural areas
- Good control needs a package of interventions applied in conjunction with good risk communication.
  - Early diagnosis
  - Isolation
  - Contact Tracing
- Early supportive care improves survival
- Specific treatments still under development
- Vaccines still under development

# The Disease

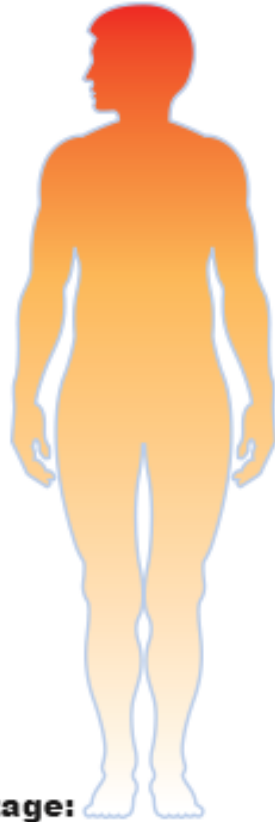
**EBOLA SYMPTOMS:** Occur 2 - 21 days after exposure, but 8 - 10 days is most common



**1st Stage:**

7 - 9 days

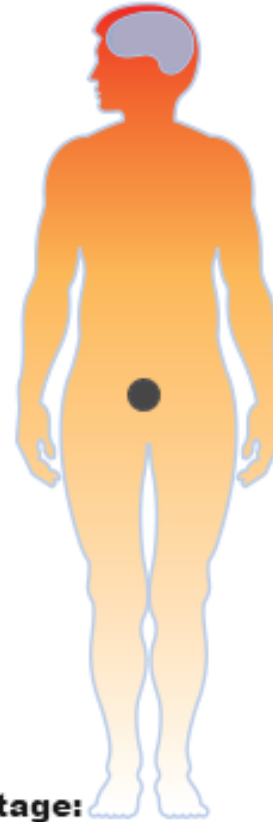
Joint pain, sore throat, fever, headache, weakness muscle soreness



**2nd Stage:**

10th day

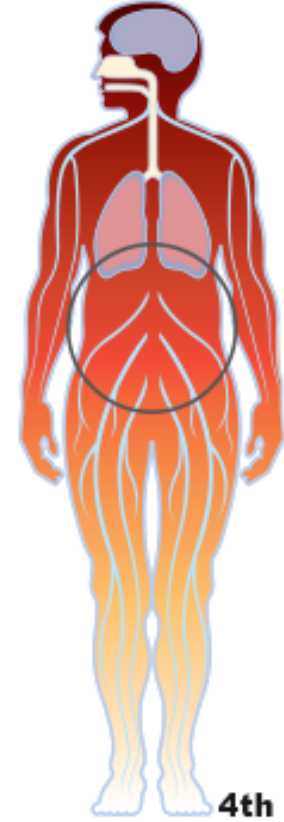
Vomiting blood, diarrhea, high fever, extreme fatigue



