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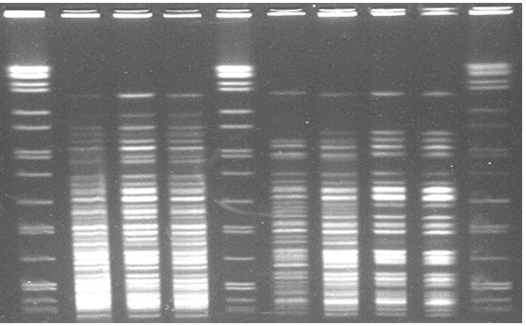

Cross-Sector Disease Detection & Investigation *Scenario-based Workshop*

Event overview

Algiers, Algeria

June 2014

Sandia National Laboratories

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Introductory Session

SNL International Biological Threat Reduction Program

Purpose of this scenario-based workshop

Expected outcomes

Review agenda

International Biological Threat Reduction

Global Health Security Program within Sandia National Laboratories

Goal: Innovative solutions for countering biological threats globally

- Promote responsible use of biological agents, equipment, and expertise globally
- Strengthen capacities to safely, securely, and responsibly detect, handle, and control dangerous biological agents
- Improve understanding and management of the risks associated with accidental and deliberate misuse of biological agents.

IBTR Core Capabilities

Laboratory biorisk management

Biological threat identification and analysis

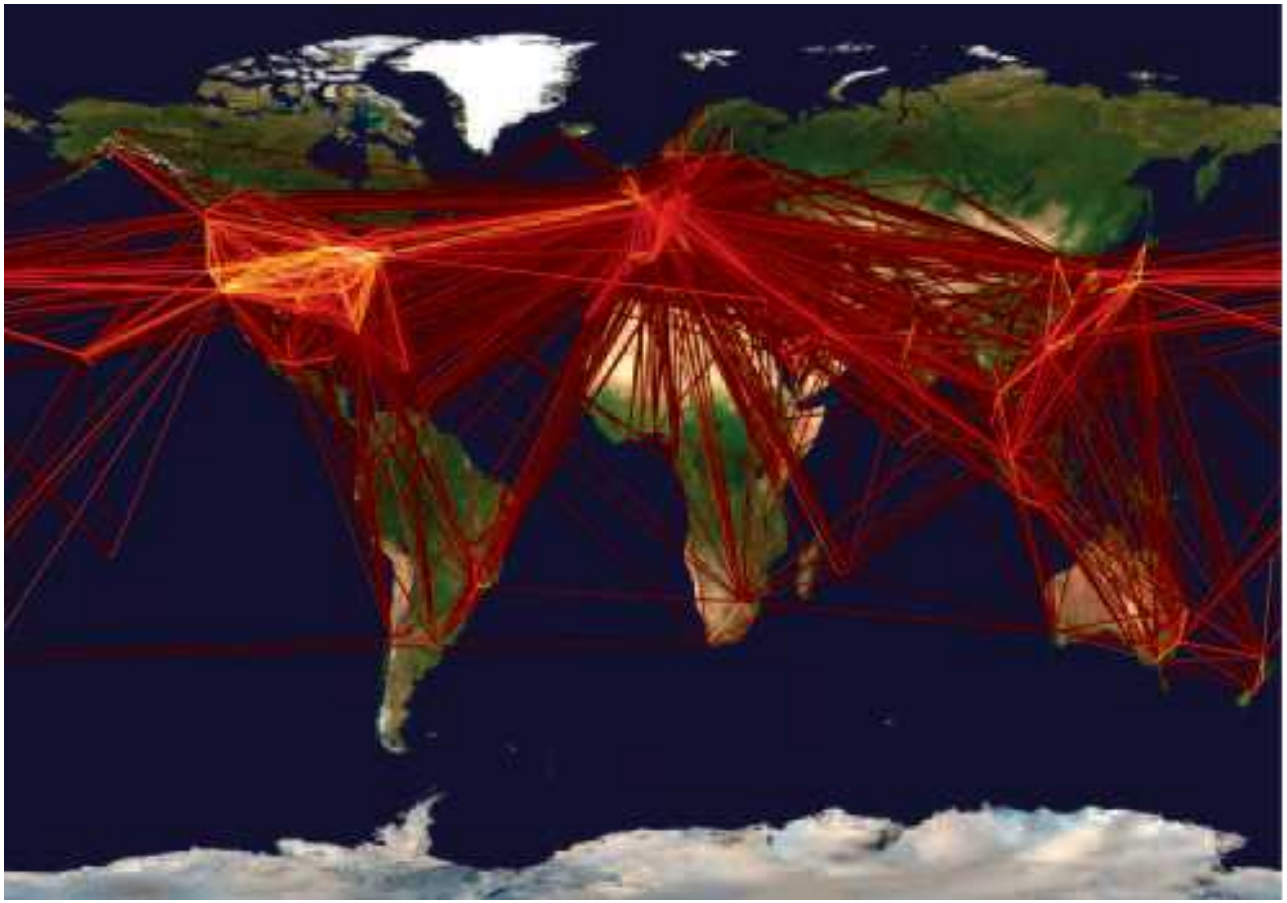
Capacity building and outreach

Building safer and more secure biomedical capabilities

BEP

CDC

Global Health Security



Biological incidents, public and animal health emergencies do not recognize or stop at international borders

Hufnagel, et al. Forecast and control of epidemics in a globalized world. *Proc Natl Acad Sci USA*. 2004. Oct 19, 2004; 101 (42):15124-15129

Zoonotic disease surveillance matters

Early detection of health hazards

Improved disease detection & response from interdisciplinary communication, collaboration

Prevention of infectious diseases transmission

…save lives, protect communities, safeguard economies

http://www.onehealthinitiative.com/publications/Practicing%20One%20Health%20Human%20Health%20Care%20Providers%20April%202012.pdf

