

## Emergency Management Practice Exercise

You are a private practitioner veterinarian attending the MVMA Summer Conference on Mackinac Island. You have brought two staff members with you so that they can attend the practice management session on Sunday.

After the session on Sunday, your staff members take a relaxing walk around the island. They return in a concerned state and tell you the following:

- They walked by a flock of approximately 20 sheep in a fenced in paddock near the airport.
- They noticed dead lambs, evidence of abortions and a few adults with diarrhea and serosanguinous nasal discharge.

### QUESTIONS:

- 1) Which of the following diseases or conditions would be put on your differential diagnoses list?
  - a. Bluetongue
  - b. Wesselsbron
  - c. Ephemeral Fever
  - d. Enterotoxemia of sheep
  - e. Brucellosis
  - f. Vibriosis
  - g. Trichomoniasis
  - h. Rift Valley Fever
  - i. Nairobi Sheep Disease
  - j. Heartwater
  - k. Ovine enzootic abortion
  - l. Campylobacter
  - m. Salmonella
  - n. Listeriosis
  - o. Toxoplasmosis
- 2) Do you know where your Michigan Reportable Disease List is?
- 3) How would you access the Michigan Reportable Disease List on-line?

## Emergency Management Practice Exercise

Answers to Scenario One:

- 1) Which of the following diseases or conditions would be put on your differential diagnoses list? (All of them)
  - a. Bluetongue
  - b. Wesselsbron
  - c. Ephemeral Fever
  - d. Enterotoxemia of sheep
  - e. Brucellosis
  - f. Vibriosis
  - g. Trichomoniasis
  - h. Rift Valley Fever
  - i. Nairobi Sheep Disease
  - j. Heartwater
  - k. Ovine enzootic abortion
  - l. Campylobacter
  - m. Salmonella
  - n. Listeriosis
  - o. Toxoplasmosis
  
- 2) Do you know where your Michigan Reportable Disease List is? (Yes or No)
  - a. Go to the MDA website: <http://www.michigan.gov/mda>
  
- 3) How would you access the Michigan Reportable Disease List on-line?
  - a. Go to the MDA website: <http://www.michigan.gov/mda>
    - o Click on the Tab that says Food and Agribusiness on the left hand side
    - o Click on Animal, Plant and Pest Information
    - o Click on Reportable Animal Diseases

Emergency Management Practice Exercise

## Scenario Two: Monday, August 1, 2005 AM

When your staff was talking to the sheep owner, they mentioned that they worked for a veterinarian who was visiting the island for a conference. They gave the owner your contact information and upon receiving a call from the owner, you go out to the farm to investigate.

You take a history and find that the farm has not had any ill animals until now. The owner keeps to a strict and complete vaccination schedule. Lastly, you ask the owner about the visitors and where they are from. You find out that a group of students from Saudi Arabia had visited the farm a couple months ago.

While doing a thorough physical exam you find the following:

- Fever 105F
- Anorexia
- Weakness
- Mucopurulent nasal discharge
- Abortion (100%)
- High mortality in newborn lambs

Upon necropsy of the lambs, you find hepatic necrosis, enlarged liver, yellow and friable, with petechial hemorrhages.

### QUESTIONS:

- 1) When you go to examine the flock, what considerations would you have for biosecurity? (assume you could get the materials you needed from the Veterinarian's Office on the island)
  
- 2) When you examine the flock, what samples would you collect? (assume you could get the materials you needed from the Veterinarian's Office on the island)
  
- 3) Where would you submit the samples you collected?

## Emergency Management Practice Exercise

Answers to Scenario Two:

- 1) When you go to examine the flock, what considerations would you have for biosecurity? (assume you could get the materials you needed from the Veterinarian's Office on the island)
  - a. Coveralls
  - b. Boots
  - c. Gloves
  - d. Thorough disinfection of all inanimate objects. The preferred disinfectant of Michigan Department of Agriculture is Virkon.
  
- 2) When you examine the flock, what samples would you collect? (assume you could get the materials you needed from the Veterinarian's Office on the island)
  - a. Heparinized blood or serum from febrile sheep.
  - b. Tissue samples of liver, spleen, kidney, lymph node, heart blood, and brain from dead animals or aborted fetuses.
  - c. They should be preserved in a 10% buffered formalin and in glycerol-saline and transported at 4C.
  