**3rd Stage:**

11th day

Brain damage, bleeding from nose, mouth, anus



**4th Stage:**

12th day

Coma, organ failure, shock, massive internal bleeding, death

Source: Centers for Disease Control

VGA



# Symptoms

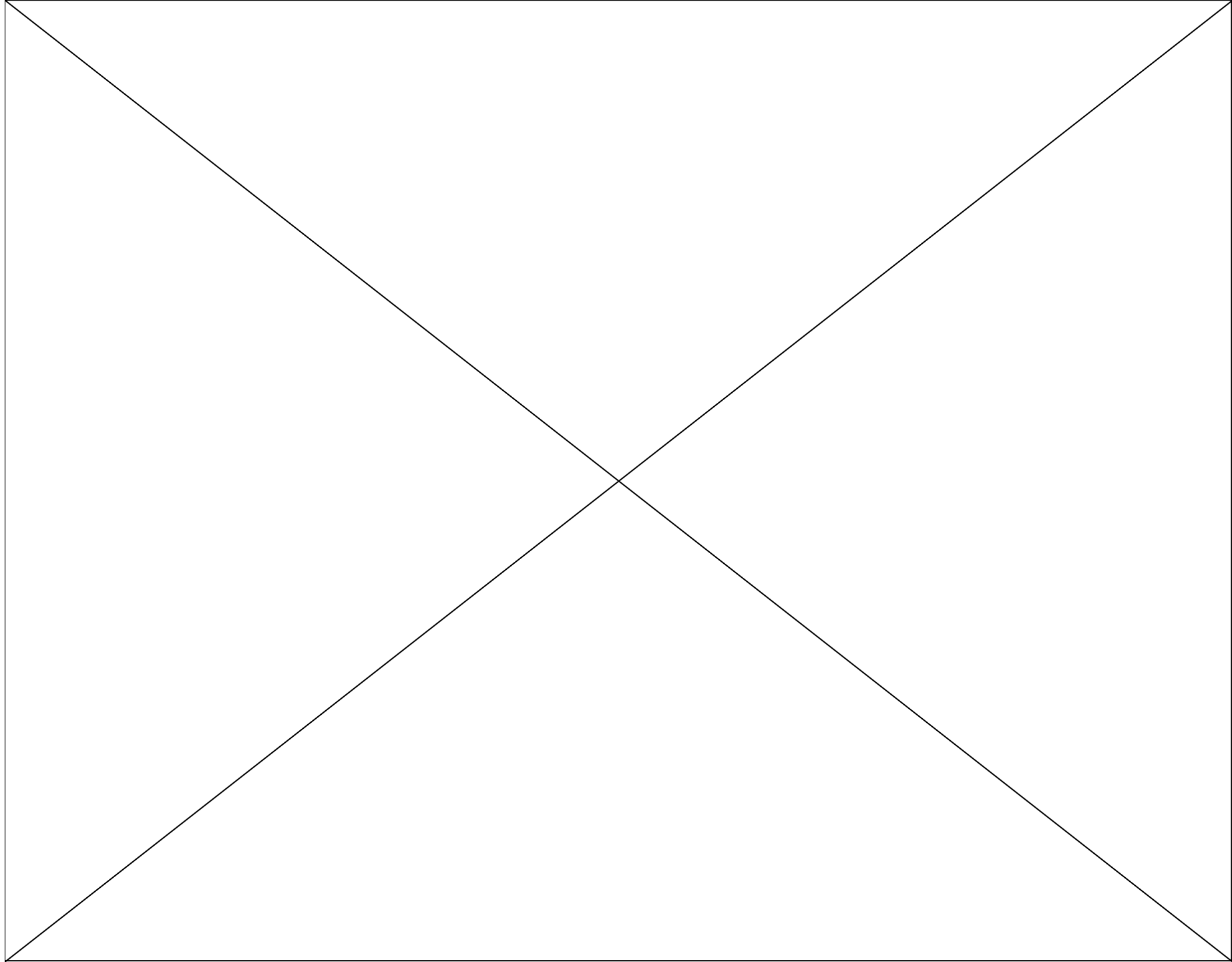
- Early



- Later

A hemorrhagic rash appears over entire body





# Exposure Risk Levels



- High Risk
  - Percutaneous or mucous membrane exposure to blood or body fluids
  - Direct skin contact with, or exposure to blood or body fluids without appropriate PPE
  - Processing blood or body fluids without appropriate PPE or standard biosafety precautions
  - Direct contact with a dead body without appropriate PPE in a country where an EVD outbreak is occurring
- Low Risk
  - Household contact
  - Other close contact in healthcare facilities or community settings
    - Being within about 3 feet of an EVD patient or within the patient's room or care area for a prolonged period of time while not wearing recommended PPE
    - Having direct brief contact (e.g., shaking hands) with an EVD patient while not wearing recommended PPE
  - Brief interactions do not constitute close contact
    - Walking by a person
    - Moving through a hospital

# Human-to-Human Transmission

- Epidemiological Evidence
  - Transmission Opportunities
    - Pts with vomiting – 67.6%
    - Pts with diarrhea – 65.6%
    - Pts with bleeding – 18%
    - Death vs survival – RNA copy levels 2  $\log_{10}$  higher
  - Kikwit 1995
    - 27 Primary EVD cases
    - 173 household contacts
      - 95 with direct physical contact
        - » 28 developed EVD
      - 78 with no direct physical contact
        - » 0 developed EVD