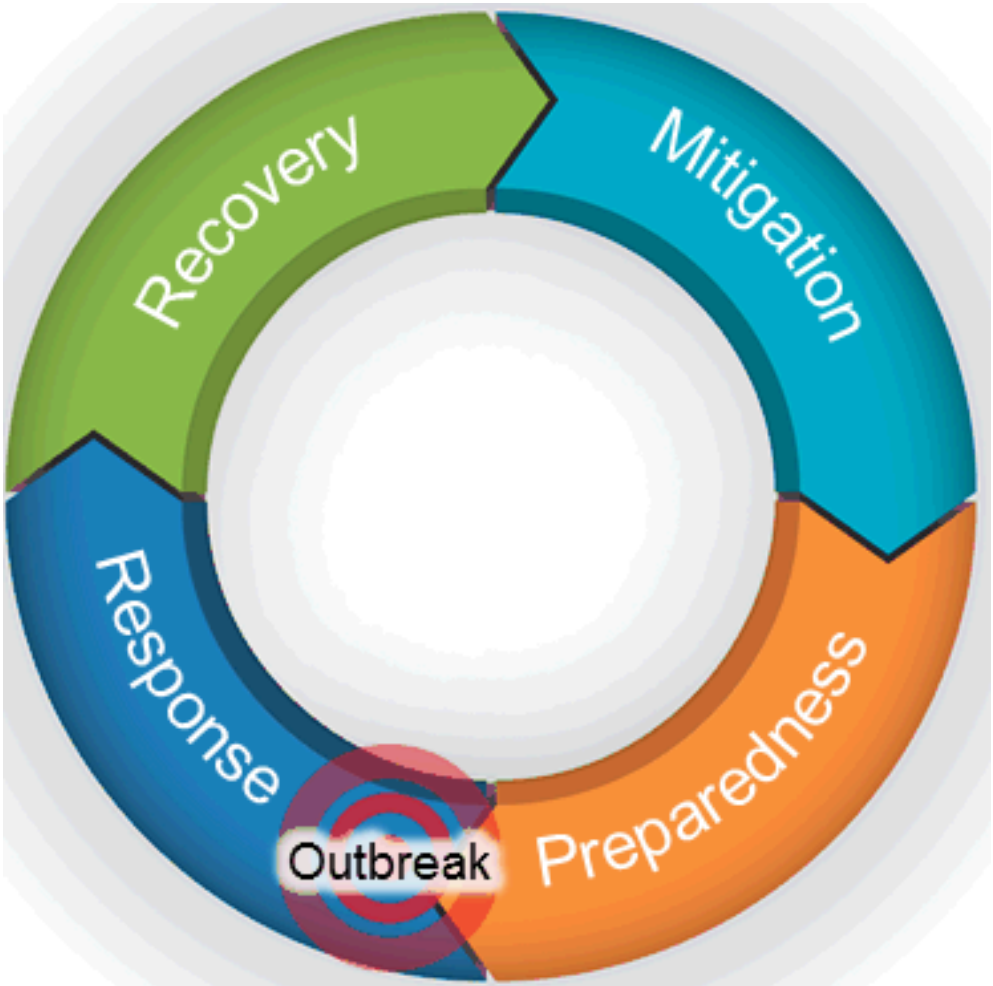
Purpose of this event

Scenario-based approach to understand multi-sector detection of a zoonotic biological incident

At each step, we will focus on identifying

- Roles & responsibilities of epidemiologists, public health agencies, animal health agencies, research facilities and laboratories during a zoonotic biological incident
- Strengths & gaps in public health risk communication
- Strengths & gaps in biorisk management during an incident
- Needs for standard protocols & formal plans

A tool to improve preparedness



Scenario-Based Workshop

Scenarios help us better understand what would actually occur during a real emergency

- Informal, safe, stress free environment
- See how different roles, agencies interact during an emergency
  - Identify roles and responsibilities
  - Meet colleagues working in similar areas, facing same challenges
- Review plans, procedures, and policies

Scenario-based workshop findings useful in planning

- Identified roles, responsibilities can be put into formal plans
- Formal plans help agencies ensure a consistent, reliable response

Why ask so many questions?

Have answers ready in case of a real-life incident

Understand the process from start to finish

- Identify opportunities for collaboration
- Prioritize areas needing improvement

Develop a more comprehensive accurate model

- Identify efficient use of resources
- Identify strengths and gaps in the system

Workshop Roles

Group	Where are they from	Role
Facilitators/Controllers	US- Sandia National Laboratories	Guide discussion
Players/Participants	Public health, animal health, epidemiology & laboratory experts	Explain actions agencies would take each step of the way
External Evaluator	CDC	Provide external evaluation

Participant criteria

1) You have expertise in animal health, public health, epidemiology and laboratory roles in outbreak response

2) You understand how your agency's current practices and protocols for responding to an outbreak

3) You are interested in making the system better

Event objectives

Characterize and identify potential areas for improving cross-sector collaboration during detection and investigation of a zoonotic disease event.

- Identify roles and responsibilities among the different government sectors in detecting a zoonotic disease outbreak

- Recognize current strengths and opportunities in detecting, reporting and initiating a response to a disease outbreak, while managing biosafety and biosecurity risks associated with the collection and manipulation of suspect clinical samples and associated information

- Describe and practice cross-sector biological incident risk communication

Expected event outcomes

Overall Outcomes

- Identification of areas for improving cross-sector response
- Understanding of biorisk management during outbreak response
- Practice in targeted public health emergency risk communication

Take away

- Completed copies of responsibility charts
- Identify needs for strategic-level plans for cross-sector coordination, & communication
- After-action report
  - Identify next steps at operational level

Agenda overview

Day 1

- Background
- Introductions & Team Building Activity
- Risk Communication during Biological Incidents
- Scenario Part 1

Day 2

- Scenario Parts 2-3

Day 3

- After Action Report
- Conclusion and Certificates

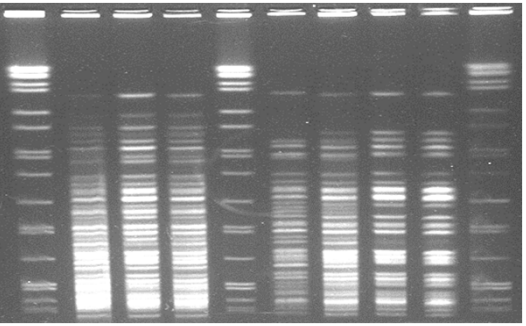
Ground rules

Open and honest communication

- **No "right" or "wrong" answers**
- Don't fight the scenario
- Respect fellow participants
- Cell phones will need to be turned off or on silent mode
- No photographs, video, or audio recordings
- Meals and breaks will be provided throughout
- Table facilitators will keep workshop on schedule
- **Please let us know if you have questions or concerns**

Your active participation
is the key to a successful workshop!

Thank you!



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Cross-Sector Disease Detection & Investigation *Scenario-based Workshop*

Introductions

Team building activity

Algiers, Algeria

June 2014

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Team Building Objectives

Meet and reconnect with colleagues

Learn about agency and participant roles during disease detection and response

- Lab capacity
- Epidemiology, surveillance, case definitions
- Clinical practice
- Disease reporting

Understand existing agency policy/plans

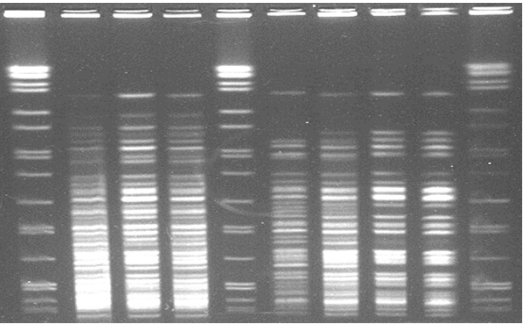
Knowing each other's background and experience will be helpful during the scenario-based workshop

Introductions

Each person will be allotted 5-10 minutes to share

- Name, Title
- Agency
- Role (participant role & agency role in zoonotic outbreaks)
- Existing policies/plans related to disease detection/response
- Recent or past experience during an outbreak

Morning	Clinical Sector: Medical & Veterinary
	Epidemiology: Human & Animal Health
Afternoon	Laboratory: Human & Animal Health
	Policy: Human & Animal Health



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Interagency Risk Communication during a Biological Incident

Algiers, Algeria

June 2014

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Why Risk Communication Matters

- **Risk Communication is a core capacity for the International Health Regulations**
- **During incidents, risk communication methods ensure your message is heard clearly and appropriate responsive actions are taken**
- **Coordinated, collaborative, multi-agency responses rely heavily on effective communication during biological incidents**

Role of risk communication during biological incidents

During an emergency, people act unpredictably

- Emotions of stress and fear can make it difficult to listen, understand & remember information
- Biological incidents can be particularly concerning as they are rare

Risk communication helps ensure your audience will

- Accurately perceive the reality of the crisis
- Respond appropriately to help with the emergency
- Not act in ways to worsen the situation

Audience beyond the public:

Agencies, coworkers in preparedness & response

Public health definitions for risk communication

Risk communication is the **interactive process of exchange of information & opinion** among risk assessors, risk managers, & other interested parties. (WHO)

Crisis and emergency risk communication is an approach used by scientists and public health professionals to provide information that allows an individual, stakeholders or an entire community.

- **to make the best possible decisions about their well-being,**
- **under nearly impossible time constraints,**
- **while accepting the imperfect nature of their choices.** (CDC)

Successful risk communication

GOALS FOR YOUR AUDIENCE	HOW YOU CAN SUCCEED
Make best decisions possible	Know your end goal Listen to your audience Remember perception = Reality Use clear, concise messages Trust each other
Act within time constraints	Be proactive, avoid reactive Provide timely, frequent messages
Accept imperfect choices	Empathize with each other Discuss uncertainty

Three keys to risk communication

Know the goal

- Pre-determined outcome of the communication
- How the audience responds with a decision or action

Know the audience

- Do not make assumptions
- Understand audience background knowledge
- Trust, empathize, & interactively engage
- Use existing communication plan to know whom to contact

Know the message

- Clear, concise, timely, frequent
- Develop, practice main messages *before* emergency
- Validate that the audience received & understands the message

Risk Communication for Scenario-based Workshop

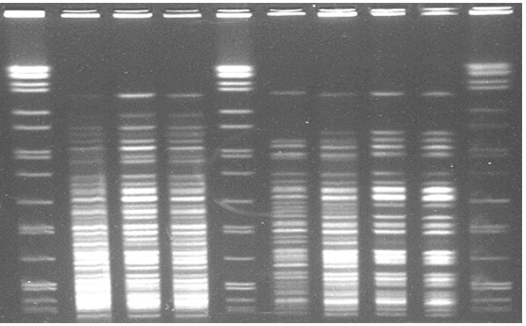
We will begin the workshop in just a moment

During the workshop, when you need to develop messages—remember these principles of risk communication for public health emergency situations

- There are no correct answers, and no wrong answers!
- Refer to the "Successful Risk Communication Chart" as needed

Your audience may include people in your agency, another agency, the public, and possibly external collaborators such as another country or international organizations.

Thank You!



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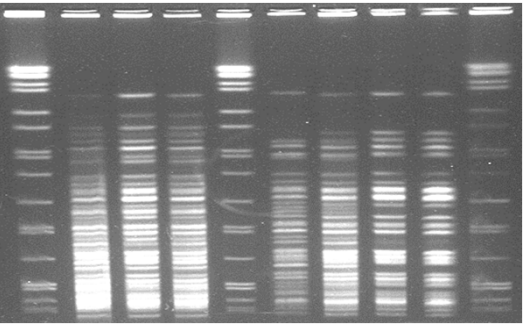

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Cross-Sector Disease Detection & Investigation

Scenario-based Workshop

The Scenario

Algiers, Algeria

June 2014

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Overview

Review workshop objectives, limitations, assumptions

Begin working through scenario

- Designate 1 spokesperson per card
- Designate 1 note-taker per table
- Small groups, write on flip charts & report out
- Information will be used to fill in large charts on walls
- Feel free to notes in your handouts

Complete by developing after-action report as large group

Objectives

- Identify roles and responsibilities among the different government sectors in detecting a zoonotic disease outbreak
- Recognize current strengths and opportunities in detecting, reporting and initiating a response to a disease outbreak, while managing biosafety and biosecurity risks associated with the collection and manipulation of suspect clinical samples and associated information
- Describe and practice cross-sector biological incident risk communication

Scenario Limitations

- The focus of this scenario is on identifying roles across many sectors during a zoonotic outbreak, to identify strengths & weakness in detection/response and biosecurity, and to practice risk communication. We are not focusing on clinical treatment of any illness identified during the scenario.

- Keep discussion focused on ***this workshop*** - not prior outbreaks.

- It is common to have different opinions/ideas on what would happen—there is not a "right" answer

- We cannot replicate the timeline of an outbreak during one week; all timelines are hypothetical

Scenario Assumptions

- This is a hypothetical, fictional scenario.

  Remember, do not fight the scenario…it is purely fictional

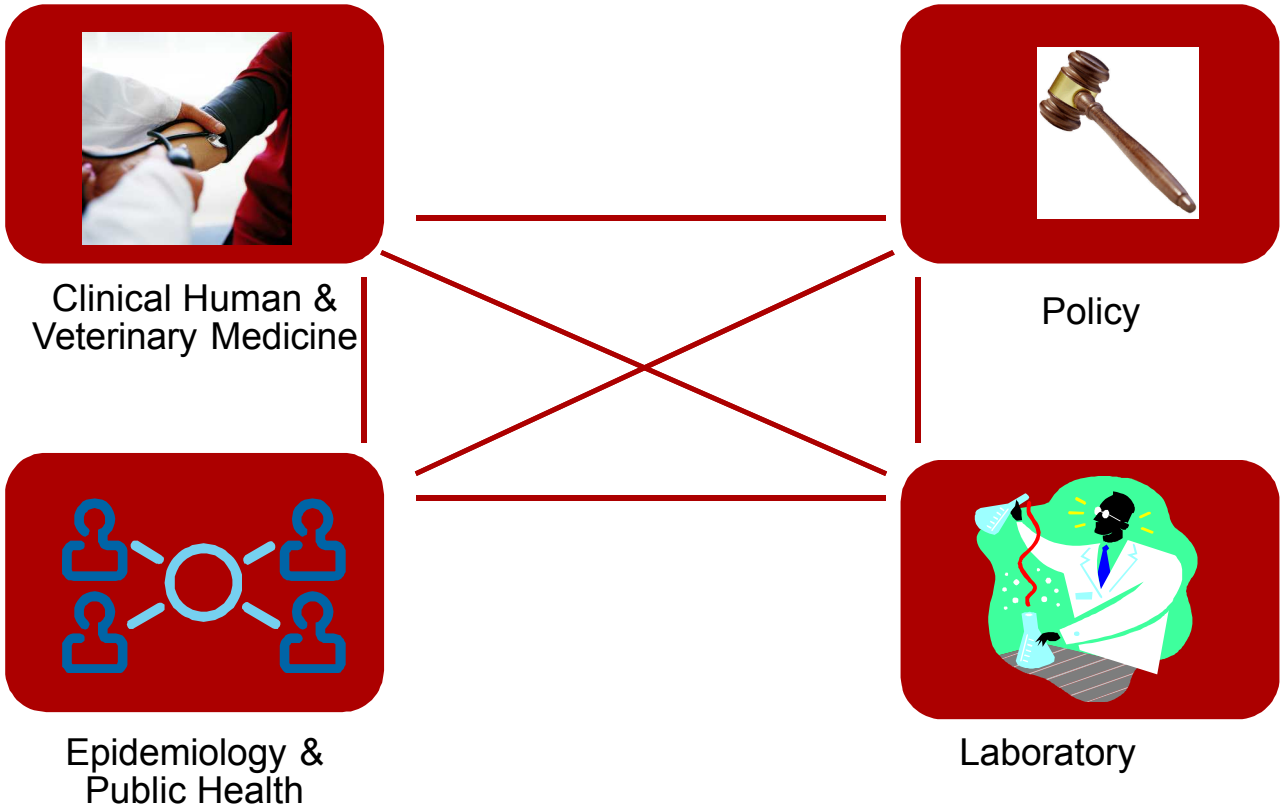
- This is a judgment-free zone. Please make sure comments are constructive.

- No personal attribution. To ensure the best outcomes of the workshop we want you to feel comfortable sharing experiences, questions, concerns, and ideas for plans. *Comments, questions, concerns, and the like will NOT be attributed to the individual who made them.*

Scenario Assumptions

- Everyone here is well versed in their ministries' policies and procedures for disease surveillance and response
- We expect you to respond based on your understanding of **existing policies and current practices**
- You will be asked to play the "role" you or someone in your agency would have during this incident
- It is absolutely acceptable not to know the answer to a question. *There are no "right" or "wrong" answers!*

Participant Groups



Setting the stage

Ghardaïa, Algeria

Scenario Part 1a

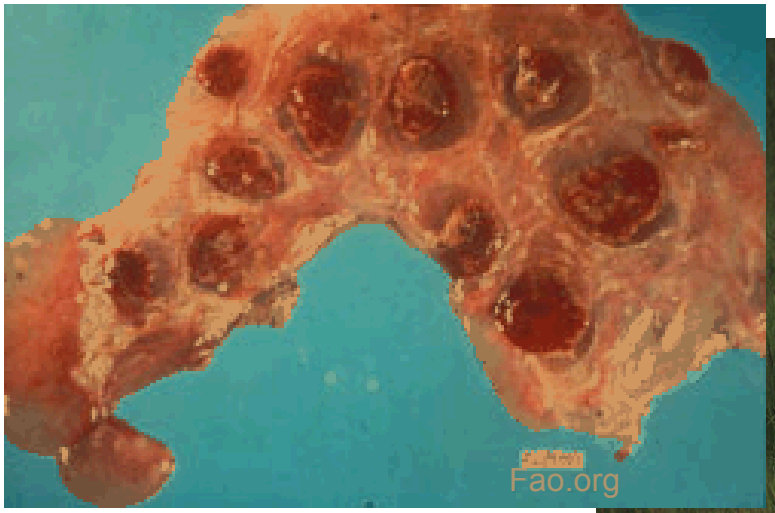
0800 March 10 2014 Economic News National NEWS RADIO

Farmers shared concerning news this week that health issues among local dairy cows may impact the growing dairy industry in the Zelfana area of the Ghardaïa Province.

