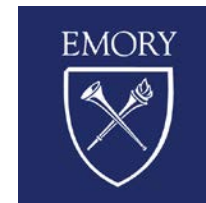


Case Presentation

Susan McLellan, MD, MPH

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Case presentation

- 60 y/o African woman presents to a local hospital in a large city in Texas with fatigue and abdominal pain for 2 days
- Limited English, accompanied by 16 y/o granddaughter
- Per history possible hypertension, not clear if taking meds
- Complains of non-specific abdominal pain, nausea, some sore throat, and headache
- Physical exam unremarkable, temperature 100.1, blood pressure normal
- Head/abdomen/pelvis CT scans unremarkable
- Complete blood count, comprehensive metabolic panel, amylase and lipase were sent and minimally off (wbc and plts lowish, LFTs up a bit)

In the ER:

- Plan: Discharge home with diagnosis of sinusitis, azithromycin
- Before discharge, repeat temp is taken: 103.2

In the ER:

- Plan: Discharge home with diagnosis of sinusitis, azithromycin
- Before discharge, repeat temp is taken: 103.2
- Revised plan: admit, start on ceftriaxone and vancomycin, send blood, urine, throat cultures

Next morning, on the floor

- Still febrile, has had 1 episode of vomiting and diarrhea but better after Zofran
- Intern assigned to ID team calls her home number and gets some history from patient's son
 - Arrived last week from Kampala, Uganda
 - Was helping to care for sick brother there, who died without going to the hospital. Came to US 3 days after funeral.
 - Was supposed to go stay with daughter in Lake Charles but decided to stay with son in Texas a few days ago

