



**County of San Luis Obispo Public Health Department
Public Health Emergency Preparedness Program (PHEPAC) Meeting
January 5, 2017**

In attendance: Chris Anderson, Nicole Balliet, James Beebe, Kerry Boyle, George Brown, Peggy Callison, Richard Cardenas, Reanna Clayton, Diego Flores, Ashley Foyt, Christine Gaiger, Claire Grantham, Megan Harrington, Robin Hendry, Colleen Hubbard, Karen Jones, Rob Jenkins, Anita Konopa, Emma Lauriston, Steve Lieberman, Eric Martin, Ann McDowell, Scott Milner, Brenda Ouwkerk, Vince Pierucci, Susan Rainey, Teri Reeder, Sean Summerall, Jeannette Tosh, Denise Yi

For corrections/comments: email Megan Harrington mharrington@co.slo.ca.us

Call to Order	Meeting began at 10:30 with a welcome from Robin Hendry and introductions.
TOPIC	DISCUSSION
PROGRAM REPORTS	
SCOTT MILNER COUNTY OES	<ul style="list-style-type: none"> • The Electronic Patient Care Reporting System (EPCR) and Public Health Lab projects were approved through the Homeland Security Grant. • The Nuclear Power Plant (NPP) Exercise was successful for OES and all participating agencies.
DR. JAMES BEEBE PUBLIC HEALTH LAB	<ul style="list-style-type: none"> • The Laboratory Response Network (LRN) and Agents of Bioterrorism Presentation (Attached)
CHRISTINE GAIGER COMMUNICABLE DISEASE	<ul style="list-style-type: none"> • Flu is very prominent in our county. A skilled nursing facility reported 33 cases. Everyone in the facility is on antivirals. • PH Staff were affected by flu in the beginning of December. There were nine polymerase chain reaction (PCR) positive tests for the H3A Flu strain. • Isolation and Quarantine Presentation: <ul style="list-style-type: none"> ○ SOP review ○ Non Pharmaceutical Interventions (NPI) for Pan Flu and water contamination.(Top Hazards) ○ Surveillance and impact on first responders during an isolation and quarantine emergency.
VINCE PIERUCCI EMSA	<ul style="list-style-type: none"> • The Multi Casualty Incident (MCI) Plan is in the process of being approved. The Emergency Medical Care Committee (EMCC) is scheduled to approve at the committee meeting on January 19th with an implementation date of March 15, 2017.
ROBIN HENDRY PHEP REPORT	<ul style="list-style-type: none"> • We are expecting level grant funding for the 2017-2018 fiscal year. • The Public Point of Distribution (PPOD) Drill was on October 23, 2016. There were two POD sites: Colony Park in Atascadero and Arroyo Grande Women’s Center. 880 people were vaccinated. • Special thanks to Atascadero City Fire and Five Cities Fire for supporting the PPOD drill.
DENISE YI HPP REPORT	<ul style="list-style-type: none"> • The Statewide Medical and Health Exercise (SWMHE) was on November 17, 2016. All four hospitals participated. PHEP and OES staff supported hospitals by participating as controllers and evaluators.

Public Health Emergency Preparedness Program Advisory Committee PHEPAC Minutes 01/05/2017

<p>ROBIN HENDRY COMMUNICATIONS</p>	<ul style="list-style-type: none"> • There were three California Health Alert Network (CAHAN) State drills: <ul style="list-style-type: none"> ○ Statewide Medical and Health Exercise: 100% response. ○ Pharmaceutical: 56% response. ○ State Fire: 52% response. • Created a GIS map with a Protective Action Zone (PAZ) overlay of hospitals, residential care facilities, and long term care facilities.
<p>UP COMING EVENTS</p>	<ul style="list-style-type: none"> • January 12, 2017: CHEMPACK Tabletop Exercise at Sierra Vista Regional Medical Center. Please RSVP to Megan Harrington; mharrington@co.slo.ca.us see flyers. • January 18, 2017: Medical Reserve Corps Orientation 5:30pm - 7:00pm see flyers. • February 15, 2017: OES/ SLA NPP dress rehearsal decontamination patient transport to French Hospital. • March 29, 2017: OES/SLA NPP evaluated decontamination patient transport to French Hospital.
<p>ROUND TABLE</p>	<ul style="list-style-type: none"> • E. Lauriston: Sierra Vista Regional Medical Center has hired a Program Project Manager. • Dr. J. Beebe: Public Health Lab will purchase a DNA Sequencer through Homeland Security Grant. • K. Jones: Fire panel in north county nursing home is broken. Requested a list of current fire department contacts. • N. Balliet: Camp Roberts is encouraging all of their troops to get a Flu vaccination. • S. Milner: County Fire obtained ballistic vests and helmets through the Homeland Security funding. • S. Lieberman: Expecting many staff changes over the next few months. • K. Boyle: Jeff Gator has retired and SLO City Fire is welcoming Keith Aggson as his replacement.
	<ul style="list-style-type: none"> • Next PHEPAC Meeting: Thursday April 6, 2017 at 10:30 am CHP Coastal Division Headquarters, 4115 Broad Street, #B-10, San Luis Obispo, CA
<p>ADJOURN</p>	<ul style="list-style-type: none"> • The meeting adjourned at 11:45 am

The Laboratory Response Network (LRN) and Agents of Bioterrorism

James L. Beebe PhD, D(ABMM)

Laboratory Director

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Bioterrorism Agents

- Anthrax
- Brucellosis
- Cholera
- Meliodiosis/Glanders
- Plague
- Tularemia
- Q-fever
- Viruses
 - Smallpox (Variola)
 - VEE
 - VHF (Ebola+)
- Biologic Toxins
 - Botulinum toxin
 - Staph Enterotoxin-B
 - Ricin
 - T-2 Mycotoxins

LRN responses-other threats

- Chemicals and Radiologics—State Laboratory
- Other bio agents
 - SARS Corona virus 2003-04
 - Influenza A H1N1 2009-2010
 - MERS Corona virus 2013
 - Ebola 2013-2015
 - Enterovirus D68
 - Chikungunya-Dengue-Zika 2016

If a BT agent is being used how would we know?