The head of a local dairy tells our reporter that many dairies have experienced some late-term abortions and retained placentas as well as a number of cows having trouble walking. The bull has inflamed reproductive organs.

One local dairy herder says Algerian families should prepare for rising costs of cheese and milk if the cow health issues continue.


aem.asm.org


Fao.org


Fao.org

Scenario Part 1b

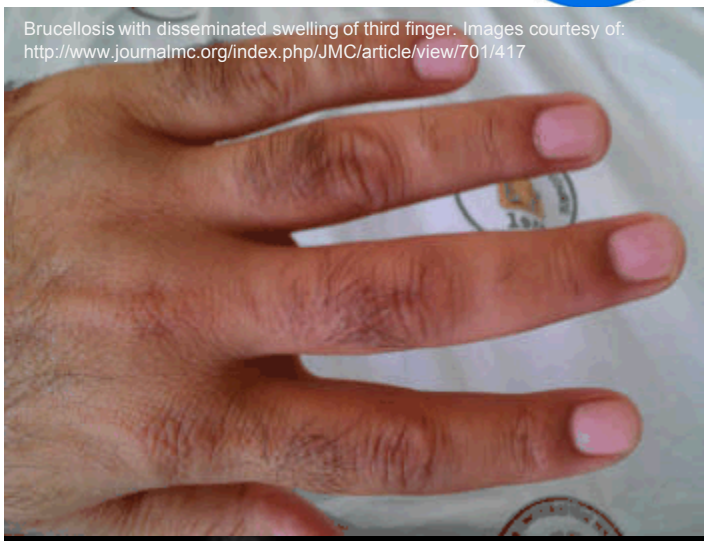
0800 June 16 2014 Health Report: National news Radio

Ghardaia Hospital has reported 15-month old has died from bronchopneumonia (acute inflammation of walls of the bronchioles) from an unknown cause.

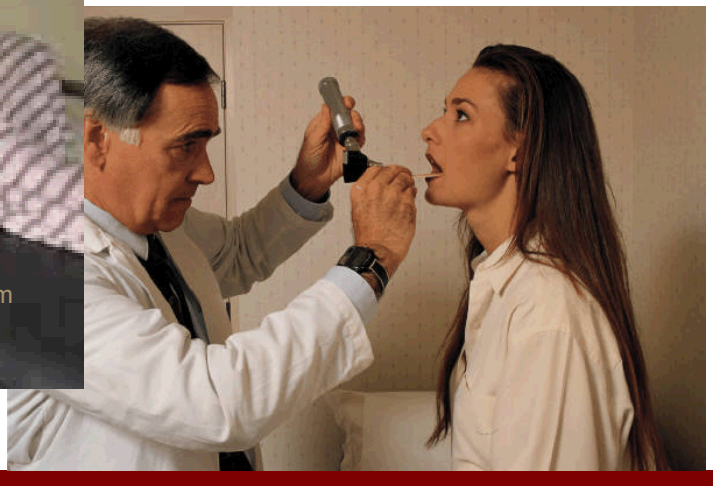
The baby presented to the local hospital with an intermittent fever, vomiting and respiratory distress. Hospital physicians report that bloodwork and physical examination were consistent with infectious disease.

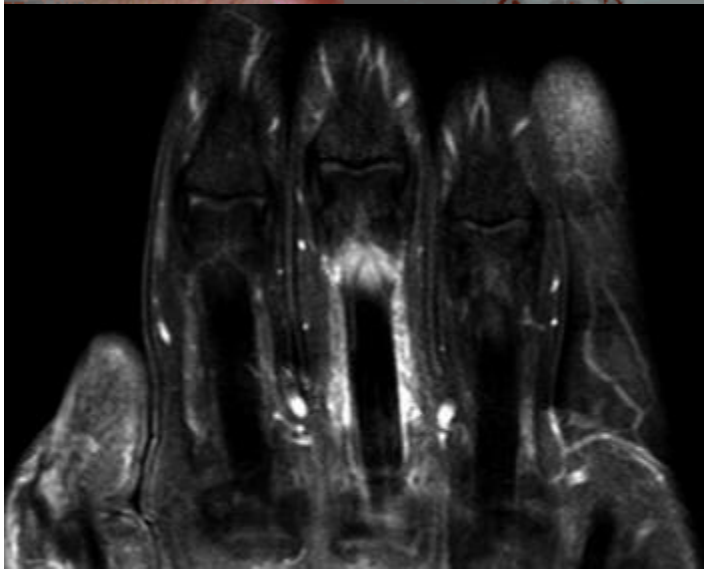
Seven adults from the same rural, farming community have been hospitalized since May, but stable, with intermittent fevers, body aches and sweating. One of the adult men, who declined to be interviewed, presented with swollen testicles and swollen joints in his hands. It is unknown if other in the community have similar illness. All men report having been involved in slaughtering livestock.

Tune in tomorrow, when we hope to be able to let you know how the patients are doing and whether you need to take any special precautions at home.



Brucellosis with disseminated swelling of third finger. Images courtesy of: http://www.journalmc.org/index.php/JMC/article/view/701/417





Scenario Part 1

Objective 1—Roles and Responsibilities

Please read your card to the rest of the table

- Each table may have a different number of cards
- You can pair up to answer questions on the cards
- Please write notes on the flip charts
- Appoint one spokesperson to report findings after 25 minutes

Scenario Part 1

Objective 2—Identify strengths and gaps

Take 25 minutes with your table colleagues to think about each of your roles identified during Objective 1.

