USAID | STOP AI
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TRAINER GUIDE

GHANA BIOSECURITY, SURVEILLANCE AND OUTBREAK RESPONSE TRAINING OF TRAINERS (TOT)

4-15 AUGUST 2008

TABLE OF CONTENTS

ACKNOWLEDGEMENTS

Several different organizations have contributed their time, knowledge, and training materials to develop this course:

- UC Davis School of Veterinary Medicine/Global Livestock CRSP's Avian Flu School provided the following modules: Overview of Avian Influenza, Animal Surveillance, Biosecurity Principles, Procedures and Planning, and Considerations of Outbreak Recovery.

- Bird Flu Control (BFC) developed the modules on Outbreak Response, Depopulation and Disposal, including the Poultopia case study.

- Development Alternatives, Inc. (DAI) developed the modules on National Preparedness and Response Plans.

- The modules on the PPE Kit, Lab Kit and Decontamination were developed by AED, with technical input from DAI, to accompany USAID's Avian Influenza Commodity Kits.

- Management Sciences for Health (MSH) developed the modules on Human Health Surveillance.

- BFC, MSH, and UC Davis School of Veterinary Medicine collaborated to develop the Public Health and Occupational Safety module.

GHANA BIOSECURITY, SURVEILLANCE AND OUTBREAK RESPONSE TRAINING OF TRAINERS (TOT)

BLOCK SCHEDULE

TIME	Monday 4 August	Tuesday 5 August	Wednesday 6 August	Thursday 7 August	Friday 8 August
AM	Opening Ceremony Overview of AI	Biosecurity Principles, Procedures and Planning	Biosecurity Principles, Procedures and Planning *continued*	Surveillance Planning Introduction to the PPE Kit	Introduction to the Lab Kit Depopulation and Disposal Options Cleaning and Disinfection Principles
LUNCH					
PM	Public Health and Occupational Safety National Preparedness and Response Plans	Biosecurity Principles, Procedures and Planning *continued*	Animal and Human Surveillance	Outbreak Response and Management	Poultopia Exercise

GHANA BIOSECURITY, SURVEILLANCE AND OUTBREAK RESPONSE TRAINING OF TRAINERS (TOT)

BLOCK SCHEDULE (CONTINUED)

TIME	Monday 11 August	Tuesday 12 August	Wednesday 13 August	Thursday 14 August	Friday 15 August
AM	Wet Lab	Field Visit Observing Biosecurity	Methodology for Training Adults	Preparation for Practice Training	Practice Training *continued* Application Planning Closing
LUNCH					
PM	Considerations in Outbreak Recovery Preparation for the Field Visit	Field Visit Debriefing Wrap up of Course Technical Content	Facilitation Skills Practice	Practice Training	

GHANA BIOSECURITY, SURVEILLANCE AND OUTBREAK RESPONSE TRAINING OF TRAINERS (TOT)

AGENDA

OBJECTIVES

By the end of the course, participants will be able to:

- Describe the essential characteristics of the H5N1 HPAI virus;
- Recognize the signs of H5N1 HPAI infection in birds and humans;
- Describe approaches to public health and occupational safety for farm/market workers and response workers;
- Explain site management practices for protection, containment, and enforcement;
- Describe and assess key features of a National HPAI Preparedness and Response Plan (NPRP);
- Evaluate biosecurity risks and recommend appropriate measures to minimize risk for the small producer, commercial farmers, and live bird market owners and sellers;
- Explain what poultry growers and sellers should do if they suspect an outbreak of H5N1 HPAI;
- Explain H5N1 HPAI surveillance plans;
- Describe appropriate sampling techniques for use on both poultry and wild birds and associated sample storage and shipping requirements;
- Describe disease surveillance and lab surveillance for human health;
- Describe the components of a response operation;
- Define the procedure for deciding on the extent of restricted areas, establishing and enforcing movement controls;
- Explain decontamination procedures for use in the event of an outbreak
- Compare and select suitable depopulation and disposal techniques;
- Perform wet laboratory exercises such as necropsy, poultry bleeding techniques and rapid diagnostic testing
- Describe the elements of the Experiential Learning Cycle and how it applies to training different audiences;
- Use facilitation skills to deliver effective training, transfer technical concepts, and generate interaction among participants.

MONDAY, 4 AUGUST 2008

Time	Modules/Topics	Presenter/ Facilitator
9:00 – 10:00	Opening Ceremony	
10:00 – 10:30	Course Opening • Registration • Welcome and introductions • Objectives and agenda	Rachael Wilcox
10:30 – 1:00 *including break*	Overview of Avian Influenza • H5N1 HPAI virus classification and description • HPAI transmission and clinical signs • Spread of H5N1 HPAI • Economic Impacts of H5N1 HPAI	Dr. Darlington Owusu
1:00 – 2:00	Lunch	
2:00 - 4:00 *including break*	Public Health and Occupational Safety • General public education and protection • Occupational safety for farm/market workers and response workers • Site management for protection, containment, and enforcement	Dr. Helena Acquah
4:00 - 6:00	National Preparedness and Response Plans for HPAI • Key features of a National HPAI Preparedness and Response Plan (NPRP) and the Standard Operating Procedures (SOP) components • Evaluation and identification of gaps in an existing National HPAI PRP	Dr. Anthony Akunzule

TUESDAY, 5 AUGUST 2008

Time	Modules/Topics	Presenter/ Facilitator
9:00 – 1:00 *including break*	**Biosecurity Principles, Procedures and Planning** Overview: • Principles of biosecurity • Potential biosecurity risks • Preparing a biosecurity plan Biosecurity Measures in Different Settings: • Commercial Farms and Smallholder Farms	Dr. Darlington Owusu
1:00 – 2:00	Lunch	
2:00 – 5:00 *including break*	**Biosecurity Principles, Procedures and Planning** *continued* Biosecurity Measures in Different Settings: • Commercial Farms and Smallholder Farms Biosecurity Practices for Transporting Poultry to Market	Dr. Anthony Akunzule

WEDNESDAY, 6 AUGUST 2008

Time	Modules/Topics	Presenter/ Facilitator
9:00 – 1:00 *including break*	**Biosecurity Principles, Procedures and Planning** *continued* Biosecurity Measures in Different Settings: • Live Bird Markets • Consumers Biosecurity Planning and Checklists	Dr. Helena Acquah
1:00 – 2:00	Lunch	
2:00 - 5:00 *including break*	Animal and Human Surveillance • Types of surveillance • Sampling procedures • Surveillance for human AI • International Health Regulations (IHRs)	Dr. Anthony Akunzule

THURSDAY, 7 AUGUST 2008

Time	Modules/Topics	Presenter/ Facilitator
9:00 – 12:00 *including break*	Surveillance Planning • Designing an outbreak investigation form	Dr. Anthony Akunzule
12:00 – 1:00	Introduction to the PPE Kit • Contents of the PPE Kit; how to correctly don and doff the kit	Dr. Helena Acquah
1:00 – 2:00	Lunch	
2:00 – 5:00 *including break*	Outbreak Response and Management • Components of a response operation • Activities undertaken on an infected site during depopulation • The outbreak response in Ghana: best practices and lessons learned	Dr. Darlington Owusu

FRIDAY, 8 AUGUST 2008

Time	Modules/Topics	Presenter/ Facilitator
9:00-10:30	Introduction to the Lab Kit • Contents of the Laboratory and Diagnostics kit • Proper storage and shipping procedures	Dr. Anthony Akunzule
10:30 – 11:45 *including break*	Depopulation and Disposal Options • Suitable culling and disposal techniques under different situations • Materials needed to carry out the depopulation operation	Dr. Darlington Owusu
11:45 – 1:00	Cleaning and Disinfection Principles (USAID Decontamination Kit) • Definitions of cleaning and disinfection • Contents of the decontamination kit • Decontamination procedures for use in the event of an outbreak	Dr. Helena Acquah
1:00 – 2:00	Lunch	
2:00 – 5:00 *including break*	Poultopia Exercise • Planning a response strategy • Recommendations on culling and disposal techniques • Intra-team collaboration	Dr. Darlington Owusu Rachael Wilcox

MONDAY, 11 AUGUST 2008

Time	Modules/Topics	Presenter/ Facilitator
9:00-1:00 *including break*	Wet Lab • Laboratory exercises • Laboratory skills and safety review • Cloacal and oral cavity swabbing technique • Performing FluDETECT Test • Bleeding a chicken • Humane euthanasia techniques • Necropsy of birds	Dr. Anthony Akunzule
1:00 – 2:00	Lunch	
2:00 - 4:00 *including break*	Considerations in Outbreak Recovery • Basic recovery options and benefits • Challenging issues related to vaccination for HPAI H5N1 • Components and challenges of compensation for culling poultry	Dr. Anthony Akunzule
4:00 – 5:00	Preparation for Field Visit	Dr. Helena Acquah Rachael Wilcox

TUESDAY, 12 AUGUST 2008

Time	Modules/Topics	Presenter/ Facilitator
7:00 – 1:00	Field Visit Observing Biosecurity • Visit to a farm (and hatchery and feed mill, if available) • Identifying biosecurity infractions	Dr. Darlington Owusu
1:00 – 2:00	Lunch	
2:00 – 4:00 *including break*	Field Visit Debriefing • Discussion of field visit and presentation of findings • Sharing solutions to biosecurity infractions	Dr. Anthony Akunzule Rachael Wilcox

WEDNESDAY, 13 AUGUST 2008

Time	Modules/Topics	Presenter/ Facilitator
9:00-1:00 *including break*	Methodology for Training Adults • The Experiential Learning Cycle • Effective facilitation skills • Presenting key ideas and concepts from the STOP AI Biosecurity, Surveillance and Outbreak Response training to different audiences	Rachael Wilcox
1:00 – 2:00	Lunch	
2:00-5:00 *including break*	Facilitation Skills Using facilitation skills to: • Encourage participation • Generate interaction • Guide learners through an experiential session	Rachael Wilcox

THURSDAY, 14 AUGUST 2008

Time	Modules/Topics	Presenter/ Facilitator
9:00 - 1:00 *including break*	Preparation for Practice Training	Rachael Wilcox
1:00 – 2:00	Lunch	
2:00 - 5:30 *including break*	Practice Training • Peer feedback	Rachael Wilcox

FRIDAY, 15 AUGUST 2008

Time	Modules/Topics	Presenter/ Facilitator
9:00 – 12:00 *including break*	Practice Training • Peer feedback Practice Training Debrief	Rachael Wilcox
12:00 – 1:00	Application Planning • Taking the learning home Closing • Closing Remarks • Course Evaluation	Rachael Wilcox

GHANA BIOSECURITY, SURVEILLANCE AND OUTBREAK RESPONSE TRAINING OF TRAINERS (TOT)

PURPOSE

This two-week Training of Trainers (TOT) is designed for animal health and other professionals who will deliver the STOP AI Biosecurity, Surveillance and Outbreak Response course.

The purpose of the TOT is to familiarize participants with the contents of the course and to introduce tools and techniques that will help them to deliver training effectively.

Participants will learn course content as well as training and facilitation skills so they may, in turn, train veterinarians, veterinary technicians and other professionals at the regional, district and sub-district levels.

This course is best delivered by one facilitator and two to three trainers who are subject matter experts. This will allow them to work more closely with each participant. The maximum number of participants for the course should be 20.

The course includes a *Trainer Guide*, *Participant Manual* and accompanying PowerPoint slides. To ensure that all trainers give consistent technical messages, there are instructions and talking points in the *Trainer Guide*. It is important to familiarize yourself with these points so that you are comfortable covering the content and facilitating discussions with participants.

OBJECTIVES

By the end of the course, participants will be able to:

- Describe the essential characteristics of the H5N1 HPAI virus;
- Recognize the signs of H5N1 HPAI infection in birds and humans;
- Describe approaches to public health and occupational safety for farm/market workers and response workers;
- Explain site management practices for protection, containment, and enforcement;
- Describe and assess key features of a National HPAI Preparedness and Response Plan (NPRP);
- Evaluate biosecurity risks and recommend appropriate measures to minimize risk for the small producer, commercial farmers, and live bird market owners and sellers;
- Explain H5N1 HPAI surveillance plans;
- Explain what poultry growers and sellers should do if they suspect an outbreak of H5N1 HPAI;
- Describe appropriate sampling techniques for use on both poultry and wild birds and associated sample storage and shipping requirements;
- Describe disease surveillance and lab surveillance for human health;
- Describe the components of a response operation;
- Define the procedure for deciding on the extent of restricted areas, establishing and enforcing movement controls;
- Explain decontamination procedures for use in the event of an outbreak
- Compare and select suitable depopulation and disposal techniques;
- Perform wet laboratory exercises such as necropsy, poultry bleeding techniques and rapid diagnostic testing
- Describe the elements of the Experiential Learning Cycle and how it applies to training different audiences;
- Use facilitation skills to deliver effective training, transfer technical concepts, and generate interaction among participants.

TIME

The full course takes two weeks to deliver. Modules are presented separately so they can be delivered independently, depending on the time available for training.

MATERIALS

- Trainer Guide and Power Point slides: *Ghana Biosecurity, Surveillance and Outbreak Response TOT* (1 copy for each participant and trainer)
- Participant Manual: *Ghana Biosecurity, Surveillance and Outbreak Response TOT* (1 copy for each participant and trainer)
- Poultopia maps and symbols
- CDs with preloaded course materials for each participant
- Laptops and LCD projectors (1 or 2 depending on the number of participants)
- Flipchart paper and easels
- Magic markers
- Masking tape
- Notebooks and pens for each participant
- Name badges/name tents
- General office supplies (sticky notes, index cards, stapler, paper clips, etc.)

For the Wet Lab:

For each participant:
- 1 PPE kit and instructions
- 2 3cc syringes and 23 gauge 1" needle for bleeding
- 1 3cc syringe and 16 gauge 1" needle to practice vaccination
- 1 tube rack
- 2 swabs
- 1 knife or scissors and a pair of forceps
- Markers for labeling blood tubes

For each table:
- Flu Detect rapid antigen test supplies for one test
- 4 Viral Transport media
- Newspaper to cover tables
- Duct or regular tape for taping newspapers and/or gloves to PPE
- 1 plastic bucket
- 1 bottle of liquid soap

Other materials:

- Minimum 20 chickens (laying hens cheaper than broilers)
- Crates or boxes to transport and house chickens to Necropsy room
- 2 Sharps disposal containers (can use large gallon plastic container)
- 5 large rubbish bins with strong plastic liners
- Ketchup or other colored material (e.g. palm oil) for testing PPE removal
- Soap for handwashing (can use liquid soap above)
- Paper towels
- Colored rope or tape (red, green, yellow) to use for site management practice (whole roll if available)

COURSE OPENING

1.5 hours	**COURSE OPENING**

1 hour	**OPENING CEREMONY**

1 The course will begin with an opening ceremony in which project stakeholders, dignitaries and guests are invited to address the participants and offer remarks about the STOP AI project and this two-week training course.

Note: each training team will need to plan this event and determine the guest list and length of time needed. Be sure to invite the media and make arrangements for a brief, private reception with the guests after the opening.

15 minutes	**INTRODUCTIONS**


PPT 1-2

3 Begin the course by welcoming participants and introducing yourself and the training team.


PPT 3

4 Ask participants to introduce themselves by sharing the following:
- Name
- Work experience/training background
- Expectations they have for this course

5 Write the participants' responses to the last question on the flipchart; once completed, summarize their hopes and expectations. Be sure to mention that you will discuss the responses more after you talk about the course's objectives.

5 minutes	**COURSE PURPOSE AND OBJECTIVES**


PPT 4-5

6 Review the purpose and objectives of the course.

Purpose:
The purpose of the course is to familiarize participants with the contents of the STOP AI Biosecurity, Surveillance and Outbreak Response Course and to introduce you to tools and techniques for delivering training effectively.

Objectives:

By the end of the course, participants will be able to:

- Describe the essential characteristics of the H5N1 HPAI virus;
- Recognize the signs of H5N1 HPAI infection in birds and humans;
- Describe approaches to public health and occupational safety for farm/market workers and response workers;
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- Compare and select suitable depopulation and disposal techniques;
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- Describe the elements of the Experiential Learning Cycle and how it applies to training different audiences;
- Use facilitation skills to deliver effective training, transfer technical concepts, and generate interaction among participants.

Be sure to indicate which of the participants' expectations will be addressed during the course and which might not. If appropriate, you can always discuss individuals' questions with them during breaks or lunch. Most important, you'll want to let people know if they have expectations that are totally beyond the scope of this course and help them identify how to get the information they want.

15 minutes COURSE SCHEDULE, PARTICIPANT MANUAL AND LOGISTICS


PPT 6-7

7 **Have** participants turn to the block schedule in their manuals and **review** how the objectives that will be addressed over the four days. Be sure to **cover** logistical details such as:

- lunch and break times and locations
- restroom locations
- time (follow clock in the room)
- hotel arrangements/rooms
- per diem

Pause and ask for participants' reactions or questions, and ask whether they feel there is anything missing from this program.


PPT 8-9

8 **Introduce** the *Participant Manual* and describe how it will be used during the course. Highlight the following:

- The manual will be used to convey key concepts covered in the course.
- There is space to make notes as well as capture reflections.
- Reference materials are included for their use during and after the course.

Explain that participants will also receive the *Trainer Guide* and Power Point slides during the TOT portion (hard copy and on CD-ROM). Participants will have the opportunity to use these materials later in the course during their practice training.

9 **Remind** participants that they should pay attention to both the content and training methodology of the course because they will teach the course to their colleagues and others. Encourage them to take notes on how you deliver the course as well as on the technical points.

10 minutes GUIDELINES FOR WORKING TOGETHER


PPT 10

10 As in any course, having agreed-upon norms is helpful. **Write** the following guidelines on flipchart and review them with participants.

- Keep time (start on time, return from breaks on time, end on time)
- Switch mobile phones off or to "vibrate"
- Participate fully
- Ask questions freely
- Balance talking and listening
- Respect each other's points of view

Ask the participants to decide:

- If there are any they would like to modify
- If any are missing.

Write any additional guidelines on the flipchart and **check** to see if everyone in the room can agree to the list. You can keep it light by asking them to simply nod their heads or raise their hands to signify agreement.


PPT 11

11 Warmly **welcome** the participants again and jump into the content of the course!

OVERVIEW OF AVIAN INFLUENZA

MODULE PURPOSE

To provide an overview of the natural history of AI, with particular emphasis on the H5N1 Highly Pathogenic (HPAI) strain.

MODULE OBJECTIVES

At the conclusion of this module, participants will be able to:

- Define avian influenza;
- Identify avian influenza subtypes and pathogenic forms;
- Describe how the avian influenza virus is transmitted among birds and to other species;
- Identify potential health and economic risks associated with an outbreak of H5N1 HPAI.

TIME

2 ½ hours, (including break)

MATERIALS

- *Trainer Guide*
- *Participant Manual*
- Power Point slides

2 1/2 hours (including break) OVERVIEW OF AVIAN INFLUENZA


PPT 1

1 **Welcome** participants.

5 minutes PURPOSE AND OBJECTIVES


PPT 2-3

2 **Present** the purpose of the module:

To provide an overview of the natural history of AI, with particular emphasis on the H5N1 Highly Pathogenic (HPAI) strain.

Present the objectives of the module:

At the conclusion of this module, participants will be able to:

- Define avian influenza;
- Identify avian influenza subtypes and pathogenic forms;
- Describe how the avian influenza virus is transmitted among birds and to other species;
- Identify potential health and economic risks associated with an outbreak of H5N1 HPAI.

15 minutes LESSON 1: AVIAN INFLUENZA VIRUSES


PPT 4

3 **Ask** participants, "What is your experience with H5N1 HPAI?" Determine the level of involvement the participants have had in dealing with H5N1 HPAI outbreaks in Ghana. **Find out** their experiences and be sure to refer back to those participants throughout the training to benefit from their direct, practical experience in the field.

Define Avian Influenza: commonly called "bird flu": *An infection caused by influenza viruses that occur naturally in birds, and less commonly in pigs and humans.*

Highlight the following points on HPAI:
- Is highly pathogenic to poultry species
- Is constantly evolving with unpredictable results
- Poses the risk of a human pandemic
- Threatens livelihoods especially of rural poor
- Causes economic losses, trade in poultry and poultry products affected

PPT 5-6

4 **Present** information on Avian Influenza Etiology.

- Family – Orthomyxoviridae (RNA virus)
- AI virus type A – human, swine, equine, avian
- AI virus type B and C – humans only
- Classification into types A, B or C based on differences between their nucleoprotein (NP) and matrix protein (MP) antigens

Highlight the subtypes according to surface antigens

- Hemagglutinin (H1-16)
- Neuraminidase (N1-9)
- H5N1

PPT 7-8

5 **Present** information on AI pathogenicity and distinguish between Low Pathogenic vs. High Pathogenic forms. **Point** participants to the detailed information in the *Participant Manual* (p.3) on pathogenicity.

Show the slide with the picture of the AI virus structure and **describe** it.

Ask participants which tests they use in Ghana to determine Low Pathogenic vs. High Pathogenic forms.

Ask, When you get Low Pathogenic results from a test, what do you do? **Discuss** the policy in Ghana (one possible answer is that these cases are monitored).

PPT 9-10

6 **Present** information on the epidemiology of AI. Key points include:

- Domestic fowl, ducks, geese, turkeys, guinea fowl, quail and pheasants are very susceptible

- Immediate source of infection is hard to pin down but most outbreaks historically have started with direct or indirect contact of domestic poultry with wild waterfowl

- Once established, the disease is highly contagious and high concentrations of virus are excreted in feces and in oculonasal discharges
- Spread from flock to flock can occur by movement of infected birds, contaminated shoes, clothing, equipment etc.

- Airborne transmission can occur if birds are in close proximity. Infection occurs by direct deposition of virus in the conjunctiva, nares and trachea

- There is no evidence for vertical transmission

Stress that the disease is highly contagious-it can spread like wildfire; it can be spread from flock to flock by movement of infected birds, contaminated shoes, clothing, equipment, etc.

Emphasize that there is no evidence for vertical transmission. Point to an example to illustrate this (one example is how the virus was transmitted from

Egypt into Sudan through hatching eggs).

PPT 11

Point out information on the incubation period:

- Usually 3-7 days

Depends on:

- the strain of the virus, dose and route of exposure
- Species and age of host (younger birds are more susceptible than younger birds)
- Immune status of host

PPT 12

7 **Present** and discuss the clinical signs and case definition of HPAI:

- Variable and dependent on species, age, concurrent diseases and environment
- **Sudden high mortality in a flock**
- Respiratory signs (sneezing, gasping, coughing)
- Oculonasal discharge
- Edema of face and cyanosis of combs and wattles
- Diarrhea
- Hemorrhages on skin of shanks, breast
- Egg production drops
- Nervous signs

Explain that the signs are variable and not all signs are visible at once. **Make the point** that this is a disease that does not hide. "If it is present, you will know about it."

Explain that the testing for HPAI helps to differentiate it from other diseases, particularly Newcastle Disease in Ghana. Give some examples of how the clinical signs for HPAI might different from Newcastle Disease.

PPT 13-18

Ask participants to share which signs they have seen in Ghana. Then **present** some photos that show the clinical signs (mostly taken in Sudan) and **describe** them, **referring** back to the list of clinical signs above.

PPT 19

8 **Point** to the end of Lesson 1 in the *Participant Manual* and **ask** participants to complete the questions on p.5:

Take a moment to check your knowledge:

- How do flu viruses change?
- Which virus subtypes can cause HPAI?
- How can flu viruses be destroyed?

Check and **compare** their answers before moving on.

20 minutes LESSON 2: HISTORY OF H5N1

PPT 20

9 **Present** a history of the global spread of H5N1 HPAI and discuss ways in which H5N1 HPAI can be introduced in a new country or region. **Show** the WHO map on the slide and **discuss** the areas in which the disease has spread since 2003.

Share some of the misconceptions about the spread of the disease by a migratory route. **Explain** that some believe that wild birds transmit the disease but this is not the case. Wild birds with HPAI die quickly; they would not be able to fly across the ocean to carry this disease.

Share the fact that trade seems to be the #1 thing that spreads the disease.

PPT 21

10 **Describe** a summary of the animal epidemic and **present** current data from the WHO on the spread of the disease and the reported human cases.

PPT 22-23

Show the graphic on flu outbreaks around the world and discuss the spread of HPAI across 11 countries in Africa. **Point out** that Nigeria was the first country to report cases and had one human death. Egypt was the second country to report cases and had 22 human deaths.