- 3) Where would you submit the samples you collected?
  - a. Michigan State University, Diagnostic Center for Population and Animal Health



### Answers to Scenario Three:

- 1) While discussing this new information with your colleagues, one suggests calling the Michigan Department of Agriculture for additional assistance. You think this is the logical next step. Why is this a logical next step and where would you obtain this number?
  - a. Why is this a logical next step?
    - i. This is a disease that appears to be spreading rapidly and may be zoonotic. Nearly all the diseases on your initial rule out list are reportable diseases. Many of them are foreign animal diseases. There is a requirement in Michigan for any person who suspects or diagnoses a reportable disease to report to the Michigan Department of Agriculture, Animal Industry Division (State Veterinarian's Office).
    - ii. One reason reporting is beneficial is because it can expedite sample collection and provide testing at no charge to you or your client. This is especially true when foreign animal diseases are suspected. USDA and MDA have trained Foreign Animal Disease Diagnosticians (FADDs) ready to respond on short notice. When MDA receives a call about a possible Foreign Animal Disease (FAD), MDA notifies USDA. Veterinarians may also report directly to USDA, APHIS, VS- Area Veterinarian in Charge. In that case, USDA will notify MDA so both agencies are aware of the situation.
    - iii. In this emergency management exercise, MDA ideally would have been notified during the veterinarian's first visit to examine the sheep. Then you would not need to worry about sending samples to DCPAH in glycerol-saline at 4C while you were suppose to be relaxing at a conference on an island!
  - b. Where could you obtain a number for MDA?
    - i. <http://www.aphis.usda.gov/vs/sregs/official.html>
    - ii. Vet Net Emergency Card
    - iii. MDA website: <http://www.michigan.gov/mda>
    - iv. Your reportable disease list brochure
    - v. Vet Net Notebook
    - vi. Committed to your memory? (517) 373-1077
- 2) Given possible transmission by mosquitoes, high abortion rates, and/or zoonotic potential, can you narrow your original rule out list to these diseases?  
(Correct Answer: YES)
  - a. Brucellosis
  - b. Rift Valley Fever
  - c. Listeriosis
  - d. Nairobi Sheep Disease
  - e. Vibriosis
  - f. Ovine enzootic abortion
  - g. Campylobacter
  - h. Salmonella

## Emergency Management Practice Exercise

## Scenario Four: Tuesday, August 2, 2005 AM

You receive an urgent phone call from DCPAH stating that they have isolated Rift Valley Fever Virus (Genus *Phlebovirus* Family Bunyaviridae). You also receive a call from USDA letting you know one of their FADD veterinarians is on the way.

### QUESTIONS:

- 1) Which of the following would likely happen next (as soon as possible)?
  - a. An incident command system response initiated by USDA and MDA, with use of Michigan's Animal Health Emergency Response Plan as a guide.
  - b. Participation in the response by Michigan Department of Community Health because of the public health threat.
  - c. Consultation with or participation by Michigan Department of Natural Resources depending on impact to wildlife.
  - d. Public notification and education performed by MDA communication staff in conjunction with Mackinac Island officials.
  - e. Mobilization of the Michigan Arbovirus Working Group to address technical issues relating to mosquitoes.
  - f. Consultation with the sheep owner about disposition of and compensation for the flock.
  - g. Epidemiological investigation to identify source of disease and measures to stop the spread.
  - h. Regulatory action as appropriate to stop movement of infected animals.
  - i. Any veterinarians attending the conference who had also attended a Michigan Emergency Veterinary Network (Vet Net) training session, would be invited to assist in the disease outbreak response.
  - j. You apply for a position at MDA because you want to be involved in protecting animal health in Michigan.
  - k. You decide you want to escape the commotion for awhile so you go to your room and order a Pecan Ball from room service.

Answer to Scenario Four:

- 1) Which of the following would likely happen next (as soon as possible)?
  - a. An incident command system response initiated by USDA and MDA, with use of Michigan's Animal Health Emergency Response Plan as a guide.
  - b. Participation in the response by Michigan Department of Community Health because of the public health threat.
  - c. Consultation with or participation by Michigan Department of Natural Resources depending on impact to wildlife.
  - d. Public notification and education performed by MDA communication staff in conjunction with Mackinac Island officials.
  - e. Mobilization of the Michigan Arbovirus Working Group to address technical issues relating to mosquitoes.
  - f. Consultation with the sheep owner about disposition of and compensation for the flock.
  - g. Epidemiological investigation to identify source of disease and measures to stop the spread.
  - h. Regulatory action as appropriate to stop movement of infected animals.
  - i. Any veterinarians attending the conference who had also attended a Michigan Emergency Veterinary Network (Vet Net) training session, would be invited to assist in the disease outbreak response.

Scenario Five: Tuesday, August 2, 2005 PM

Thank you for all of your hard work in stopping the spread of Rift Valley Fever! Hopefully, through your participation in this case, you were able to brush up on the necessary steps to take when presented with a serious reportable disease.

We have included additional information in this envelope about Vet Net and some upcoming training opportunities in case you are interested in furthering your knowledge about emerging diseases and response to outbreaks.

If you have questions, please contact Dr. Nancy Frank at the MVMA Summer Conference or later at (517) 373-6764.

Finally, your feed back on this exercise would be appreciated. An evaluation form is included in Envelope 5.

**MVMA Summer Conference 2005**

# Emergency Response Exercise Evaluation

Y I found this exercise useful

Y I did not find this exercise useful

Comments/Suggestions: \_\_\_\_\_  
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Please leave at the Grand Hotel Reception Desk for Dr. Nancy Frank.