➤ Medical Community

- Dramatically fatal infections and intoxications
- Veterinarians and agriculture too.
- Clinical Laboratories recover a “BT” agent
- Physicians and Hospital report cases

➤ Law Enforcement (FBI)

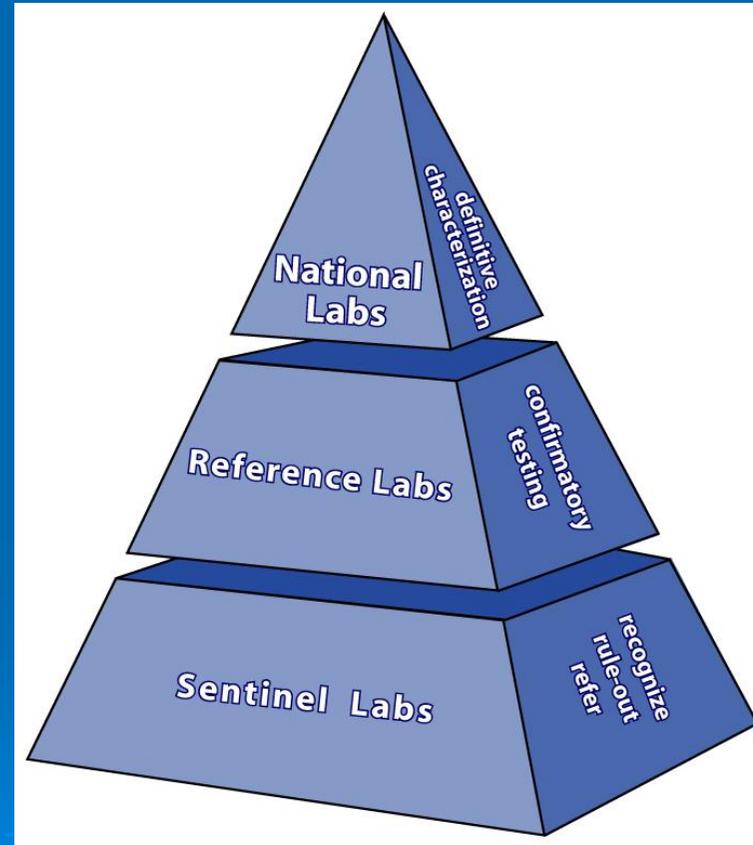
- Collect Intelligence— Identify threats – doesn't have to be a real agent to break the law
- Chase the bad guys
- Collect Forensic Evidence
- Prosecute the bad guys

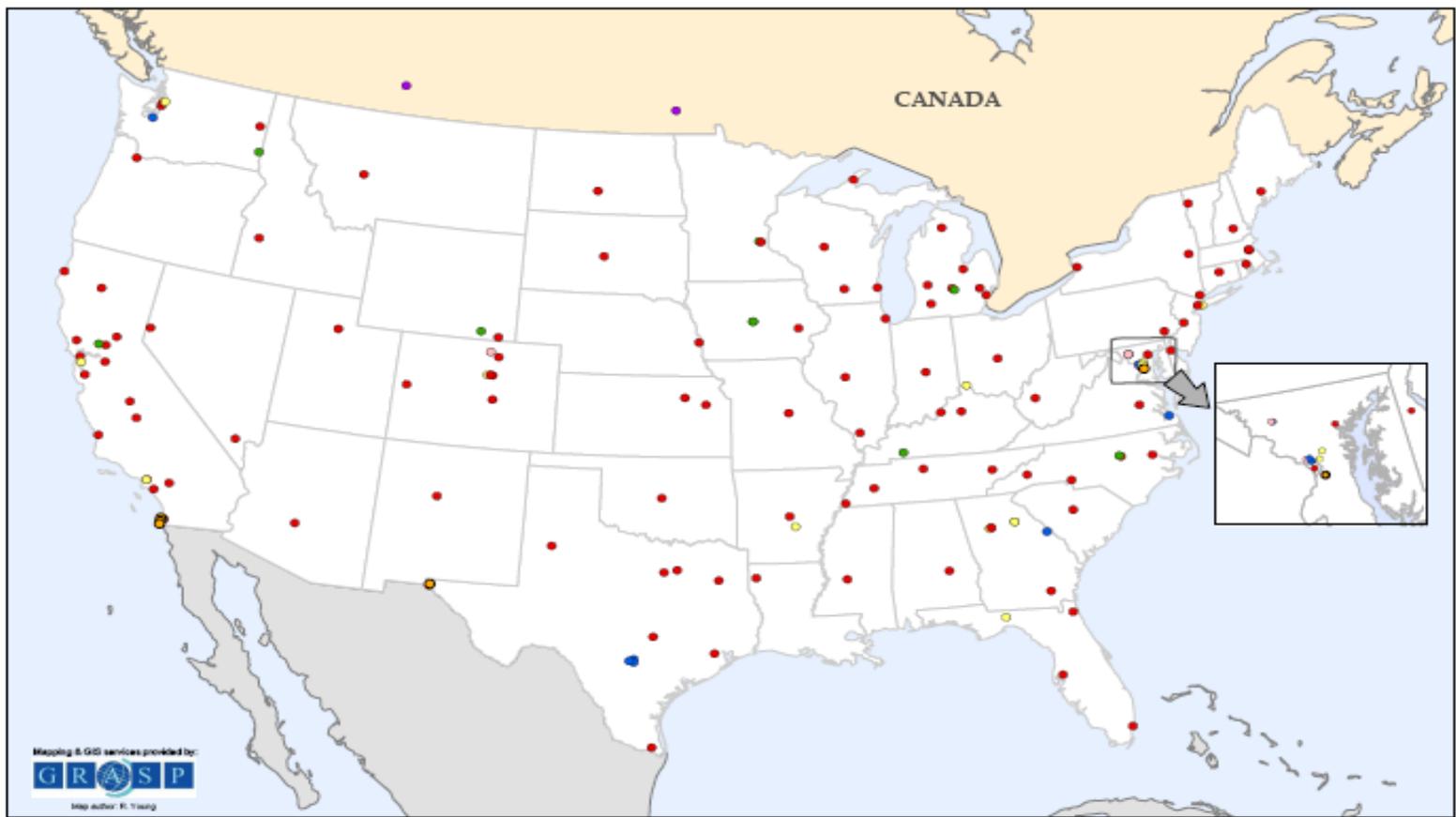
Laboratory Response Network

National Labs- CDC
(Atlanta Ga) USAMRIID
(Frederick, MD)