Ebola Virus Outbreaks by Species and Size, Since 1976

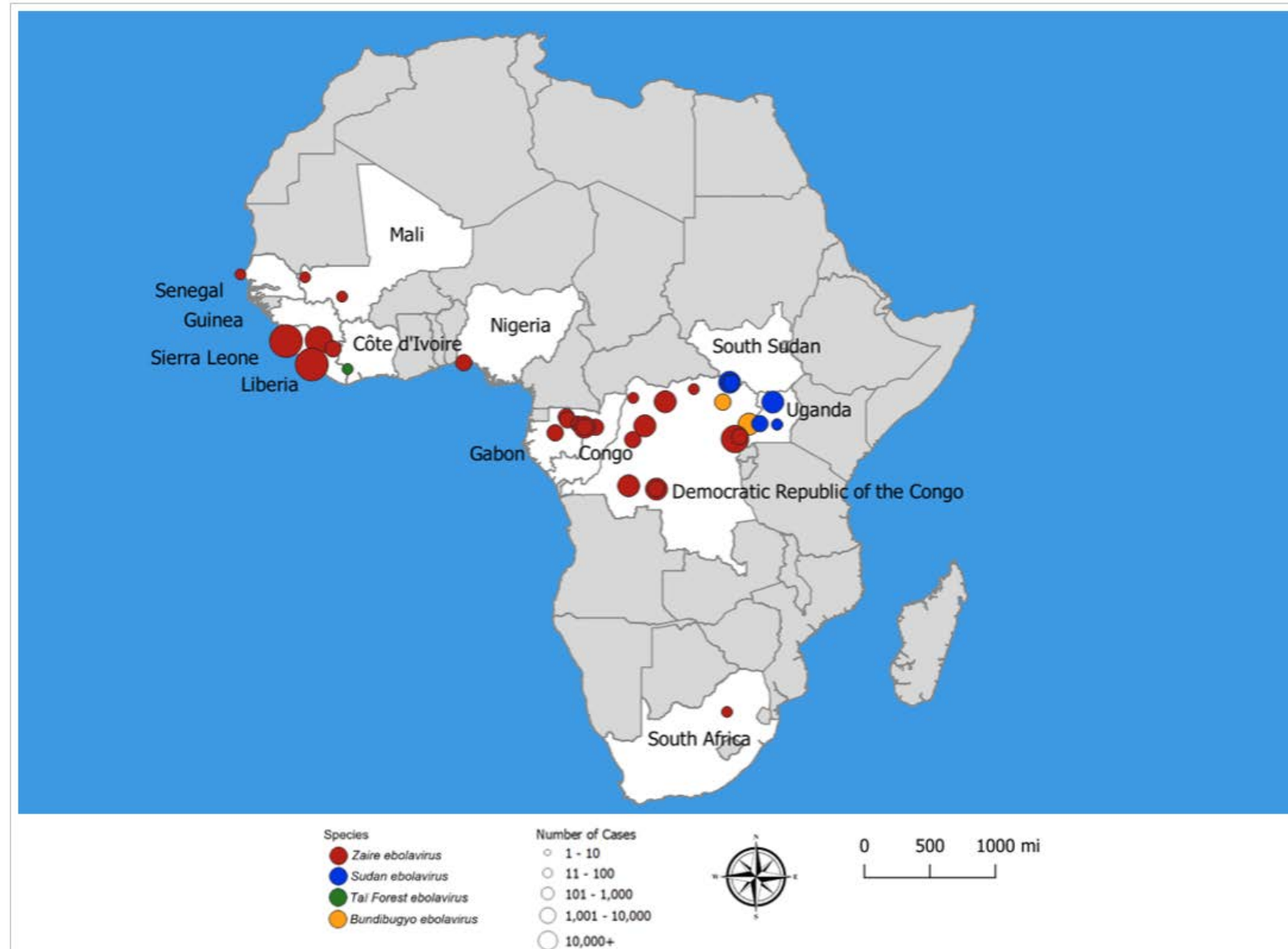
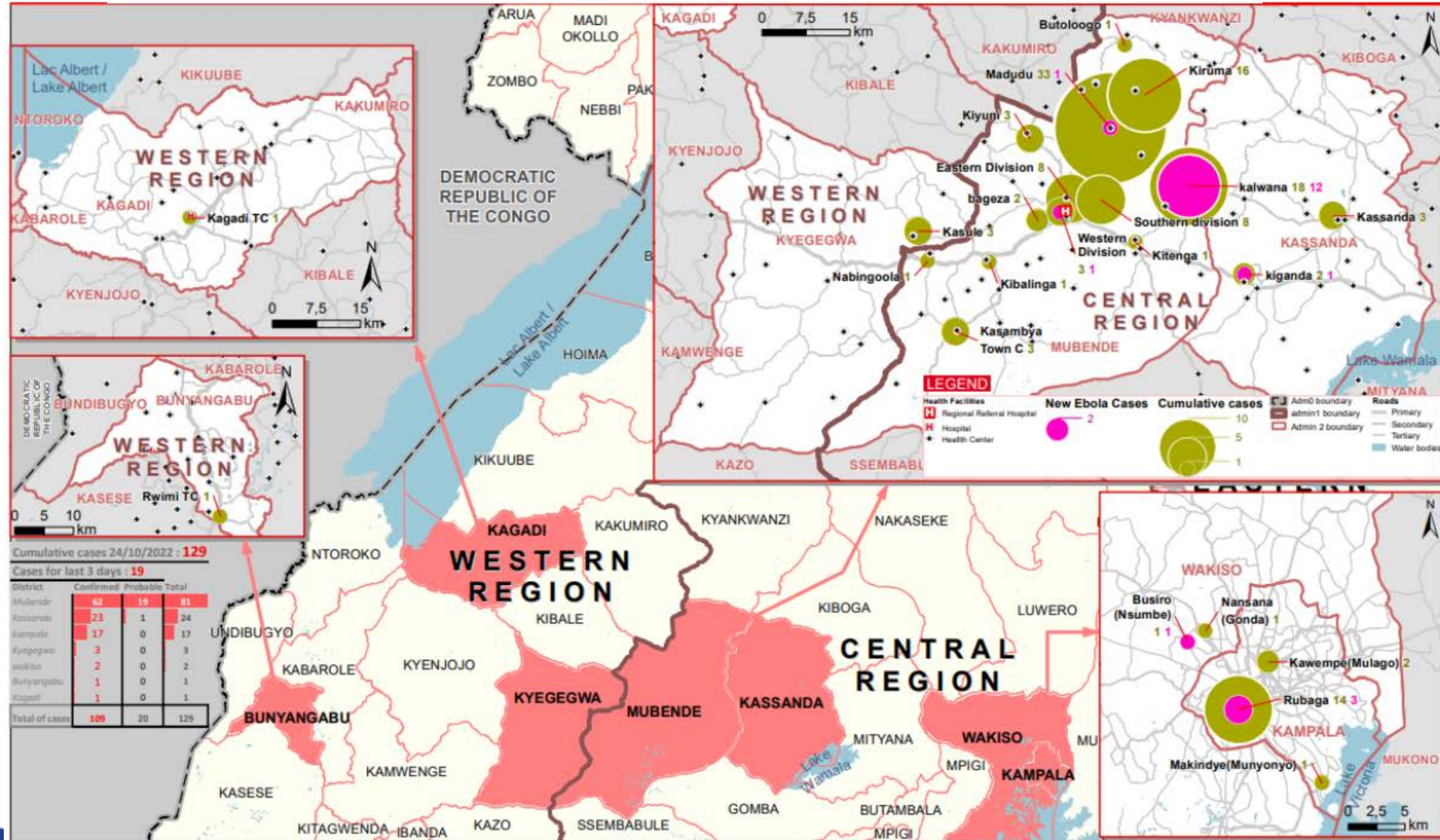


Figure 2: Place analysis of affected persons by district and sub-county



Ebola Virus Ecology and Transmission

Ebola virus disease is a zoonotic disease. Zoonotic diseases involve animals and humans.

Animal-to-Animal Transmission

Evidence suggests that bats are the reservoir hosts for the Ebola virus. Bats carrying the virus can transmit it to other animals, like apes, monkeys, and duikers (antelopes), as well as to humans.

Spillover Event

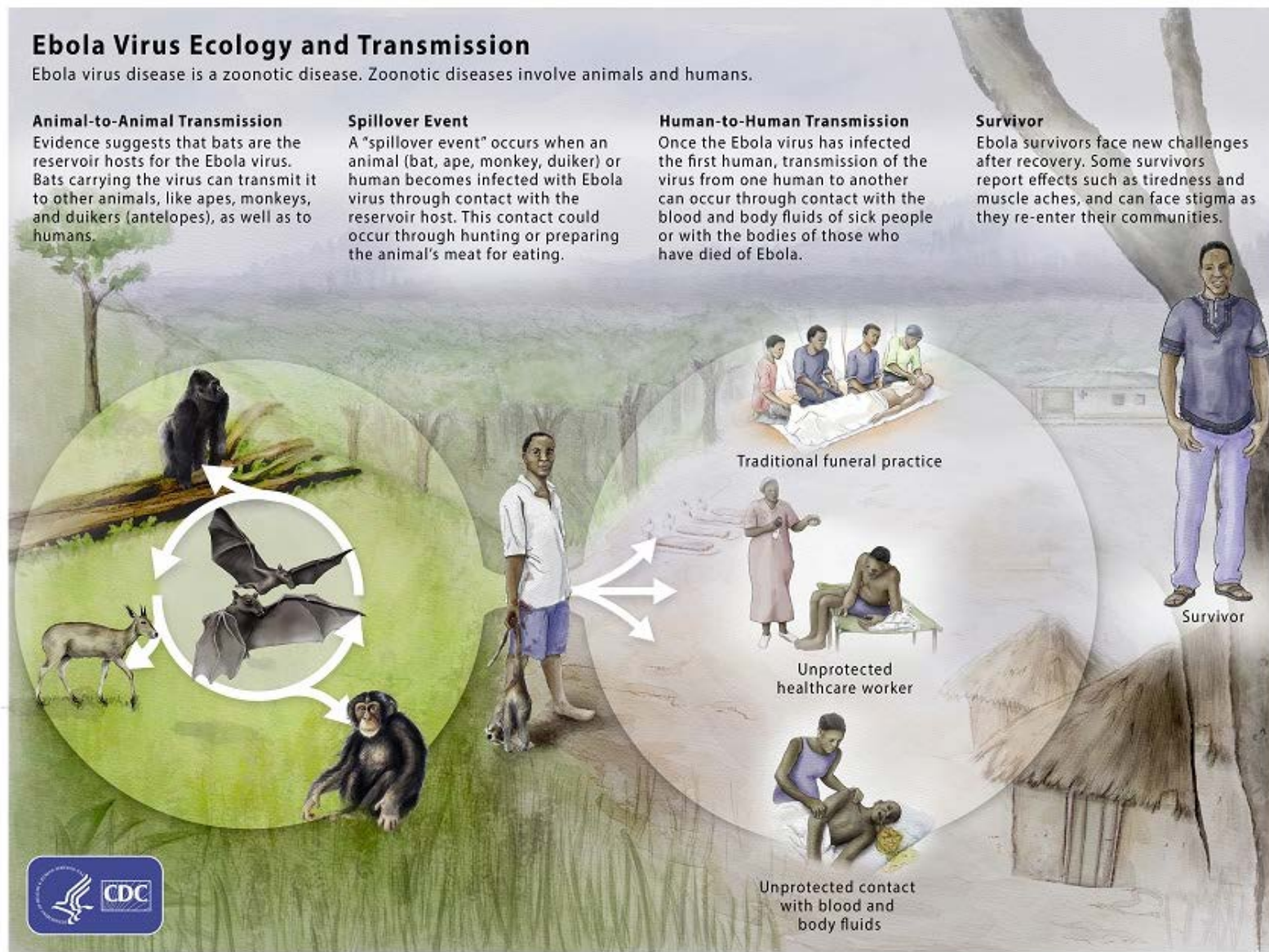
A "spillover event" occurs when an animal (bat, ape, monkey, duiker) or human becomes infected with Ebola virus through contact with the reservoir host. This contact could occur through hunting or preparing the animal's meat for eating.

Human-to-Human Transmission

Once the Ebola virus has infected the first human, transmission of the virus from one human to another can occur through contact with the blood and body fluids of sick people or with the bodies of those who have died of Ebola.

Survivor

Ebola survivors face new challenges after recovery. Some survivors report effects such as tiredness and muscle aches, and can face stigma as they re-enter their communities.