Show the map of the African continent and **ask** participants to suggest ways the disease would have spread between these countries.

PPT 24-25

Point specifically to the cases in Ghana and **present** the information on outbreaks in Ghana:

- April 2007 - Tema
- May 2007 - Sunyani
- June 2007 - Aflao

10,000 birds culled (**ask** participants to verify this number)
No reported human cases

Encourage participants to share their experience with the disease and contribute additional relevant information on the situation in Ghana.

PPT 26

11 **Instruct** table groups to look at the questions in their *Participant* Manual on p.8. Discuss with the large group those questions in bold below:

- **Are any of these facts surprising to you?**
- Which of these facts are most important to the stakeholders or constituencies you work with?
- Based on these facts, what messages are important to communicate with the groups and constituencies you work with?
- **Currently H5N1 HPAI is a panzootic and not a human pandemic. What do you think of H5N1 HPAI being an animal health**

emergency?
- What do you think of the issue of prevalence of the disease in humans? Or the fact that it has been limited to only 256 cases worldwide over several years.

Lead a whole group discussion on their responses and **make** some of these key points:
- There were very few rural chickens involved in the outbreak in Ghana; it was mostly the imported breeds. Why is this so? There has been no research into this…perhaps the local chickens have antibodies?
- There is a lack of evidence for human-to-human transmission.
- This is both an animal and human health disease; many people have lost their lives and livelihoods. Media has helped with the hype-but it is not new anymore. There are still new outbreaks every day – as of May 2008 (Indonesia and Bangladesh, for example).

40 minutes LESSON 3: HPAI TRANSMISSION


PPT 27-28

12 **Describe** the paths of AI transmission and point to the diagram of sources of infections and barriers to transmission in the *Participant Manual.*


PPT 29

13 **Ask** participants to turn to **Exercise 1** for this lesson in the *Participant Manual on p.10.* **Explain** the task and ask them to work in table groups to complete the exercise:

Choose one poultry setting to use as the context for this discussion (commercial farm, smallholder farm, etc.).

Identify:
- three sources of infection from poultry to other poultry.
- three barriers to infection from poultry to other poultry
- three sources of infection from wild birds to poultry
- three barriers to infection from wild birds to poultry
- sources of infection from poultry to humans
- three barriers to infection from poultry to humans

Instruct participants to discuss with their group:
- What parts of the transmission paths are of most concern to you or your community?
- What was the most valuable thing you learned about how the virus is transmitted?
- How will you use this transmission information to help with your community's current H5N1 HPAI response?

Give the participants 10 minutes to discuss and answer the questions as a table group.

14 **Lead** a discussion with the whole group so that they can compare answers. **Chart** the participants' ideas on how they will use the information to help with Ghana's

response to H5N1 HPAI.

Discuss any clarifying points before moving to a break.

15 minutes BREAK

30 minutes LESSON 4: RISK OF H5N1 HPAI TO HUMANS


PPT 30

15 **Present** information in the *Participant Manual* (p.12) on the effects of H5N1 HPAI on humans.

Discuss the fact that H5N1 HPAI is one of the few avian influenza viruses to have crossed the species barrier to infect humans and is among the most deadly of those that have infected humans.


PPT 31

16 **Stress** this important point:

So far, the spread of H5N1 HPAI virus person-to-person has been limited and has not continued beyond one person or a small cluster of people. Nonetheless, because all influenza viruses have the ability to change, scientists are concerned that H5N1 virus one day could be able to infect humans and spread easily from one person to another.


PPT 32

17 **Ask** the participants to consider why the H5N1 HPAI virus has raised concerns that it could cause a human pandemic. **Elicit** some responses and then present the following reasons:

- It is especially virulent
- It can be transmitted from birds to mammals and, in some limited circumstances, to humans.
- Most humans have no immunity to H5 virus.


PPT 33

18 **Point out** the following exposures resulting in human infections:

- Home slaughter of poultry (dressing, plucking, and contact with blood)
- Touching poultry unexpectedly sick or dead
- Being less than one meter from dead poultry
- There is no evidence that the disease can be transmitted by infected poultry meat as long as there has been no cross contamination and it is cooked to an internal temperature of 70°C (158 F).
- H5N1 HPAI can produce rapidly-developing and severe illness in humans, with viral pneumonia and multi-organ failure as common outcomes.


PPT 34

19 **Provide** a recap update on the current situation and statistics related to HPAI and human health.

20 **Point** to the "Check your Knowledge" section in Lesson 4 on p. 13 of the *Participant Manual*. **Give** participants five minutes to complete the sentences and discuss with their table groups.

Lead a plenary discussion in which you ask one or two tables how they answered a question, compare answers and **move** to the next question.

15 minutes LESSON 5: IMPACTS OF H5N1 HPAI

PPT 35

21 **Ask,** What are some of the costs or impacts of an H5N1 HPAI outbreak in a country?

Present briefly some of the economic impacts of the animal health emergency of H5N1 HPAI (p. 14 in the *Participant Manual*).

Highlight the fact that there is a substantial economic impact to small farmers and commercial poultry producers.

Have the participants share a few examples of the economic impact of the disease in Ghana.

PPT 36

22 **Show** a photo of a typical way of transporting chickens in Ghana to recap the discussions!

10 minutes REFLECTION

PPT 37

23 **Ask** participants to take five minutes to complete the Reflection Worksheet in their manual:

- What are three points you want to remember from this module that are important to the training you will be conducting on AI?
- What additional information do you need on this module?

Encourage several participants to share their reflections. **Ask** a few people to contribute one of the three key points from the module that they consider important and would like to remember.

Ask participants to share some of their needs for additional information on the module and be sure to **discuss** the ways in which you will be able to address their needs within the course (in other modules and activities, during optional evening sessions, through resources and references, etc.).

CLOSE

PUBLIC HEALTH AND OCCUPATIONAL SAFETY

MODULE PURPOSE

The purpose of this module is to present principles for veterinary, public health, and other animal control workers to prevent exposure to HPAI, to identify suspect human cases of HPAI, and to provide guidelines for managing individuals exposed to HPAI. This module also describes some of the practical implications of personal protection when working in the field and proposes a system of risk management on infected farm or village sites to reduce the exposure of workers to the HPAI virus.

MODULE OBJECTIVES

At the conclusion of this module, participants will be able to:

- Identify risks for transmission to humans;
- Understand basic infection prevention principle;
- Describe the protective measures people in various roles should implement to minimize the risk of infection from and/or the spread of HPAI;
- List the safety and biosecurity procedures that must be in place on an infected site during outbreak response and justify the need for strict enforcement of these principles;
- Describe and explain the need for procedures for taking rest breaks, water and food when at an infected site without compromising worker safety;
- Explain simple and safe procedures for the immediate replacement of worn or defective PPE.

TIME

2 hours (including break)

MATERIALS

- *Trainer Guide*
- *Participant's Manual*
- Power Point slides

2 hours (including break) **PUBLIC HEALTH AND OCCUPATIONAL SAFETY**

PPT 1

1 **Welcome** participants.

5 minutes **PURPOSE AND OBJECTIVES**

PPT 2

2 **Present** the purpose of the module:

The purpose of this module is to present principles for veterinary, public health, and other animal control workers to prevent exposure to HPAI, to identify suspect human cases of HPAI, and to provide guidelines for managing individuals exposed to HPAI. This module also describes some of the practical implications of personal protection when working in the field and proposes a system of risk management on infected farm or village sites to reduce the exposure of workers to the HPAI virus.

PPT 3

Present the objectives of the module:

At the conclusion of this module, participants will be able to:

- Identify risks for transmission to humans;
- Understand basic infection prevention principle;
- Describe the protective measures people in various roles should implement to minimize the risk of infection from and/or the spread of HPAI;
- List the safety and biosecurity procedures that must be in place on an infected site during outbreak response and justify the need for strict enforcement of these principles;
- Describe and explain the need for procedures for taking rest breaks, water and food when at an infected site without compromising worker safety;
- Explain simple and safe procedures for the immediate replacement of worn or defective PPE

1 hour **LESSON 1: PUBLIC HEALTH AND OCCUPATIONAL SAFETY**

PPT 4-5

3 **Introduce** the first lesson and **present** the history of H5N1 in humans.

- First reported in Hong Kong in 1997, when 18 cases resulted in 6 deaths.
- As of November 2006, 258 cases have been reported

– many among children
– especially in Vietnam, Thailand, Cambodia, and Indonesia
– 153 of those cases fatal.

• Other subtypes of AI have rarely infected humans,
– Exceptions: 89 cases and one death from H7N7 in the Netherlands, infections with H9N2 in Hong Kong and China, and H7N3 cases in Canada.

• Most human cases have been associated with direct contact with infected poultry
– Exceptions: 3 cases of H7N7 in the Netherlands and a few of H5N1 in Southeast Asia apparently from person-to-person transmission.

Ask, "What's the current global status?"


PPT 6

4 Show the slide on Public Perception of H5N1 HPAI, pausing to take a few responses to each question. Go from table to table, asking for different people to share some ideas on the questions.

• How well do you think the general public understands bird flu?
• How have you seen it portrayed on the news?
• Do people know how to prevent it? Or that it is preventable?
• Have you heard any crazy ideas about how it's transmitted?
• Who is/should be responsible for educating the public? Workers?

Ask the group about the situation in Ghana. Ask for some examples of the way that avian influenza has been portrayed on the news and in print media, as well as some of the myths and 'crazy ideas' about how it is transmitted (address the myth that wild birds bring it into the country).


PPT 7

5 Lead a discussion about key messages to be conveyed to the public and all HPAI control workers, the challenges they have faced, and the approaches they have used successfully.

• What are the key messages to convey?
• What are the challenges?
• What approaches have worked in your experience?

Elicit from the participants specific approaches that have worked (and not worked) in cases of outbreaks. Ensure that they are bringing to bear upon the discussion their own experiences and perspectives.


PPT 8

Show the slide to fill in any information the participants have missed in terms of what the public must know and why:

• What is the H5N1 HPAI virus
• Where and how the virus survives
• How the virus is transmitted to humans
• Importance of routine hand-washing and other basic hygiene habits

- What actions to take if they have sick or dead birds
- Where they might encounter exposure to HPAI how to avoid it


PPT 9-10

6 **Show** the transmission of Influenza A using the diagram on the slide. **Make** a distinction between the routes of H5N1 HPAI transmission through direct and indirect contact, using the list on the slide:

Direct Contact
- Host comes into contact with reservoir
- Skin-to-skin contact, fingers to mucous membranes
- Contact with contaminated soil or vegetation

Indirect Contact
- Disease is carried from reservoir to host
- Particles in the air
- Contaminated surfaces (fomites)


PPT 11

Discuss the differences between transmission of influenza viruses through droplet, airborne and contact transmission, **showing** the chart on the slide.

Refer participants to the table on page 4 in the *Participant Manual* for more information on the transmission of Seasonal, Pandemic, and Zoonotic Flu.


PPT 12

7 **Introduce** the infection control precautions.

Explain that, in addition to standard precautions, there are several levels of transmission-based precautions:
- Contact Precautions
- Droplet Precautions
- Airborne Precautions


PPT 13

Review the slide on standard precautions and draw attention to the specific hand washing techniques:

- Prevent the transmission of common infectious agents
- Hand washing key
- Assume infectious agent could be present in the animal/patient's
  - Blood
  - Body fluids, secretions, excretions
  - Non-intact skin
  - Mucous membranes
- Use PPEs

Note: You may get many comments on hand-washing, as participants find this to be a simple way to reduce transmission. Invite the public health participants to comment.


PPT 14-15

9 **Define** contact precautions: precautions that help to prevent infection through direct or indirect contact with poultry or contaminated environment. **Remind**

participants of some examples of transmission through contact.
Share some contact precautions that should be taken *in addition to* Standard Precautions:

- Limit animal/patient movement
- Isolate or cohort animal/patients
- Gown + gloves for animal/patient or room contact
- Do not touch eyes, nose, mouth with hands
- Avoid contaminating environmental surfaces
- Wash hands immediately after contact with poultry or suspect human case
- Use dedicated equipment if possible

Check the participants' experience with such precautions and **answer** any questions they might have.


PPT 16-17

10 **Define** droplet precautions and **remind** participants of examples of transmission through contact. It is important to prevent infection by large droplets from:

- Sneezing
- Coughing
- Talking

Share some droplet precautions that should be taken *in addition to* Standard Precautions:

- Wear surgical mask within 1 meter of patient
- Wear face shield or goggles within 1 meter of patient
- Place patients in single rooms or cohort 1 meter apart
- Initiate "cough etiquette"—All patients instructed to cough into inner elbow or provided tissues or a handkerchief to cough into to prevent droplet spread.
- Limit patient movement within facility

Ask for and **answer** any questions.

Note: You may get comments on practices in Ghana and elsewhere, i.e. what to do when you sneeze (cover you nose, sneeze into the crook of your arm, etc.). **Take** some comments but be careful not to belabor these points.


PPT 18-19

11 **Define** airborne precautions and **remind** participants of examples of transmission through airborne particles.

Share some airborne precautions that should be taken *in addition to* Standard Precautions:

- N95 mask (or equivalent) for personnel
  Check seal with each use
- Negative pressure isolation room for patients
  Air exhaust to outside away from others
- Patient to wear a surgical mask if outside of the isolation room

Show the diagram and explain the mechanics of a Negative Pressure Isolation Room.

Ask participants to share their experiences using a Negative Pressure Isolation Room. If there are public health professionals, encourage them to share the importance of this room for contact precautions.


PPT 21

12 **Begin** the discussion on poultry farm worker protection by observing that careful personal hygiene when working will greatly minimize worker's risk of disease.

Make the point that hand washing is one of the simplest and most effective precautionary measures.


PPT 22-23

Then **describe** precautions including:
- clothing
- decontamination
- vaccinations

Invite participants to comment on effective practices that they have seen in Ghana.


PPT 24

Ask for some examples from participants of effective and ineffective practices they have observed in handling sick or dead birds.

Provide this important tips:
- If workers notice severely depressed birds or a large number of dead birds, they should
  - immediately leave the poultry house if they are not wearing sufficient PPE to prevent exposure.
  - contact a supervisor to investigate and determine if the problem is mechanical

- Anyone entering the poultry house should put on full PPE and limit the time and amount of contact with dead or dying birds and potentially infective manure.


PPT 25-26

13 **Discuss** backyard/small holder poultry owner protection:
- Outreach for small farmers is a key part of preventing transmission from poultry to people
- Lack of basic knowledge contributes to poor personal hygiene practices and increases the risk of infection.
- Biosecurity
- Basic sanitation
- Keep poultry outside and out of family living space

Highlight the importance of protecting children and describe ways in which their exposure can be reduced.
- Many of the human cases of HPAI H5N1 have occurred in small children and young adults

- Supervise if they play with or care for poultry to prevent exposure.
- Restricting the access of children to poultry will reduce exposure.
- Any children around poultry should be taught to practice good hand hygiene.


PPT 27

14 **Make** the point that live bird market workers will most likely need some basic education to be able to make the correct decisions about personal protection including what viruses are, where and how they live, how they are transmitted and the importance of routine hand washing in the market.

Workers need to know:
- What viruses are
- Where and how they survive
- How they are transmitted
- Importance of routine hand-washing habits in the markets.

Ask for examples of the situation that the participants have seen in live bird markets in Ghana.


PPT 28-29

Stress that education is the key. **Show** the slides and **discuss** the specific things the market worker should be told to do and/or not do (bulleted list). **Engage** participants in a short discussion on the most effective means of reaching market workers.

Highlight also what worker should do if there is a large numbers of dead birds:

- Limit exposure by leaving the market
- Secure the market areas so others cannot enter.
- Contact their supervisor, the market owner, or designated first responder.
- Monitor their own health
- Consider quarantine or culling all exposed birds

Summarize the discussion and **state** that we will cover this in greater detail in the Biosecurity module.


PPT 30

15 **Introduce** the topic of *Applying Control Strategies in Real Life.* Make some general comments, highlighting the importance of prevention, education and correct use of PPE:

- Although difficult to contract, over half the confirmed cases of H5N1 HPAI in humans have been fatal.
- Preventing infection is the best method of control.
- Lack of basic knowledge of avian influenza biology contributes to risky practices.
- Correct use of Personal Protection Equipment (PPE) is an important measure for limiting exposure to infection.


PPT 31

Point out that location will have a lot of influence on which actions will be most helpful in the situation.

- Medical facilities
- Homes

- Farms
- Markets
- Rural versus Urban areas

Ask for some examples of the good control strategies that might be used in each situation. Compare that to some real examples that participants have witnessed in Ghana and elicit suggestions for improving some ineffective practices.


PPT 32

Explain that it is important to anticipate exposures that people may have had with:

- Animals/poultry
- Infected individuals
- Individuals suspected to be infected
- Potentially contaminated substances
- Potentially contaminated surfaces / items
- High-risk procedures
- Corpses


PPT 33

Show on the slide the list of items one must consider in assessing the existing infection control infrastructure:

- Policies and procedures
- Authority
- Human resources
- Financial resources
- Engineering resources


PPT 34

Present the following questions for discussion. Move quickly through the questions, asking for the experiences and opinions of the participants.

- Do policies describe PPE for workers?
- Are procedures in place for environmental decon?
- Will you need to promote respiratory and hand hygiene in the community?

Refer back to some things that may have already been shared in the previous discussions.


PPT 35

Note the steps that should be taken for Surveillance of Animal Control Workers and Family Members of HPAI Affected Households:

- Daily symptom check of all control workers
- Symptom check of all family members
- Confirm temperatures of any suspect symptoms
- Referral for evaluation of any suspected cases of human HPAI
- Prompt isolation for anyone exhibiting symptoms


PPT 36-37

Present the case definition for suspect human HPAI:

Any individual presenting with an unexplained LRI with:

- Fever (temperature > 38 C.)
- Shortness of Breath or
- Difficulty breathing

Review also the additional exposures in the 7 days prior to symptom onset (on slide).

Discuss especially what to do if a person comes into close contact with a suspect, probable or confirmed human or animal case.


PPT 38-39

Discuss actions that should be taken in the management of suspected human HPAI:

- Initiate prompt infection control activities with standard and airborne precautions for all personnel in contact with suspect patient
- Refer to nearest health facility capable of evaluation of patient.
- Maintain strict isolation of patient, either in health facility or in home:
  - 7 days for adults
  - 21 days for children
- If suspect human case meets case definition, start Oseltamavir 75 mg twice a day immediately pending confirmation of positive or negative Influenza A H5 test.

Note: you may get some questions about the number of isolation days for children and adults. **Invite** a human health worker to comment.

Address the accidental exposure of control workers to HPAI:
- Active daily surveillance for symptoms and fever
- Consider initiating prophylaxis;
  - Oseltamivir 75 mg once a day for 10 days
- Refer for further evaluation and treatment if patient meets case definition of suspect human HPAI.
- Consider quarantine


PPT 40

16 **Show** the case study slide and assign a case to each table. **Ask** participants to discuss the case at their table (more than one table will be assigned to each case). This is a brief discussion; give table groups five minutes to discuss the case.

Call one table to give their answer. **Ask** if another table had the same or different response. Briefly **compare** the answers, assisting where necessary. **Proceed** to the next case.

When each case has been discussed, **call** for a short break.

15 minutes BREAK

30 minutes LESSON 2: SITE MANAGEMENT FOR PROTECTION CONTAINMENT AND ENFORCEMENT


PPT 41

17 **Provide** some context for the discussion of site management by making the following points (p. 11 in the *Participant Manual):*

- Health protection is not simply wearing personal protection equipment (PPE).
- The set up and control procedures on an infected site can significantly reduce exposure to the virus.
- Many of the workers on an infected premise (IP) will not be trained in response and will have to be instructed.
- Strict enforcement on the proper use of PPE and decontamination stations is essential.
- When there is a shortage of PPE, supervisors should understand the risks and provide practical alternative solutions


PPT 42-43

Cite the OIE standard for leadership of operational activity and **discuss** the specific control activities that must be undertaken.

Ask "What can you do to enforce biosecurity and biosafety around an outbreak site?" and get some ideas from the participants. **Give** some key points for establishing authority and control:

- Establish and enforce rigorous Gate Control with full decontamination
- Allow people onto the site for the minimum amount to time and only if absolutely necessary
- Divide site into risk areas
- Control and decontaminate people as they pass through these boundaries


PPT 44-45

18 **Stress** that all activities on an infected site must comply with the 4 principles:

1. Protect people
2. Protect animals
3. Contain the virus
4. Make it a single event

Lead a short discussion concerning control of infected premises or areas. **Pose** the questions on the slide:

- What are the most high-risk places and activities on an infected site?
  - A commercial farm
  - A village –several back yards
- What critical control points could you establish to reduce exposure to infection?

Describe the high-risk places and activities and the kinds of control points that should be established.


PPT 46-47

19 **Explain** the principle of risk areas and define the red, orange, yellow and green areas. Then describe practical application of these principles:

- Use existing barriers or mark out with tape or rope to define the risk areas
- Place intermediate decontamination points at suitable places between the areas
- Do not cross a barrier except at designated point
- It is permitted to pass clean materials across the barrier

Refer to p.13-15 in the *Participant Manual* for greater detail about the high to low risk areas.


PPT 48

20 **Describe** the importance of managing flow and the people involved.

Main Site Entrance: Gate Officer
- Register and check authorized people
- Stop people entering site without full, correct PPE
- Stop people exiting site without full decontamination

Between areas use the decontamination points
- Decontamination Assistant to control
- Wash hands
- Clean boots
- If necessary provide assistance to change damaged/worn PPE

Ask for examples from any participants who have been involved in the outbreak in Ghana. Was there a gate officer? If so, what was his role? If not, how did this impact the flow?


PPT 49

21 **Discuss** the purpose of the PPE in outbreak response:
- Protect people
- Protect animals
- Prevent contamination and virus spread

Tell participants that we will cover the proper use (and donning and doffing) of PPEs in other modules during the week.


PPT 50

Explain the importance of discarding the PPE and tell participants that we will cover this in detail in the Introduction to the PPE Kit module.


PPT 51

Ask:
- What are the key areas to protect?
- What alternatives to proprietary PPE are available?

Elicit the experience of the participants in answering these questions and ask for some alternatives to PPEs that are available in Ghana. **Give** examples of adaptations made in other countries, considering the climate, material available, etc.

10 minutes REFLECTION

22 **Ask** participants to take five minutes to complete the Reflection Worksheet in their manual:

1. What are two things you will share with your co-workers and family about protecting ourselves from HPAI?
2. What is important for you to remember about the four principles for activities on an infected site?

Encourage several participants to share their reflections.

Ask participants to share some of their needs for additional information on the module and be sure to **discuss** the ways in which you will be able to address their needs within the course (in other modules and activities, through resources and references, etc.).

CLOSE

NATIONAL PREPAREDNESS AND RESPONSE PLANS

MODULE PURPOSE

This module is aimed at providing the tools for guidance on preparing and assessing national HPAI preparedness plans that can be used for Highly Pathogenic Avian Influenza (HPAI) and adapted for other transboundary animal diseases. The module will introduce the concepts of Prevention, Preparedness, Response and Recovery activities as the main components of a national preparedness and response plan together with standard operating procedures for implementing the plans.

MODULE OBJECTIVES

At the conclusion of this module, participants will be able to:

- Describe the key features of a National HPAI Preparedness and Response Plan (NPRP) and Standard Operating Procedures (SOP) components;
- Evaluate an existing National HPAI PRP;
- Identify gaps in an existing National HPAI PRP.

TIME

2 hours

MATERIALS

- *Trainer Guide*
- *Participant Manual*
- Power Point slides

2 hours	NATIONAL PREPAREDNESS AND RESPONSE PLANS FOR HPAI

PPT 1

1 **Welcome** participants back from break.

2 minutes	MODULE PURPOSE AND OBJECTIVES

PPT 2-3

2 **Present** the purpose of the module:

To provide the tools for guidance on preparing and assessing national HPAI preparedness plans that can be used for Highly Pathogenic Avian Influenza (HPAI) and adapted for other tranboundary animal diseases.

Explain that the module will introduce the concepts of Prevention, Preparedness, Response and Recovery activities as the main components of a national preparedness and response plan together with standard operating procedures for implementing the plans.

Present the specific objectives of the module:

At the conclusion of this module, participants will be able to:

- Describe the key features of a National HPAI Preparedness and Response Plan (PRP) and Standard Operating Procedures (SOP) components;
- Evaluate an existing National HPAI PRP;
- Identify gaps in an existing National HPAI PRP.

Explain that, although there is lots of content to cover in this module, participants will have two opportunities to work together in break-out groups.

5 minutes	KEY TERMS, PLAN GOALS AND STANDARD OPERATING PROCEDURES

PPT 4

3 **Define** HPAI National Preparedness Response Plan (NPRP): A document that details a set of actions and activities that can be implemented to prevent, prepare for, respond to and recover from an incursion of HPAI-H5N1 virus.

PPT 5

Present Plan Goals (p. 3 in the *Participant Manual)*:

- Prevention
- Preparedness
- Response
- Recovery

PPT 6

Define Standard Operating Procedures (SOP): A set of written instructions, protocols, or worksheets that document routine or repetitive activity followed by an organization or body to facilitate consistency in the quality and integrity of a product of end result.

PPT 7

4 **Present** the agenda for this module:

- Lesson 1: Country Status and Assessment
- Lesson 2: Prevention and Preparedness
- Lesson 3: Response and Recovery
- Lesson 4: Components of Standard Operating Procedures for Implementation of a National Preparedness and Response Plan for HPAI
- Lesson 5: Public Health Component
- Lesson 6: Public Awareness and Communications Strategy
- Lesson 7: Financial and Funding Strategy
- Lesson 8: Important Appendices

Explain that we will be spending more time on Lesson 2; and after going thought the eight lessons, we will give participants an opportunity to prepare a checklist (in small groups) for an NPRP.

5 minutes LESSON 1: COUNTRY STATUS AND ASSESSMENT

PPT 8

5 **Tell** participants to briefly look at the Country Information on page 4 in their *Participant Manual.*

Ask: Why do you think these facts about the country are important to put in a plan?

PPT 9-11

Summarize the Country Status and Assessment topic areas and **stress** that this information is critical to include in any plan.

Country background information including geography, climate and population

Veterinary Services (VS) structure and delivery – number of personnel, level of training, diagnostic laboratory system (number of labs, lab infrastructure, type of tests, state of lab equipment and relevance to lab functions, lab personnel and level

of training, training opportunities)

Poultry Sector
- poultry production systems
- species and numbers and associated economic importance
- common poultry diseases in the country and their control
- descriptions of marketing systems for poultry, live bird markets and distribution channels
- overview of poultry slaughter plants and processing methods if any

Migratory and Wild Birds
- main migratory wild bird resting spots and bird habitats and their proximity to poultry production and urban population centers
- interaction between wild birds and poultry

Animal Health Surveillance System
- active or passive, animal health monitoring, surveys, lab testing, data management and reporting

Suggest that participants take a closer look at the specific questions in each topic area during their evening study time.

40 minutes LESSON 2: PREVENTION AND PREPAREDNESS


PPT 12-13

6 Introduce the key features of prevention and preparedness:

- Chain of command and national and local coordinating mechanisms – government agencies responsible for writing and implementing the plan, coordination between animal health and human health agencies, roles of non-governmental organizations

- Setting up regional and local centers for outbreak management

- One type of command structure that can be used for outbreak management at the national, regional and local levels is the incident management model (IMM)


PPT 14

7 Provide an overview of the incident management model (IMM) as one type of command structure that can be used for outbreak management at the national, regional and local levels. Suggest that participants follow along in their manual.

State that in an outbreak, a successful response depends on:

- Making sure that tasks are assigned
- People only being responsible to a single supervisor

- Good communication
- IMM provides a flexible structure to accomplish these goals


PPT 15-16

Review the IMM diagram and briefly **describe** it. **Give** some examples of how this model is used in other countries.

Introduce the IMM management functions:

INCIDENT COMMAND
- sets the objectives, strategies, and priorities
- has overall responsibility for managing the outbreak

OPERATIONS
- determines how operational objectives of the Outbreak Action Plan will be accomplished
- implements the plan

PLANNING
- develops the Outbreak Action Plan for accomplishing the objectives
- collects and analyzes outbreak data, tracks resources (personnel, supplies, materials), and maintains records of the outbreak and response

LOGISTICS
- provides support, resources, training and other services to meet the operational objectives

FINANCE/ADMINISTRATION
- recruits personnel, tracks them and their time worked, and pays salaries
- pays compensation if agreed upon, and all other invoices and also describe the IMM management functions:

Ask participants how many are familiar with the IMM model and/or have used this model in their work?


PPT 17

8 **Give** the following table exercise:
You will be divided into 4-5 groups for a short table discussion on the IMM. Look at the model and the management functions on p.8-10 in your *Participant Manual.* Discuss the questions below and be prepared to summarize your discussion with the larger group.

1. What questions do you have regarding the IMM?
2. What are your reactions to this type of set up? In a developed country? In a developing country?
3. Any ideas on how such a structure can be modified and improved for use in the field in mostly resource poor countries?

Allow them five minutes to discuss and then ask for table groups to report some of their responses to the three questions, starting with the first question, then moving to the second question, and then the third question. **Give** all tables a chance to report out.

Discuss overall reactions and ideas and **take** some additional questions (10 minutes).


PPT 18

9 **Present** the following questions to consider for the Ghana NPRP and **lead** a discussion on participants' perspectives.

- Is there an existing National HPAI PRP in Ghana? Does it have animal health, public health and communications components?
- Is there a veterinary legal and regulatory framework for plan implementation? If one exists it should include disease reporting, welfare concerns regarding mass culling and disposal of infected livestock, compensation policies and human and animal movement restrictions.

Find out if any participants were involved in the creation of the NPRP and **invite** them to share their experiences.


PPT 19

10 **Review** the main components of preparedness and prevention:

- Biosecurity – farms (sector definition), live bird markets, rapid response teams

  Note *that we will be spending one and a half days on biosecurity in the course.*

- Surveillance – passive and active (poultry and wild birds), sample types, testing of samples, field and lab testing, sample submission, screening and confirmatory tests, frequency of testing, sampling locations, reporting, GIS, data management

  Note *that surveillance can be very expensive. Often it is done by NGOs.*

- Importation bans- seaports, airports and border posts

  Note *this is usually the first thing that is done in the case of an outbreak.*


PPT 20-25

Show some photographs that illustrate the different sectors.


PPT 26

11 **Review** the main components of preparedness and prevention (continued):

- Improvement of veterinary service delivery including diagnostic capability- physical structure rehabilitation, training of personnel, diagnostic equipment and supplies

- Equipment and supplies inventory (Transportation, PPE, disinfectants, sampling supplies, culling, disposal, communications equipment, data collection equipment, data management equipment and supplies etc.)


PPT 27-28

Show some photographs of veterinary services buildings to illustrate the above.


PPT 29

12 **Review** the remaining main components of preparedness and prevention (continued):

- Personnel evaluation and training- rapid response teams (composition),
- Review of response plans – frequency and method
- Simulations – field or tabletop for testing and refining the plan, SOPs, coordinating mechanisms
- Preparation of compensation strategy or update of existing strategy

Highlight the fact that that an NPRP is a "living document" and should be reviewed and revised frequently. **Answer** any questions the participants have and then move to Lesson 3.

8 minutes LESSON 3: RESPONSE AND RECOVERY


PPT 30

13 **Refer** participants to Lesson 3 in their *Participant Manual* (p. 15-17) and ask that they read through the list of items that should be included in a national plan to address readiness of response and recovery. These items include the following:

- Case definition of suspect cases
- Diagnosis
- Deployment of rapid response teams
- Quarantine and movement control
- Epidemiology
- Outbreak surveillance
- Biosecurity protocols
- Culling methods
- Disposal methods
- Decontamination
- Vaccination
- Lifting of quarantine
- Restocking
- Payment of compensation
- National HPAI PRP review

Give the group 4-5 minutes to look through the three pages, and ask if there is any item that they would like you to clarify or elaborate on.

5 minutes LESSON 4: STANDARD OPERATING PROCEDURES


PPT 34

14 **Emphasize** that Standard Operating Procedures (SOPs) are crucial to making an NPRP ready for implementation.

Walk through the following SOPs (in the *Participant Manual,* beginning on p. 18) and encourage participants to share their experience with such SOPs. Major highlights are below; and on the slides.


PPT 35

Biosecurity

- commercial establishments- farm sanitation, flock management, location, housing, feed delivery, vaccinations, traffic control
- backyard flocks – semi-intensive and extensive systems – housing, sanitation, species, carcass disposal
- households- village flocks, health and hygiene,
- live bird markets- cleaning and disinfection, market shut down, species,
- rapid response teams- seasonal flu vaccinations, antiviral prophylaxis, traffic flow, PPE


PPT 36

Surveillance

- surveillance and epidemiology network
- surveillance types – active and passive for poultry and wild birds
- surveillance locations
- outbreak surveillance – infected farms, protection zone and surveillance zone
- sampling size determination
- sample collection (tracheal and cloacal swabs, blood), handling and preservation
- sample submission to national and international laboratories


PPT 37

Quarantine and Movement Control

- disease zoning definitions
- quarantine control points
- enforcement of movement control


PPT 38

Culling procedures

- cervical dislocation (manual and mechanical)
- carbon dioxide gas
- lethal injection (ratites)

Disposal methods

- burial
- burning or incineration
- composting


PPT 39

Decontamination
- disinfection of farms, litter and equipment
- disinfection of laboratory equipment and environment
- Classes and action of disinfectants

Compensation
- compensation rates determination
- payment methods
- funding sources

Ask, what is the importance of having SOPs in place? Elicit some ideas on how the VSD might be able to put in place SOPs.

5 minutes LESSON 5: HUMAN HEALTH COMPONENT


PPT 40-41

15 Emphasize that an integrated NPRP has its advantages – resources can be better utilized and animal and public health personnel can improve cooperation. Communication messages as well can be better integrated with a plan that addresses both animal and public health.

Present the details that should be included in the plan:

- Public health surveillance systems
- Human resources in public health sector
- Public health infrastructure
- Laboratory facilities
- Emergency Epidemiologic Response Plans

Ask participants for examples why an integrated NPRP is critical and what the challenges might be in implementing such a plan in Ghana. If there are human health professionals among the participants, encourage them to discuss their perspective on an integrated plan.

5 minutes LESSON 6: COMMUNICATION AND PUBLIC AWARENESS


PPT 42

16 Ask participants how most people in the country get information – print, radio, TV? Then ask what the current approaches are to increasing public awareness of HPAI? Encourage participants to share some effective practices they have seen.


PPT 43

Emphasize the important elements of the communication and public awareness component:

- Public awareness of HPAI
- National plan and mechanism for HPAI communication
- Technical capacity for HPAI communication
- State of mass media in the country
- National and local communication activities

Lead a brief discussion on effective communication and public awareness practices in Ghana. Ask for an example or two of new practices that have worked or might work in Ghana. Bring into the discusson such things as available media, most commonly used media, and literacy levels. Point to some of the considerations on p. 22 in the *Participant Manual.*

2 minutes LESSON 7: FINANCIAL PLAN – FUNDING COMPONENT


PPT 44-45

17 State that the financial plan should include budgets for the following:

- Equipment
- Training programs
- Surveillance activities
- Rehabilitation and construction of physical structures

3 minutes LESSON 8: IMPORTANT APPENDICES


PPT 46-47

18 Present the appendices that are important to include in the plan.

Ask if there are additional appendices that are important given the situation in Ghana.

30 minutes TABLE TASK: PREPARING A CHECKLIST FOR A NPRP


PPT 48

19 Show a slide that recaps the eight major elements contained in an NPRP:

1. Country Status and Assessment
2. Prevention and Preparedness
3. Response and Recovery
4. Components of Standard Operating Procedures for Implementation of a National Preparedness and Response Plan for HPAI

5. Public Health Component
6. Public Awareness and Communications Strategy
7. Financial and Funding Strategy
8. Important Appendices


PPT 49-50

20 **Lead** a table task that will allow participants to do a deeper dive into the elements that should be included in a NPRP.

Share the purpose of this exercise: to consider the information participants would include in an effective NPRP.

Explain the task as follows:

- Each group will be assigned one or two of the elements of a National Preparedness and Response Plan (NPRP). With your group, discuss the most important information to include in your section(s).
- Devise a **set of checklist questions** that can be used to ensure that an NPRP included comprehensive information. Use the blank forms in your *Participant Manual on p. 26.*
- Take 10 minutes for the activity and be prepared to share one or two items.

Show an example (on slide) to get the participants started.

After they have finished, **lead** a discussion (about 10 minutes) on the group's suggested checklist items. Then **distribute** the handout (laminated, if possible) to the participants so they can compare their items and see what they may have missed. **Tell** the participants that they can use this handout as a reference.

10 minutes REFLECTION


PPT 51

21 **Ask** participants to take five minutes to complete the Reflection Worksheet in their manual:

1. What have you learned about the importance of National Preparedness and Response Plans?
2. What is one thing you plan to do with the checklist as a result of our discussions?

Encourage several participants to share their reflections.

Ask participants to share some of their needs for additional information on the module and be sure to **discuss** the ways in which you will be able to address

their needs within the course (in other modules and activities, during optional evening sessions, through resources and references, etc.).

CLOSE

BIOSECURITY PRINCIPLES, PROCEDURES AND PLANNING

MODULE PURPOSE

To learn principles and methods for preventing an H5N1 HPAI outbreak.

MODULE OBJECTIVES

At the conclusion of this module, participants will be able to:

- Define biosecurity principles;
- Describe basic biosecurity measures;
- Identify potential biosecurity risks;
- Explain biosecurity measures adapted for different environments: commercial and smallholder farms, live bird markets, and consumers;
- Understand biosecurity practices for transporting poultry to market;
- Use biosecurity planning and checklists.

TIME

11 hours (including breaks and lunch)

MATERIALS

- *Trainer Guide*
- *Participant's Manual*
- Power Point slides

11 hours	BIOSECURITY PRINCIPLES, PROCEDURES AND PLANNING


PPT 1

1 **Welcome** participants.

Explain that this module on biosecurity is the core of our training program. The term biosecurity means "protecting life.

5 minutes	MODULE PURPOSE AND OBJECTIVES


PPT 2

2 **Present** the purpose of the module:

To learn principles and methods for preventing an H5N1 HPAI outbreak.

Present the objectives of the module:

At the conclusion of this module, participants will be able to:

- Define biosecurity principles;
- Describe basic biosecurity measures;
- Identify potential biosecurity risks;
- Explain biosecurity measures adapted for different environments: commercial and smallholder farms, live bird markets, and consumers;
- Understand biosecurity practices for transporting poultry to market; and
- Use biosecurity planning and checklists.

30 minutes	GETTING STARTED DISCUSSION


PPT 3-4

3 **Explain** that we get started this morning with a getting started discussion to get right into the topic. **Show** the two slides with photos and the following questions:

- What should poultry farmers do if they suspect birds have H5N1 HPAI on the farm?
- What should poultry sellers do if they suspect birds have H5N1 HPAI at the market?


PPT 5

Give the following table assignments:

With your table group, answer the question:

- Tables 1, 3 and 5– What should poultry farmers do if they suspect birds have H5N1 HPAI on the farm?
- Tables 2 and 4 – What should poultry sellers do if they suspect birds have H5N1 HPAI at the market?

Decide on the steps you would recommend. Choose someone at your table who will share your recommendations.

You have 10 minutes for this discussion.

After ten minutes, **ask** tables to report the steps they would take. **Listen** to then reports first for "on the farm" and then for "at the market" from each table. **Chart** their answers.


PPT 6-7

Reinforce the steps, as follows, acknowledging all the steps the table groups correctly stated. **Point out** any steps they may have missed. **Take** about ten minutes for this discussion. (*Note:* this discussion can tend to take a long time. Be sure to limit the discussion and use this exercise to set the climate and introduce the topic.)

On the farm:

1. Leave the Poultry House Immediately
2. Decontaminate Workers
3. Contact the Authorities
4. Don't Visit Other Farms
5. Don't Move, Sell, or Eat Your Birds
6. Keep Records of the Sick and Dead Birds

Additional comments you might expect from participants:

- Isolate the sick birds
- Isolate the farm
- Be sure to use personal protection (masks and hand washing)
- Make sure the footbaths are operational
- Assign sections to workers
- Alert neighboring farms (by phone!)

At the Market:

1. Contact the Authorities
2. Get the Virus Off Yourself and Others
3. Don't Touch, Move, Sell, or Eat Your Birds
4. Don't Visit Other Stalls, Markets, or Farms
5. Keep Records of the Sick and Dead Birds

Additional comments you might expect from participants:

- Stop selling to the public
- Report the situation to a vet; bring vets to the market
- Take a census of sick or dead birds
- Clean and disinfect the cages and the area
- Get a medical screening
- Find the source of the birds
- Be careful of moving the birds from cage to cage


PPT 8

Pose the following discussion questions to the full group:

- Which of these steps are most often ignored by farm workers and poultry sellers?
- What would you do when talking with each of these groups to get them to

PPT 9

actually follow the steps you've recommended?

Wrap-up the discussion with the question – What if help is not available?

Briefly **make** the following points, if not made by the group:

1. Protect Yourself
   - Wear Protective Clothing – PPE or Face Mask and Gloves
   - Wash Your Hands Immediately

2. Kill the Sick Birds Safely and Humanely
   - Minimize Contact with Blood and Feces

3. Dispose of the Dead Birds Properly
   - Burning and/or Burial

PPT 10

4 **Present** the topics we will cover in this module:

- Lesson 1: Introduction to Biosecurity Principles
- Lesson 2: Biosecurity in Different Settings – Commercial and Smallholder Farms
- Lesson 3: Biosecurity Practices for Transporting Poultry to Market
- Lesson 4: Biosecurity Measures in Different Settings – Live Bird markets
- Lesson 5: Biosecurity Planning for Commercial Farms and Live Bird Market Administrators

Explain that we will be spending today on Lessons 1-3, and tomorrow morning on Lessons 4 and 5. **Point out** the rich information available in the *Participant Manual* on this module and **encourage** participants to follow along in the manual and use evening time to read through the material more thoroughly.

1 hour, 10 minutes — LESSON 1: INTRODUCTION TO BIOSECURITY PRINCIPLES

PPT 11-12

5 **Introduce** the first lesson by asking, what is biosecurity? **Get** some ideas from the groups and then **define** it:

Bio = Life
Security = Protecting
Biosecurity = Protecting Life

- Biosecurity is a set of practices designed to prevent the spread of disease into a farm or market.

- It is the process of keeping germs away from poultry and poultry away from germs.

PPT 13-14

State that biosecurity has three major components:
1. Isolation
2. Traffic Control
3. Sanitation

Explain that good animal husbandry and management is essential to maintaining effective biosecurity measures, which means that you must ensure the good health and maintenance of poultry. Provide some examples:

- Provide adequate feed, water, air
- Remove carcasses regularly
- Keep records of flock health


PPT 15-17

6 **Define** each component and provide examples for each (on the slides):

1. Isolation: Creating an environment where poultry are protected from carriers of disease – people, other animals, air, water, etc.
2. Traffic Control: Controlling the movement of people, animals, equipment, and vehicles into, out of, and within a farm or market.
3. Sanitation: Regular cleaning and disinfection of housing, equipment, vehicles and people.


PPT 18-19

7 **Show** the illustration of how disease spreads between farms and markets (also on p. 3 of the *Participant Manual)* and describe some of the different ways.

Discuss some of the ways that infectious diseases can be spread:

- Introduction of diseased birds
- Introduction of birds that are carriers of disease
- Shoes and clothing of people
- Contact with objects that are contaminated with disease agents
- Carcasses of dead birds
- Impure water, such as surface drainage water
- Pests: rodents, wild animals and birds
- Insects
- Contaminated materials: feed, feed bags, egg flats, crates, coops, etc.
- Contaminated vehicles: delivery trucks, motorcycles, wheelbarrows, etc.
- Contaminated premises through soil and old litter
- Egg transmission (for HPAI, this is limited to egg surfaces).


PPT 20-21

8 **Point** participants to Exercise 1: Identifying Biosecurity Infractions on p. 5-6 of the *Participant Manual.*

Give the following instructions (participants should work individually, then compare answers with their table group):

Follow the steps on p. 5 of your *Participant Manual* to complete this exercise.

- Study the illustration of the farm on p. 6.
- Circle each biosecurity risk that you notice.
- In the space provided, write directions for correcting the infractions that you indicated on the illustration

Take 10 minutes and be prepared to share your answers with the group.
HINT: There are at least 10 infractions pictured.

When they have finished, **ask** each table group to contribute one risk that they identified. **Go around** to each table until you have a full list. Evident risks include:


PPT 22

1. Carcasses left outside
2. Poultry house is not secured (chickens are out in the open)
3. Gate is open
4. Feed bin is open
5. There is a pond on the farm
6. Mixed species are on the farm
7. The vehicles is parked in front of the poultry house
8. There are weeds around the house
9. There are stray cats and dogs
10. The signs are contradictory (No Entry sign, along with a sign that says that eggs sales are inside the farm)

Note: participants may come up with additional items, but the ten listed above are fairly comprehensive.

Lead a discussion with the group to identify those risks that they believe are the highest (groups have often identified the first five in the list as the greatest risks). Use the top five items for the table exercise after lunch (prepare the cards in advance).

15 minutes	**BREAK**

2 hours	**LESSON 2: BIOSECURITY MEASURES IN DIFFERENT SETTINGS – COMMERCIAL AND SMALLHOLDER FARMS**


PPT 23-24

9 **Introduce** the next lesson first by **showing** the figure that illustrates how each step in the poultry production and market chain is connected – from the farm to dealer and to the market. **Stress** the fact that biosecurity must be a consideration throughout.


PPT 25

Present the following questions for large group discussion:

- How many of you work with commercial or smallholder farms?
- Who do you work with on the farm?
- How would you describe their level of knowledge about poultry diseases? About biosecurity?
- In your experience, what biosecurity practices do most farms follow?
- What are the most common biosecurity risks you've seen on commercial farms?

Facilitate a brief discussion on the questions to ascertain the participants' experience with biosecurity practices. **Draw upon** their experiences throughout the module.

Point to the Appendices for further information throughout your discussion.


PPT 26

10 **Introduce** the core biosecurity messages for commercial and smallholder farms:

1. Practice Good Animal Husbandry
2. Design and Maintain Your Farm to Keep Diseases Out
3. Control Entry to and Movement on Your Farm
4. Keep Your Farm Clean

Refer participants to Lesson 2 (p. 8-28) in the *Participant Manual* that cover in detail messages 1-4 above and **briefly** walk through the highlights of the messages on the slides.


PPT 27

1. Practice Good Animal Husbandry

1. Provide adequate feed and water
2. Remove carcasses at least twice a day
3. Cull sick birds regularly
4. Monitor and Record Flock Health
5. Never Add New Poultry to a Flock
6. Do Not Keep Multiple Species of Poultry


PPT 28

11 ## 2. Design and Maintain Your Farm to Keep Diseases Out

Restrict Access to the Entire Farm
- Fence and gate farm
- Fence poultry area
- No standing bodies of water on the farm


PPT 29-36

12 ## 3. Control Entry to and Movement on Your Farm

(major headings are below; fill in with the details on the slides):

1. Entering the Farm
2. Movement within the Farm
3. Movement from the Farm
4. Conducting Farm Business

Precautions for People Who Move Between Farms
- Do not visit more than 2 farms per day
- Do not visit more than 1 farm where birds are sick, bathe and change clothes/shoes immediately after
- Park outside the farm gate
- Wash hands/feet and change clothes/shoes before entering and upon exiting


PPT 37-38

11 ## 4. Keep Your Farm Clean

1. Clean and Disinfect Equipment Regularly
2. Feed Management
3. Litter Management
4. Clean Poultry Houses Between Flocks
5. Pest Control


PPT 39

14 **Give** the following table exercise:

- Review the material from Lesson 2 (p. 8-28) in the *Participant Manual.*
- Identify which of these biosecurity practices are the ***most important*** and yet ***least used*** on commercial poultry farms. Choose one or two to focus on.
- Discuss with your group some ideas you have for encouraging farmers to adopt these essential biosecurity practices.
- Be ready to share your ideas.
- Take about 20 minutes for your discussion.

When they have finished, **ask** each group to present a brief summary of their discussion.


PPT 40

Discuss the ideas that participants generated on ways to encourage farmers to adopt these biosecurity practices and summarize with the following key points:

- Wear clean, protective clothing and footwear when working with poultry
- Keep dedicated clothing and footwear on the farm for workers and visitors
- Prevent poultry from mixing with wild birds, other animals, and pests
- Restrict the movement of poultry/eggs, animals, manure, equipment, and people between farms and markets
- Control the movement of poultry/eggs, animals, manure, equipment, and people on the farm
- Practice basic hygiene – regular hand washing and decontaminating footwear

1 hour	**LUNCH**

1 hour 30 minutes	**LESSON 2 (continued): BIOSECURITY MEASURES IN DIFFERENT SETTINGS – COMMERCIAL AND SMALLHOLDER FARMS**


PPT 41-42

15 **Continue** the discussion on commercial farms by integrating biosecurity risks and biosecurity practices with a small group exercise. **Begin** by recapping the list of top ten biosecurity risks from the problem farm and the core biosecurity messages below (on slides).

Explain that the groups will consider the risk assigned to them and create a Standard Operating Procedure (SOP) that farm workers can follow so as to minimize the risk.

Give the instructions below first and then assign people to different groups. Once in their groups, **pass out** the index cards and groups can begin to work.


PPT 43

1. Read the biosecurity risk on your card.
2. With your group, create a procedure that farm workers can follow that will minimize the biosecurity risk assigned and use good biosecurity practices.
3. The procedure should be clear, simple, and require few resources.
4. Be clear about what will be done, by whom, where, and when. You can use the SOP template in Appendix H as a guide.

5. Identify one person to present your SOP.
6. Take about 30 minutes for your discussion.

16 **Lead** the small group reports and discussion (about 30 minutes).

Ask each group to briefly report out their recommended SOP for the biosecurity risk assigned to their table. **Add** any information that they may have missed.


PPT 44

After each table report, **pose** the following two questions:

- If you were working with a commercial farm, what approach would you recommend to train workers to use these procedures?
- What would you recommend that the farm manager do to encourage compliance with the SOP?

Notes: some suggestions from group discussions might include:
For farm managers:
- Post the SOPs clearly at the farm.
- Consider incentives for farm managers to follow the SOPs.

To train workers:
- Use a participatory approach and involve them in creating the SOP to make certain they own the recommendations.
- Be sure to explain why the SOP is necessary.
- The message should be simple and should be written down. You must consider the literacy of the worker (perhaps use illustrations).
- Show them by example-model the procedures so they can see how they should be done.

Ask the group about their experiences in using SOPs. Ask, do SOPs now exist for biosecurity measures? What might your role be in creating and implementing SOPs?


PPT 45

17 **Move** to a discussion of smallholder farms. **Pose** the following questions to the full group:

- How many of you work with smallholder farmers?
- How would you describe their level of knowledge about poultry diseases?
- About biosecurity?
- What's their level of literacy?

Ask the group about the situation in Ghana in terms of the number and size of smallholder farms. **Encourage** them to share their ideas on the owners' level of knowledge of poultry disease and biosecurity. **Discuss** ventilation, location of the chickens (sometimes close to living quarters), etc.


PPT 46

18 **Lead** a large group discussion on the following questions:

- What are the biggest challenges to adopting biosecurity practices for smallholders?
- Which do you think are the most important practices?
- Which ones will be the easiest to adopt?

- What are some ideas about how to work with smallholders to get them to adopt some of these practices (can you use SOPs?).

Notes:

- Bring into the discussion the issues of poultry associations and private veterinarians and the information they have about biosecurity (they sometimes have more information than the government).
- Make sure you ask the participants about practical ideas of ways they can approach owners of smallholder farms, given the context and realities of Ghana.

Summarize the discussion and move to break.

15 minutes	**BREAK**

1 hour, 15 minutes	**LESSON 3: BIOSECURITY PRACTICES FOR TRANSPORTING POULTRY TO MARKET**


PPT 47-50

19 Welcome participants back from break and explain that for the remainder of the day we will be discussing recommendations for moving live poultry from farm to market.

Show two photographs of typical ways that poultry is transported in Africa and ask participants to describe what they see.

Then pose the following questions to the group to get the discussion started:

- Who moves poultry to market in Ghana?
- How often do you interact with poultry dealers and transporters?
- What are the common practices around transporting poultry to market?
- What are the common biosecurity risks?

Ask participants to turn to a partner and discuss the questions for ten minutes. Have each group contribute some of their ideas (go table to table to get a varety of responses).

Lead a brief discussion on the local practices in Ghana, comparing the differences between urban and rural areas. Determine what interaction the participants have with dealers and transporters and what biosecurity risks they have observed.


PPT 51

20 Introduce the core biosecurity messages for transporting live poultry from farm to market:

1. Start with Healthy Birds
2. Don't Spread Disease
3. Keep It Clean

Refer to pages 29-31 in the *Participant Manual* that cover the messages in detail.


PPT 52-54

21 **Briefly** walk through highlights of the messages.

1. Start with Healthy Birds
   - Only buy birds from trusted producers
   - Do not accept sick birds

2. Don't Spread Disease
   - Avoid collecting birds from multiple farms in one day
   - Never bring dealer/transporter cages onto farms
   - Have easily identifiable cages
   - Do not enter poultry houses to pick up birds
   - Avoid carrying people and birds in the same vehicle at the same time
   - Also avoid carrying multiple species together
   - Respect poultry movement bands during outbreaks

Point to the illustrations p. 30-31 that show some examples of the above.

3. Keep It Clean
   - Clean and disinfect vehicles before and immediately after transporting birds
   - Use cages made of plastic or metal
   - Frequently dispose of and replace cages made of wood (e.g., millet stalks, raffia, palm products, bamboo)

Point to the illustration p. 31 that shows a traditional cage. Ask the participants what the challenges are with keeping this kind of cage clean.


PPT 55-56

22 **Give** the following group exercise:

- Each table group will be assigned a biosecurity practice for transporting poultry to market to discuss with a transporter:
- With your group, decide how you will convince the transporter to adopt the practice. Develop a message you would deliver to him/her.
- Choose one person from your group to be the messenger and one to be the transporter. You will *role-play* the conversation.
- Take about 15-20 minutes to prepare.

Notes: Choose some practices to assign to the groups, such as those suggested below:

- Do not accept or purchase from flocks showing signs of disease.
- Avoid collecting birds from different farms on the same day
- Do not enter poultry houses to pick up birds.

- Clean and disinfect vehicles before and immediately after transporting birds

- Frequently replace (burn or bury) the traditional cages made from millet stalks, raffia, palm products or bamboo.

Instruct the groups to make the role-play brief and encourage the transporter to give some resistance. At the end of the role-plays, **ask** the group to make comments on the effectiveness of the message and the delivery.

Note: This exercise has worked very well and is a great way to end the day.


PPT 57

23 **Ask** for some comments on the day. **Post** on flipchart paper the following statements:

- What worked well today:
- What I would have changed for today:

Make sure that each table has some sticky notes **and instruct** them to write one comment for each statement and post it.

Explain that we will cover the remainder of the biosecurity module on the following morning.

SECOND DAY

1 hour, 15 minutes	**LESSON 4: BIOSECURITY MEASURES IN DIFFERENT SETTINGS – LIVE BIRD MARKETS**


PPT 58

24 **Welcome** participants back to a new day. **Explain** that we will moving to a discussion on live bird markets for and **point** the participants to the lesson material in the *Participant Manual,* beginning on p. 35.


PPT 59-64

Show the pictures from various live bird markets and ask participants to describe what they see. **Invite** them to identify possible biosecurity infractions that they notice.


PPT 65

25 **Pose** the following questions:

- What are the biosecurity challenges in live bird markets?
- Who is responsible for improving biosecurity in live bird markets?
- What is the role of the municipal authorities?
- What is under their control?
- How would you describe their level of knowledge about poultry diseases?
- About biosecurity?
- What's their level of literacy?

Lead a whole group discussion and **get** some examples of realities on the ground in Ghana. Some comments you might hear include:

- People are shock-minded and are aware when there is a crisis. When the crisis fades, people go back to previous ways of doing things.
- Issues are often politicized.
- Politicians do not get the input of the people affected.

Point to the illustrations on p. 36 in the *Participant Manual* and **compare** the differences between a market with good and bad biosecurity practices. Ask which scene is more likely to be experienced in Ghana.


PPT 66-67

26 **Show** a photo of a market manager in an Accra market. **Ask** what his role is in maintaining good biosecurity practices in the market.

Then **present** the core biosecurity messages for municipal market managers:

1. Locate markets away from food
2. Control the flow of traffic in the market
3. Provide for good sanitation
4. Educate sellers about biosecurity practices
5. Conduct regular disease surveillance


PPT 68

Ask participants to think about these practices and answer the following questions with a partner:

1. What are the easiest recommendations to implement in live bird markets in Ghana?
2. Which are the hardest? What are the obstacles?
3. How can you overcome these obstacles?

Allow 10 minutes for pair discussions, and then **ask** for recommendations from each table. **Take** about 15-20 minutes for the whole group discussion and **chart** their answers.

Some recommendations you might expect include:

- Build a stand for cages
- Clean and disinfect cages at the end of the day or end of the week
- Clean the surroundings each day
- Divide the market into sections to isolate species (hardest to implement; hard to change the layout of the market, relocate sellers, etc.)
- Separate garbage grounds or have an incinerator
- Cages should be made of metal or wood and be able to be easily cleaned (use lining)
- Transport cages should be made of wood
- Should have water for washing hands
- Should have a separate place for slaughtering of chickens


PPT 69-70

27 **Show** a photo of a poultry seller in a live bird market. **Pose** the following questions for large group discussion:

- What role do the poultry sellers in the market play in biosecurity?

- How would you describe their level of knowledge about poultry diseases?
- About biosecurity?
- What's their level of literacy?

Take some responses from the group and as what the two most important biosecurity points for poultry sellers might be. Then **show** the slide with the two points:

- Never buy or sell sick poultry
- Never sell carcasses of dead poultry


PPT 71

Show a photo of a very sick bird that was taken in a live bird market in Accra and **ask** what the consequences are for selling the bird and having the bird in with healthy birds.


PPT 72-73

Briefly walk through additional highlights of biosecurity messages for poultry sellers.

For urban markets:
- Start with healthy birds
- Be alert for illness in your birds
- Keep it clean

One additional point for rural markets:
- Organize the market


PPT 74

Ask:
1. Which recommendations are easiest to implement? Why?
2. Which are the hardest? Why?
3. How best can you convey the messages?
4. How can you encourage adoption of these practices?

Lead a discussion on these questions and notice if the answers are different for poultry sellers than for market managers. Why or why not?


PPT 75

28 **Pose** the following two questions and **discuss:**

- What are you learning about how to encourage and support biosecurity in live bird markets?
- What ideas do you have about working with the municipal authorities and poultry sellers to increase biosecurity?

Help the participants to explore what they can do, in their positions, to promote and encourage good biosecurity measures in live bird markets.


PPT 76

29 **Complete** this lesson by discussing briefly some information on biosecurity measures for consumers. **Show** the following questions:

- What do consumers need to know and do to be safe from H5N1 HPAI?
- How do you reach consumers to communicate this information?
- What can poultry sellers do to promote safe poultry handling and preparation?

- What can municipal authorities do?
- What can you do?

Some comments you might expect include:
- In Ghana, there are live bird markets that sell birds for sacrifice in rituals
- There are traditions and practices whereby people give you chickens—how do you handle that?

Find out how consumers reacted to purchasing and consuming chicken when the outbreaks occurred in Ghana.

PPT 77

Show a photo of a consumer purchasing a chicken in a market in Ghana. **Ask** what the photo illustrates and what consumers should be wary of.

PPT 78

Present the recommended measures for safe cooking practices:

- Eat only healthy birds
- Wash your hands before cooking
- Chop raw vegetables first
- Prepare raw meat and eggs next
- Wash your hands after touching raw meat/eggs
- Clean all surfaces that touch raw meat/eggs
- Cook meat thoroughly
- Eat (or refrigerate) cooked foods within 2 hours

Summarize the discussion on live bird markets before moving to a break.

15 minutes	**BREAK**

1 hour 30 minutes	**LESSON 5: BIOSECURITY PLANNING FOR COMMERCIAL FARMS AND LIVE BIRD MARKET ADMINSTRATORS**

PPT 79-80

30 **Explain** that we are going to finish this module with some practice on putting together a biosecurity plan.

Present the suggested process for developing a biosecurity plan outlined in Lesson 5, beginning on p. 49 of the *Participant Manual:*

1. Define the objectives
2. Assess risk
3. Establish biosecurity procedures
4. Train staff
5. Monitor the effectiveness of the biosecurity plan

Give participants 15 minutes to silently read through the lesson in the manual. **Answer** any clarifying questions before moving on to the exercise.

Ask participants to turn to Exercise 2 on p. 53 of their *Participant Manual* –

Biosecurity Planning.


PPT 81

Provide an overview of the biosecurity planning exercise, **stating** that this exercise allows participants to apply acquired knowledge to a real-world setting by creating a biosecurity plan.

Give the instructions:

- In this exercise, you will be evaluating the biosecurity efforts of a specific setting and creating a plan for improvements.
- Turn to p. 53 in your *Participant Manual* and follow the directions. Work with your group to complete the exercise.
- Choose a reporter and be prepared to share your answers with the group.
- You have 45 minutes for this exercise.

Ask table groups to go ahead with the exercise, using the Biosecurity Planning worksheet in their *Participant Manual.*

Monitor the working groups to help answer clarifying questions and to keep them moving through the worksheet.

Allow 45 minutes for this exercise, and then **ask** each table group to report by first describing the setting they choose, followed by a summary of their responses to the worksheet.

Make certain that you **weave in** important information from the previous lessons as the groups report out. **Pose** the question:

- What are the important learning points that you're taking away from this discussion about how to increase biosecurity in commercial farms and live bird markets?


PPT 82

Encourage participants to reflect on the day and a half module and contribute some things they will be able to immediately apply to they daily work.


PPT 83

Summarize the biosecurity module and **refer** participants to the contact information, checklists and appendices in their *Participant Manual.*

10 minutes — REFLECTION


PPT 84

31 **Ask** participants to complete the Reflection Worksheet in their manual:

- What are **three things** you will do differently in your work and in your life as a result of the knowledge you have gained on biosecurity?
- What additional information do you need on this module?

Encourage several participants to share their reflections.

Ask participants to share some of their needs for additional information on the module and be sure to **discuss** the ways in which you will be able to address their needs within the course (in other modules and activities, during optional

evening sessions, through resources and references, etc.).

CLOSE

ANIMAL AND HUMAN SURVEILLANCE

MODULE PURPOSE

To discuss the steps, methods, and objectives for the surveillance of H5N1 HPAI in different populations of birds.

MODULE OBJECTIVES

At the conclusion of this module, participants will be able to:

- Design a national H5N1 surveillance plan (for domestic and wild birds) based on guidelines;
- Modify the surveillance plan as the disease situation changes;
- Identify types of surveillance for inclusion in a national plan;
- Identify appropriate sampling procedures; and
- Understand the importance of collecting appropriate sample sizes.

TIME

3 hours (including break)

MATERIALS

- *Trainer Guide*
- *Participant Manual*
- Power Point slides

3 hours (including break)	**ANIMAL AND HUMAN SURVEILLANCE**

PPT 1

1 **Welcome** participants.

5 minutes	**MODULE PURPOSE AND OBJECTIVES**

PPT 2-3

2 **Present** the purpose of the module:

To discuss the steps, methods, and objectives for the surveillance of H5N1 HPAI in different populations of birds and to discuss the elements of a good surveillance system for Human AI.

Present the specific objectives of the module:

At the conclusion of this module, participants will be able to:

- Design a national H5N1 surveillance plan (for domestic and wild birds) based on guidelines;
- Modify the surveillance plan as the disease situation changes;
- Identify types of surveillance for inclusion in a national plan;
- Identify appropriate sampling procedures;
- Understand the importance of collecting appropriate sample sizes.

Explain that we want to start with an exercise that helps get us started talking about and understanding surveillance.

10 minutes	**GETTING STARTED ACTIVITY – CHECK YOUR UNDERSTANDING**

3 Explain that the purpose of this exercise is to enable participants to assess their current knowledge of animal surveillance and to identify topics that especially interest them.

PPT 4

Ask participants to open to p. 3 in the Animal and Human Surveillance module, Exercise 1: Check Your Understanding.

Give the following instructions: Review the list of surveillance concepts and determine whether you believe them to be True or False. Check on True or False

box after each statement.

When they have finished, Explain that we will repeat the exercise at the end of the module and compare their responses now with their responses later.


PPT 5

4 **Present** the topics for this module:

- Lesson 1: H5N1 HPAI Surveillance
- Lesson 2: Sample Size Calculation
- Lesson 3: Surveillance in Poultry and Captive Populations
- Lesson 4: Elements of a Good Health System for Human Health

Ask participants about their level of experience with surveillance. Be sure to draw upon the experiences of participants who have knowledge of surveillance and sampling.

30 minutes LESSON 1: H5N1 HPAI SURVEILLANCE


PPT 6

5 **Present a** definition of surveillance:

A systematic form of data recording with three distinct elements:

- Sampling, recording and analyzing data
- Dissemination of information to interested parties, so that
- Action can be taken to control disease

Compare random surveillance and targeted surveillance:


PPT 7

Random Surveillance
Random selection of a population to look for a disease or condition. It can also be described as a specific form of probability sampling

Targeted Surveillance
Sampling a population in an adaptive manner, taking into account other historical population information


PPT 8-9

Show the two slides that illustrate the two and describe the differences. **Ask,** 'in what situations would you use random surveillance? Targeted surveillance?

Make the following points:

- Each shape represents a bird species.
- Quails have the highest prevalence of H5N1 HPAI, while pigeons and chickens have much lower prevalence.
- When taking three random samples, the chances are that no infected bird will be sampled.
- When targeting the birds that are most likely to be infected (quails), the chances of sampling an infected individual will increase.

- When sampling pigeons or chickens by their proximity to quails (which have the highest prevalence) the chances of sampling an infected bird will increase.
- This is an approximation of a live bird market situation.


PPT 10

6 Now **ask** for a participant to define active and passive surveillance and examples of when you would use each. Then **describe** passive vs. active surveillance surveillance.

Passive: The testing of sick or dead birds that are reported.

Active: The systematic testing of the birds or animals, including those that are healthy.


PPT 11

Ask participants to turn to the information on p. 5 and **point out** the additional resources available.

- Clinical (or syndromic) surveillance
- Virological surveillance
- Serological surveillance


PPT 12

7 **Ask** participants to turn to Exercise 2, Review of Key Concepts, on p. 7 in their *Participant Manual.*

Explain that the purpose of the exercise is to assess what they have learned about methods of data collection and surveillance types.

Give a brief overview of the exercise and ask them to read the instructions and complete the exercise. **Allow** 15 minutes for the exercise and then **check** for correct responses.

Discuss last question in the exercise: Which surveillance methods and types are most challenging for you or your community? **Find out** some of the concerns or challenges the group has in conducting surveillance in Ghana.


PPT 13-14

8 **Review** surveillance objectives and have the participants read along in the *Participant Manual.*

- Early detection
- Extent of infection
- Detection in vaccinated population
- Freedom of infection

Give them a few minutes to scan the manual and answer any additional questions they have.


PPT 15

9 **Cover** some information on zoning and compartmentalization. **Start** by sharing this:

Recent strategic changes have been made in the design of the science based

international standards to move from **entire country freedom** as the basis for trade to the application of zoning or compartmentalization principles, to minimize economic consequences previously associated with disease reporting.


PPT 16-17

Define zoning as:

- Zoning is based on separating a country into areas of differing disease status by natural or artificial geographical barriers.


PPT 18-19

And **define** compartmentalization as:

- Compartmentalization is the separation of disease status by the application of appropriate management systems, including bio-security management
- A good example is the consideration of poultry breeder farms (with grandparent or pureline flocks) as compartments due to their high level of biosecurity and superior management.


PPT 20

Briefly **discuss s**urveillance in other species:

- Mammalian species such as cats, pigs, dogs, mice, weasels, ferrets and humans have been infected by H5N1 HPAI.
- Surveillance in these species is now low but will become more important if virus mutations allow the disease to spread rapidly.

1 hour — LESSON 2: SAMPLE SIZE CALCULATION


PPT 21

8 **Review** sampling procedures and the importance of collecting appropriate sample size.

- Prevalence – The rate of disease in a population.
- Confidence Level – The degree of certainty that a statistical prediction is accurate. Confidence levels from 95% to 99% are acceptable.

Mathematical approaches to calculate the sample size required for a particular prevalence, population size and confidence level can follow either the hypergeometric or binomial approach.

- To calculate the sample size required for a particular prevalence, population size and confidence level two mathematical approaches can be followed:

- The hypergeometric approach
  OR
- The binomial approach

Explain that because the prevalence of the disease is usually unknown, we can

use a "best guess" based on published reports and/or expert opinion.

Emphasize that the lower the prevalence, the higher the sample size required.

PPT 24-25

9 **Define** in more detail the hypergeometric approach:

- requires very complicated calculations
- considers sampling without replacement. This means that a bird's chance of being selected increases after each sample is taken
- tables can be used to make the calculations

PPT 26

10 **Define** in more detail the binomial approach:

- is a very good approximation for big populations (over 10,000)
- for the calculation of the recommended sample size following the binomial distribution, the following equation should be used (U.S. Interagency Strategic Plan 2006):

$n = \log (1 - c) / \log (1 - P)$

where n is the sample size, c is the desired level of confidence, and P is the prevalence of positive samples in the population. An adequate sample size should allow for over 95% confidence that AI is detected.

Then show a sample calculation:

PPT 27

Example: to detect AI at or below 1.5% prevalence with a >95% level of confidence, 200 individual birds from the population of interest should be sampled (U.S. Interagency Strategic Plan 2006).

$n = \log (1 - 0.95) / \log (1 - 0.015) = 198.2 = 199$

PPT 28-29

11 **Point** the participants to the calculation of sample sizes using the Scenario A and B in on p. 11 in the *Participant Manual.*

- Scenario A: The population size is 500, the prevalence of disease is estimated to be 0.5% and you would like to be 99% confident in your determination.
- Scenario B: The population size is 500, the prevalence of disease is estimated to be 10% and you would like to be 99% confident in your determination.

Ask them to take 10 minutes to discuss the scenarios with a partner and to answer the questions posed in the *Participant Manual:*

- Is it feasible to take that many samples, for example in each live bird market?
- What alternative approaches could be taken?

Take some answers from the group and **discuss** the feasibility issues. **Get** some ideas on alternative approaches that might be taken as well.

Explain that these examples demonstrate that:

- The lower the prevalence, the more samples you need
- The higher the confidence interval, the more samples you need

Point out Table 1 under Appendix A – the number needed to test to be 99% confident that the disease will be detected if present at or above five levels of prevalence.

Answer any questions the participants have before moving on to the next lesson.

15 minutes **BREAK**

20 minutes **LESSON 3: SURVEILLANCE IN POULTRY AND CAPTIVE POPULATIONS**


PPT 30

12 **Explain** that we have up to now been discussing concepts of surveillance in all bird populations, but now we will focus specifically on surveillance in poultry and captive populations.


PPT 31-32

Refer participants to Lesson 3 in their *Participant Manual* and ask that they read through the specific points on surveillance in poultry and captive populations.

Define the three types of surveillance for poultry and captive populations.
- Clinical
- Verological
- Serological

Show the detailed slides and **encourage** participants to share their experiences with these surveillance methods.


PPT 33

Next, **review** Figure 3 in the *Participant Manual* – Graph of survival and antibody production of vaccinated and non-vaccinated chickens after infection with HPAI.


PPT 34

13 **Review** surveillance objectives:

1. Early Detection: The strategy employed will depend on the risk of infection in poultry.

2. Extent of Infection: Surveillance should focus on the same populations as in early detection under high risk.

- Surveillance in zoos and pet shops
- Live bird markets (or wet markets)

Tell the participants to follow along on 14 of the *Participant Manual.*

PPT 35-37

Discuss live bird market (or wet market) and Figure 4 charts on p. 15 – Demonstration of seronegative and seropositive surveillance scenarios. Explain seronegative and seropositive scenarios and use the diagram on the slide to illustrate.

Seronegative: No evidence of prior infection

- Infection is introduced into a mostly seronegative population.
- Many birds from seronegative flocks will get infected.
- Shedding starts 6 to 24 hours after exposure.
- It will be easy to detect shedding birds, because the prevalence will be high after a few days.
- The negative source flocks act as sentinels with naïve immune systems.

Seropositive: evidence of prior infection (antibodies)

- If most birds are seropositive, individuals are resistant to infection and few will become infected and shed the virus.
- It will be much more difficult to detect shedding birds, because the prevalence is low.
- In this scenario, the use of sentinels might be more cost and time effective.

PPT 38

14 **Give** instructions for Exercise 3 in the *Participant Manual* – Check Your Understanding. **Give** the instructions:

Review the list of surveillance concepts that you saw at the outset of this module and determine whether you believe them to be True or False. Check on True or False box after each statement.

After about five minutes, **ask** them to compare their responses with their previous responses.

Ask for examples of any changes.

30 minutes LESSON 4: ELEMENTS OF A GOOD HEALTH SYSTEM FOR HUMAN HEALTH

PPT 39

15 **Explain** that there are seven key elements of a good surveillance system for human health:

- Simplicity
- Flexibility
- Acceptability
- Sensitivity
- Predictive value positive
- Representativeness
- Timeliness

Ask participants to take 5-10 minutes to read through the descriptions of these seven key elements on p. 19 in their *Participant Manual.*


PPT 40-46

After most participants have had the chance to finish reading, **walk** through each of the seven key elements on the slides (see slides for content).

Clarify any questions and **invite** the human health participants to contribute as well


PPT 47

16 **Share** the revised International Health Regulations (IHR) that entered into force on June 15th 2007.

- set of rules and procedures agreed by 193 countries
- will help to make the world more secure from threats to global health.
- agreed by the World Health Assembly in 2005 and represent a major step forward in international public health security.

Summarize the discussions and tell the group that they will have a chance to do some surveillance planning in the next module.

10 minutes REFLECTION


PPT 48

17 **Ask** participants to complete the Individual Reflection Worksheet in their manual:

- Identify one tip, tool, idea, strategy or resource from this module that you plan to use.
- Identify one action you plan to take. When? With whom will you share your planned action?
- What additional information do you need on this module?

Encourage several participants to share their reflections.

Ask participants to share some of their needs for additional information on the module and be sure to **discuss** the ways in which you will be able to address their needs within the course (in other modules and activities, through resources and references, etc.).

CLOSE

SURVEILLANCE PLANNING

MODULE PURPOSE

To apply acquired surveillance knowledge to design an outbreak investigation form and surveillance plan.

MODULE OBJECTIVES

At the conclusion of this module, participants will be able to:

- Design an outbreak investigation form;
- Create a sample surveillance plan;
- Apply acquired surveillance knowledge to a real-world setting.

TIME

3 hours (including break)

MATERIALS

- *Trainer Guide*
- *Participant Manual*
- Power Point slides

3 hours (including break)	**SURVEILLANCE PLANNING**


PPT 1

1 **Welcome** participants.

5 minutes	**MODULE PURPOSE AND OBJECTIVES**


PPT 2

2 **Present** the purpose of the module:

To apply acquired surveillance knowledge to design an outbreak investigation form and surveillance plan.

Present the specific objectives of the module:

At the conclusion of this module, participants will be able to:

- Design an outbreak investigation form;
- Create a sample surveillance plan;
- Apply acquired surveillance knowledge to a real-world setting.

1 hour	**DESIGNING AN OUTBREAK INVESTIGATION FORM**

3 **Review** briefly the previous module on animal and human surveillance.

Take 10 minutes to clarify any questions the participants may have. **Explain** that in this module, participants will be doing some practical exercises and will have he change to address any outstanding questions they have about surveillance in an open space discussion.

4 **Ask** participants to turn to Exercise 1 on p. 4 of their *Participant Manual* – Designing an Outbreak Investigation Form.

State the purpose for Exercise 1 – Designing an Outbreak Investigation Form:

An outbreak investigation form can help you identify the problem and determine immediate steps to be taken to deal with the problem. This exercise will allow you to use your knowledge on animal surveillance to design an outbreak investigation form.

Give the following table exercise:

- In your small group, follow the steps below to conduct this exercise:

  1. Consider the information you would need to investigate an outbreak. Then create an **Outbreak Investigation Form** using the information you generated above. Use the following headings and the blank format on the next page.

     - Livestock data
     - Management and husbandry
     - Sample collection

  2. Be prepared to share your form with the larger group.

Allow them 20-30 minutes to complete the exercise. Trainers should walk around and **help** the groups as they go through the exercise. **Make sure** that the group has one recorder to write the final form.

5 **Process** the exercise. **Go around** to each table and ask them to share some of the key items they included. **Ask** what they are noticing.

Pass out the sample Outbreak Investigation Form to each table. **Allow** them some time to compare their work with the sample.

Discuss overall reactions, ideas and additional questions.

15 minutes **BREAK**

1 hour **SURVEILLANCE PLANNING**

6 **Welcome** participants back from the break.

Ask participants to turn to Exercise 2 on p. 7 in their *Participant Manual* – Surveillance Planning.

State the purpose for Exercise 2 – Surveillance Planning:

This exercise will allow you to apply your acquired surveillance knowledge to a real-world setting by creating a sample surveillance plan.

Point participants to the instructions for the exercise:

In your small groups follow the steps on p. 7 in the *Participant Manual* to conduct this exercise.

Each small group will be assigned ONE of the three scenarios in the manual.

Assign each group a scenario and **allow** them 30 minutes to complete the exercise.

7 Then **ask** table groups to share their sample surveillance plan with the full group. **Lead** a whole group discussion on their ideas and recommendations.

Discuss overall reactions, ideas and additional questions.

30 minutes ROUND TABLE DISCUSSION

8 Participants typically have many questions after this module and the module on animal and human surveillance. Allow this time to address any outstanding issues, questions, or concerns they have on the topic.

10 minutes REFLECTION

9 **Ask** participants to complete the Reflection Worksheet in their manual:

- How might you be able to apply the exercise on designing an outbreak investigation form in your work?
- What are two important things you learned about surveillance planning?
- What additional information do you need on this module?

Encourage several participants to share their reflections.

Ask participants to share some of their needs for additional information on the module and be sure to **discuss** the ways in which you will be able to address their needs within the course (in other modules and activities, through resources and references, etc.).

CLOSE

INTRODUCTION TO THE PERSONAL PROTECTIVE EQUIPMENT (PPE) KIT

MODULE PURPOSE

To familiarize participants with the contents, function and proper use of the Personal Protective Equipment provided by USAID.

MODULE OBJECTIVES

At the conclusion of this module, participants will be able to:

- Identify and explain the contents of the PPE Kit and describe their function;
- Explain the concepts of: "clean" and "dirty" zones;
- Correctly put on (don) the PPE;
- Correctly take off (doff) the PPE.

TIME

1 hour

MATERIALS

- *Trainer Guide*
- *Participant Manual*
- Power Point slides
- One PPE Kit

1 hour	**OVERVIEW OF AVIAN INFLUENZA**


PPT 1-2

1 **Welcome** participants.

5 minutes	**PURPOSE AND OBJECTIVES**


PPT 3

2 **Present** the purpose of the module:

To familiarize participants with the contents of the Personal Protective Equipment (PPE) kit.


PPT 4

Present the objectives of the module:
At the conclusion of this module, participants will be able to:

- Identify and explain the contents of the PPE Kit and describe their function;
- Explain the concepts of: "clean" and "dirty" zones;
- Correctly put on (don) the PPE;
- Correctly take off (doff) the PPE.

15 minutes	**LESSON 1: THE PERSONAL PROTECTIVE EQUIPMENT (PPE) KIT**


PPT 5-6

3 **Show** the slide of the PPE and review each item on the list of kit content.

When you mention an item, pick up and **show** each piece of equipment as you discuss it. Participants can also follow along with the list in their *Participant Manual.*

4 This next discussion is intended to get participants comfortable with explaining the importance of PPE kits despite the resistance to wearing them. Start by asking them to share their own experience with wearing them. Typical responses may include:
- They are incredibly hot
- It is hard to move around in them—they are restrictive


PPT 7

After a few comments discuss the importance of wearing PPEs, **stressing** that "you can be infected by HPAI through your eyes, nose or mouth." **Point out** that HPAI is transmitted to humans by direct contact with infected birds and products. The routes of infection can be through the eyes, nose and mouth. These areas of the body need to be protected when humans are investigating or responding to an HPAI outbreak.

PPT 8

Share also that we use PPEs: because:
- Virus can be carried to farms
- Virus can survive in the environment
- You may not be aware that it is there

20 minutes DONNING AND DOFFING THE PPE

PPT 9

5 **Explain** that you will now show the sequence of activities involved in donning PPE and that human healthcare workers will also follow the same sequence.

PPT 10-12

Share some tips on what to do before donning the PPE (remove jewelry, extra clothes, leave cell phone behind, etc.). **Stress** the importance of washing hands as well. **Suggest** that coveralls should be two sizes larger than what one would normally wear.

PPT 13-23

6 **Present** the slides that show how to don the PPE. Go step by step and ask participants to follow along in their *Participant Manual.* **Answer** any questions that participants have.

PPT 24

Ask for a volunteer to don the PPE. Have the volunteer follow the proper procedure by using the steps described.

PPT 25

7 **Ask** for and **answer** any questions on how to don the PPE:

- What, if anything, was difficult about donning the PPE?
- What do you want to remember, and to encourage others to remember, about donning the PPE?

PPT 26-34

8 **Show** the slides and describe the proper procedure for doffing and disposing of the PPE. Go step by step and ask participants to follow along in their *Participant Manual.* **Answer** any questions that participants have.

PPT 35

9 **Guide** the volunteer to doff the PPE as you go through the slides. Have the participants instruct him in the proper procedure by using the steps described.

PPT 36-37

10 **Instruct** participants to clean their hands, arms and face with alcohol wipes and wash with soap and water, if possible.

Remind them that the PPE kit contents are designed for single use only; they should not be washed and reused.


PPT 38-42

11 **Share** some tips for discarding the PPE. **Answer** any questions the participants might have.


PPT 43

12 **Guide** the volunteer to doff the PPE as you go through the slides. Have the participants instruct him in the proper procedure by using the steps described.


PPT 44

13 **Ask** for and **answer** any questions on how to doff the PPE:

- What, if anything, was difficult about doffing the PPE?
- What do you want to remember, and to encourage others to remember, about doffing the PPE?

10 minutes PPE SCENARIO


PPT 45

14 **Point** participants to the Exercise: PPE Case Study in their *Participant Manual.* In table groups, **instruct** the participants to take five minutes to discuss the scenario and report out.

Lead a whole group discussion on what participants would do in the situation.

10 minutes REFLECTION


PPT 46

15 **Ask** participants to complete the Reflection Worksheet in their manual:

1. What is one key point you want to remember when wearing the PPE?
2. What is one thing you will keep in mind when disposing of the PPE?

Encourage several participants to share their reflections.

Ask participants to share some of their needs for additional information on the module and be sure to **discuss** the ways in which you will be able to address their needs within the course (in other modules and activities, during optional evening sessions, through resources and references, etc.).

CLOSE

OUTBREAK RESPONSE AND MANAGEMENT

MODULE PURPOSE

This module is about what practical steps you can take within a regional or district veterinary station, department, or office:

- Before you ever have an outbreak;
- When you suspect the disease is present;
- When you have an outbreak;
- When you are finished.

MODULE OBJECTIVES

At the conclusion of this module, participants will be able to:

- Describe the components of a response operation;
- Describe and define the procedures needed locally to develop a practical and rapid response plan;
- Define the procedure for deciding on the extent of restricted areas, establishing and enforcing movement controls;
- Explain the importance of the action planning prior to a response operation;
- Describe the activities undertaken on an infected site during depopulation.

TIME

3 hours (including break)

MATERIALS

- *Trainer Guide*
- *Participant Manual*
- Power Point slides

3 hours (including break) **OUTBREAK RESPONSE AND MANAGEMENT**


PPT 1

1 **Welcome** participants.

5 minutes **PURPOSE AND OBJECTIVES**


PPT 2

2 **Review** the purpose of the module:

This module is about what practical steps you can take within a regional or district veterinary station, department, or office:

- Before you ever have an outbreak;
- When you suspect the disease is present;
- When you have an outbreak;
- When you are finished.


PPT 3

Review the objectives of the module:

Objectives: At the conclusion of this module, participants will be able to:

- Describe the preparation needed locally to develop practical and rapid response plans;
- Describe the components of a response operation;
- Define the procedure for deciding on the extent of restricted areas, establishing and enforcing movement controls;
- Explain the importance of action planning prior to a response operation;
- Describe the activities undertaken on an infected site during depopulation.

15 minutes **LESSON 1: INTRODUCTION TO OUTBREAK RESPONSE**

3 **Encourage** participants to follow along with each lesson in their *Participant Manual,* beginning on p. 2. The manual provides greater detail than what is presented on the slides.


PPT 4

Ask participants to define "outbreak." **Stress** the fact that it is much more than a small epidemic. **Explain** that we will first discuss the steps involved in responding to an outbreak and then we will have a lengthy discussion on the outbreak response in Ghana, using the Tema case as an example.

PPT 5

Explain that to contain an outbreak:
Rapid Response Teams must be mobilized and deployed to eradicate infected flocks, within 24-48 hours of high suspicion or confirmation of disease.

Ask participants "what goals should we have in mind when working to contain an outbreak? **Take** some responses and show the key points:

- Protect people
- Protect animals
- Contain the virus
- Make it a single event

Discuss these goals and the importance of moving quickly in order to achieve the goals. **Ask** for some quick examples of how we can work towards the goals when an outbreak has occurred.

PPT 6

4 **Present** the 7 steps involved in responding to an outbreak, using the diagram on the slide and the information on p. 2 in the *Participant Manual.*

- Watch
- STOP
- Notify
- Diagnose
- Depopulate
- Dispose
- Clean

Briefly describe each step. Refer back to discussions in previous modules on the steps of "Watch, STOP, Notify and Diagnose." **Bring in** relevant examples from the Ghana outbreak cased. **Tell** the participants that we will discuss how to "Depopulate, Dispose and Clean" in modules on the following day.

15 minutes LESSON 2: COLLECT AND ANALYZE DATA

PPT 7-9

5 **Discuss** the practice of collecting and analyzing data. Ask, "What ***sources*** of information on numbers of poultry and poultry farm or backyard flocks do you have?" **Ask** participants to discuss answers briefly with a partner and then **compare** participant responses.

Some answers you might expect are: visit the farm, speak with the farmer association, ask community members, etc.

Then **present** a sample chart and discuss the importance of analyzing the local area.


PPT 10-11

Suggest two important ways you can collect and analyze data:

1. Map It!
Using a map of the local area, explain that you can:
- Mark the major farms on a map along with any slaughterhouses, markets, feed mills, or hatcheries
– Plan what resources you might need to mobilize and cull the largest farms, visit them and have a look around

- Consider where the highest density of back yard birds are kept – it is not the number of birds but the number of households
– Plan how you would approach the culling of birds in a village or urban area, discuss the plan with community leaders

Ask, why is it important to have this information *before* an outbreak occurs?

Other key questions related to estimating resources that you need to be able to answer before an outbreak include:
- How many veterinary officers might you need in a major outbreak?
- How many contract staff will be needed for depopulation work?
- What equipment and vehicles might you need?
- What are you going to do with that number of carcases?
- Do you have a mechanism for paying compensation?

Note: you may be able to share some information from the outbreaks in Tema/Suunyani:
- 20 people were paid as contractors for depopulation work
- Getting equipment and vehicles were a problem
- Carcasses had to be taken to a different place, away from the farm in Suunyani. The ground was so soft that they dug a hole and buried them.
- A compensation plan was in place.

10 minutes LESSON 3: INVESTIGATE AND REPORT


PPT 12-13

6 **Discuss** the roles of investigation and reporting. **Ask**, "What additional non-clinical information can be collected at the time of the investigation to prepare a depopulation plan and to prevent the need for a return visit to the farm?"

Lead a brief discussion on the importance of an investigation form, pointing back to the exercise that we did in designing this form in the surveillance planning module! **Give** participants a few minutes to review the outbreak investigation form and discuss the non-clinical information with a partner. **Ask** for some responses.

Ask for methods and tools that were used to investigate the outbreaks in Ghana.

20 minutes LESSON 4: ACTION ON CONFIRMATION

PPT 14-15

7 **Discuss** the actions required upon confirmation of an outbreak, being sure to include the mobilization of the control center.

Show the chart that illustrates the regional or district control center.

PPT 16

In setting up quarantine areas and enforcing movement controls, there are several key questions that need to be answered. **Present** the questions and the task:

Work with your table group to answer the following questions:
- Who defines the area?
- Who legally declares the area?
- Who enforces the controls?

Choose one person to report out to the group. Take five minutes for this discussion.

When the groups have finished, **lead** a whole discussion on their answers and ideas.

Ask the participants what might be some of the challenges the would face in Ghana.

Also **discuss** the resources needed to enforce compliance with restrictions and **ask** for some examples from participants. Some answers you might get include:

- Resources
- Security agency
- Finance
- Vehicles/equipment
- Consumables and nonconsumables
- Training

PPT 17

8 **Show** the FAO guidelines on quarantine areas for poultry, describing each briefly.

IP: Infected Premises
IA: Infected Area
RA: Restricted Area
CA: Control Area

PPT 18-19

Ask about quarantine areas; what do you call them? **Label** and **describe** them and then ask participants to describe what happens in each area. **Show** the chart and spend some time discussing it and answering any questions that arise.

15 minutes LESSON 5: PLANNING THE FIELD RESPONSE


PPT 20-22

9 **Describe** the components of a proper response plan, using the chart on the slide. **Share** the following key points:

- Use data collected at time of diagnosis
- If incomplete a second trip will have to be made to the INFECTED farm

Describe the steps involved in planning the field response:

- Select a culling AND disposal method within the constraints of the conditions and resources available
  - Decision trees for culling and disposal
- Allocate resources
- Each Rapid response team must have
  - Outbreak Response Leader
  - Field Veterinarian
  - Public Health Officer
- Large infected sites will require delegation of tasks


PPT 23

Then **show** the proposed organizational structure for field response teams (the chart in blue) on the slide and on p. 8 of the *Participant Manual.* **Allow** the participants a few minutes to look at the chart and then **discuss** the feasibility of using such a structure in Ghana for field response.

Ask, would this structure work? Why or why not?

20 minutes LESSON 6: MOBILIZING THE OPERATION


PPT 24-27

10 **Show** the mobilization slides and **discuss** set up, running the operation and cleaning up in some detail.

Site Set Up
- Plan how the site can be divided in risk areas.
- Establish gate security and decontamination areas with entry and exit registration.
- Establish a Green Area place for staging of personnel, equipment and hygiene and rest facilities.
- Establish the red, orange, yellow risk areas.
- Bring in the equipment – stage largest amounts in the Green Area and only necessary equipment into the Orange/Red areas.

Running the Operation
- Brief the operational support staff on their tasks
- Brief the culling and disposal team on the logistics of the operation outside of the site.
- Distribute and check PPE then bring in full team.

- If on-site disposal is being used then this must be prepared.
- Once the disposal system is established then culling can begin

Clean Up
- Breaking down equipment
- Washing equipment
- Disinfecting equipment
- Reporting on used equipment
- Cleaning up the site
- Breaking down the red, orange, yellow, green area
- Final departure leaving entrance secured with basic C&D

Ask for and answer any questions from the participants.

5 minutes LESSON 7: FOLLOW UP AND DEBRIEFING


PPT 28-29

1 Discuss the importance of debriefing team members, assuring follow up medical
1 checks for workers, instructing the site owner about deep cleaning and disposal and establishing a closed period following site cleaning and decontamination:

- Debriefing of site team/unit leaders to record exactly what was done on site.
- Follow up medical checks for all workers attending an infected site
- Instructions to site owner/manager for deep cleaning of site and disposal of litter.
- Establishment of "closed" period on farm once final C&D is completed

15 minutes BREAK

50 minutes THE OUTBREAK RESPONSE IN GHANA


PPT 30-58

1 Present the outbreak response in Ghana, using the account of what happened in
2 Tema. Present photographs of the response and describe the approach that was taken.

Lead a discussion with participants on the way the response was handled and answer any questions they have. Elicit a critical analysis of the response and suggestions for changes that participants would make should another outbreak occur.

10 minutes **REFLECTION**

PPT 59

16

Ask participants to complete the Reflection Worksheet in their manual:

- What are **three** points you want to remember about outbreak response and management that are important to the training you will be conducting for on AI?

Encourage several participants to share their reflections. Ask a few people to contribute one of the three key points from the module that they consider important and would like to remember.

Ask participants to share some of their needs for additional information on the module and be sure to **discuss** the ways in which you will be able to address their needs within the course (in other modules and activities, during optional evening sessions, through resources and references, etc.).

CLOSE

INTRODUCTION TO THE LAB KIT

MODULE PURPOSE

To familiarize participants with:

1. The contents of the Laboratory and FLU DETECT test kits.
2. Sampling practices for use on both poultry and wild birds.
3. Key steps in the shipping process, including preparation of collection vials, storage of samples.
4. Preparation of samples for shipping.

MODULE OBJECTIVES

At the conclusion of this module, participants will be able to:

- Identify the contents of the Laboratory and FLU DETECT test kits;
- Describe appropriate sampling techniques for use on both poultry and wild birds;
- Name the steps involved in testing both tracheal and cloacal samples.

TIME

1.5 hours (including break)

MATERIALS

- *Trainer Guide*
- *Participant Manual*
- Power Point slides
- One Laboratory Kit

1.5 hours	**INTRODUCTION TO THE LAB KIT**


PPT 1-2

1 Welcome participants.

5 minutes	**PURPOSE AND OBJECTIVES**


PPT 3

2 Review the purpose of the module:

To familiarize participants with:

- The contents of the Laboratory and FLU DETECT test kits.
- Sampling practices for use on both poultry and wild birds.
- Key steps in the shipping process, including preparation of collection vials, storage of samples.
- Preparation of samples for shipping.

Review the objectives of the module:


PPT 4

At the conclusion of this module, participants will be able to:

- Identify the contents of the Laboratory and FLU DETECT test kits;
- Describe appropriate sampling techniques for use on both poultry and wild birds;
- Name the steps involved in testing both tracheal and cloacal samples.

45 minutes	**LESSON 1: CONTENTS OF THE LABORATORY AND DIAGNOSTIC KITS; TAKING AND TESTING SAMPLES**


PPT 5-6

3 Explain the purposes of the lab kit:

- Rapid field testing
- Collection of specimens for virus characterization
- Provision of shipping materials

Show the chart that lists the content of the lab kit and point to the chart on p. 2 of the *Participant Manual.*

PPT 7-8

4 **Identify** the contents of the Symbiotics Flu Detect Kit and show a photo of the contents.

Ask how many participants are familiar with the kits and **determine** their level of experience in using such kits. **Explain** that we get some experience in using the kit during the wet lab activity.

Describe what the Flu Detect Test is:

- 15 minute assay based on a rapid immunochromatographic technology
- Can be done on a farm or in the lab
- Detects Influenza Type A virus only and not H5N1
- Appropriate for use in poultry and wild birds
- Best results when used to test sick or recently dead birds

PPT 10-11

5 **Describe** the principles behind the test:

- The test strip uses two antibodies specific to the nucleoprotein of Influenza Type A virus
- An anti-influenza A antibody bound to Influenza A antigen present in the sample forms a complex which migrates along a strip
- The antigen-antibody complex is captured on a sensitized reaction line by the second antibody
- Accumulation of the complex causes the formation of a clearly visible pink/purple band
- Above the reaction line is a control band which ensures the test was performed correctly

Show the diagram that illustrates the test principle and **describe** it briefly.

PPT 12-13

6 **Describe** the importance of sample collection.

Explain that samples are collected for testing purposes:

- Field testing (combined with clinical signs): immediate decisions to stop movement, impose quarantines
- National laboratory testing: confirm results, determine quarantines, make decisions about outbreak management

Share what happens in each of the following reference labs:

OIE Reference lab testing:
Track virus
Watch for mutations
Potential assistance with vaccine preparation

WHO Reference lab testing:
Track virus
Watch for mutations that would signal the possible start of a human pandemic

PPT 14

7 **Lead** a discussion on sample collection, highlighting these points:

- Samples are collected for preliminary and confirmatory testing for HPAI H5N1 virus
- Preliminary tests include rapid antigen tests and agar gel precipitation
- Confirmatory tests include real time RT-PCR testing and virus isolation

PPT 15

Discuss sample collection for animal testing and **emphasize** the following:

It is generally recommended that both tracheal (also oropharyngeal) and cloacal swabs should be collected from infected birds. **Explain** the choices available:

- Trachea/oropharynx is best site for sample collection for domestic poultry species
- Cloaca is best site for sample collection for wild birds
- Samples may be pooled (5 maximum)
- Pool only similar samples, do not mix cloacal and tracheal samples

Explain that samples should be collected from sick or recently dead birds for best results. Enzymes produced during decomposition of carcasses can interfere with the test to produce false positives. **Show** the slides with the photos that illustrate this important point.

Ask for and **answer** any questions that participants have about sample collection.

PPT 16-17

PPT 18-20

8 **Describe** the Synbiotics Flu Detect™ Tracheal and Oropharyngeal Samples collection techniques. Participants can follow along and find more detail on p. 4 in the *Participant Manual.* **Stress** the following:

Tracheal or oropharyngeal samples should be taken from behind the tongue and into the trachea or oropharyngeal area (not just from the mouth). **Show** the photos that illustrate these techniques and demonstrate how to use the test properly.

PPT 21

9 **Discuss** the testing procedure using Flu Detect Kit to test tracheal samples, including interpretation of results. **Ask** participants to also follow along in their *Participant Manual* on p. 5.

- Place swab directly into extraction buffer (see Step 1 for testing tracheal swabs)
- Place swab into Viral Transport Media (VTM) first if the sample is a cloacal or tracheal swab that will be sent for further testing (viral isolation)
- Samples can be pooled with up to 5 swabs per pooled sample. Pool per testing site.

Be sure to **stress** that they should not mix tracheal and cloacal samples.

PPT 22-25

10 **Point** participants to p. 6 and p. 7 in their *Participant Manual,* Using the Flu Detect Test Strip (for animals). They can follow along as you show the various steps for using the test strip with tracheal samples:

Step 1
- Place test tube in rack
- Add 8 drops (~250µl) extraction buffer into test tube

Step 2
- Insert swab sample into Flu Detect™ extraction buffer
- Rotate swab 5-10 times in buffer.
- Press swab against side of tube to extract liquid.
- Dispose of swab.

Step 3
- Insert test strip, labeled side up, so that pink pad is just submerged into extracted sample.
- Incubate for 15 minutes.
- Remove strip and read results.

Step 4: Reading results and validation:
- Control line is at the top, closest to handle
- If control line is absent the test is *invalid*

PPT 26

Move to a discussion on interpreting the results, **sharing** the following:

- A positive test result may be truly positive or could be a false positive (decomposing tissues can give false positives and leaving the strip in for more than 15 minutes can also give false positives)
- A negative result could be a false negative
- Therefore always follow up with further CONFIRMATORY testing after using the rapid antigen test kit

Allow participants a couple of minutes to read through the steps in the manual and consider the steps to interpreting the results. **Answer** any questions they have about the steps, highlighting again the importance of incubating for 15 minutes.

PPT 27

11 **Describe** the use of Flu Detect to test cloacal samples, highlighting the following:

- Best type of sample for wild birds
- Avoid solid excrement and blood
- Preferably extracted in viral transport media, which is provided in separate tubes as part of the Lab Kit
- Virus load in cloacal samples is low especially with HPAI
- VTM use is recommended if samples are to be sent for virus isolation (extraction buffer has detergents that will destroy virus)


PPT 28-30

Show the various steps involved in testing cloacal samples:

- Pipette 0.5 ml of BHI or Viral Transport Media into a clean test tube
- Place the cloacal swab into the media
- Rotate swab 5-10 times

- Press swab against side of tube to remove liquid
- Dispose of swab
- Allow contents to settle and remove 200 µl off the top and deposit in a new test tube; now add 3 drops of extraction buffer

- Insert test strip into tube
- Allow to incubate for 15 min
- Read results


PPT 31

12 Lastly, **highlight** again the importance of sample collection:

- Samples needed to confirm outbreak
  - World Health Organization
  - World Animal Health Organization (OIE)
- Needed to track the virus
- May help in vaccine development

Before moving on to storage and shipping, **ask** the group if they have any burning questions about the lab kit or about sample collection. **Remind** them that we will get practice in using the lab kit at the wet lab.

20 minutes PROPER STORAGE AND SHIPPING PROCEDURES


PPT 32

12 **Point** participants to p. 8 in the *Participant Manual* so they can follow along with the procedures for storage and shipping.

Discuss how to prepare sample collection vials:

- Add 1-2 ml of viral transport media
  - Store at -20°C until ready to use
  - Store at 4°C for 48-96 hours
  - Store at room temperature if < 2 days

- Number the vials to correspond to the Field Data Collection Sheet

Now **highlight** the minimum data needed for the Field Data Collection Sheet:


PPT 33-34

- Date sample collected
- Geographic location of sampling (village/owner)
- Species sampled (chicken, duck, name of human, etc.)
- Type of sample (tracheal swab, cloacal swab, etc.)

Show the *Sample Field Data Collection Sheet* and ask participants if they have had experience with the sheet. If so, **ask** how effectively it has been utilized. If not, **ask** ways in which they might be able to use such a sheet. **Ask** also for suggestions on items they would add to the sheet.


PPT 35-37

13 **Discuss** storage of samples, **taking** participants through the steps below:

- Collect sample, rotate swab in vial, press against side of tube to extract liquid and discard swab
- Samples should be stored at 4°C soon after sampling for a maximum of 48-96 hours
- If longer storage is required, store at -70°C
- Avoid repeated freezing and thawing
- Do not freeze swabs or tissues at -20°C if virus isolation is to be done
- Blood samples: allow blood to clot, pour off cells and store serum at 4°C for up to one week or -20°C for storage.
- Tissue samples:
- For virus isolation: pack on ice, *do not place in viral transport media*, and freeze at -70°C as soon as possible
- For histopathology: place in formalin, 1 part tissue to 10 parts of a 10% formalin solution

Check for understanding and **answer** any questions about the steps.


PPT 38-39

14 **Provide** instructions on the preparation of samples for shipping, following International Air Transport Association (IATA) regulations.

- Samples for shipping should be packed in a three-layer packaging system that meets International Air Transport Association (IATA) regulations:
  - The primary package must be wrapped with absorbent material
  - The secondary package must be watertight
  - The outer package is where the gel packs and ice packs are placed together with information about the samples (protected in a plastic bag)
- If samples are to be shipped internationally, dry ice should be used in the outer package instead of gel packs
- Never use dry ice in the tightly sealed inner package (it may explode)
- Samples have to be sealed well when dry ice is used to avoid destruction of the influenza virus by CO2
- Please refer to the most current edition of the International Air Transport Association (IATA) Dangerous Goods Regulations for specifics


PPT 40-41

Show the photo of the packaging and also **point** to the diagram on p. 9 of the *Participant Manual.* Lastly, **stress** the applicable guidelines for shipping:

- Each country has regulations on transporting infectious materials within its borders
- International shipments must follow the most current edition of the International Air Transport Association (IATA) Dangerous Goods Regulations

20 minutes **REFLECTION**


PPT 42

15 Ask participants to complete the Reflection Worksheet in their manual:

1. What is one key point you want to remember about sample collection?
2. What is one thing you will keep in mind when storing and shipping samples?

Encourage several participants to share their reflections.

Ask participants to share some of their needs for additional information on the module and be sure to discuss the ways in which you will be able to address their needs within the course (in other modules and activities, during optional evening sessions, through resources and references, etc.).

CLOSE

DEPOPULATION AND DISPOSAL OPTIONS

MODULE PURPOSE

Depopulation, also called culling of birds & disposal of carcasses, is one of the fundamental parts of a stamp out strategy. What kind of techniques are available and under what circumstances can they be applied? How does the depopulation fit into the national preparedness plan?

This session introduces both technical and practical information on culling and disposal techniques. The participants will have the opportunity to discuss the relative merits of each system and integrate it with the method of disposal. In addition, there are a number of exercises and activities relating not only to the information delivered in this session but also on outbreak response and site management that can be integrated, depending on the time available for the session, in each of the training courses.

MODULE OBJECTIVES

At the conclusion of this module, participants will be able to:

- Prepare for a (multiple) depopulation operation according to the international guidelines of FAO and OIE
- Compare and select suitable culling and disposal techniques that are applicable under different situations
- Compare and select different options for additional materials needed to carry out the depopulation operation

TIME

1 ½ hours

MATERIALS

- *Trainer Guide*
- *Participant Manual*
- Power Point slides

1 1/2 hours DEPOPULATION AND DISPOSAL OPTIONS


PPT 1

1 **Welcome** participants.

5 minutes PURPOSE AND OBJECTIVES


PPT 2

2 **Present** the purpose of the module:

To introduce both technical and practical information on culling and disposal techniques.


PPT 3

Present the objectives of the module:

At the conclusion of this module, participants will be able to:

- Prepare for a (multiple) depopulation operation according to the international guidelines of FAO and OIE;
- Compare and select suitable culling and disposal techniques that are applicable under different situations;
- Compare and select different options for additional materials needed to carry out the depopulation operation.

10 minutes LESSON 1: DEFINITION OF STAMP OUT


PPT 4-5

4 **Explain** that before the discussion on depopulation and disposal techniques, you will introduce some key terms. **Define** what "stamp out" means, according to the FAO and OIE.

- OIE: carrying out under the vet authority, the killing of animals infected and suspected to be infected.

- FAO: designation of clean & infected zones, intensive disease surveillance within the infected zone, quarantine of livestock movement, and immediate slaughter and disposal of all susceptible animals (depopulation).


PPT 6

5 **Define** also "depopulation" and "humane killing."

Depopulation
- Depopulation is culling AND disposal

Humane Killing

- Methods used should result in immediate death of an animal or immediate loss of consciousness lasting until death; when loss of consciousness is not immediate, it should not cause anxiety, pain, distress or suffering in animals.
- The method of restraint of an animal should be considered part of the killing process.

Ask for examples of human killing techniques in Ghana and be prepared to discuss those techniques used that are not humane. **Ask,** what can we do to impact the way that people in Ghana practice human killing?

15 minutes LESSON 2: PRINCIPLES FOR OUTBREAK RESPONSE


PPT 7-8

6 **Describe** the four principles of outbreak response. **Point** to this lesson in the *Participant Manual* (beginning on p. 2) and have participants follow along.

- Protect humans
- Protect animals
- Contain the virus
- Make the outbreak a single event

Review this material (this should be a recap for the participants from previous modules). Instead of teaching the materials, give participants five minutes to read through the manual pages and do a "teachback" to the class. **Ask** for a volunteer to share the essence of each principle with the group and **fill in** with any missing information.

7 Before you begin Lesson 3, **refer** participants to the Exercise 1: Worksheet on Culling Methods in the *Participant Manual* on p.6. **Explain** that they should take notes on this page as you go through the four culling options. We will answer the questions at the end of the lesson.

30 minutes LESSON 3: ASSESSING THE CULLING OPTIONS


PPT 9-10

8 **Explain** that there are 4 categories of OIE recommended poultry killing methods. **Observe** that, in selecting a method you are looking for one that is not too simple, not too complicated, and also doesn't over kill! Use the photos on the slides to illustrate this.


PPT 11-16

9 **Show** the slides and describe each method. **Ask** participants what experience they have had with each method. **Ask** those who have had experience with a method if they have any advice to share with the group about that experience.

PPT 17-19

10 **Explain** that there are some additional methods that also deserve attention, such as wet foam, gas lift system, and complex container systems.

Show the slides and explain how these systems work.

PPT 20

11 *Note:* many of these options will not be available in Ghana. **Ask:**

- What are the culling methods used in Ghana?
- Which are most effective? Most appropriate?

Get a few responses and then **ask** for and **answer** any questions on the module. **Note** that there is a table comparing the different methods in their *Participant Manual* beginning on p.8.

PPT 21-23

12 **Explain** that, whichever method is selected, there are some important precautions to take. **Show** the slides and **explain.**

PPT 24

13 Now **return** to p. 6 in the manual and **give** the table groups 10 minutes to answer the questions. **Show** the instructions on the slide:

- With your table group, review and answer the questions on p. 6 in your *Participant Manual.*
- Take 10 minutes for your discussion and be prepared to share your answers.

Lead a brief report out of their answers.

25 minutes LESSON 4: DISPOSAL OPTIONS

PPT 25-26

14 **Introduce** the discussion on disposal methods by noting that there are four principle methods for safe disposal of infected poultry carcasses (p. 13 in the *Participant Manual)* .

PPT 27-32

Show the slides and discuss each method. **Pause** after each method to **ask** participants whether they have had experience with it. **Ask** those who may have been involved in the outbreak in Ghana to comment and discuss specifically the options available in country.

PPT 33

15 **Ask** participants to pair up and discuss the following questions for about five minutes:

- Which of the 4 do you see used most often?
- What experiences have you had with rendering?
- What are some lessons you've learned in working with composting and burial?

Follow up by asking what lessons they have learned from their experiences with these methods.

10 minutes REFLECTION

16 Ask participants to complete the Reflection Worksheet in their manual:

- What have you learned about the depopulation options that are best suited to Ghana?
- What have you learned about the disposal options that are best suited to Ghana?
- What additional information do you need on this module?

Encourage several participants to share their reflections.

Ask participants to share some of their needs for additional information on the module and be sure to discuss the ways in which you will be able to address their needs within the course (in other modules and activities, through resources and references, etc.).

CLOSE

CLEANING AND DISINFECTION PRINCIPLES

MODULE PURPOSE

To familiarize participants with the concepts of decontamination and decontamination procedures appropriate for use in the event of an outbreak.

MODULE OBJECTIVES:

By the conclusion of this module, participants will be able to:

- Define cleaning and disinfection and explain what each accomplishes;
- Recognize the contents of the decontamination kit;
- Describe decontamination procedures for use in the event of an outbreak.

TIME

1 hour, 15 minutes

MATERIALS

- *Trainer Guide*
- *Participant Manual*
- Power Point slides

1 hour, 15 minutes	**CLEANING AND DISINFECTION PRINCIPLES**


PPT 1-2

1 **Welcome** participants.

5 minutes	**PURPOSE AND OBJECTIVES**


PPT 3-4

2 **Present** the purpose of the module:

To familiarize participants with the concepts of decontamination and decontamination procedures appropriate for use in the event of an outbreak.

Present the specific objectives of the module:

By the conclusion of this module, participants will be able to:

- Define cleaning and disinfection and explain what each accomplishes;
- Recognize the contents of the decontamination kit;
- Describe decontamination procedures for use in the event of an outbreak.

25 minutes	**INTRODUCTION: DEFINING CLEANING AND DISINFECTION**


PPT 5-6

3 **Begin** by providing some introductory information on cleaning and disinfection (this material is largely contained on the Power Point slides).

Define decontamination as "removal or neutralization of disease organisms (or hazardous chemicals) through a process of cleaning and disinfection."

Make the point that decontamination is key to human and animal health.


PPT 7

4 **Ask** participants, "Why do we decontaminate?" and get some answers.

Show the slide that tells why we decontaminate:
- To destroy viruses and other disease organisms
- To prevent contamination of people
- To allow for safe repopulation
- Decontamination is a key component of routine biosecurity on farms and in bird markets

Ask for a few brief examples of decontamination practices that are used in Ghana.

PPT 8

5 **Describe** how the avian influenza can survive and the agents that can deactivate it:

Virus can survive:
- Up to 4 days at 22°C
- 35 days at 4°C in poultry manure
- 30 days at 0°C in water
- Virus can survive several days in carcasses at room temperature or up to 23 days if refrigerated

PPT 9

Show the photos and **describe** them: the bird on the left appears to have died very recently--there are no signs of decomposition. In high temperatures, birds decompose rapidly and the virus is destroyed in the process. The bird on the right is in a walk-in cooler/refrigerator.

PPT 10

Explain that live bird markets are a likely source of HPAI transmission. **Show** the three photos of scenes from live bird market: a storefront market, cages of birds in an outdoor market and in an indoor market. **Note** the single pheasant among chickens in the middle cage of picture on the right.

PPT 11

Ask the participants to comment on some of the obvious risks they see in the photos. **Check** to see if similar scenarios might be found in Ghana and **point** to additional information on p. 8 in the *Participant Manual.*

Then describe some agents that deactivate AI:

- Some soaps when used with water
- Many household detergents / cleaners
- Disinfectants and chemicals

PPT 12-13

6 **Present** a definition:
Decontamination = Cleaning + Disinfection

1. Clean: remove organic material, dirt and grease
2. Disinfect: using an appropriate disinfectant for the job

Show an example of truck decontamination and **ask** if farms in Ghana use similar disinfection practices for vehicles.

PPT 14

Explain that cleaning is a two-step process. **Describe** dry cleaning:

- Dry cleaning: Using a brush, a rag or tools such as blow dryers to remove dry organic material
- Dry cleaning should not be used for cleaning poultry houses which contained flocks infected with HPAI
- Dry cleaning may cause aerosolization of the virus and increase the risk of infection for humans

Make this point:
Virus is spread when virus-containing particles are stirred up into the air (aerosolization). An essential HPAI prevention tactic is to avoid actions that raise dust and to carefully wet the area down with disinfectant. The less chance the virus

has to get into the air, the less chance it will be breathed in by humans or other birds!

PPT 15

Point out that cleaning is improved with:
- Soaps
- Detergents
- Warm water
- Scrubbing
- Brushing
- Power washers

PPT 16

Next, **define** wet cleaning:
- Wet cleaning: Using soap and water, soak the area and scrub to remove remaining organic material as well as dirt and grease
- Wet cleaning reduces the risk of aerosolization of virus

PPT 17-18

Provide some detail on soaps and detergents:
- Destroy the fat in the virus membrane, killing the virus
- Membrane is double outer and inner white layer in diagram and the dark outer ring in electron micrograph

And then **give** an example of how to clean a poultry house:
- Remove manure down to bare concrete or wood
- If possible, use high-pressure spray to clean
- Disinfect

PPT 19-20

7 **Highlight** the eight important points about cleaning after depopulation (see detail on slides).

Ask for and **answer** any questions from participants on these points before moving to disinfection concepts.

PPT 21-22

8 **Present** some disinfection concepts:

Avian influenza virus is killed by:
- Sunlight
- Heat
- Drying
- Most disinfectants

Ask about the common disinfectants available in Ghana. **Discuss** the pros and cons of a few and show the list of common disinfectants on the slide.

Emphasize that disinfectants are chemicals and utmost care should be taken when using them. Many are skin, lung and eye irritants. Manufacturer's directions should be always followed. **Explain** also the factors that one would consider in choosing the correct disinfection.


PPT 23

Ask the participants how they would go about choosing the right disinfectant. The choice of disinfectant will depend on the following:

- Cost
- How efficiently it destroys viruses and other organisms
- Temperature
- Activity with organic matter
- Toxicity - how safe is it for both animals and humans?
- Contact time and residual activity
- Effect on fabric and metal equipment
- Solubility (acidity, alkalinity, pH)


PPT 24-30

Next, walk through the slides on disinfection concepts, highlighting the following.

- Disinfectants need to be mixed properly to be effective.
- Check label for instructions on safe use
- As a safety measure, never mix disinfectants from the different chemical groups
- Organic material such as excrement or dirt absorbs disinfectants and makes them less effective: clean before you disinfect
- Rinsing with water is not enough--WATER CAN SPREAD THE VIRUS.
- Both detergents and disinfectants must be used
- Bird feces is the biggest danger for spreading the avian influenza virus
- Disinfect cages when moving birds
- Transmission of the virus has been strongly linked to transporting live birds, contaminated dead birds or litter in vehicles
- Be sure to decontaminate all vehicles and equipment!

Take five minutes and allow the participants to consider the information provided in the slides on cleaning and disinfection.

Encourage them to ask questions for clarity and fill in any information gaps.

15 minutes LESSON 1: DECONTAMINATION KIT CONTENT LIST


PPT 31-32

9 Show a photo of the contents of the Decontamination Kit and ask participants to review the contents on p. 2-3 in their *Participant Manual.* Show and describe each content as you go through the list in the manual.

Answer any questions participants have about the contents.


PPT 33-34

10 Provide some detail on Virkon®: a buffered synergized acid peroxygen system containing a high percentage of surfactant. Describe Virkon® and the reasons it is used.


PPT 35-36

11 Instruct participants on how to prepare Virkon®. Share the following steps:

1. Use latex gloves when mixing and handling the powder and solution
2. Wear an N-95 respirator to avoid inhalation of fine dust when mixing

3. A mask and eye protection (goggles) should be used when working with these fine sprays and mists

Describe how to use Virkon®. **Ask** participants if they have any experience with it and invite them to share that with the group.

20 minutes LESSON 2: DECONTAMINATION DURING OUTBREAKS


PPT 37-40

12 **Describe** decontamination during outbreaks.

Share some of the safety issues in using Virkon ® during an outbreak.

Explain procedures for preparatory activities, cleaning, disinfecting and repopulation. **Begin** with preparatory activities:

- Soak bird carcasses with Virkon®
- Remove carcasses
- Remove all organic matter (litter and manure) from the buildings
  - Bury or compost on the premises, or
  - Double bag it and take to a designated landfill or incinerator

Then **describe** the procedures for cleaning:

- Use a detergent and pressure washer (if available) and thoroughly soak
  - Floors
  - Walls
  - Ceilings
  - Nest boxes
  - Feeders
  - Fans and other equipment
- Allow 10 minutes for detergent to penetrate and then scrub everything accessible with a scrub brush

Encourage participants to add to the conversation using their own experiences, especially those who were involved in the outbreaks in Ghana.


PPT 41-43

13 **Explain** the procedures for disinfecting:

- Disinfect fans and other electrical equipment, using a cloth soaked in Virkon®
- Spray all areas with Virkon, including bird housing, barnyards, and paths
- Allow Virkon ® to soak for at 24 hours before rinsing
- Disinfect village footpaths and roads
- Allow disinfectant to soak in for at least 30 minutes

Describe the photos on the slide that shows disinfection using lime (calcium hydroxide).

Then **show** a photo of the disinfection of a chicken house.

PPT 44-45

State that, after 7 days have passed, you should repeat the decontamination procedure (both cleaning and disinfecting). Then:

- Repopulation should not occur until the outbreak has been declared eradicated
- OIE recommends waiting 21 days after removal of last infected birds
- Sentinel birds may help to determine if disinfection is complete

PPT 46

14 **Point** participants to the Exercise: Decontamination Case Study on p. 9 in the *Participant Manual.*

Describe the photo: Decontamination of an empty broiler house after HPAI infected birds were removed.

Ask an introductory question before beginning the case: Is the sprayer adequate for decontaminating the size of house seen on the slide? **Provide** the answer: The sprayer is too small. It will not do an effective job of decontaminating the house

Show the instructions for the case study:

PPT 47

Turn to p. 9 in the *Participant Manual.*
Read the case study and study the photo.

With your table group, answer the questions:

1. How can you help the farmer do a better C&D (refer to the picture) with the funds the government has allocated?
2. What do you see wrong with this picture?
3. What disinfectant will you recommend?

Take five minutes for your discussion and choose a reporter.

Lead a whole group discussion on their answers, filling in information and providing suggestions along the way.

10 minutes REFLECTION

PPT 48

1 **Ask** participants to complete the Reflection Worksheet in their manual:

- What are two key decontamination procedures you will remember to apply in the event of an outbreak?
- What additional information do you need on this module?

Encourage several participants to share their reflections. **Ask** participants to share some of their needs for additional information on the module and be sure to **discuss** the ways in which you will be able to address their needs within the course (in other modules and activities, through resources and references, etc.).

CLOSE

POULTOPIA SIMULATION

MODULE PURPOSE

To provide an opportunity to apply technical and practical information on culling and disposal techniques as well as on outbreak response and site management.

MODULE OBJECTIVES

At the conclusion of this module, participants will be able to:

- Identify important outcomes and actions for the implementation of a simulated situation;
- Plan a response strategy;
- Develop recommendations on culling and disposal techniques;
- Practice intra-team collaboration.

TIME

3 hours (including break)

MATERIALS

- *Trainer Guide*
- *Participants Manual*
- Power Point slides
- Poultopia maps and charts
- Poultopia symbols

3 hours (including break)	**POULTOPIA SIMULATION**


PPT 1

1 **Welcome** participants.

5 minutes	**PURPOSE AND OBJECTIVES**


PPT 2-3

2 **Present** the purpose of the module:

To provide an opportunity to apply technical and practical information on culling and disposal techniques as well as on outbreak response and site management.

Present the specific objectives of the module:

At the conclusion of this module, participants will be able to:

- Identify important outcomes and actions for the implementation of a simulated situation;
- Plan a response strategy;
- Develop recommendations on culling and disposal techniques;
- Practice intra-team collaboration.

Explain that this activity is an opportunity to apply the concepts covered earlier on managing an outbreak response – restricting movement, containing the spread, managing the site and depopulating.

1 hour 40 minutes	**SMALL GROUP EXERCISE**


PPT 4

3

Explain that participants will be working in four small groups to complete the exercise. **Give** the instructions first and then divide them into their groups.

Allow the participants a few minutes to read through the River Mohr scenario on p.2 in the *Participant Manual.*

Point to the instructions on p. 3 in the *Participant Manual* and **provide** another few minutes to read them carefully. **Clarify** any questions that the group has on the instructions before you begin.


PPT 5-8

STEP 1

- Use colored markers to identify the red, orange, yellow, and green zones on your map.

- Use the symbols to show the following on your map:
  - Entrance/checkpoints, registration and administration points, and human health care point
  - Storage, food & beverage distribution, and sanitation points
  - Culling point(s) and carcass disposal points

STEP 2

- Use the symbols to show on the map which people will be involved at the various points of the outbreak response. Identify the number of people you will need for each function (write the number the symbol).
- Use the symbols to show on the **"Who's in Charge"** chart the people who will be involved at the national, regional and local levels. Identify the lead person at each level on your chart.

STEP 3

- Use the "Checklist for Assessing Culling and Disposal Options" (on the next pages) to assess the scenario and develop recommendations on the most appropriate culling and disposal techniques.
- Write the culling technique you have chosen on the **"Culling and Disposal"** chart. List the time it will take for you to complete the culling as well as the equipment you will need for culling, cleaning, disinfection, and disposal.

STEP 4

- Prepare a five-minute presentation of your recommendations.
- Select a reporter to share your recommendations with the group.

Assign the participants to four small groups. Each group will work on one of the maps on the wall assigned to their group.

4 **Explain** that the groups have about one and a half hours to complete the exercise. **Suggest** that each group selects a reporter to share their recommendations.

As the groups are working, the facilitators should circulate and observe, but not interfere with their work. **Move** to a break when the groups have finished the exercise and before you hear the report outs.

15 minutes BREAK

50 minutes SMALL GROUP REPORTS

PPT 9

5 **Facilitate** small group report outs.

Invite each group to come forward and provide their recommendations. Make sure they cover the following:

- Placement of red, orange, yellow, and green areas.
- Location of entrance/checkpoints, registration and administration, and human health care points
- Location of storage, food & beverage distribution, and sanitation points
- Location of culling point(s) and carcass disposal points

Ask the group to explain their reasons for these placements.

Then ask the group to show on their map the people who will be involved in the different zones and at the various stations and checkpoints and the number of people required, as well as the people on the "Who's Who" chart.

Invite the group to share the culling and disposal techniques they have chosen, as well as the culling point(s), carcass collection point(s), and cleaning & disinfection point(s). Ask them to share their chart that shows what they selected as the culling technique, disposal method, and equipment needed (and why).

Move through each group, allowing for a thorough report out.

6 Compare the similarities and differences in the approaches used and reinforce the points about the different zones (including the appropriate size for the red zone).

Discuss any differences between the culling techniques selected and provide your technical opinion on the most appropriate method given the specifics of the scenario. Be sure to have a suggested list of equipment for comparison. Fill in any missing items and explain the importance of each.

Thank the group for their hard work and creativity and be sure to fully process and reflect upon the exercise (below).

10 minutes REFLECTION


PPT 10-11

7 Facilitate a large group discussion on the simulation activities using the Reflection sheet in the *Participant Manual.* Ask the following questions:

- What was it like to conduct this level of planning?
- What was the hardest part for you to complete? Why?
- What are the two most important things you want to remember from this exercise?
- What do you want to learn more about? How will you do this?

CLOSE

CONSIDERATIONS IN OUTBREAK RECOVERY

MODULE PURPOSE

To discuss the range of issues, options, and challenges in the recovery stage of an H5N1 HPAI outbreak.

MODULE OBJECTIVES

At the conclusion of this module, participants will be able to:

- Describe basic recovery options and benefits;
- Understand the challenging issues related to vaccinating to prevent HPAI;
- Understand the components and challenges of compensation for culling poultry.

TIME

2 hours (including break)

MATERIALS

- *Trainer Guide*
- *Participant Manual*
- Power Point slides

2 hours (including break)	**CONSIDERATIONS IN OUTBREAK RECOVERY**


PPT 1

1 **Welcome** participants.

5 minutes	**MODULE PURPOSE AND OBJECTIVES**


PPT 2

2 **Present** the purpose of the module:

To discuss the range of issues, options, and challenges in the recovery stage of an H5N1 HPAI outbreak.

Present the objectives of the module:

At the conclusion of this module, participants will be able to:

- Describe basic recovery options and benefits;
- Understand the challenging issues related to vaccinating to prevent HPAI; and
- Understand the components and challenges of compensation for culling poultry.

25 minutes	**LESSON 1: RECOVERY**


PPT 3

3 **Make** the important point that response activities can be costly to farmers and communities. Successful recovery from an outbreak focuses on preserving farms and businesses, protecting valuable birds and infrastructure, and resuming business as quickly as possible.


PPT 4

Introduce the basic recovery measures common across sites and **describe** them briefly (**point** to p. 2 in the *Participant Manual):*

- Waiting
- Determine infection source
- Compensation
- Vaccination
- Restore Confidence


PPT 5

4 **Ask** participants to take 10 minutes to read through the recovery measures for specific scenarios on p. 2-6 in their *Participant Manual.* **Give** these instructions:

Consider how you might address recovery differently given specific scenarios:

- Smallholder Poultry
- Live-Bird Wet Markets

- Commercial Flocks
- Zoos and Aviary Collections
- Wildlife

Take ten minutes to read through the sections on p. 2-6 in your *Participant Manual.* Then we will discuss each.


PPT 6-11

5 After participants have had the chance to finish the reading, **ask** where clarification is needed as you briefly walk through each of the scenarios on the slides. For each scenario, **highlight** certain information (refer to slides).

- Smallholder Poultry
- Live-Bird Wet Markets
- Commercial Flocks
- Zoos and Aviary Collections
- Wildlife

Also, with each scenario, **ask** what additional measures they would recommend.


PPT 12-13

6 Vaccination is a key topic that has likely come up in previous modules. **Address** it in this module and **point** to p. 7-8 in the *Participant Manual.*

Ask the participants what they think about the use of vaccinations and bring in some real world examples from Ghana and other African countries. **Make** the point: Vaccination is an addition to biosecurity and NOT an alternative to proper biosecurity measures!

Highlight especially the response in poultry:
- Influenza vaccines do not create "sterilizing immunity"—a response so strong that birds will resist infection.
- Birds that are vaccinated are more resistant to infection than unvaccinated birds.
- Vaccinated birds do not show clinical signs of disease and shed much less virus than unvaccinated birds.

Get some reactions to this from the participants.

35 minutes LESSON 2: COMPENSATION


PPT 14-15

7 **Define** what we mean by compensation:
- A payment for losses incurred.

Ask: Why is compensation important?


PPT 16

After soliciting a responses, emphasize following points if missed:
- Compensation encourages disease reporting and compliance with culling regulations.

- Farmers are more likely to cooperate if they know they can recover the cost of culled birds.
- Compensation in poor countries is even more essential to prevent an adverse impact on people's livelihoods.


PPT 17-22

8 **State** that several questions regarding compensation need to be answered to arrive at a suitable strategy or plan. Participants can follow along in the *Participant Manual* (p. 9-10) as you **explore** each question. **Pose** the question first to get some responses, then **fill in** with key information:

1. How much compensation should be paid?
- The market value of the birds at the time of depopulation is usually the rate used for compensation but the determination of market value itself has to be done carefully.

- It is important to apply uniform rates of compensation in the whole country. Different prices can be paid for different species and categories of birds but care should be taken not too have too many categories that will make the plan difficult to administer.

2. How much compensation should be paid?
- The market value of the birds at the time of depopulation is usually the rate used for compensation but the determination of market value itself has to be done carefully.
- It is important to apply uniform rates of compensation in the whole country. Different prices can be paid for different species and categories of birds but care should be taken not too have too many categories that will make the plan difficult to administer.

3. How is compensation paid?
- Compensation can be paid by cash, checks or in-kind
- For large commercial operations that are financially more organized, money is given in the form of a written check.
- For small-scale farmers and poultry traders in live bird markets, cash payments are commonly provided.
- It may be possible to replace culled birds with healthy birds for restocking but this type of compensation is difficult to administer. Birds may have to be culled again if the disease situation is unstable.

4. What Needs to be Done to Ensure Proper Compensation?
- Proper record keeping or registration is the basis for the success of any compensation program.
- The veterinary services and its culling teams must keep accurate records of the age, type of birds killed, and the number of birds that died that died during the outbreak together with the owner's name and location.

5. Who makes the payments?
- The government should set up a simple system.
- Money can be paid out at religious institutions, government offices and the

homes of the farmers.
- Non-governmental organizations can help give out payments.

6. Who funds the payments?
- Taxes can be collected from commercial farmers
- Some commercial farmers can pay for private insurance
- Countries may have to seek assistance from regional groupings

Share with participants the compensation rates for Nigeria. **Ask** how these rates would compare in Ghana.


PPT 23-24

9 Next, **present** some ways to fund compensation programs:

- National funding
- Cost-sharing approach
- Industry Funding
- International Organizations' Funding

Ask which of these methods might work best in Ghana. Before moving on to break and the task, **summarize** the discussion on compensation and **get** some real examples of the complexities of having such a program in place in Ghana.

15 minutes BREAK

30 minutes DESIGNING COMPONENTS OF A COMPENSATION PROGRAM


PPT 25

10 **Ask** participants to turn to the Exercise on p. 14 in their *Participant Manual* – Designing Components of a Compensation Program. **Explain** that, for this task, they will be assigned a new group. **Give** the directions first and then assign the group:

Read the scenario on p. 14. With your group, answer the four questions:

1. How would you assign the value of compensation?
2. What special considerations would you make to determine compensation rates? Would the rates vary between sectors?
3. What procedures would you establish to implement the payment of compensation?
4. How do you recommend the program should be funded?

Be prepared to share your recommendations with the larger group.

You have 20 minutes to complete the exercise.

When the groups have finished, ask each to share some of their recommendations

in a plenary discussion.

Discuss overall reactions, ideas and additional questions.

10 minutes REFLECTION

11 Ask participants to take a few minutes to complete the Reflection Worksheet in their manual:

- What is one point you want to remember from this module on recovery?
- What is one new piece of information you have learned about compensation?
- What additional information do you need on this module?

Encourage several participants to share their reflections. Ask a few people to contribute one of the three key points from the module that they consider important and would like to remember.

Ask participants to share some of their needs for additional information on the module and be sure to discuss the ways in which you will be able to address their needs within the course (in other modules and activities, through resources and references, etc.).

CLOSE

WET LAB

MODULE PURPOSE

The purpose of this module is to present principles for veterinary, public health, and other animal control workers to prevent exposure to HPAI, to identify suspect human cases of HPAI, and to provide guidelines for managing individuals exposed to HPAI. This module also describes some of the practical implications of personal protection when working in the field and proposes a system of risk management on infected farm or village sites to reduce the exposure of workers to the HPAI virus.

MODULE OBJECTIVES

At the conclusion of this module, participants will be able to:

- Conduct laboratory exercises;
- Practice laboratory skills and safety;
- Correctly labeling tubes and tracking forms;
- Perform cloacal and oral cavity swabbing technique;
- Perform a FluDETECT Test;
- Bleed a chicken;
- Utilize humane euthanasia techniques;
- Perform necropsy of birds;
- Don and doffing a PPE and perform decontamination procedures.

TIME

4 hours (including break)

MATERIALS

- *Trainer Guide*
- *Wet Lab Manual*

For each participant:
- 1 PPE kit and instructions
- 2 3cc syringes and 23 gauge 1" needle for bleeding
- 1 3cc syringe and 16 gauge 1" needle to practice vaccination
- 1 tube rack
- 2 swabs
- 1 knife or scissors and a pair of forceps
- Markers for labeling blood tubes

For each table:

- Flu Detect rapid antigen test supplies for one test
- 4 Viral Transport media
- Newspaper to cover tables
- Duct or regular tape for taping newspapers and/or gloves to PPE
- 1 plastic bucket
- 1 bottle of liquid soap

Other materials

- Minimum 20 chickens (laying hens cheaper than broilers)
- Crates or boxes to transport and house chickens to Necropsy room
- 2 Sharps disposal containers (can use large gallon plastic container)
- 5 large rubbish bins with strong plastic liners
- Ketchup or other colored material (e.g. palm oil) for testing PPE removal
- Soap for hand washing (can use liquid soap above)
- Paper towels or kitchen dish towels
- Colored Rope or tape (red, green, yellow) to use for site management practice (whole roll if available)

Note on set up:
The wet lab module requires a necropsy room or equivalent big enough to fit five large, metal tables (preferable) to accommodate four participants per table. The lab should have a good water source for washing.

PREPARATION

Trainers should set up the lab the evening before so that participants can arrive, don their PPEs, and move right into the activities.

4 hours (including break) **WET LAB**

1 Welcome participants.

Note: This is a practical session at a veterinary lab. Distribute the *Wet Lab Manual* ahead of the scheduled exercise and encourage participants to read through it. The manual provides all of the instruction and information the participants will need to complete the lab exercises. There are no Power Point slides for this module.

Trainers should set up the green, yellow and red zones and the lab stations the night before. One or two trainers should be at the lab 1-2 hours before the arrival of participants to make certain that the lab stations are set up with the proper equipment.

PURPOSE AND OBJECTIVES

2 Present the purpose of the module:

The purpose of this module is to present principles for veterinary, public health, and other animal control workers to prevent exposure to HPAI, to identify suspect human cases of HPAI, and to provide guidelines for managing individuals exposed to HPAI. This module also describes some of the practical implications of personal protection when working in the field and proposes a system of risk management on infected farm or village sites to reduce the exposure of workers to the HPAI virus.

Present the objectives of the module:

At the conclusion of this module, participants will be able to:

- Conduct laboratory exercises;
- Practice laboratory skills and safety;
- Correctly labeling tubes and tracking forms;
- Perform cloacal and oral cavity swabbing technique;
- Perform a FluDETECT Test;
- Bleed a chicken;
- Utilize humane euthanasia techniques;
- Perform necropsy of birds;
- Don and doffing a PPE and perform decontamination procedures.

WET LAB

3 Conduct the laboratory exercises. List the activities that you will do with the participants and post them at the lab so they can follow along:

1. Donning PPE
2. Lab skills and safety
3. Chicken handling
4. Cloacal and oral cavity swabbing techniques
5. Performing FluDETECT kit
6. Vaccinating a chicken
7. Bleeding a chicken
8. Collecting blood
9. Humane Euthanasia of individual birds
10. Necropsy
11. Doffing PPE

Explain each step thoroughly as you go along, demonstrating proper procedures and safety tips. Encourage participants to ask questions of the trainers and assist each other through the steps.

4 At the end of the lab exercises, lead a brief discussion with participants and summarize all they have learned and practiced.

CLOSE

FIELD VISIT OBSERVING BIOSECURITY

MODULE PURPOSE

To provide an opportunity to apply technical knowledge on biosecurity and surveillance planning to a real world farm setting.

MODULE OBJECTIVES

At the conclusion of this module, participants will be able to:

- Complete a data collection and outbreak investigation form;
- Identify biosecurity infractions and recommend solutions for dealing with the infractions.

TIME

1 day (including debriefing)

MATERIALS

- *Trainer Guide*
- *Participant Manual*
- Commercial Farm Data Collection Sheet
- Commercial Farm Risk Assessment Checklist
- Commercial Hatchery Risk Assessment Checklist
- Feed Mill Risk Assessment Checklist

1 day	FIELD VISIT OBSERVING BIOSECURITY

PPT 1

1 **Welcome** participants and brief them on the plans for the field visit.

Note: Do this the day before the field visit.

The field visit will take about half a day. Activities will vary according to what is available; consider selecting a location that has a hatchery and feed mill in addition to a poultry farm.

5 minutes	PURPOSE AND OBJECTIVES

PPT 2

2 **Review** the purpose of the module:

To provide an opportunity to apply technical knowledge on biosecurity and surveillance planning to a real world farm setting.

Review the objectives of the module:

At the conclusion of this module, participants will be able to:

- Complete a data collection and outbreak investigation form;
- Identify biosecurity infractions.

4-5 hours	FIELD VISIT

PPT 3

3 **Explain** the plans for the field visit.

Participants will be divided into five teams so that they can work together to complete the observation sheets and checklists (pre-assign the teams).

PPT 4-6

4 **Describe** the team task for the field visit:

Team Task: Preparation

- With your team, review the field visit forms and checklists that you will fill out. Plan how you will organize yourself in your teams (how you'll use your time, share assignments to complete the forms, etc.).
- Identify what you want to pay attention to and take note of at the various sites.
- Identify what questions you want to ask the owner/manager and workers.

Team Task: Onsite During the Field Visit
- Observe and record biosecurity risks and strengths
- Gather additional information about current practices by interviewing owners/managers and workers
- Complete the forms and checklists

Team Task: Debriefing the Field Visit
- Prioritize the biosecurity risks
- Develop recommendations to address the top risks
- Plan how you would communicate your findings and recommendations to the owners/managers and workers

- Be prepared to share your findings and recommendations with the group

Be sure to **clarify** the instructions and ensure that the group understands the plans!


PPT 7-8

5 **Share** information on the names and locations of the field visit sites, as well as logistics for the trip. **Answer** any questions the participants have.

6 **Conduct** the field visit. Facilitators should divide themselves among the groups and be available as a resource to participants if they need assistance in completing the activity.

Remind the participants that their role is make observations and ask questions and not to criticize or judge the owners/managers of the sites.

1 hour, 50 minutes	**DEBRIEFING**


PPT 9-10

7 **Lead** the participants through a thorough debriefing of the visits. **Focus** on the participants' application of technical knowledge on biosecurity and surveillance planning to real world settings.

Draw out the participants' observations through this debriefing exercise:

With your team, discuss and record on flipchart paper:
- Some general observations and findings
- The top 3 biosecurity risks you observed
- Recommendations to address the 3 top risks
- Your communications approach for sharing your recommendations with the owners/managers and workers

- You have 1 hour to prepare. Each team will have 10 minutes to make a brief presentation on your findings.

Allow the groups to work together to plan for their presentations.


PPT 11

8 **Encourage** the teams to listen to each other's presentations and **give** these guidelines:

As you listen to each group's presentation, think about these questions:
- What did you like about their recommendations and/or approach?
- What advice would you give them about their recommendations and/or approach?

Lead the groups through their report outs and **facilitate** a discussion on their findings.


PPT 12

9 **Summarize** the field visit findings by asking the following questions:

- What are you noticing about the biggest biosecurity risks in the field?
- Does what you're hearing confirm what you've observed in the past or does it surprise you?
- What are you learning about what it will take to address these risks?

10 minutes REFLECTION


PPT 13

10 **Ask** participants to complete the Reflection Worksheet in their manual:

- What new ideas are you taking away about communicating and working with different groups on biosecurity?
- What additional information do you need on this module?

Encourage several participants to share their reflections.

Ask participants to share some of their needs for additional information on the module and be sure to **discuss** the ways in which you will be able to address their needs within the course.

CLOSE

METHODOLOGY FOR TRAINING ADULTS

MODULE PURPOSE

To introduce the Experiential Learning Cycle and effective tools for delivering training to adult learners.

MODULE OBJECTIVES

At the conclusion of this module, participants will be able to:

- Describe the elements and value of the Experiential Learning Cycle and how it applies to training adult learners;
- Plan and deliver organized presentations which are crafted to a specific audience;
- Use a core set of facilitation skills to conduct training sessions and present the key ideas and concepts from the Stop AI Biosecurity, Surveillance, and Outbreak Response Course.

TIME

4 hours (with break)

MATERIALS

- *Trainer Guide*
- *Participant Manual*

4 hours (with break)	**METHODOLOGY FOR TRAINING ADULTS**


PPT 1

1 **Welcome** participants.

5 minutes	**PURPOSE AND OBJECTIVES**


PPT 2-3

2 **Begin this session** by reinforcing that participants now have a good understanding of the technical content covered in the course. The next step is to give them some tools and techniques that will help them be more effective when delivering the course content to various audiences.

Present the purpose of the module:

To introduce the Experiential Learning Cycle and effective tools for delivering training to adult learners.

Present the specific objectives of the module:

At the conclusion of this module, participants will be able to:

- Describe the elements and value of the Experiential Learning Cycle and how it applies to training adult learners;
- Plan and deliver organized presentations which are crafted to a specific audience;
- Use a core set of facilitation skills to conduct training sessions and present the key ideas and concepts from the Stop AI Biosecurity, Surveillance, and Outbreak Response Course.

Explain that the more participants understand the methodology used in designing the modules, the easier it will be for them to utilize the *Trainer Guide* and to deliver the course in the way it is designed.

45 minutes	**THE ADULT LEARNER**


PPT 4

3 **Begin** by explaining the need to focus on the people for whom we are creating these learning experiences. **Stress** the importance of understanding the adult learner and delivering training that is appropriate for them; this is essential to

changing behavior. Using methodologies that are geared toward a younger and more inexperienced learner, like teaching students in a classroom, tends to not work with adults.

Ask participants to turn to **p. 2 in** the *Participant Manual* and answer the following questions to solicit more information on the typical adult learner they expect to train. **Allow** them five minutes to write notes.

Describe the typical adult learner you will be working with. How will he/she best learn?

What would characterize an effective learning event for these adult learners?

4 When participants have finished, **give** the following task:

At your table groups:

- Discuss your answers with each other.
- Share some examples of your description of a typical adult learner and the kind of learning event best suited to these learners.
- Put your notes on flipchart paper and be prepared to share with the larger group.

Take 20 minutes for your discussion.

5 **Invite** the groups to post their flipcharts on the wall and take a few minutes to do a gallery walk to review each other's ideas.

Lead a discussion of the different characteristics and then **summarize** what they have offered. **Ask, "**what are some similarities between the lists?

Take this time to add any characteristics they may have missed. Often they miss the following:

- Adult learners are most focused on solving real work problems that make a difference to them.
- Adult learners come with significant life experiences and want to be respected for their experience.
- Adult learners can skip many basics and theoretical points; they like to go right into the practical application of what they are learning.
- Adult learners have many demands and commitments, which often get in their way of learning; they have responsibilities outside of the workshop.
- Adult learners like to be engaged and have fun while learning.

Point out the "Fundamental Assumptions About Adult Learners" on p. 3 in the *Participant Manual.*

45 minutes EFFECTIVE TRAINING FOR ADULT LEARNERS


PPT 9-11

6 **Refer** to the participants' flipcharts again. Ask, "What does a trainer/facilitator do to create an effective learning environment for our participants?" **Compare** the different groups' descriptions.

Point out the list of characteristics of "Effective Training for Adult Learners" on p. 4 in the *Participant Manual:*

- Makes explicit links between real world and content.
- Is participatory – provides opportunities to share or contribute ideas.
- Includes practice in the use of skills or frameworks.
- Integrates and makes links between sessions/topics.
- Uses a mix of methodologies.
- Matches methods to content in ways appropriate for the learning you are trying to achieve.
- Challenges participants to be analytical.
- Helps participants identify the relevance/importance/applicability to their work.
- Balances individual and group context for learning.
- Supports theoretical frameworks with concrete examples.
- Provides materials/resources that eliminate obstacles to learning.

Reinforce the similarities between what participants identified and the list in the manual. **Note** any points they missed and **ask** if there is anything they found surprising.


PPT 12-13

7 **Present** "Dale's Cone of Experience" and "How People Learn." **Make sure** participants see the linkage between how people learn and the methodologies used in training.


PPT 14-16

8 **Reinforce** the need to understand our audiences. **Ask,** "Why is it important for us to understand our audience before a course begins?" **Introduce** briefly the Training Needs Assessment and suggest that:

- Complex assessments are usually done before a series of courses are designed
- When designing a single course, a simple assessment of some of the participants will help us understand what their needs might be

Suggest some sample methods for conducting a training needs assessment:

- Surveys
- Observation
- Interviews
- Focus groups
- Document reviews (previous course evaluations, etc.)

Generate a list of the different audiences with whom the participants will be working in training events and chart them. **Go around** to each table group until you have a full list.

Assign one of the audiences to each table group and ask them to discuss the methods they would use to assess the audience's training needs. **Give** them 5 minutes for this discussion.

Lead a large group discussion to compare and discuss the different methods. **Ask,** "What will you do to assess the training needs of your audiences? How will this help you in your training delivery and facilitation?"

9 **Summarize** the discussion on adult learners and **ask** participants to share some key points they learned. Then **invite** some participants to share ways that they will adapt their approach to training specific audiences based on the discussions.

15 minutes BREAK

1 ½ hours THE EXPERIENTIAL LEARNING CYCLE

PPT 17

10 **Introduce** this session by explaining that experiential learning is just what it sounds like – learning from experience. It reinforces how adults learn best – by doing and saying.

Remind participants that they've established that adult learners prefer to learn by doing, by sharing experiences, and by seeing the application of what they're learning to their real work environments.

Explain that the Experiential Learning Cycle is a process that helps participants to get the greatest benefit from their experiences. **Remind** them that every module in the STOP course uses this design process.

PPT 18-20

11 **Present** the graphic representation of the ELC and explain the elements in more detail. **Cover** the following in a brief lecture:

The ELC comprises 4 steps:

- First, you have people ***do something*** – complete an exercise, solve a problem, etc. (experience)
- Then you encourage them to ***talk about what they did*** and to pull out any lessons they learned (processing)

- Next you ***explore whether the lessons learned are useful*** to other situations (generalizing)
- Finally you ask them to think about ***how they will apply*** what they learned when they go back to their work places (application)

Review the model again and **explain that** the introduction of theory can occur either before the experience or after the generalization.

Explain that following these four steps, can increase the likelihood that participants will learn, will remember, and will apply what they learned when they leave the classroom.

12 **Prompt** discussion of this method by **asking** how it compares to classes participants took in school or other professional experiences. You might look for answers such as "typical classroom education is more telling or talking to the students rather than engaging them in an activity." If participants have experienced similar training methods, **ask them** to share how they felt as a learner during those training experiences.

Explain that this model is critical to the training approach we will be using to deliver the course content. **Before leaving** the model, **allow** the participants ten minutes to read the article and **ask** for and **answer** any questions they have.


PPT 21

13 **Assign** each table groups one of the modules from the *Trainer Guide*.

Ask them to read through the Trainer Guide and **identify** the following:

- Experience: examples where participants are asked to do something (case studies, small group tasks to solve problems, etc.)
- Processing, generalizing, application: examples of how the trainer guide handles the questioning to help participants process the experience, drawing out lessons learned, generalize principles and apply them to real world situations (i.e., reflections, small group discussion, application planning).

Give them 20-25 minutes to review the *Trainer Guide* together and consider the questions. They should choose one person to report out. When they are finished, **lead** a discussion with the whole group on their findings.

Elicit examples of experiential activities and **invite** participants' views on the effectiveness of the activities.


PPT 22

Ask participants one or more of the following:

- How does processing differ from generalizing? (Note that processing gets participants to talk about what happened and how they felt about the experience. Generalizing gets them to extract lessons learned.)

- What specific questions can you use to start the processing?
- Which step in the process is most likely to be skipped? What is the implication of skipping it?

30 minutes FACILITATION SKILLS


PPT 23

14 **Introduce** facilitation skills by asking:

- What are some of the facilitation skills we need to have in order to create an effective adult learning experience?

15 **Tell** participants to think back to the lists they generated and discuss this question with their table groups (5 minutes).

Take a few answers from the groups and **link** them to facilitation skills. Make the point that trainers need to stimulate conversation and engagement, and draw out the experiences and knowledge of the participants. The facilitation skills are effective at generating and controlling participation.

One of the things new trainers fear is that they will get participants talking and then will lose control of the discussion. These skills help them focus the discussion and create a wonderful participatory learning experience. You can make the following points:


PPT 24

- Facilitation skills are core skills for all effective trainers.
- They are the glue that holds the training sessions together and keeps the learner engaged.
- These skills appear simple, but to be effective, they take lots of practice and an understanding of what you are trying to accomplish with the use of each skill.

Introduce the tips on "Making Presentations More Interactive". **Refer** to the list of ideas (p. 11 in the *Participant Manual)* on how instructors can increase learning by making their presentations more interactive and answer any questions the participants may have. **Point** to the tips:


PPT 25

- Stop to elicit input
- Summarize frequently
- Use concrete examples
- Employ humor
- Ask questions


PPT 26-29

16 **Look** more closely at **point** #2:

2. *Pose questions to the group. Facilitate the group to answer the question rather than answering it yourself.*

Discuss the importance of asking questions. Make some of the following points:

The trainer asks open-ended, clarifying and, occasionally, closed questions to expand both the listener's and the speaker's understanding of the situation. Open-ended questions usually begin with "what", "how", "when", "where" and are posed in a way in which the speaker cannot answer "yes" or "no", but must expand the base of information. Clarifying questions are posed in order for the trainer to become more clear about the situation and often begin with "which", "why", "do you mean to say...", etc. Closed questions can be answered with a "yes" or "no" and are asked to get specific information.

Review the processing, generalizing and application questions and show some examples. Encourage participants to use these lists as they plan to deliver course content themselves.

17 Give participants 10 minutes to reflect quietly and think about the facilitation skills they would like to work on in the practice session. Generate a list from their responses and point to the ways that the skills will be addressed in the TOT.

Preview the next module and let participants know that we will be covering facilitation skills in greater depth.

10 minutes REFLECTION

18 Ask participants to complete the Reflection Worksheet in their manual:

- What are three points you want to remember from this module that are important to the training you will be conducting on AI?
- What additional information do you need on this module?

Encourage several participants to share their reflections.

Ask participants to share some of their needs for additional information on the module and be sure to discuss the ways in which you will be able to address their needs within the course (in other modules and activities, through resources and references, etc.).

CLOSE

FACILITATION SKILLS PRACTICE

MODULE PURPOSE

To provide an opportunity to apply technical and practical information and practice facilitation skills to deliver training on biosecurity, surveillance and outbreak response.

MODULE OBJECTIVES

At the conclusion of this module, participants will be able to:

- Use facilitation skills to:
    - Encourage participation when delivering interactive presentations/lecturettes;
    - Generate interaction among participants;
    - Guide learners through an experiential module;
- Practice the training techniques incorporated into the Stop AI Biosecurity, Surveillance, and Outbreak Response TOT Trainers Guide.

TIME

3 hours (including break)

MATERIALS

- *Trainer Guide*
- *Participant Manual*
- Power Point slides

3 hours (including break) FACILITATION SKILLS PRACTICE


PPT 1

1 **Welcome** participants.

5 minutes PURPOSE AND OBJECTIVES


PPT 2-3

2 **Present** the purpose of the module:

To provide an opportunity to apply technical and practical information and practice facilitation skills to deliver training on biosecurity, surveillance and outbreak response.

Present the specific objectives of the module:

At the conclusion of this module, participants will be able to:

- Use facilitation skills to
  - Encourage participation when delivering interactive presentations/lecturettes;
  - Generate interaction among participants;
  - Guide learners through an experiential module;
- Practice the training techniques incorporated into the Stop AI Biosecurity, Surveillance, and Outbreak Response TOT Trainers Guide.

Explain that the more participants understand the methodology used in designing the modules, the easier it will be for them to utilize the *Trainer's Guide* and to deliver the course in the way it is designed.

15 minutes EFFECTIVE FACILITATION SKILLS

3 **Review** the point you made in the previous module about facilitation skills and their effectiveness at generating and controlling participation. **Ask** participants if they have any questions or ideas they want to share with the group on tip for effective facilitation.


PPT 4-7

4 **Refer to** the *Participant's Manual* (beginning on p. 4) to cover information on facilitation skills, focusing on question asking, paraphrasing, summarizing and encouraging. Use some of the follow-up questions to stimulate interactive discussion:

Question Asking – The trainer asks open-ended, clarifying and, occasionally, closed questions to expand both the listener's and the speaker's understanding of the situation.

Review the list of suggested open-ended questions in the *Participant Manual.*

Paraphrasing – Using her/his own words, the trainer reflects what the speaker is saying and how the speaker is feeling.

Ask participants to share what they think makes this difficult or makes people reluctant to paraphrase. Typically, responses are that people are "afraid of sounding silly repeating what the person just said," "feels artificial," or they "don't want to interrupt."

Reinforce that the important thing is to be genuine when using this skill and not to overdo it. They don't want to "parrot" back what the person said, they want to "paraphrase," which communicates understanding and that they are listening.

Summarizing – The trainer, when appropriate during the course of the conversation, identifies and verbalizes the key elements or details of the conversation up to that point.

Explain that the purpose of summarizing is to end one phase of the conversation and either terminate or move on to the next phase. Summarizing is valuable in controlling the pace and amount of time spent listening and conversing.

Encouraging – Through facial expressions, body language, and comments, the trainer encourages the speaker to say more about the situation.

Ask participants to identify some of the common encouraging behaviors people use in conversations. Ask for examples of behaviors that are appropriate in Ghana.


PPT 8

5 Introduce other helpful techniques (both verbal and non-verbal):

- Nod your head
- Maintain eye contact
- Keep an open body position
- Make encouraging statements
- Repeat the last word or two of the speaker
- Repeat a sentence

40 minutes FACILITATION SKILLS PRACTICE - PREPARATION

6 In the practice rounds, participants will work in groups of four, giving everyone an opportunity to practice facilitation skills.

Divide participants into groups of four. Present a list of topics that participants may choose from.


PPT 9

Suggested topics include:

- The procedure for properly donning a PPE
- Elements of a good surveillance system
- Depopulation and disposal options in Ghana
- Lessons learned from the outbreak response in Ghana
- Effective biosecurity measures for a smallholder farm


PPT 10-11

7 Carefully **explain** how the practice rounds will work. This can get chaotic if participants don't fully understand the mechanics of the practice. **Give** the individual task first then when they are done, **cover** the remaining points in your instructions. **Refer** to the *Participant Manual.* **Tell** the participants:

- You will be facilitating a discussion with a small group of no more than four people on a topic you will choose. You will have 10 minutes to facilitate this discussion, and 5 minutes to receive feedback from the participants.

- To prepare for this practice, first choose a topic from among the options provided to you. Using the facilitation skills guidelines in the previous module, think about and prepare for your practice facilitation. You have 20 minutes to prepare.

- Organize your thoughts on the topic and think of some open-ended questions you might use to stimulate conversation.

Consider the questions in your *Participant Manual:*

- What are the key points you are going to present?
- What questions will you ask to elicit participation and discussion?
- How will you use the other facilitation skills during your practice?


PPT 12

8 When participants have finished preparing, **give** instructions on how the practice will work:

- In the practice rounds:
  - Each person will have 10 minutes of practice facilitation on the group topic. They will have to keep the discussion moving by using their facilitation skills.
  - You will keep time so they can focus on keeping the discussion going until you tell them to stop.

- When you stop the discussion, each person will receive 5 minutes of feedback from the group on the following:
  - The skills they used
  - The impact the use of the skill had on the discussion
  - One example of something that could have been done differently to make the discussion more interactive.

Before the participants start practicing, double check to **make sure** they understand the instructions. **Ask** someone to summarize what he or she understands about the practice rounds.


PPT 13

After the rounds, the presenters should then reflect on the feedback they have received and record some of the feedback in the *Participant Manual;* "What I am Learning about Facilitation Skills and Interactive Presentations:"

- What you are doing well:
- Areas for improvement:
- What are you discovering about using facilitation skills to elicit participation?
- What skill areas do you want to pay particular attention to as you both prepare for and practice your training session?

30 minutes FACILITATION SKILLS PRACTICE: ROUNDS 1 AND 2

9 Start the first and second round of practice (15 minutes).

Stop participants when time is up and ask for examples of facilitation skills used really well and for examples of things that could have been done better.

15 minutes BREAK

45 minutes FACILITATION SKILLS PRACTICE: ROUNDS 3 AND 4

10 Set up the remaining rounds of practice in a similar fashion. Be sure to keep time and move them along, switching the trainer role among participants. The energy gets high during this activity and you'll need to stay on top of it so participants will get the most out of the practice. While they are practicing, try to observe some of the rounds and make some notes of things you see being done well and some common mistakes or missed opportunities. You can share these in the debriefing.


PPT 14

11 Encourage the participants to review the comments they made in their manuals on "What I am Learning about Facilitation Skills and Interactive Presentations:"

Debrief the practice by asking the following:

- How did it feel to practice?
- What was easier than they expected?
- Which skills were used the most? Examples?
- What was more difficult and why?
- What impact did paraphrasing seem to have on the discussion?
- What did they discover about the role of listening in facilitation?
- What will they want to do more of in their own training sessions?

Chart some of the participants' comments, especially those areas in which people had the most trouble. Provide additional instruction and coaching on these areas. Build the confidence of the participants and ensure them that you will be available

to help them get ready to facilitate courses on their own.

12 **Remind** participants that the purpose of this session was to give them some ideas about how to deliver the training in a manner most suitable for the adult learners they will encounter in the field. **Explain** that in the next session they will have a chance to practice using some of these techniques in delivering the modules to one another. **Move** to a break before introducing the practice training.

20 minutes INTRODUCTION TO PRACTICE TRAINING

13 Practice training will allow participants to combine the technical content with the facilitation skills and practice delivering the course materials.

Before giving instructions on the practice training, **point** to the additional information in the *Participant Manual* (Facilitating Plenary Discussions, Making Small Groups Work Effectively and Giving Tasks).


PPT 15-22

14 **Review** the Additional Tips and Techniques for Trainers in the *Participant Manual*:

- Preparation: Proper Prior Planning Prevents Poor Performance
- Creating the Positive Learning Environment
- Getting Started
- Delivery
- Non-verbal Techniques for Dealing with Distractions
- Transitions


PPT 23

15 **Present** the information on co-training/facilitation and team-teaching. Allow participants five minutes to review the material, especially the "Co-Trainer's Guide." **Encourage** the participants to use this guide as they plan with their partner for the practice training.


PPT 24

16 **Point** out the two checklists, "Focusing on the Audience" and "Presentation Planning." These lists will also help the participants with their preparations. Be sure to **clarify** any questions they have before moving to the instructions for practice training.


PPT 25-27

17 **Explain** how the practice will work. Also **refer** participants to the guidance in the *Participant's Manual.* **Cover** the following in your overview:

How the practice will be organized:

- You will be working with a co-trainer. Together, you will present a 45-minute portion of one of the training modules from this course.
- You and your co-trainer may choose any part of a training module that you would like. Be sure that the sections you select are consecutive and that they will give you the opportunity to present material, facilitate a task, and do some processing questions.
- You will have the whole morning tomorrow for preparation time. Each team

will be assigned a presentation time.

- Each training team will receive 15 minutes of feedback from the trainers and/or your colleagues after your presentation.


PPT 28-29

Instructions:

1. Find a partner to work with and agree on a module from the STOP AI Biosecurity, Surveillance and Outbreak Response Trainer Guide that you would like to present.

2. Review the **design** of your module. Make sure you are both clear on the points the module is making.

3. Choose segments from the module that total a 45-minute session. Highlight **key points** from the presentation, and choose **one small group activity** to practice.

4. **Divide** the work between the two trainers to prepare for delivery.

5. Make sure you prepare the **supporting materials** that you will need (flipcharts, slides, handouts, etc.).


PPT 30

18 **Explain** there will be 5 rounds of practice (with two trainers and 20 participants, you can run two concurrent practice rounds with each trainer conducting 5 rounds of practice).

Give participants 10 minutes to pair off for delivering the practice training session; they need to agree on a module they want to present. Once they have selected a partner, use balloting to assign time slots for the practice.

They will have the whole morning of the next day for preparations.

Be sure you have **flipchart paper** and **markers** for them to use in preparations. Some may want to use the PowerPoint slides in the modules so you'll also want to have a flash drive so they can transfer their slides to the computer with the LCD projector. It is important for you to be visible and available while participants are preparing; they will benefit from your suggestions and may want some assistance.

10 minutes REFLECTION


PPT 31

19 **Ask** participants to complete the Reflection Worksheet in their manual:

- What are **three** points you want to remember about facilitation skills that are important to the training you will be conducting on AI?
- What additional information do you need on this module?

Encourage several participants to share their reflections.

CLOSE

PRACTICE TRAINING SCHEDULE

THURSDAY		GROUP A	GROUP B
Round One	2:00 – 3:00	Team 1	Team 2
Round Two	3:00 – 4:00	Team 3	Team 4
	4:00 – 4:15	BREAK	
Round Three	4:15 – 5:15	Team 5	Team 6
	5:15 – 5:30	Debrief	
FRIDAY		GROUP A	GROUP B
	9:00 – 9:15	Prepare for the Day	
Round Four	9:15 – 10:15	Team 7	Team 8
	10:15 – 10:30	BREAK	
Round Five	10:30 -11:30	Team 9	Team 10

PRACTICE TRAINING and APPLICATION PLANNING

3 ½ hours (including break) PRACTICE TRAINING


PPT 1-2

1 Note: if you are conducting concurrent sessions, you will need separate rooms with projectors and flipchart paper. One lead facilitator should be with each group to observe, keep time, and offer feedback.

Welcome everyone and **remind** them of the schedule for practice rounds:

THURSDAY		GROUP A	GROUP B
Round One	2:00 – 3:00	Team 1	Team 2
Round Two	3:00 – 4:00	Team 3	Team 4
	4:00 – 4:15	BREAK	
Round Three	4:15 – 5:15	Team 5	Team 6
	5:15 – 5:30	Debrief	
FRIDAY		GROUP A	GROUP B
	9:00 – 9:15	Prepare for the Day	
Round Four	9:15 – 10:15	Team 7	Team 8
	10:15 – 10:30	BREAK	
Round Five	10:30 -11:30	Team 9	Team 10

GIVING FEEDBACK

2 Note: you may choose to do this before the lunch break.

Begin by introducing the subject of feedback, explaining that an important part of the practice is receiving feedback on how well they used the facilitation skills and how clear they were about the technical content.

Ask participants how familiar they are with giving and receiving feedback. As part of the discussion, **ask them to share:** "What kind of feedback would you like to receive from your colleagues?"

Take some comments and **chart** them. Then **ask**: "What do you want to pay special attention to when giving feedback to others?"

3 **Summarize** the discussion and add:

- Support general statements with specific examples
- Be descriptive rather than judgmental

- Be direct and to the point
- Direct feedback toward behavior the receiver can control or change.

It is common for participants to gloss over any feedback they could give and just offer praise to their colleagues. Encourage them to think of this as an investment they are making in the skills of their colleagues by helping them to see what they already do really well and want to continue, and what they could do to improve their effectiveness as trainers.

4 **Explain** that, in each round when you are giving feedback, start with things that you saw the participants do really well. Also ask them to share the positive feedback. Then offer a few suggestions of what they could do differently in the future. Be selective and don't criticize too much. The intent is to help them learn a few skills well, so pick up on 1 or 2 things to suggest they change. Ask their colleagues to offer a few things; again don't let the "constructive" feedback overwhelm the co-facilitators. It is often helpful to start by asking the participants what they think went well.

When you are done with the feedback on things to improve, ask them to summarize what they did well and 1 or 2 things they'd like to remember to do differently in the future. Suggest that they write these down and review the skills or material relevant to these ideas.

2 hours **PRACTICE TRAINING ROUNDS ONE AND TWO**

5 **Round One**:

Training (45 minutes)
Feedback (15 minutes)

Round Two:

Training (45 minutes)
Feedback (15 minutes)

15 minutes **BREAK**

1 hour **PRACTICE TRAINING ROUND THREE**

6 **Round Three**:

Training (45 minutes)
Feedback (15 minutes)

15 minutes **DEBRIEF**

PPT 3

7 **Pause** before the end of the day to lead a short debrief on the practice rounds thus far. Ask those groups who have delivered their training:

- What did you like about your facilitation during the practice session?
- What do you think you could have done differently?
- What advice do you have for the remaining groups?

8 **Make certain** that peers are providing constructive feedback to one another; review some of the comments, if possible.

Allow participants any remaining time to review their feedback and/or prepare for their practice training.

PPT 4-5

9 **Give** the participants a sneak preview of the debriefing for the next day:

We will be completing the Reflection on p. 23 of the Facilitation Skills Practice module in your *Participant Manual*…you may want to look ahead and be thinking about the questions…

Show the cartoon for a little comic relief!

DAY TWO OF PRACTICE TRAINING

4 hours (including break) **PRACTICE TRAINING ROUNDS FOUR AND FIVE**

15 minutes **PREPARING FOR THE DAY**

10 **Continue** the debriefing discussion from the previous day and **make sure** that the participants are providing each other with constructive feedback. **Move** on to the last practice rounds

1 hour **PRACTICE TRAINING ROUND FOUR**

11 **Round Four**:

Training (45 minutes)
Feedback (15 minutes)

15 minutes **BREAK**

1 hour **PRACTICE TRAINING ROUND FIVE**

12 Round Five:

Training (45 minutes)
Feedback (15 minutes)

30 minutes **DEBRIEFING THE PRACTICE ROUNDS**

PPT 6-7

PPT 8

13 **Lead** a full debriefing of the practice rounds (show another cartoon to start off).

Give the participant pairs 15 minutes to **discuss and answer** the following questions from *Participant's Manual*:

- What did you like about your facilitation during the practice session?
- What do you think you could have done differently?
- What have you learned from your experience of:
    - Planning for your session?
    - Delivering your session?
    - Co-training with your colleague?
    - Using facilitation skills?
- What will you want to do now to be better prepared to deliver the training?

PPT 9

14 **Ask** if anyone wants to share a key lesson they took away from their practice round. **Take** a few examples.

Also, **share** some common mistakes in training delivery and **ask** for others to watch out for:

- Processing Questions That Do Not Relate To the Experience
- No Application Questions to Help Participants Relate Session to Their Work/Life
- Not Maximizing Participant Involvement

Move on to the application planning.

30 minutes **APPLICATION PLANNING**

PPT 10

15 **Tell** the participants that, in order to prepare to use what they have learned, we want them to do some careful thinking about when and how they will apply new

skills and knowledge gained through this training.

Review instructions in the manual and allow participants 10 minutes to complete the plan.

1. Review your participant manual, in particular the reflection pages.

2. Complete the worksheet and consider what you will do, when you will do it, the obstacles you might face along the way, and what actions you can take to effectively remove those obstacles or get the support you need.

16 **Ask** for 2-3 **examples** that summarize key things people seem to want to do to better prepare and deliver the course.

30 minutes CLOSING AND EVALUATION


PPT 11

17 **Ask** participants to complete the course evaluation form.


PPT 12

18 Course participants will be tired and excited when this course is over. STOP AI wants these participants to feel proud of and confident in their skills to deliver the course to other veterinarians and veterinarian technicians.

Finish the course with style by creating an atmosphere of celebration and arranging a formal closing. Consider inviting some ministry officials or respected guests to deliver a few remarks and hand out the certificates.

Invite a few participants make some closing remarks as well as the trainers.

CLOSE OF TRAINING COURSE

RESOURCES

MAKING TRAINING ACTIVE – TOP TEN TIPS

10 Questions for Obtaining Participant Expectations

There are a variety of questions you can ask to find out the needs, expectations, and concerns of the participants so that you can gear instruction appropriately. You can obtain answers through open discussion, a whip, response cards, fishbowls, polling, panels, games, and so on.

1. Why did you choose this class? Why did you come?
2. What questions about [subject matter of class] do you come with?
3. What advice, information, or skills do you want to get from this class?
4. What advice, information, or skills don't you need or don't you want?
5. What do you want to take away from this class? Name one thing.
6. What are your hopes for this class? What are your concerns?
7. Do the class objectives match your needs?
8. What knowledge or skills do you feel you "need" to have? What would be "nice" to have?
9. What are your expectations about this class?
10. What have you learned from previous classes on this topic?

10 Methods for Obtaining Participation

1. Open discussion. Address an unstructured question to the entire group. The straightforward quality of open discussion is appealing. If you are worried that the discussion might be too lengthy, say beforehand, "I'd like to ask 'four or five participants to share…"

2. Response cards. Pass out index cards and request anonymous answers to your questions. Use response cards to save time or to provide anonymity for personally threatening self-disclosures. The need to state yourself concisely on a card is another advantage of this method.

3. Polling. Design a short survey that is filled out and tallied on the spot, or verbally poll participants. Use polling to obtain data quickly and in a quantifiable form. If you use a written survey, try to supply the results to participants as quickly as possible. If you use a verbal survey, ask for a show of hands or invite participants to hold up answer cards.

4. Subgroup discussion. Form participants into subgroups of three or more to share and record information. