

Head, Shoulders, Foot and Mouth

Controller/Evaluator Handbook

[Date of play TBD]

The Controller/Evaluator (C/E) Handbook describes the roles and responsibilities of exercise controllers and evaluators, and the procedures they should follow. Because the C/E Handbook contains information about the scenario and about exercise administration, it is distributed to only those individuals specifically designated as controllers or evaluators; it should not be provided to exercise players

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/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 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 Schedule

The full exercise schedule is adaptable, as it is played out by modules. It can be conducted in a day if ‘in person’ or by module if played electronically. The following table is filled out once the schedule is determined.

Event	Date	Location (if needed)
Participant Registration	[Date]	[Location]
Participant Brief	[Date]	[Location]
Start of Exercise (StartEx)	[Date]	[Location]
End of Exercise (EndEx)	[Date]	[Location]
Hotwash	[Date]	[Location]
Controller/Evaluator Debrief	[Date]	[Location]

Table 1. Exercise Schedule

Objectives

The following exercise objectives in [Table 2] describe the expected outcomes for the exercise. The objectives are linked to capabilities, which are distinct critical elements necessary to achieve the specific focus area(s). The objectives and aligned capabilities are guided by senior leaders and selected by the Exercise Planning Team.

Exercise Objective	Core 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 2. Exercise Objectives and Associated Capabilities

Scenario

12 weeks ago, the USDA-APHIS-VS confirmed FMD in your zoo's petting zoo animals. Since then, FMD has run rampant through the United States' cattle industry and mass depopulations have taken place. Depopulation of your zoo's FMD positive animals have taken place and the other susceptible endangered hoofstock species have successfully been isolated. Your zoo must decide what the next steps are to continue to keep these species safe in light of the FMD epidemic that is not yet under cs.

More detailed scenario information is located in Appendix C.

Exercise Assumptions and Artificialities

In any exercise, assumptions and artificialities may be necessary to complete play in the time allotted and/or account for logistical limitations. Artificialities and constraints, such as the exercise assembly area, may detract from realism.

Assumptions

Assumptions constitute the implied factual foundation for the exercise and, as such, are assumed to be present before the exercise starts. The following assumptions apply to the exercise:

- This exercise is conducted in a no-fault learning environment where systems and processes, not individuals, will be evaluated.
- The exercise scenario is realistic and plausible; events occur as they are presented.
- The goals and objectives of the exercise are consistent with functional area operations and technical plans and procedures, whenever possible.
- Exercise simulation contains sufficient detail to allow players to react to the information and situations as they are presented as if the simulated incident were real.
- Participants may need to balance exercise play with real-world emergencies. Real-world emergencies take priority.
- Exercise participants will comply with real response procedures unless otherwise directed by the control staff.

Artificialities

During this exercise, the following artificialities apply:

- Exercise communication and coordination will be limited to participating exercise organizations, venues, and the Simulation Cell (SimCell).
- Only communication methods listed in the Communications Plan are available for players to use during the exercise.
- The zoological institution described in the scenario likely differs from your facility construct, collection composition and other factors. However, the concepts, strategies and tactics discussed during the exercise will likely inform similar decision-making in actual institutions, as well as test existing plans and strategies for actual collections.
- Participating agencies may need to balance exercise play with real-world emergencies. Real-world emergencies will always take priority.

EXERCISE LOGISTICS

Communications

All communications during the exercise if conducted via email will begin and end with the statement, [**“This is an exercise”**] or [**“Exercise. Exercise. Exercise.”**] Exercise participants who would initiate communication with the SimCell /Exercise Controllers must identify the agency, organization, office, or individual with whom they wish to speak.

If playing virtually the Exercise Director will cease exercise play by transmitting the End of Exercise (ENDEX) via the controller communications network.

Safety and Real-World Emergencies

All participating organizations must recognize the importance of conducting an exercise of this magnitude as safely as possible. Safety will be an integral part of the exercise process.

General

Exercise participant safety takes priority over exercise events. Although the organizations involved in this exercise come from various groups, they share the basic responsibility for ensuring a safe environment for all personnel involved in the exercise. Professional health and safety ethics should guide all participants to operate in their assigned roles in the safest manner possible. It is important to be aware that operating in an operations-based exercise environment is inherently dangerous.