- What are the overall strengths identified during this stage of the scenario?
- What gaps did you notice?
- Given current practice and existing plans, how would you address the biosafety & biosecurity?
  - Can you identify any strengths in biosafety & biosecurity?
  - Can you identify gaps in biosafety & biosecurity that are not currently addressed?
- How would you recommend improving biosafety & biosecurity for the roles and responsibilities you identified?

Scenario Part 1

Objective 3:

Cross- Sector Communication

At your tables, take 5-10 minutes to talk about how your organization would be communicating across sectors during this part of the scenario. It is possible they might not be.

If there is communication, note the ways communication would occur: phone, email, fax, in-person

We will discuss this topic as a large group

Scenario Part 1

Objective 3:

Cross- Sector Communication Strengths

At your tables, take 5-10 minutes to talk about the strengths in how your agency communicates with other agencies at this point in the scenario.

We will discuss this topic as a large group

Scenario Part 1

Objective 3:

Cross- Sector Communication Gaps

At your tables, take 5-10 minutes to talk about the gaps or areas in need of improving how your agency communicates with other agencies at this point in the scenario.

We will discuss this topic as a large group

Update: End of Day 1

1830 June 16 2014 Oran TV NIGHTLY NEWS

Health professionals are on alert tonight after three people working in the hospital laboratory fell ill with symptoms of fever, sweat, headaches and muscle pain. Over the past two days, over two dozen persons have presented with similar symptoms. So far, preliminary tests for a pandemic influenza are negative.

We will continue to monitor the situation and provide updates on the morning news.

Locations of Ill People and Animals

Ghardaïa
& Oran

Day 2

Review of Scenario from Day 1

1) How many people and animals are sick?
2) Where are they located?
3) What is the timeline of the illnesses?
4) What has been currently done by each sector to address the scenario?

Scenario Part 2a

1830 June 17 2014 National News Radio

Investigations in the Ghadaria Province continue to identify the cause of ill dairy cows. This reporter has learned that local veterinarians are ruling out moldy food and toxins as the cause of the cow abortions and reproductive issues. One of the local dairies had imported several hundred new head of cattle in January (about 2 months before any abortions were noted) to improve herd genetics and is concerned that the loss of milk production from this outbreak may bankrupt his farm.

Local veterinarians are concerned that samples sent out yesterday to the laboratory did not arrive as expected. They advise anyone with information on this to contact the regional animal and public health offices and not to touch the containers as this may be a disease that could make people sick as well.


pisagro.org

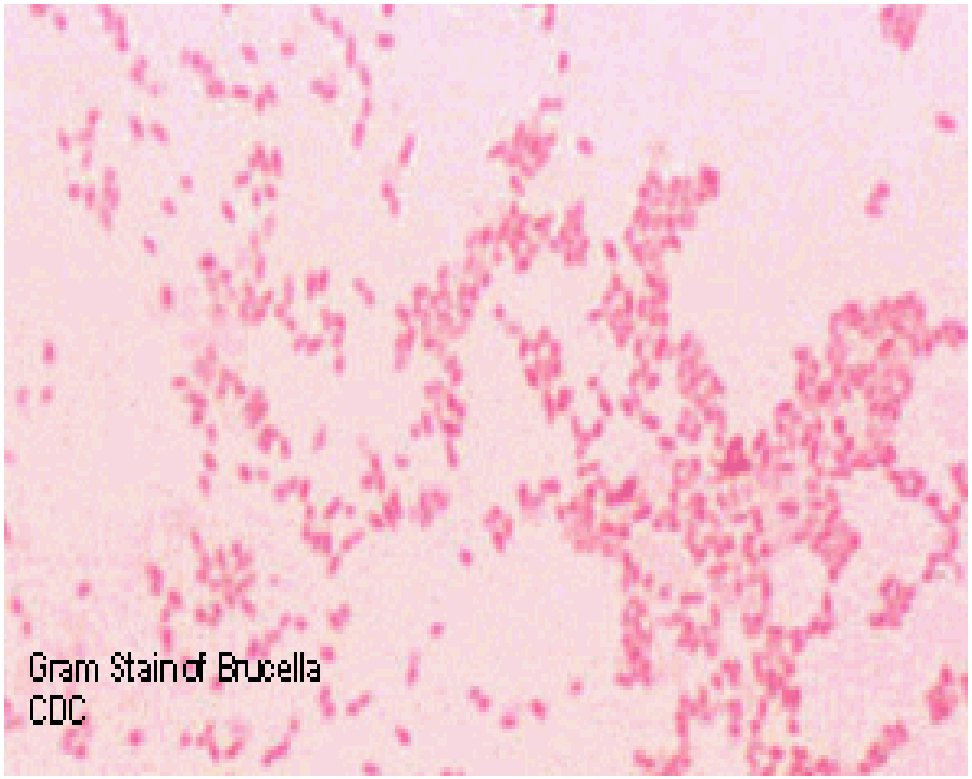
Scenario Part 2b

1830 May 17 2014 National News Radio

Ghardaia General Hospital has reported that Ghardaia is experiencing a rare outbreak of *Brucella abortus—or brucellosis*—particularly among rural, farming residents.

The bacteria was identified in antibody tests from patients who had presented with intermittent fevers, aches and swollen testicles. Most of the hospitalized adults with fevers and symptoms of unknown origin have returned home after beginning antibiotic treatment.

One 15 month old is the only confirmed death in this outbreak.



Gram Stain of Brucella
CDC

Scenario Part 2

Objective 1—Roles and Responsibilities

Please read your card to the rest of the table

- Each table may have a different number of cards
- You can pair up to answer questions on the cards
- Please write notes on the flip charts
- Appoint one spokesperson to report findings from your table in 25 minutes

Scenario Part 2

Objective 2—Identify strengths and gaps

Take 25 minutes with your table colleagues to think about each of your roles identified during Objective 1.