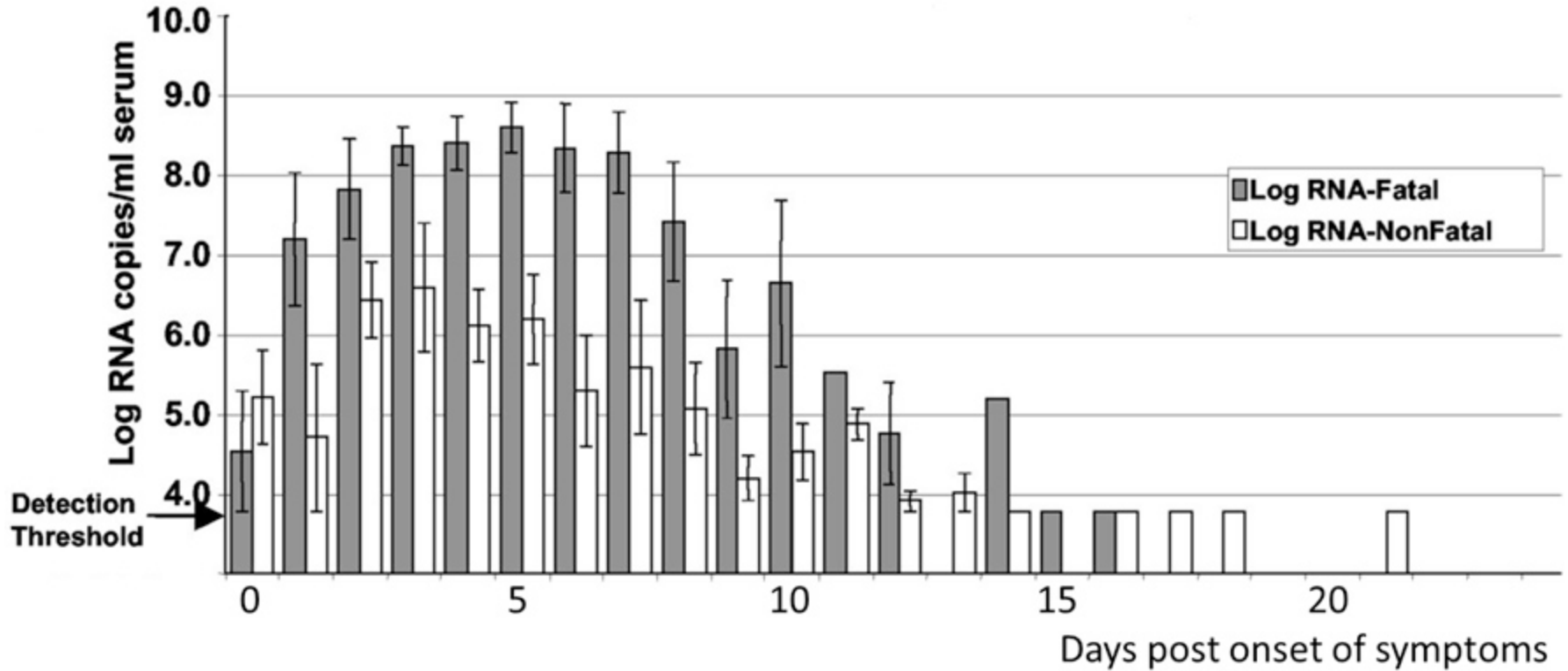
# Human-to-Human Transmission

- Kikwit 1995
  - 315 case patients – 80(25%) healthcare workers
    - All HCW patients without adequate contact precautions
    - After barrier precautions – only 1 additional HCW case
      - Inadvertently rubbed eyes with soiled glove
- Bundigbugyo – 2007-2008
  - 14 HCW patients before precautions
  - 0 HCW patients after precautions
- Laboratory Data
  - Detectable levels at symptom onset to 3 days after symptom onset
  - Virus levels increase logarithmically

# Human-to-Human Transmission

- Airborne Transmission
  - Hypothesized but not demonstrated in humans
  - Kickwit 1995
    - 12 of 316 EVD patients without high risk contact
      - EVD not lab confirmed
      - 10 of 12 were interviewed by surrogates
    - Presence of cough did not predict 2<sup>0</sup> household cases

# Viral Levels



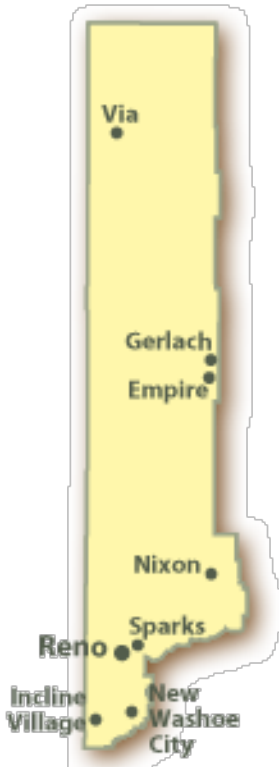
# PPE for Healthcare Workers

- Repeated training
- Demonstrated competency
  - Infection control practices and procedures
  - Donning / doffing proper PPE
- No skin exposed
- Onsite manager at all times
  - Each step of donning / doffing overseen by trained observer
- Designated areas for PPE Donning / Doffing





# Current Situation in Washoe County



- No confirmed cases of EVD
- No probable cases of EVD
- No PUIs
- One County Resident with a very low risk of potential exposure
  - Active monitoring
  - Restricted movement

