

Head, Shoulders, Foot and Mouth

Situation Manual

[Date of play TBD]

This Situation Manual (SitMan) provides exercise participants with all the necessary tools for their roles in the exercise. Some exercise material is intended for the exclusive use of exercise planners, facilitators, and evaluators, but players may view other materials that are necessary to their performance. All exercise participants may view the SitMan.

EXERCISE OVERVIEW

Exercise Name	Head, Shoulders, Foot and Mouth
Exercise Dates	[TBD]
Scope	This exercise is a tabletop, planned to be played in modules either in person, or electronically. Exercise play is limited to those individuals who manage exotic wildlife species and their regulatory partners.
Focus Area(s)	Protection, Response, Recovery
Capabilities	Planning, Operational Communication, Operational Coordination
Objectives	<ol style="list-style-type: none"> 1. Understand the Federal, State, Local and Zoological stakeholders involved in a response to Foot and Mouth Disease (FMD) 2. Understand the management of communication and coordination that would occur during an FMD outbreak 3. Display basic knowledge of organized outbreak response to an infectious disease 4. Explore for vaccination of high value zoological species
Threat or Hazard	Epidemic outbreak of FMD in the US
Scenario	A Foot and Mouth Disease (FMD) outbreak has occurred. Zoos must consider their response strategies, internal and external communication that would take place, as well as possible vaccination protocols.
Sponsor	Virginia Maryland College of Veterinary Medicine MPH program and the Zoo and Aquariums All Hazards Partnership
Participating Jurisdictions/ Organizations	This exercise has been designed to include exotic animal owners and operators, at animal management and senior staff positions. An effective exercise will also include State and Federal input for regulatory decision-making.
Point of Contact	For additional information on conduct or the exercise itself, contact the Zoo and Aquariums All Hazards Partnership https://zahp.org/join-us/

GENERAL INFORMATION

Exercise Objectives and Capabilities

The following exercise objectives in Table 1 describe the expected outcomes for the exercise. The objectives are linked to capabilities, which are the means to accomplish a mission, function, or objective based on the performance of related tasks, under specified conditions, to target levels of performance. The objectives and aligned capabilities are guided by senior leaders and selected by the Exercise Planning Team.

Exercise Objectives	Capability
Understand the Federal, State, Local and Zoological stakeholders involved in a response to Foot and Mouth Disease	Operational Coordination
Understand the management of communication and coordination that would occur during an FMD outbreak	Operational Communications
Display basic knowledge of organized outbreak response to an infectious disease	Operational Coordination
Explore options for vaccination of high-value zoological species	Planning

Table 1. Exercise Objectives and Associated Capabilities

Participant Roles and Responsibilities

The term *participant* encompasses many groups of people, not just those playing in the exercise. Groups of participants involved in the exercise, and their respective roles and responsibilities, are as follows:

- **Players:** Personnel who have an active role in discussing or performing their regular roles and responsibilities during the exercise. Players discuss or initiate actions in response to the simulated emergency.
- **Observers:** Do not directly participate in the exercise. However, they may support the development of player responses to the situation during the discussion by asking relevant questions or providing subject matter expertise.
- **Facilitators:** Provide situation updates and moderate discussions. They also provide additional information or resolve questions as required. Key Exercise Planning Team members also may assist with facilitation as subject matter experts (SMEs) during the exercise.
- **Evaluators:** Are assigned to observe and document certain objectives during the exercise. Their primary role is to document player discussions,

including how and if those discussions conform to plans, policies, and procedures.

Exercise Structure

This exercise will be a multimedia, facilitated exercise. Players will participate in the following 4 modules:

- Module 1: Suspect FMD Case Identification
- Module 2: Internal Communication and Coordination
- Module 3: External Communication and Coordination
- Module 4: FMD Vaccine Program

Each module begins with a multimedia update that summarizes key events occurring within that time period. After the updates, participants review the situation and engage in functional group discussions of appropriate outbreak management issues. For this exercise, the functional groups are as follows:

- Zoological Industry
- Regulatory Officials (State and Federal)

After these functional group discussions, participants will engage in a moderated plenary discussion in which a spokesperson from each group will present a synopsis of the group's actions, based on the scenario.

Exercise Guidelines

- This exercise will be held in an open, no-fault environment wherein capabilities, plans, systems, and processes will be evaluated. Varying viewpoints, even disagreements, are expected.
- Respond to the scenario using your knowledge of current plans and capabilities (i.e., you may use only existing assets) and insights derived from your training.
- Decisions are not precedent setting and may not reflect your jurisdiction's/ organization's final position on a given issue. This exercise is an opportunity to discuss and present multiple options and possible solutions.
- Issue identification is not as valuable as suggestions and recommended actions that could improve outbreak management efforts. Problem-solving efforts should be the focus.
- The assumption is that the exercise scenario is plausible and events occur as they are presented. All players will receive information at the same time.