Ebola Sudan: Clinical

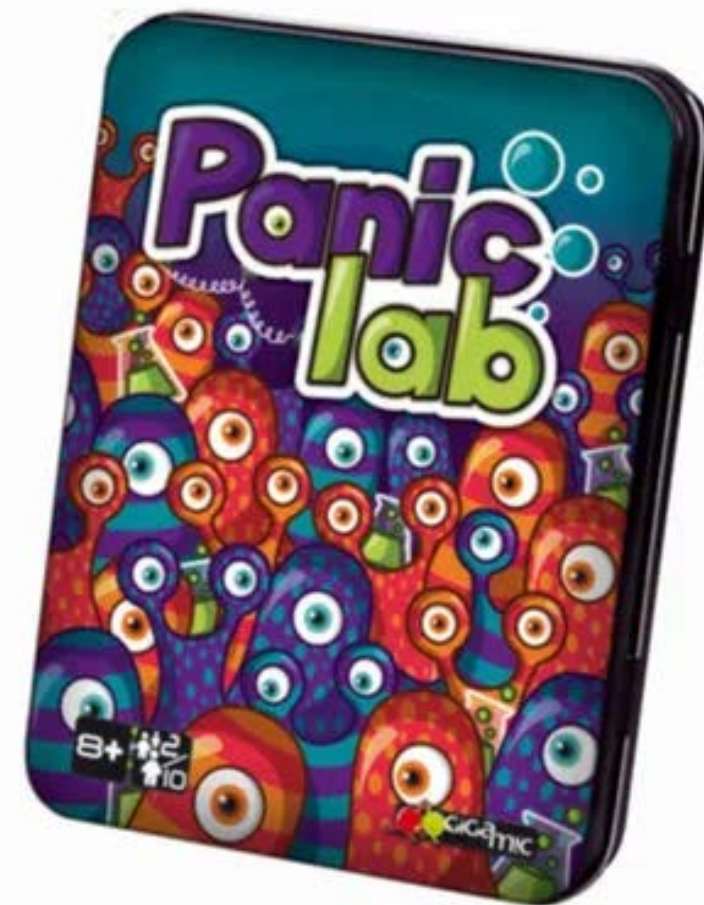
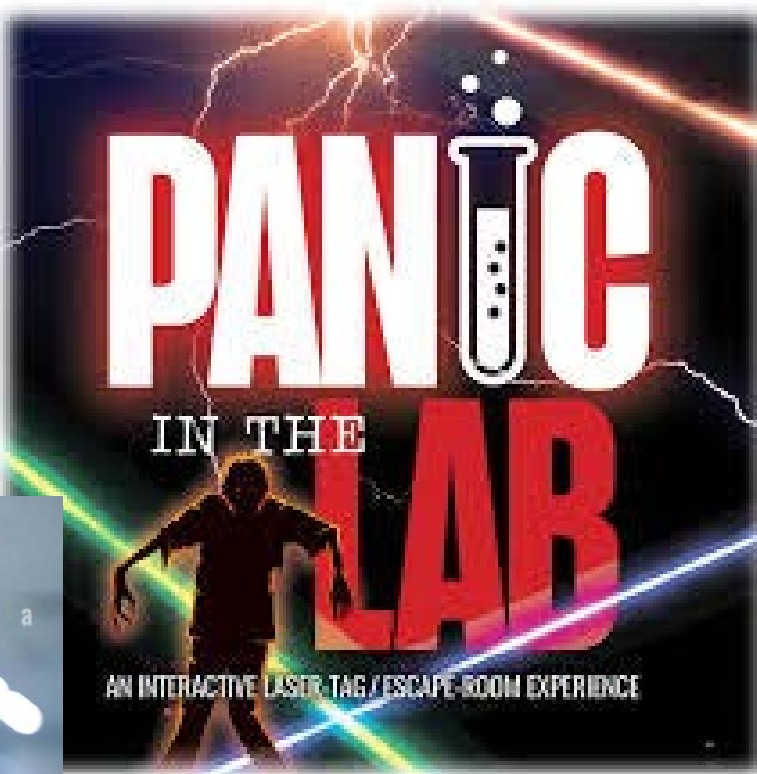
- VHF similar to Ebola Zaire
- Fewer outbreaks – so we know less
 - 7 prior outbreaks
- Case fatality ratio reported as 41-100%
 - Currently about 50% (fatal/(fatal + recovered))
- Approved mAb therapies don't treat
- Approved vaccine doesn't protect
- Experimental products being investigated

Next morning, on the floor

- Enthusiastic ID team intern calls his fellow intern and recommends testing for malaria and Ebola
- Fellow intern figures out how to place a miscellaneous order and orders an Ebola test....

In the lab

- Now what????



In the lab

How to test for Ebola Sudan?

- Testing capacity in process of being ramped up

How to do necessary testing for clinical care?