The following general requirements apply to the exercise should this be conducted as an exercise in a predetermined location:

- A Safety Controller is responsible for participant safety; any safety concerns must be immediately reported to the Safety Controller. The Safety Controller and Exercise Director will determine if a real-world emergency warrants a pause in exercise play and when exercise play can be resumed.
- All controllers, evaluators, and other exercise staff will serve as safety observers while exercise activities are under way. Any safety concerns must be immediately reported to the Safety Officer.
- Participants will be responsible for their own and each other’s safety during the exercise. All persons associated with the exercise must stop play if a real-world safety problem exists. After the problem is corrected, exercise play may resume.

- All organizations will comply with their own environmental, health, and safety plans and procedures, in addition to appropriate federal, state, and local environmental health and safety regulations.

The following procedures will be used in case of an actual emergency or unsafe act:

- The controller(s) will suspend exercise play.
- The controller(s) will notify the Exercise Director or Lead Controller.
- The Exercise Director or Lead Controller will evaluate the situation and decide if the exercise can safely resume.

Accident Reporting and Real Emergencies

For an emergency that requires assistance, use the phrase “**real-world emergency.**”

The following procedures should be used in case an emergency occurs during the exercise:

- Anyone who observes a participant who is seriously ill or injured will advise the nearest controller and (if possible) render aid, provided the aid does not exceed his or her training.
- The controller who is made aware of an emergency will provide the following information to the Exercise Director:
 - o Venue and function, if applicable
 - o Location within the venue and function,
 - o Condition, and
 - o Requirements.
- If the nature of the emergency requires suspension of the exercise at the venue or function, all exercise activities at that facility will cease immediately. Exercise play may resume at that venue or function after the situation has been addressed and resolved.
- Exercise play at other venues and functions should not cease if one venue or function has declared an emergency unless they rely on the affected venue or are ordered to do so by the Exercise Director.
 - o If a real-world incident requires resources committed to the safe conduct of the exercise, exercise leadership, in coordination with other leaders as appropriate, will convene to discuss potential courses of action.

Fire Safety

Standard fire and safety regulations relevant to the venue, or organization will be followed during the exercise, if played in person.

POST-EXERCISE ACTIVITIES

Hotwash

At the conclusion of exercise play, site evaluators will facilitate a hotwash to allow players to discuss strengths and areas for improvement and allow evaluators to seek clarification regarding player actions and decision-making processes. Evaluators should actively participate in these hotwashes to validate their initial observations and gather new information. If controllers do not conduct a hotwash, evaluators should attempt to resolve any outstanding questions with exercise players before leaving the site. Evaluators should include details from these hotwashes and other follow up discussions in their EEGs and raw notes. All participants may attend; however, observers are not encouraged to attend the meeting.

Participant Feedback Forms

Participant Feedback Forms provide players with the opportunity to comment candidly on exercise activities and exercise design. Participant Feedback Forms should be collected at the conclusion of the Hotwash.

Controller and Evaluator Debriefing

Controllers and evaluators attend a facilitated controller/evaluator debriefing immediately following the exercise. During this debriefing, controllers and evaluators provide an overview of their observations and discuss strengths and areas for improvement.

After Action Meeting

Once the draft After Action Report is complete, senior leaders, evaluators, and program managers will come together for the After-Action Meeting (AAM) to finalize the AAR and create the Improvement Plan (IP). The AAM is scheduled based upon exercise date.

CONTROLLER INFORMATION AND GUIDANCE

Exercise Control Overview

Exercise control maintains exercise scope, pace, and integrity during exercise conduct. The control structure in a well-developed exercise ensures that exercise play assesses objectives in a coordinated fashion at all levels and at all locations for the duration of the exercise.

Exercise Control Structure

Control of the exercise is accomplished through an exercise control structure. The control structure is the framework that allows controllers to communicate and coordinate with other controllers at other exercise venues, (if exercise is played in different locations on-line) the SimCell, or a Control Cell to deliver and track exercise information.

Exercise Control Documentation

Controller Package

The controller package consists of the C/E Handbook, activity logs, badges, and any other exercise tools (e.g., MSEL) as necessary. Controllers must bring their packages and any additional professional materials specific to their assigned exercise activities.

Master Scenario Events List

MSEL injects/questions are designed to stimulate exercise play and promote expected player actions. Each inject contains an implementer (occasionally referred to as the “script”) that contains the information needed to stimulate player response actions per the appropriate plan, policy, or procedure. Implementers may also contain related attachments to drive exercise play (e.g., maps, weather reports).

Controllers and simulators should review and understand each MSEL inject/question required for their segments of the exercise. If a question is not understood, the controller should request clarification from agency representative or zoological personnel. Certain MSEL injects/questions contain specific information required by the player. This information should not be readily provided until the players have executed the relevant standard operating procedures.

Ad Hoc Contingency Inject Process

Not all MSEL injects are preplanned or pre-scripted. Some will be ad hoc or contingency injects as expected player actions evolve.

EXERCISE SIMULATION

Because the exercise is of limited duration and scope, certain details will be simulated. The physical description of what would actually occur at the incident sites and surrounding areas will be relayed to players by the scenario.

Exercise Controller/ Simulation

The Exercise Controller is responsible for control of exercise play, and any simulated field assets.

Simulation is supported by department/agency subject-matter experts and is designed to replicate actions by departments, agencies, and field assets not participating in the exercise or ad hoc actions by participating departments and agencies where the segment of the department or agency that would normally take action is not participating.

Exercise Controller Instructions

Controllers should follow these instructions:

Controller and Evaluator (C/E) Handbook
VMCVM
Homeland Security Exercise and Evaluation Program
2020 508

ZAHP &

Rev.

Before the Exercise

- Review appropriate emergency plans, procedures, and protocols.
- Review appropriate exercise package materials, including the objectives, scenario, injects, safety and security plans, and controller instructions.
- Complete controller training and attend required briefings.
- Report to the exercise check-in location at the time designated in the exercise schedule, meet with the exercise staff, and present the Player Briefing.
- Be at the appropriate location at least 15 minutes before the exercise starts.
- Obtain, locate and test necessary communications equipment.

During the Exercise

- Wear controller identification items if needed.
- Avoid personal conversations with exercise players.
- Deliver questions to appropriate players at the time indicated in the MSEL (or as directed by the Exercise Director). **Note:** If the information depends on some action to be taken by the player, do not deliver the inject until the player has earned the information by successfully accomplishing the required action.
- If playing on-line, begin and end all exercise communications with the statement, [**This is an exercise.**”]
- Do not prompt players regarding what a specific response should be, unless an inject directs you to do so. Clarify information but do not provide coaching.
- Do not give information to players about scenario event progress or other participants’ methods of problem resolution. Players are expected to obtain information through their own resources.

After the Exercise

- Distribute copies of Participant Feedback Forms and pertinent documentation.
- All controllers are expected to conduct a Hotwash at their venue and, in coordination with the venue evaluator, take notes on findings identified by exercise players. Before the Hotwash, do not discuss specific issues or problems with exercise players.
- At exercise termination, summarize your notes from the exercise and Hotwash, and prepare for the Controller and Evaluator Debriefing. Have your summary ready for the Exercise Director.

Controller Responsibilities

These positions are filled depending on size and scope of the tabletop. If the exercise is being played at one institution, many of these positions will not be filled. As with the Incident Command System, positions will only be filled as the size of the exercise, number of participants and venues would increase. On-line exercise conduct will require fewer on-site personnel.

Controller Responsibilities
Exercise Director
<ul style="list-style-type: none"> Oversees all exercise functions Oversees and remains in contact with controllers and evaluators Oversees setup and cleanup of exercise, and positioning of controllers and evaluators
Senior Controller
<ul style="list-style-type: none"> Monitors exercise progress Coordinates decisions regarding deviations or significant changes to the scenario Monitors controller actions and ensures implementation of designed or modified actions at the appropriate time Debriefs controllers and evaluators after the exercise Oversees setup and takedown of the exercise
Safety Controller
<ul style="list-style-type: none"> Monitors exercise safety during exercise setup, conduct, and cleanup Receives any reports of safety concerns from other controllers or participants
Public Information Officer (PIO)
<ul style="list-style-type: none"> Provides escort for observers Provides narration and explanation during exercise events, as needed Performs pre-exercise and post-exercise public affairs duties May act as media briefer and escort at exercise site Serves as safety officer for his or her site
Venue Controller
<ul style="list-style-type: none"> Issues exercise materials to players Monitors exercise timeline Provides input to players (i.e., injects) as described in MSEL Serves as safety officer for his or her site
Simulation Cell (SimCell) Controller
<ul style="list-style-type: none"> Role plays as nonparticipating organizations or individuals Monitors exercise timeline Provides input to players (i.e., injects) as described in MSEL

Table 4. Controller Responsibilities

EVALUATOR INFORMATION AND GUIDANCE

Exercise Evaluation Overview

Exercise evaluation assesses an organization's capability to accomplish a mission, function, or objective. Evaluation provides an opportunity to assess performance of critical tasks to capability target levels. Effective evaluation will facilitate thorough analysis of exercise events and help identify key issues, potential best practices, and areas for improvement.