Exercise Evaluation

Evaluation of the exercise is based on the exercise objectives and aligned capabilities, capability targets, and critical tasks, which are documented in Exercise Evaluation Guides (EEGs). Evaluators have EEGs for each of their assigned areas. Additionally, players will be asked to complete participant feedback forms. These documents, coupled with facilitator observations and notes, will be used to evaluate the exercise and compile the After-Action Report (AAR)/Improvement Plan (IP)

MODULE 1: SUSPECT FMD CASE IDENTIFICATION

Scenario

May, 11, 2021: 9:00am

You arrive to work on Tuesday morning in May. It is the beginning of petting zoo season and you recently received the animals that will be housed at the petting zoo. There are 2 sheep, 5 chickens, 4 goats, 2 alpacas, 1 cow, and 3 pigs. The animals are rented to the zoo from local farms in the area. The sheep come from Farmer A. The cow and pigs come from Farmer B. The alpacas and goats come from Farmer C and the chickens come from Farmer D.

May, 11, 2021: 1:30pm

During daily rounds, a keeper noticed that the cow is not looking well, drooling, and has lesions in the mouth. You quickly contact the Zoo's veterinarian to examine the cow and the other animals housed at the petting zoo. They find that the pig and sheep are also showing similar signs of potential disease. The signs include vesicular lesions in the mouth, pyrexia, and coronary band swelling. The sheep's clinical signs are milder. This is happening only 10 days after the animals are brought to the petting zoo.

May 11, 2021: 2:00pm

The veterinarian is highly suspicious of Foot and Mouth Disease (FMD). They immediately notified state officials of a possible FMD outbreak at the zoo. The state officials arrive a few hours later to collect samples and inform you that the presumptive results will take 12-24 hours. The zoo is put under immediate verbal quarantine due to multiple species affected. The officials discuss the depopulation of the petting zoo animals given the suspicion of FMD. Later that day your team receives an email from the zoo's CEO asking what plan is in place to handle this outbreak. Discuss possible actions that will take place in the facility until confirmation of Foot-and-Mouth disease.

Key Issues

- New petting zoo animals arrive at the zoo. That afternoon a keeper notices symptoms of drooling and lesions in the mouth.
- The zoo veterinarian is worried about FMD and contacts state officials.
- State officials suspect FMD, samples are taken, presumptive results will take 12-24 hours.
- Zoo is put under immediate quarantine, depopulation of the petting zoo's animals is discussed, the CEO of the zoo wants to know what the plan is to handle the outbreak.

Questions

Based on the information provided, participate in the discussion concerning the issues raised in Module 1. Identify any critical issues, decisions, requirements, or questions that should be addressed at this time.

The following questions are provided as suggested subjects that you may wish to address as the discussion progresses. These questions are not meant to constitute a definitive list of concerns to be addressed, nor is there a requirement to address every question.

Zoo Industry

1. Does your zoo have an outbreak management plan? Are there any management efforts taking place at this time? Discuss the basic elements of your biosecurity plan.
2. Which of your animals in your zoo's collection are susceptible to FMD infection? Describe the biosecurity measures you may be advised to implement at this time. How would your biosecurity plans change if a portion of your zoo was a 'drive-through safari'?
3. Does your plan address staff who may have susceptible species at home? Discuss strategies to prevent transmission of disease between the zoo and staff-owned animals.
4. Describe the different ways that FMD may spread throughout your facility.
5. What wildlife or domestic species surround the zoo property that may be susceptible to FMD? How might this be determined?
6. What internal staff communication would take place at this time about this threat? What topics should be covered, and with what stakeholder groups? How frequently might they be held?
7. Does the zoo have alternative housing for suspected FMD positive animals at this time? Has the zoo identified a quarantine area for strict isolation of infected animals, should they be allowed to recover? Has the zoo considered obtaining permits for the movement of high value species?
8. Given the information known at this time, will there be any communication with the media? If so, what position at the zoo will be responsible for media communication?
9. What resources are available to you regarding information on FAD?

10. Describe the protocols in place at your facility to manage and contain a possible FMD case. How would protocols change if FMD is confirmed on your property?
11. Describe the engineering controls following identification of a suspect FAD case.
12. Imagine you have a Giraffe scheduled for transport to another zoo later this afternoon. How would today's events affect this? Describe the steps your facility would need to take regarding future transports.