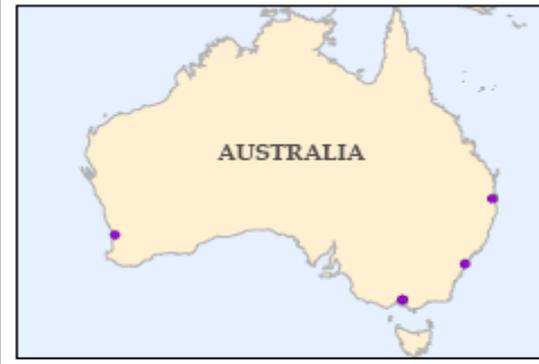
Confirmatory Labs –
State and Local Public
Health Labs – 14 in
California including SLO

Sentinel Labs – Hospital
and Clinical, Private
Reference labs, Vet, other
Diagnostic





International Locations



LRN Laboratories
April 4, 2008
n = 163

- Legend:**
- Public Health (105)
 - Military (13)
 - Federal (5)
 - Food (13)
 - Veterinary (9)
 - International (10)
 - H5 only (8)

Yersinia pestis

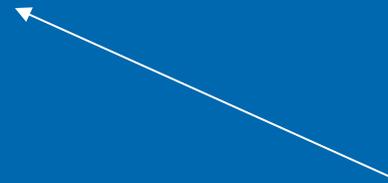
Disease: Plague



Plague—natural or sylvan cycle



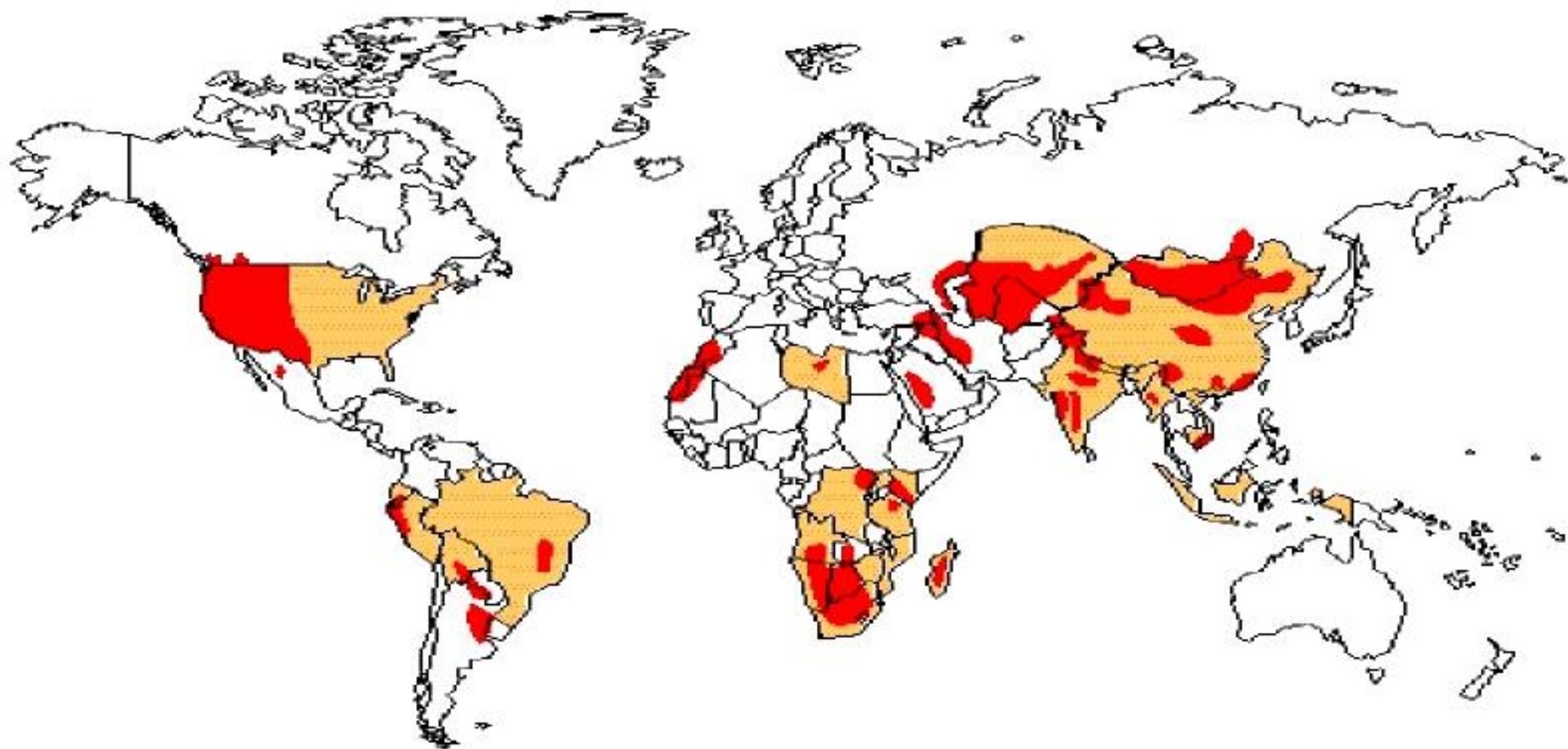
Rodents



Fleas

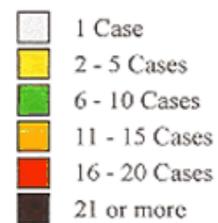
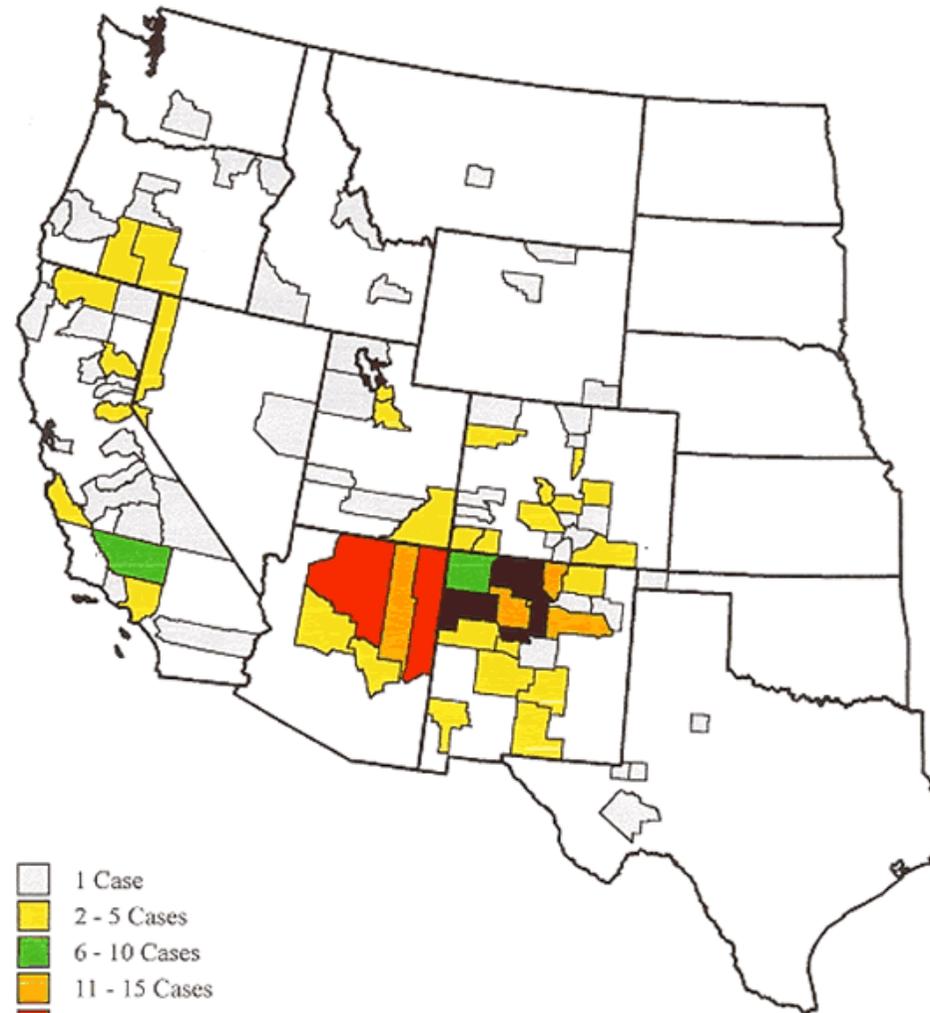