Evaluation Structure

During conduct, evaluators will observe, and document exercise play at various exercise locations. Evaluators should be located so they can observe player actions and hear conversations without interfering with those activities. In certain conditions, more than one evaluator may be needed in a particular setting or area. Evaluation staffing within the various exercise locations will differ depending on site requirements. For specific evaluator assignments will be made prior to play.

Documentation

Evaluator Package

The evaluator package contains this C/E Handbook, EEGs, and other items as necessary. Evaluators should bring the package to the exercise. They may reorganize the material so information that is critical to their specific assignment is readily accessible. Evaluators may bring additional professional materials specific to their assigned activities.

Participant Feedback Forms

Participant Feedback Forms provide players and exercise staff, including evaluators, the opportunity to comment on exercise activities and exercise design on a non-attributable form. Participant Feedback Forms should be created by the Exercise Team prior to the event. Evaluators should collect completed forms, in coordination with site controllers, at the conclusion of exercise play at their respective evaluation sites.

Raw Notes

Evaluators should also keep separate hard copy/electronic files of raw notes taken during exercise conduct. These notes should inform their completion of the EEGs but will also serve as an overall record of evaluation observations from the exercise. Evaluators should submit all notes and EEGs to the Lead Evaluator at the conclusion of the exercise.

Exercise Evaluation Guides

EEGs are structured to capture information specifically related to the evaluation requirements developed by the Exercise Planning Team. Evaluators should complete these guides as fully as possible, with clear assessments of how players completed the critical tasks. These critical tasks reflect the policies and procedures outlined in the following plans:

- Individual institutional plans, State plans, USDA documents

Each evaluator is provided with an EEG for each capability that he/she is assigned to evaluate. Evaluators should complete all assigned EEGs and submit to the Lead Evaluator at the conclusion of the exercise. The Lead Evaluator and Senior Controller compile all evaluator submissions into the first working draft of the AAR.

Exercise Evaluator Instructions

Effective evaluation is based on the following techniques:

- Use the EEGs to confirm that evaluation objectives are met.

- Take detailed notes concerning significant activities observed, including the time they were initiated and/or completed.
- When more than one evaluator is assigned to an area, divide responsibilities to ensure detailed evaluation of player activities.
- Stay in proximity to player decision makers.

Evaluator Training

Evaluators are required to attend at least one session of evaluator training. This training provides comprehensive information on evaluators' specific roles and responsibilities during the exercise as well as best practices for exceptional data collection in support of exercise evaluation. Evaluators will learn what to expect from exercise conduct, how to navigate the EEGs, and how to submit their completed evaluation materials.

Evaluators are also encouraged to complete the Emergency Management Institute's (EMI's) recently-updated exercise evaluation training course, [IS-130.a - How to be an Exercise Evaluator](#). Anyone who has not previously evaluated an exercise should complete this short online course in addition to the evaluator training.

Using Exercise Evaluation Guides

The EEGs are structured to capture information specifically related to the evaluation requirements developed by the Exercise Planning Team. The following evaluation requirements are documented in each EEG:

- Capabilities: The distinct critical elements necessary to achieve a specific focus area (e.g., prevention). To assess both capacity and gaps, each capability includes capability targets.
- Capability target(s): The performance thresholds for each capability; they state the exact *amount* of capability that players aim to achieve. Capability targets are typically written as quantitative or qualitative statements.
- Critical tasks: The distinct elements required to perform a capability; they describe *how* the capability target will be met. Critical tasks generally include the activities, resources, and responsibilities required to fulfill capability targets. Capability targets and critical tasks are based on operational plans, policies, and procedures to be exercised and tested during the exercise.
- Performance ratings: The summary description of performance against target levels. Performance ratings include both Target Ratings, describing how exercise participants performed relative to each capability target, and Capability Ratings, describing overall performance relative to entire the capability.

For each EEG, evaluators provide a target rating, observation notes and an explanation of the target rating, and a final capability rating. In order to efficiently complete these sections of the EEG, evaluators should focus their observations on the capability targets and critical tasks listed in the EEG.