Regulatory Officials

1. The scenario indicates that the facility veterinarian contacts state officials because of suspicion of FMD. Who are the "officials" that your zoo should contact?
2. The disease is not yet confirmed at the facility, but there is a high suspicion of the disease. At this time, what other officials or agencies should be notified?
3. Is there a federal protocol available for how to protect zoologic species during an FMD outbreak? If so, where can this be found?
4. What role(s) do USDA or other federal responders play at this time?

MODULE 2: INTERNAL COMMUNICATION AND COORDINATION

Scenario

May 12, 2021: 9:00am

State Officials contact your zoo with confirmatory results that the animals at the petting zoo tested positive for FMD. You and the other keepers are expected to participate in response efforts, under the direction of the SAHO. The same day the USDA contacts your zoo in regards to the FMD outbreak. Their main concern is preventing FMD from spreading out of the zoo. They want to meet with your team to discuss management plans.

May 12, 2021: 1:00pm

A department head meeting with the zoo's curators and team leaders is scheduled today at 1 pm to discuss next steps in terms of how the zoo is going to manage this outbreak for each collection of animals. Your team schedules a meeting with the USDA officers for the next day at 10 am.

May 13, 2021: 10:00am

The USDA officers ask about the zoo's biosecurity protocols. The officers require depopulation of the petting zoo animals if this has not been done yet. They also ask about the traffic flow into and out of the zoo. They request names of vendors who operate at the zoo, any staff who has access to the petting zoo animals, and any demographic information the zoo can provide on visitors to the zoo each day.

Key Issues

- FMD is confirmed in the petting zoo animals.
- USDA contacts the zoo in regards to the outbreak wanting information regarding the zoos biosecurity protocols and anyone who had access to the animals.
- Zoo staff must continue with their outbreak management plan.

Questions

Based on the information provided, participate in the discussion concerning the issues raised in Module 2. Identify any critical issues, decisions, requirements, or questions that should be addressed at this time.

The following questions are provided as suggested subjects that you may wish to address as the discussion progresses. These questions are not meant to constitute

a definitive list of concerns to be addressed, nor is there a requirement to address every question.

Zoo Industry

1. Describe your zoo's outbreak management plan. Are there any management efforts taking place at this time? Discuss the basic elements of your biosecurity plans.
2. How will your staffing assignments change following diagnosis of FMD for individuals who work with susceptible species outside of the zoo?
3. What outbreak management positions for your facility might be filled by your staff to manage this potential outbreak at this time? What would be a key responsibility of these positions?
4. How might staffing roles and responsibilities change in terms of animal care teams and who is allowed to care for certain animals?
5. What stakeholders will you communicate with to determine if closing parts of your facility is appropriate? What staff position may be responsible for assisting with the closure of any part of your facility, if appropriate?
6. Does your facility do anything differently related to zoo access for patrons at this time?
7. Does the facility keep records of vendors or other service providers that have been on site for the last 2 weeks? Why is this important? Now that there is confirmation of disease, what should be done differently with deliveries, etc?
8. Who would your zoo designate as your representative for the Joint Information Center?
9. Describe the engineering controls following confirmation of a FAD case.
10. Does your facility have a map of the premises and animal enclosures? What are some benefits to having a map during an ongoing disease outbreak?
11. What does your zoo do about the media requests, given the amount of information that you know at this time in the exercise? Who handles media requests at this time? Are messages approved by this person or someone else? What are the specific messages or talking points to be shared at this time? With whom?

Regulatory Officials

12. Briefly describe some of the agencies you would expect to be part of the response to a State-wide FMD outbreak.
13. Who can your facility contact with questions regarding FMD and outbreak management? Who should your staff veterinarian or contract vet call to get advice/scientific information?

MODULE 3: EXTERNAL COMMUNICATION COORDINATION

Scenario

May 13, 2021: 8:00 AM

The zoo's public information office has started getting media requests for information regarding the outbreak. This is also the beginning of the zoo's busy season and potential patrons have been contacting the zoo wanting to know when they can visit the zoo. Two field trips are scheduled for the next week and inquiries from the public related to these trips are also being received. As the news spreads to vendors who commonly operate at the zoo are becoming concerned about the outbreak as well local businesses in the area want updates from the zoo in regards to the outbreak.