World Distribution of Plague, 1998



-  Countries reported plague, 1970-1998.
-  Regions where plague occurs in animals.

Reported Human Plague Cases by County: U.S., 1970-1997



Plague Epidemiology

- U.S. averages 13 cases/yr
- 30% of cases are in Native Americans in the Southwest. 15% case fatality rate
- Most cases occur in summer and near the patient's residence
 - **bubonic (infected lymph nodes)**
 - **septicemic (blood-borne organisms)**
 - **pneumonic (transmissible by aerosol; deadliest)**

***Bacillus anthracis* – Anthrax**



Causative agent of anthrax (Greek: black)

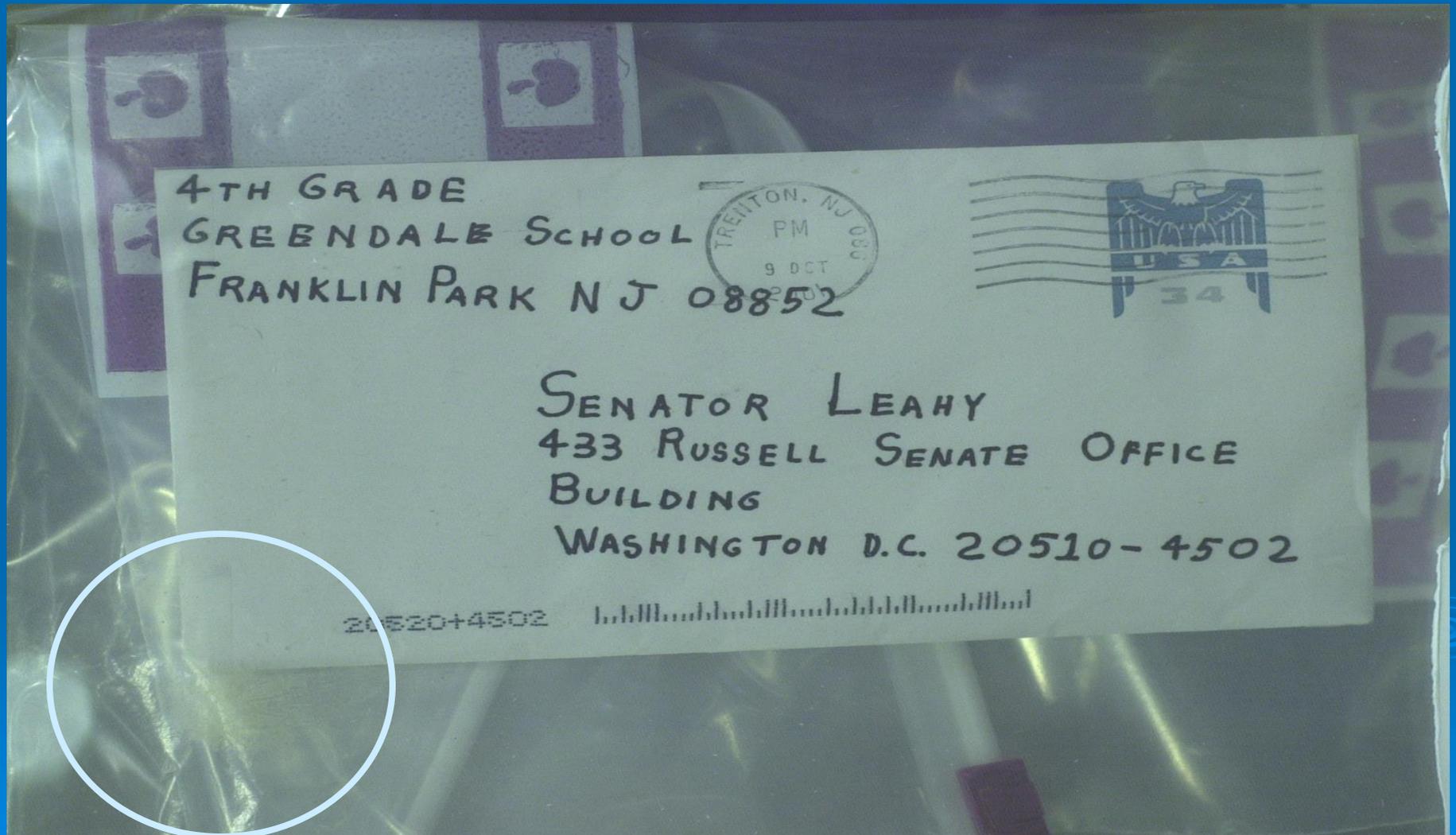
Both wild and domesticated herbivores become infected via soil-borne spores

World-wide distribution, with high risk areas including: Africa, Asia, Caribbean, South & Central America, Southern & Eastern Europe, and Middle East.

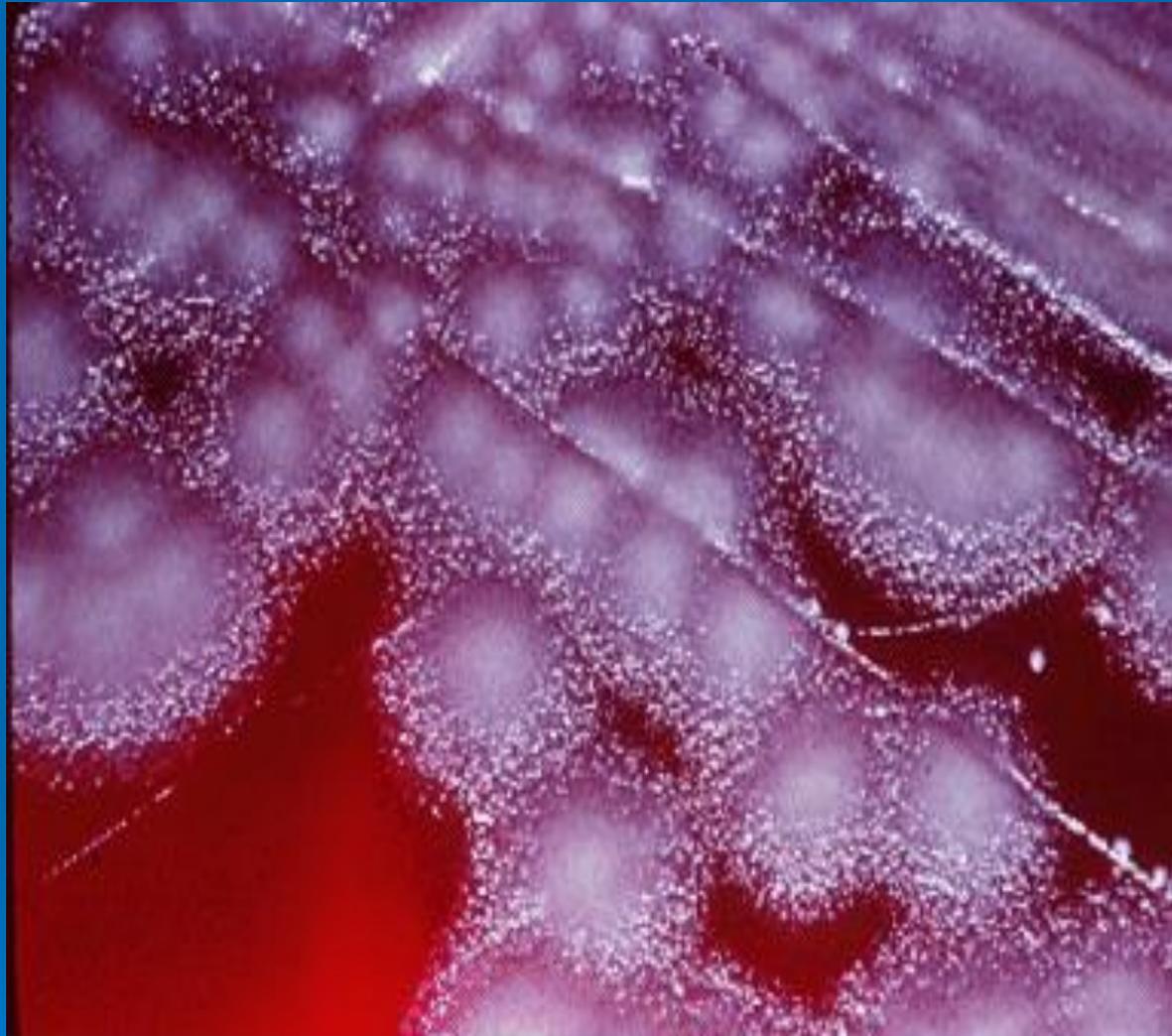
Anthrax – Clinical forms

- Three forms of human anthrax occur:
 1. **Cutaneous**- Humans become infected by handling animal products
 2. **Gastrointestinal** -Consuming contaminated meat
 - Oropharyngeal
 - Abdominal
 3. **Inhalational** (Woolsorter's Disease) - inhaling spores