- Such as that malaria smear...
- What can be done in standard clinical lab?
- What can be done in Special Pathogens Treatment Unit labs?
- What can you do without
 - Role of empiric / presumptive therapy

In the lab

What about biospecimens already sent?

- Multiple specimens already tested in core lab
 - Sent from ER via pneumatic tube system
 - Discarded tissue being held?
- Cultures pending...

How to handle / transport / dispose?

The lab people

Who's been exposed from labs already done?

- Level of risk?

Any medical response needed?

- Post-exposure prophylaxis
 - mAbs
 - vaccine

How to monitor?

- If no breach?
- If breach
- Need for quarantine?

How to protect going forward?

Dallas lab technician isolated for Ebola on cruise ship

POR TOM MALLORY | EFE

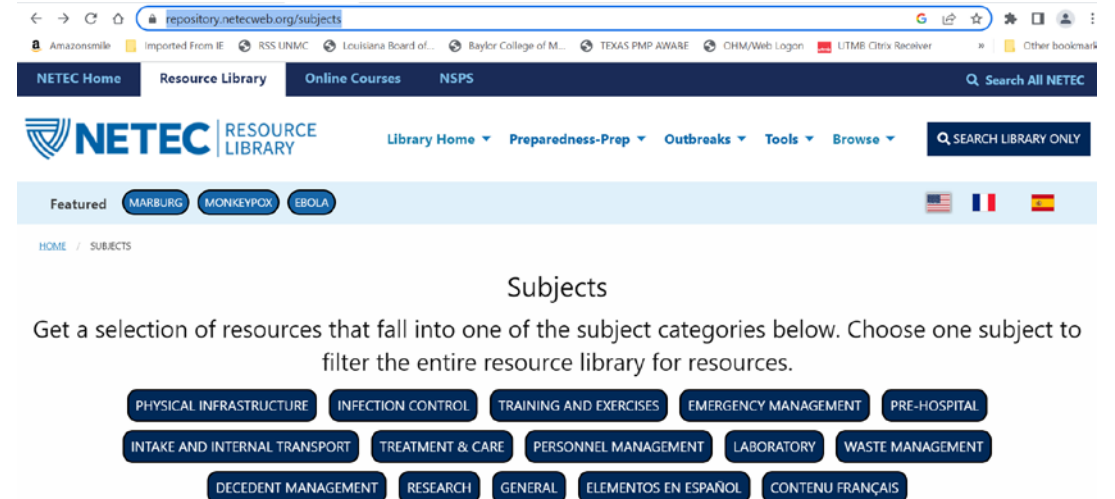
OCT. 17, 2014 3:20 PM PT

(they still can't get
quarantine vs isolate right....)



References

- <https://www.cdc.gov/vhf/ebola/laboratory-personnel/safe-specimen-management.html>
- <https://repository.netecweb.org/subjects>



The screenshot shows the NETEC Resource Library website. The browser address bar displays "repository.netecweb.org/subjects". The page features a dark blue navigation bar with links for "NETEC Home", "Resource Library", "Online Courses", and "NSPS". Below the navigation bar is the NETEC Resource Library logo and a search bar. The "Featured" section highlights "MARBURG", "MONKEYPOX", and "EBOLA". The main content area is titled "Subjects" and includes the text: "Get a selection of resources that fall into one of the subject categories below. Choose one subject to filter the entire resource library for resources." Below this text is a grid of subject category buttons: "PHYSICAL INFRASTRUCTURE", "INFECTION CONTROL", "TRAINING AND EXERCISES", "EMERGENCY MANAGEMENT", "PRE-HOSPITAL", "INTAKE AND INTERNAL TRANSPORT", "TREATMENT & CARE", "PERSONNEL MANAGEMENT", "LABORATORY", "WASTE MANAGEMENT", "DECEDENT MANAGEMENT", "RESEARCH", "GENERAL", "ELEMENTOS EN ESPAÑOL", and "CONTENU FRANÇAIS".