May 13, 2021: 4:00 PM

Your Director receives two voicemail messages requesting interviews about the farm animals that were "murdered" at your facility. Despite it being emphasized that no information is to be provided by personnel without coordination through the public information office, an employee at the petting zoo has leaked sensitive information on social media. The zoo CEO is not happy about all the negative publicity. Your team receives another email wanting your team to work with the public information office to create a community response that can ease the concerns of the patrons, vendors, and local businesses.

Key Issues

- Zoo patrons and contractors want to know when the zoo will be back to full operation.
- Public opinions of the safety of the zoo are becoming negative.
- Cohesive and organized messaging is needed for local stakeholders

Questions

Based on the information provided, participate in the discussion concerning the issues raised in Module 3. Identify any critical issues, decisions, requirements, or questions that should be addressed at this time.

The following questions are provided as suggested subjects that you may wish to address as the discussion progresses. These questions are not meant to constitute a definitive list of concerns to be addressed, nor is there a requirement to address every question.

Zoo Industry

1. Is FMD a public health concern? What would you say to the public at this time?
2. What protocols should be put in place to help prevent further spread through the park?
3. What stakeholders will you communicate with to determine if closing parts of your facility is appropriate? What Staff positions may be responsible for assisting with the closure of any part of your facility, if appropriate?
4. Describe the protocols in place at your facility to manage and contain a possible FMD case in other animals. If none, what protocols should be put in place to manage the current outbreak?
5. Does your facility assign an individual to manage and monitor social networking sites?
6. Who can you contact at this time to assist with aid to your facility during an FMD outbreak? What additional stakeholder groups would you consider contacting?

Regulatory Official

1. If not already discussed, how does the State and USDA public relations professionals support the zoological facility at this time?

MODULE 4: EXTERNAL COMMUNICATION COORDINATION

Scenario

August, 3, 2021: 8:00 AM

It has been 12 weeks since confirmation of FMD at the petting zoo. State Officials identified that FMD got into the petting zoo through Farmer A's sheep. The farmer missed the clinical signs as they are mild in sheep. Other FMD positive cases were identified across the US. Currently, FMD positive swine and cattle herds have been identified in 40 states. USDA has declared an FMD epidemic. Depopulation measures through stamping out have been attempted in a majority of states, however, this is proving difficult due to the volume of infected animals, not enough resources, and public outcry.

The outbreak within your zoo was handled well and FMD did not spread to other susceptible animals at the zoo, The other susceptible species (hoofstock of HIGH conservation value) at the zoo were successfully isolated with the highest level of biosecurity. The zoo Director and staff were devastated to depopulate their domestic animal species and are adamant that other hoofstock species be protected! Exotic animal industry leaders are beginning to push back against depopulation measures, due to substantial financial losses. Animal rights activists are in an uproar over “the mass murder of beloved Bovidae,” a direct quote from the Farm Animal Rights Movement website. There is still a high level of concern that the remaining hoofstock species could still become infected as the outbreak has not yet been contained outside the zoo boundary.

OIE and USDA recognize that we will never get out of this without vaccination and the continued outbreak will destroy the livestock industry if we do not do something now. The Director likes the idea of vaccinating the animals at the zoo, if at all possible, with the hope that the animals won't have to be depopulated in the future. They expect your team to manage any vaccination efforts taken at the zoo.

Key Issues

- The USDA has declared an FMD epidemic in the US.
- A vaccine protocol/plan needs to be developed for your high value species.

Questions

Based on the information provided, participate in the discussion concerning the issues raised in Module 4. Identify any critical issues, decisions, requirements, or questions that should be addressed at this time.

The following questions are provided as suggested subjects that you may wish to address as the discussion progresses. These questions are not meant to constitute a definitive list of concerns to be addressed, nor is there a requirement to address every question.

Zoo Industry

1. Has the zoo determined the value of zoological species that are susceptible to FMD? If so how?
2. If vaccination is an option for your priority species, which ones will you choose to vaccinate? In what order? Why?
3. What are the possible negative consequences of vaccinating your animals? Is it possible to continue isolation until the outbreak is contained?
4. Given the situation of an FMD epidemic in the US, what next steps will your zoo take to protect FMD susceptible animals housed there? Who will be responsible for making these decisions?
5. If you have endangered species, what has been discussed at your zoo and with your SAHO in regards to vaccination?
6. What are factors your zoo will consider for determining whether to (or if you can) vaccinate your priority species? How might this affect SSP transport plans?

Regulatory Officials

1. What options are available for FMD management in zoos in your state based on the USDA's Red Book?
2. What is the state's plan to deal with the FMD outbreak, what might the state do? Will the state/federal government allow zoos to vaccinate?