Result of Sampling – Leahy Letter



Most “pristine” source of spore powder



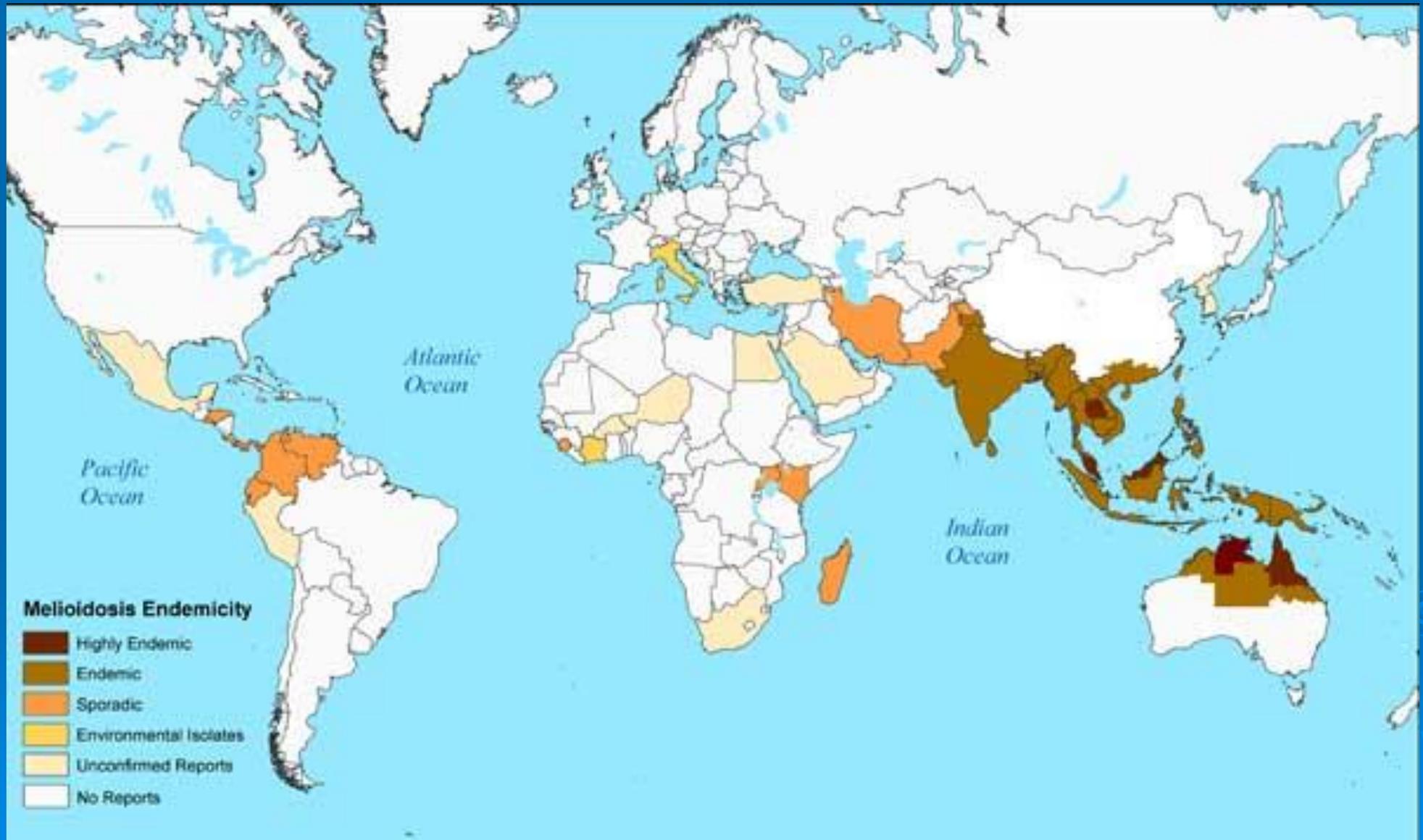
Anthrax - LRN Laboratory procedures

- PCR (2-4 hrs)
- Culture
- Gamma phage susceptibility

Melioidosis- *Burkholderia pseudomallei*

- Disease of tropics-esp SE Asia
- Contaminated water, soil
- Spread by direct contact
- Cases seen in Veterans, immigrants
- Category 2 Bioterrorism agent
- Clinically protean

Endemic areas - Melioidosis



Burkholderia pseudomallei

Laboratory Diagnosis

- GNR from blood- oxidase positive
- Wrinkled colonies– *Ps. stutzeri*??
- Rapid ID methods-unknown accuracy ???