# Control Measures

- Rapid diagnosis
- Isolation
- Contact Tracing



# Risk Communication

- Transparent Facts on Hazards
- Management of Outrage

# Response and Control

- Phase 1
  - No confirmed or probable cases and no PUIs
  - Education and Training
  - Plan review and refinement
- Phase 2
  - One or more PUIs
  - Implementation of isolation protocols
  - Submission of specimens for testing
- Phase 3
  - One or more probable or confirmed cases
  - Continuation of isolation protocols
  - Contact tracing and possible quarantine



# Phase 1 Activities



- Physician alerts
- Legal review
  - Isolation
  - Quarantine
- Meetings
  - EMS
  - Infection Preventionists
  - Other organizations
- Protocols and checklists
- Hospitals
  - Lab TTx
- ICS Coordination

# EBOLA EXPOSURE ASSESSMENT & SAFETY

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*Lei Chen, Ph.D., Sr. Epidemiologist*

*Melissa Bullock, Epidemiologist*

*Washoe County Health District*

# Objectives

- What to assess
- How to assess
- Practice what you have just learned – Assessment of different scenarios

# Risks of Having Ebola Are Extremely Low!

- Global
  - Exit screenings at 3 West African Countries (Guinea, Liberia, Sierra Leone)
- National
  - 8 cases as of 10/22/14
    - 5 acquired in West Africa and recovered
    - 3 in Texas (1 died, 2 healthcare workers in hospitals)
  - In Texas, as of 10/22, 66 people have completed surveillance and none of them had the disease and 108 are being monitored for symptoms
  - ~ 150 persons arrived in US from three affected West African countries
    - 5 airport screening
    - Active post-arrival monitoring for travelers from impacted countries (effect on 10/27/14)
- Local
  - One passenger, very low risk, being monitored and having movement restrictions

# Ebola vs. Other Communicable Diseases





# Exposure Assessment – CDC's tool

## Ebola Virus Disease (Ebola)

### Algorithm for Evaluation of the Returned Traveler



**FEVER** (subjective or  $\geq 100.4^{\circ}\text{F}$  or  $38.0^{\circ}\text{C}$ ) or compatible Ebola symptoms\* in a patient who has resided in or traveled to a country with wide-spread Ebola transmission\*\* in the 21 days before illness onset  
\* headache, weakness, muscle pain, vomiting, diarrhea, abdominal pain, or hemorrhage

NO

**Report** asymptomatic patients with high- or low-risk exposures (see below) in the past 21 days to the health department

YES

1. Isolate patient in single room with a private bathroom and with the door to hallway closed
2. Implement standard, contact, and droplet precautions (gown, facemask, eye protection, and gloves)
3. Notify the hospital Infection Control Program and other appropriate staff
4. Evaluate for any risk exposures for Ebola
5. IMMEDIATELY report to the health department

Washoe County Health District  
775-328-2447 (24/7 Line)

# Local Assessment Tool for General Business Partners

## Screening Questionnaire for Individuals Coming or Returning from West Africa

Updated by Washoe County Health District on 10/17/2014

*(This form should be filled out by agencies which are having international partners or having returned travelers from Ebola affected countries for business purposes)*

Today's Date \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_ Person who fills out this form \_\_\_\_\_

*(Following questions should be asked to those individuals coming or returning from Ebola affected countries.)*

Last Name \_\_\_\_\_ First Name \_\_\_\_\_ Gender: M F Age: \_\_\_\_ (years)

Best Contact Phone Number(s) \_\_\_\_\_

1. Are you a resident of Sierra Leone, Guinea, Liberia in West Africa?

YES  NO

If yes, which country? (Specify \_\_\_\_\_) then skip to Question 3

2. Have you had recent travel within the last month to Sierra Leone, Guinea, Liberia in West Africa?

YES  NO

If yes, which country? (Specify \_\_\_\_\_)

Travel date from \_\_\_\_\_ To \_\_\_\_\_

# Local Assessment Tool for General Business Partners

3. Have you been ill with any following symptoms within the past 3 weeks? (Y=Yes, N=No)

|                        |                            |   |
|------------------------|----------------------------|---|
| Fever                  | <input type="checkbox"/> Y | <input type="checkbox"/> N (If measured, max. temperature_____) |
| Severe Headache        | <input type="checkbox"/> Y | <input type="checkbox"/> N                                      |
| Muscle pain            | <input type="checkbox"/> Y | <input type="checkbox"/> N                                      |
| Weakness               | <input type="checkbox"/> Y | <input type="checkbox"/> N                                      |
| Vomiting               | <input type="checkbox"/> Y | <input type="checkbox"/> N                                      |
| Abdominal pain         | <input type="checkbox"/> Y | <input type="checkbox"/> N                                      |
| Diarrhea               | <input type="checkbox"/> Y | <input type="checkbox"/> N                                      |
| Unexplained hemorrhage | <input type="checkbox"/> Y | <input type="checkbox"/> N                                      |