- What are the overall strengths identified during this stage of the scenario?
- What gaps did you notice?
- Given current practice and existing plans, how would you address the biosafety & biosecurity?
  - Can you identify any strengths in biosafety & biosecurity?
  - Can you identify gaps in biosafety & biosecurity that are not currently addressed?
- How would you recommend improving biosafety & biosecurity for the roles and responsibilities you identified?

Scenario Part 2

Objective 3:

Cross- Sector Communication

At your tables, take 5-10 minutes to talk about how your organization would be communicating across sectors during this part of the scenario. It is possible they might not be.

If there is communication, note the ways communication would occur: phone, email, fax, in-person

We will discuss this topic as a large group

Scenario Part 2

Objective 3:

Cross- Sector Communication Strengths

At your tables, take 5-10 minutes to talk about the strengths in how your agency communicates with other agencies during a response.

We will discuss this topic as a large group

Scenario Part 2

Objective 3:

Cross- Sector Communication Gaps

At your tables, take 5-10 minutes to talk about the gaps or areas in need of improving how your agency communicates with other agencies at this point in the scenario.

We will discuss this topic as a large group

Scenario Part 3

Today, we will provide you special cards about challenges you might face when dealing with this outbreak.

Think about how each new piece of information might change your actions, your roles, your responsibilities, the biological risks and your need for cross-sector communication and collaboration.

Scenario Part 3

CARD A

Objective 1. Based on existing roles and responsibilities, tell us what action you would take with the new information and whether this changes your role during this outbreak.

- Please spend 30 minutes with your group
- Use the questions on the back of the card to give you guidance
- Write your answers on the flip chart and report out to the group

Scenario Part 3

CARD A

Objective 2. Identify & prioritize biological risk concerns and biosafety & biosecurity actions taken during the updated scenario

- Please spend 20 minutes with your group
- Write your answers on the flip chart and report out to the group

Scenario Part 3

CARD A

Today, each table will be given a series of cards with updates on the progression of this outbreak.

Objective 3. Identify any new needed communication among the sectors. We will practice the principles of risk communication.

- Please spend 5 minutes and report what (if any) new cross-sector communication would be needed with the new information. Report to the group.

- Practice using principles of biological incident risk communication

Scenario Part 3

CARD B

Objective 1. Based on existing roles and responsibilities, tell us what action you would take with the new information and whether this changes your role during this outbreak.

- Please spend 30 minutes with your group
- Use the questions on the back of the card to give you guidance
- Write your answers on the flip chart and report out to the group

Scenario Part 3

CARD B

Objective 2. Identify & prioritize biological risk concerns and biosafety & biosecurity actions taken during the updated scenario

- Please spend 20 minutes with your group
- Write your answers on the flip chart and report out to the group.

Scenario Part 3

CARD B

Today, each table will be given a series of cards with updates on the progression of this outbreak.

Objective 3. Identify any new needed communication among the sectors. We will practice the principles of risk communication.

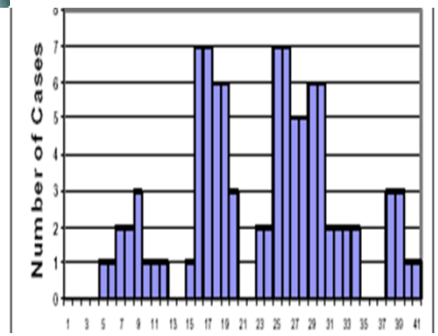
- Please spend 5 minutes and report what (if any) new cross-sector communication would be needed with the new information. Report to the group.

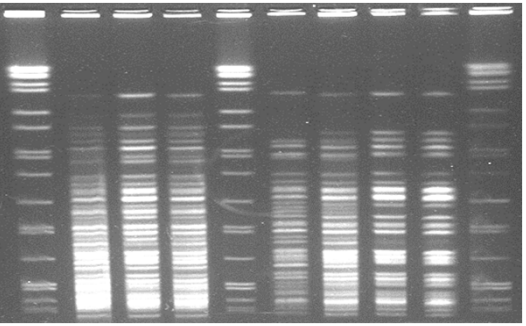
- Practice using principles of biological incident risk communication

End of Scenario

Thank you all for your hard work throughout responding to this brucellosis scenario!

Now, it is time for the most important work—identifying lessons learned and prioritizing steps to make improvements.





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Cross-Sector Disease Detection & Investigation *Scenario-based Workshop*

Debriefs & After Action Reports

How to make sure you will do an even better job next time

Algiers, Algeria

June 2014

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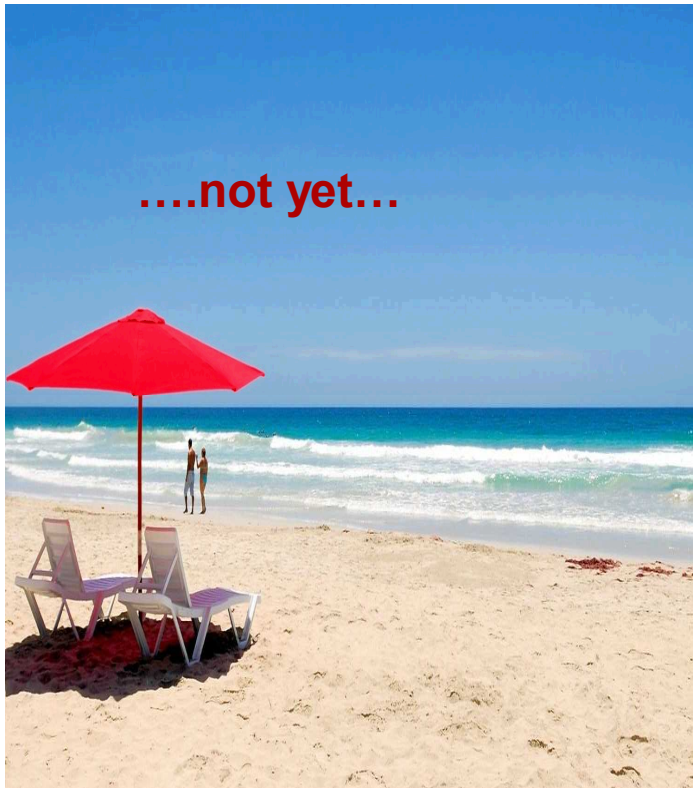
When the outbreak is over

You want to return as soon as possible to “normal operations”

…just make sure you are ready for the next outbreak first



When the outbreak is over

Evaluate the scenario and existing plans

- Response
  - What were the strengths in our detection & response?
  - What can we do better next time?

- Plans
  - Did we have the plans and protocols we needed?
  - How well did we follow existing plans?
  - Did the plans work in this scenario?
  - How can we improve before the next outbreak?

Why debrief after outbreak?

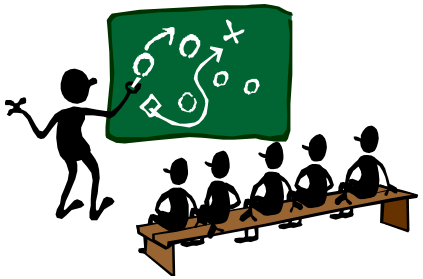
Repeat successes

Do not repeat mistakes

Best Practices for After the Outbreak

Debriefing

- Learning opportunity for how to improve response
- Meeting soon after outbreak is resolved
  - Informal, non-judgmental sharing



- Discussion of strengths, weaknesses during outbreak
- Different levels of participation may be present
  - One or more agencies
  - Lead agency hosts for other participants
  - Policy-level or operational-level

Best Practices for After the Outbreak

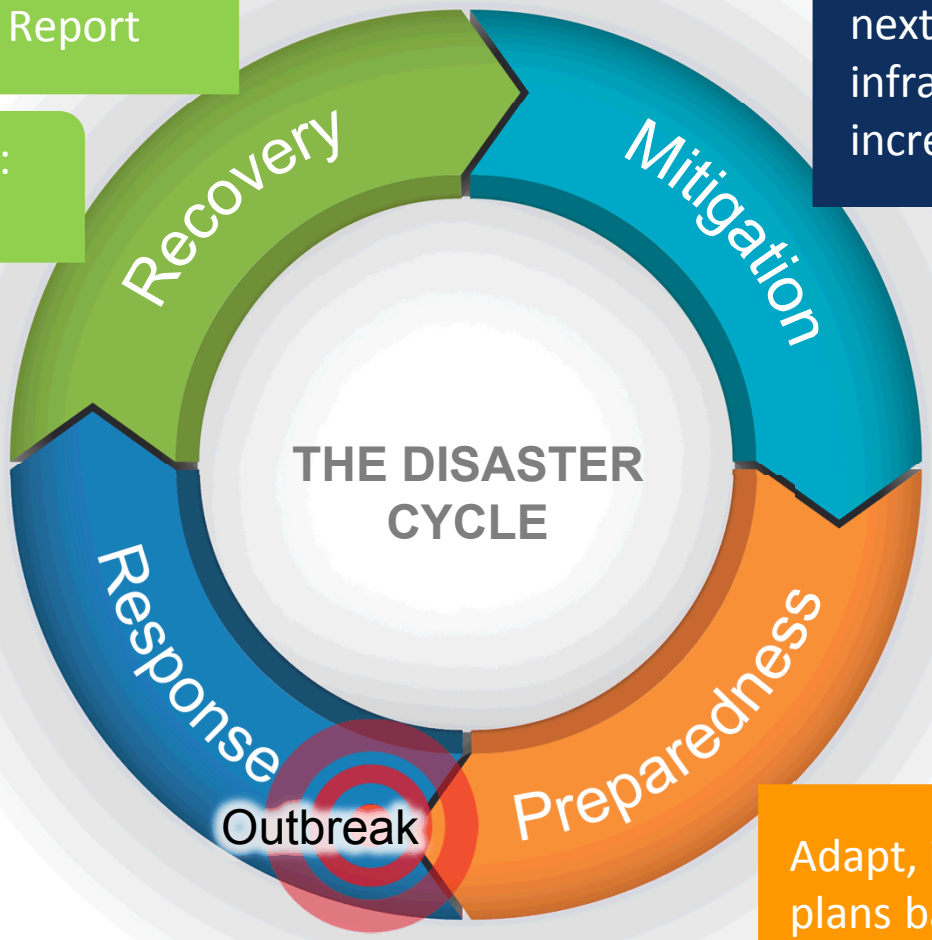
After Action Report

- Learning opportunity for how to improve response
- A comprehensive report detailing outbreak
  - Include strengths and weaknesses
  - Incorporate opinions from all sectors involved
- Guide for updating your current response plans
  - May write for one or multiple agencies

Write and distribute After Action Report

Immediately: "Debrief"

Put measures in place to reduce level of disaster next time (build infrastructure, train staff, increase lab capacity)



Adapt, improve plans based on AAR/HW

Debrief and After Action Reports:

Critical for Successful Preparedness/Response

Keys to Successful Debriefing and After Action Reports

No judgments or attributions—share your thoughts

- Talk in terms of functional roles (not using names)
- Do not blame individuals
- Do not take anything personally
- Institute policy to protect participants from retribution
- Informal, flexible

No right or wrong answers

Everyone can participate across all ranks

Use a methodology to do the evaluation

Always update, improve plans & practices with findings

Debriefing Practice

Let's do quick debriefing for this response

Three Strengths of this Outbreak Response

- Write your 3 top strengths on a post-it note
- Share your thoughts on the strengths

Three Weakness of this Outbreak Response

- Write your 3 top areas needing improvement on a post-it note
- Share your thoughts on the areas needing improvement

After Action Report Development

Let's prepare part of an after action report for this response

Spend 5-10 minutes reviewing the charts from the workshop

Record your ideas in the After Action Report Template Charts

As you complete the charts, consider these points:

1. During which phases did the response go according to plans?
2. What happened differently than what you would expect?
3. What were the most successful parts of response?
4. What could be improved for a future response?

Congratulations

Congratulations! You have successfully completed this workshop.

You will have an additional chance to evaluate
the workshop and the response at the end of the day.