Burkholderia pseudomallei

Blood Agar Morphology



Courtesy -Microbial Diseases Laboratory, Calif Dept Health, Dr Michael Janda



Burkholderia pseudomallei

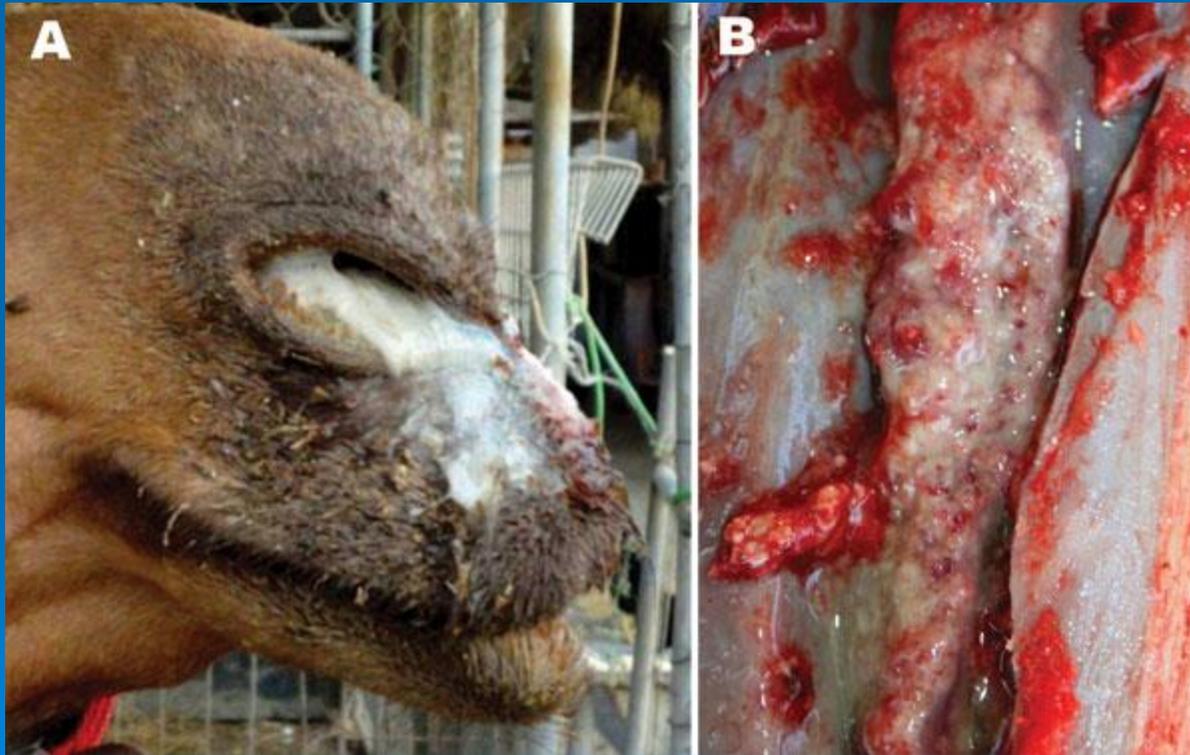
LRN Laboratory Tests

- PCR
- Culture and biochemicals



Glanders-*Burkholderia mallei*

horses, camels Bahrain, Kuwait, Lebanon,
Syria 2009-2011



Burkholderia mallei

Blood Agar Morphology

Colonies of *Burkholderia mallei*, growing on the surface of blood agar after 48 hours incubation at 35° C. The colonies are gray and round, with a smooth consistency. Since this appearance is nonspecific, further testing is required to make a definitive identification