If you have any of above symptom, please indicate the first symptom(s) you experienced\_\_\_\_\_

Onset date of first symptom \_\_\_\_\_

Individuals answering yes to question 1 or 2 and yes to any symptom in question 3 should IMMEDIATELY consult with a healthcare provider and report to Washoe County Health District at 775-328-2447. It is important to inform the healthcare provider about any symptoms and travel history before going to the medical facility. Individuals who have answered no to all of the questions in question 3 should continue to monitor their health status for fever or other symptoms for 21 days after arrival. Individuals should self-measure their temperature twice a day. Call their healthcare provider immediately once symptoms develop and notify WCHD immediately.

# Safety Measures – Tips

- Avoid any face-to-face contact if any assessments can be performed on the phone or via other venues.
- If face-to-face contact can not be avoided, keep a minimum of 3 foot distance.
- If persons are not sick, no safety measures are needed. However, some diseases can be transmitted from asymptomatic persons such as influenza, always practice good hand hygiene.
- If contact with any sick persons cannot be avoided, always take STANDARD precaution.

# Safety Measures

## Always Use Standard Precaution!

### STANDARD

Applies to all patients/residents regardless of infection status



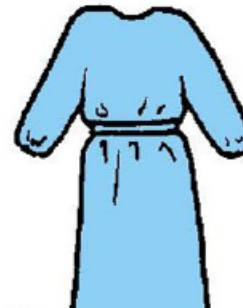
#### Hand Hygiene

Wash hands or use alcohol-based hand rub before & after patient/resident contact, after contact with objects or surfaces in the patient/resident's immediate vicinity, and after removing gloves (if worn).



#### Gloves

**If contact with blood or body fluids may occur.**  
Do not wash gloves or wear same pair for the care of more than one person. Discard before leaving area of the patient/resident.



#### Gown

**If contact with blood or body fluids may occur.**  
Do not reuse. Discard before leaving the area of the patient/resident.



#### Mask/Eye Protection

**If contact with blood or body fluids may occur.**

# Exposure Assessment Exercise - Scenario (1)

## Question:

One of my employees just returned from Liberia yesterday, he is not sick and has no symptoms. Can I allow him to return to work? What do I need tell him?

## Answer:

- Yes, okay to work.
- Provide this person's name and contact information to WCHD at 775-328-2447 for 21 day temperature and symptom monitoring.

## Exposure Assessment Exercise - Scenario (2)

### Question:

My child just became sick after he stayed with a family friend who recently traveled to West Africa. The friend is not ill. Is it possible for my child to get Ebola?

### Answer:

No.

## Exposure Assessment Exercise - Scenario (3)

### Question:

I have an employee who was a volunteer nurse in Liberia to help combat Ebola. She returned to the U.S. on 9/24/14. She became ill with fever and headache on 10/23/14, is she infected with Ebola?

### Answer:

No, if she does not have additional exposures to Ebola in the United States. The longest incubation period for Ebola is 21 days, it has been a month since she left Liberia. If you are not sure, call WCHD 775-328-2447.



## Exposure Assessment Exercise - Scenario (4)

### Question:

I am a friend of a passenger who was on the Frontier Airline flight from Cleveland to Dallas with the nurse who was later confirmed to have Ebola. Am I at risk of getting Ebola?

### Answer:

No, if your friend is not sick. If your friend is sick, additional evaluation should be done by WCHD.

# Take Home Message

## - Exposure Assessment & Safety



Assist to Detect



Protect Yourself



Call Healthcare Providers for Illness

Call WCHD 775-328-2447 for questions

In the meantime, keep calm!




# Environmental Considerations

- Bob Sack
- Division Director of Environmental Health Services



# TO RECAP...

## ILLNESS HAPPENS

1. The odds that you will come into contact with a symptomatic (infectious) person with Ebola is low (but not zero), so...
  2. Be prepared
  3. Make a plan and practice it. Know who to call and where to find information.
  4. Get vaccinated, cover your cough, stay home when you're sick
- 



**THANK YOU FOR COMING  
AND  
DOING YOUR PART**

**Washoe County Health District  
Communicable Disease 24/7  
phone line: 328-2447**