Recording Events

Although numerous events may occur simultaneously, evaluators do not need to record every single action. Knowing which events are important eliminates superfluous information and provides the type of data most useful for evaluation. Individuals preparing the AAR will analyze the results provided by all evaluators to develop an accurate representation of exercise plans and capabilities. Their analysis will focus on the timing of key events, decisions made, and actions taken. Observation notes should include *if* and *how* quantitative or qualitative targets were met. For example, a capability target might state, “*Within 4 hours of the incident...*” Notes on that target should include the actual time required for exercise players to complete the critical tasks. Additionally, observations should include:

- How the target was or was not met;
- Timeliness of actions;
- Pertinent decisions made and information gathered to make decisions;
- Requests made and how requests were handled;
- Resources utilized;
- Plans, policies, procedures, or legislative authorities used or implemented;
- Communication among players and organizations;
- Key decisions made and the times these decisions are made;
- Deviations from plans and implementation procedures;
- Equipment issues in relation to player efforts; and,
- Any other factors contributed to the results.

Evaluators should also note if an obvious cause or underlying reason resulted in players not meeting a capability target or critical task. However, the evaluators should not include recommendations in the EEGs.

Based on their observations, evaluators assign a target rating for each capability target listed on the EEG. Evaluators then consider all target ratings for the core capability and assign an overall capability rating. The rating scale includes four ratings:

- **Performed without Challenge (P):** The targets and critical tasks associated with the capability were completed in a manner that achieved the objective(s) and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or

safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws.

- **Performed with Some Challenges (S):** The targets and critical tasks associated with the capability were completed in a manner that achieved the objective(s) and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws. However, opportunities to enhance effectiveness and/or efficiency were identified.
- **Performed with Major Challenges (M):** The targets and critical tasks associated with the capability were completed in a manner that achieved the objective(s), but some or all of the following were observed: demonstrated performance had a negative impact on the performance of other activities; contributed to additional health and/or safety risks for the public or for emergency workers; and/or was not conducted in accordance with applicable plans, policies, procedures, regulations, and laws.
- **Unable to be Performed (U):** The targets and critical tasks associated with the capability were not performed in a manner that achieved the objective(s). *Placement and Monitoring*

Evaluator Roles and Responsibilities

General

- Avoid personal conversations with players.
- Do not give information to players about event progress or other participants' methods of problem resolution. Players are expected to obtain information through their own resources.

Before the Exercise

- Review appropriate plans, procedures, and protocols.
- Attend required evaluator training and other briefings.
- Review appropriate exercise materials, including the exercise schedule and evaluator instructions.
- Review the EEGs and other supporting materials for your area of responsibility to ensure that you have a thorough understanding of the capabilities, capability targets, and critical tasks you are assigned to evaluate.
- Report to the exercise check-in location at the time designated in the exercise schedule and meet with the exercise staff.

- Obtain or locate necessary communications equipment and test it to ensure that you can communicate with other evaluators and the Exercise Director.

During the Exercise

- Wear evaluator identification items (e.g., badge).
- Stay in proximity to player decision-makers.
- Use EEGs to document performance relative to exercise objectives, capabilities, capability targets, and critical tasks.
- Focus on critical tasks, as specified in the EEGs.
- Your primary duty is to document performance of capabilities. After the exercise, that information will be used to determine whether the exercise capability targets were effectively met and to identify strengths and areas for improvement.

After the Exercise

- Participate in the Hotwash and take notes on findings identified by players. Before the Hotwash, do not discuss specific issues or problems with participants. After the Hotwash, summarize your notes and prepare for the Controller and Evaluator Debriefing. Have your summary ready for the Lead Evaluator.
- Complete and submit all EEGs and other documentation to the Lead Evaluator at the end of the exercise

The evaluation team will deliver an initial draft of the After-Action Report (AAR) for review. To meet this deadline, the evaluation team requests that evaluators provide their completed EEGs and notes to the AAR team by a pre-determined date to allow adequate time to complete the AAR. All evaluation data should be emailed to [POC]. To the extent possible, all notes and EEG submissions should be typed and electronically submitted. This rapid data collection will allow the evaluation team to begin drafting the AAR immediately following conduct and deliver a final draft into concurrence in a timely manner.

APPENDIX A: EXERCISE SCENARIO

Scenario

Module 1

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.

Module 2:

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.

Module 3:

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.

Module 4:

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