Tularemia *Francisella tularensis*

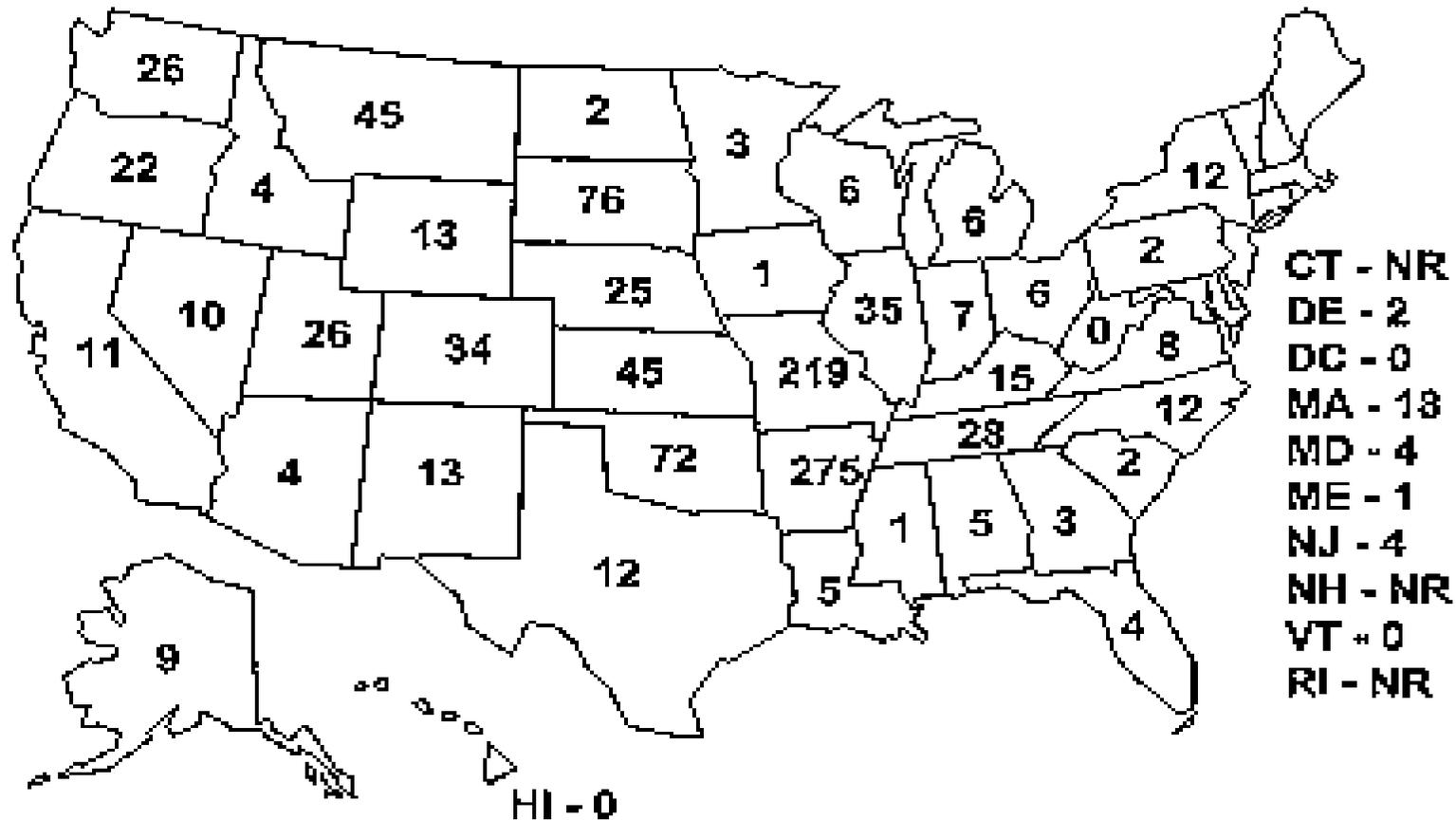


CDC:PHIL

Tularemia Clinical Forms

- **Ulceroglandular**
 - Ulcer with regional adenopathy
- **Glandular**
 - Regional adenopathy without skin lesion
- **Oculoglandular**
 - Painful purulent conjunctivitis with adenopathy
- **Typhoidal**
 - Septicemia, no adenopathy
 - Possible consideration of bioterrorism
- **Pneumonic (primary or secondary)**
 - Possible consideration of bioterrorism

Reported Cases of Tularemia 1990-1998



Smallpox

Variola virus



CDC:WHO

Variola

Smallpox virus

- Large DNA virus
- Dumbbell-shaped core
- Complex membranes



Variola

Smallpox virus

- The family *Poxviridae* consists of eight genera and a few unclassified species
- Two species are human viruses
 - **Variola virus (genus *Orthopoxvirus*)**
 - **Molluscum contagiosum virus (genus *Molluscipoxvirus*)**
- *Orthopoxvirus* includes vaccinia (a lab virus), monkeypox, cowpox, and buffalopox

Soviet Union - bioPreparat

- Weaponized smallpox virus- in tons
- USSR Breakup- B Yeltsin reported bioweapons program
- Destroyed stocks, but no records
- Freezer stocks maintained by Russia republic

Reference: "Biohazard" Ken Alibek

Pox virus testing

- Non-Variola PCR
- Pox virus PCR

RICIN-Ricinus Communis



**RICINUS
COMMUNIS**



Castor Beans



Ricin Characteristics

- Ricin can be prepared in a liquid, crystalline, or dry powder form
- Ricin is water soluble, odorless, tasteless, and stable under ambient conditions

Ricin Testing

- Time-Resolved Fluorescence Immunoassay (TRF)

LRN extras

- Influenza H1N1– H5N1 H7N9
- SARS Corona virus
- MERS Corona virus
- Ebola virus
- Zika virus (plus Dengue and Chikunguya)
- Whatever comes next.....

Questions????





COUNTY OF SAN LUIS OBISPO

Isolation and Quarantine

- Isolation and quarantine are used to protect the public by preventing exposure to infected persons or to persons who may be infected
- Two types of Isolation and Quarantine:
 - **Voluntary**- Cautionary
 - **Forced**- Many levels of government (federal, state and local) have basic authority to force isolation of sick people to protect the public



Federal Isolation and Quarantine

By Executive Order of the President, federal isolation and quarantine are authorized for these communicable diseases:

- Cholera
- Diphtheria
- Infectious tuberculosis
- Plague
- Smallpox
- Yellow fever
- Viral hemorrhagic fevers (like Ebola)
- Severe Acute Respiratory Syndrome (SARS)
- Flu that can cause a pandemic



Quarantine – The Middle Ages

- The practice of quarantine, as we know it, began during the 14th century in an effort to protect coastal cities from plague epidemics. Ships arriving in Venice from infected ports were required to sit at anchor for 40 days before landing



Isolation

- Isolation refers to the separation of people who have a specific infectious disease from those who are healthy to stop the spread of that illness.
- Isolation allows focused health care to people who are ill, and it protects healthy people from getting sick.
- In most cases, isolation is voluntary. However, many levels of government (federal, state and local) have basic authority to force isolation of sick people to protect the public
- Only caregivers are allowed to enter isolation areas



Length of Isolation

- Isolation would last for the period of communicability of the illness, which varies by disease and the availability of specific treatment.



Quarantine

- Separates and restricts the movement of people who were exposed to a contagious disease to see if they become sick
- States generally have authority to declare and enforce quarantine within their borders. This authority varies widely from state to state, depending on state laws. The Centers for Disease Control and Prevention (CDC), through its Division of Global Migration and Quarantine, also is empowered to detain, medically examine or conditionally release people suspected of carrying certain communicable diseases



Voluntary Isolation and Quarantine

Patients will be asked to :

- Stay at home
- Stay away from other people
- Check for symptoms and
- Call a doctor if they get symptoms



Public health orders for isolation and quarantine:

- The patient will have contact with the public health department
- Public health department will help facilitate getting patients the resources i.e. food, supplies, medications, they may need.



How will first responders assist with Isolation and Quarantine?

- Law Enforcement:
 - May be asked to serve official orders for isolation and quarantine
 - May be asked to enforce the official orders
- Fire:
 - May be asked to check on patients in their homes
 - May be asked to drop off supplies-fire



Who else may be impacted?

- Hospitals may be asked to admit patients that need isolation if can't be done in other settings.
- Hospital staff may be asked to work more to cover absenteeism.
- Staffing ratios may be changed.
- Skilled nursing facilities may be asked to send those home that are able to make room to isolate a person or quarantine a cluster
- If healthcare workers are exposed they may be asked to quarantine themselves at home
- Home health staff may be asked to help care with patients that need assessment or care in the home.



Non-Pharmaceutical Interventions: Contaminated Water

- Boil water
- Obtain water from alternate sources i.e. bottled water
- Educate persons on no use orders
 - washing hands, brushing teeth, showering



Non-Pharmaceutical Interventions: Pan Flu

- Social distancing: school closures, childcare closures, mass gathering cancelations
- Restriction of nonessential domestic travel to affected areas
- Hand and respiratory hygiene/cover your cough
- Mask use as indicated
- Decontamination of household surfaces



How might this affect you?

- You will be asked to report what you are seeing in the field/community- noting clusters of patients with similar symptoms
- You or your family may be affected
- Your role may change within your scope of practice

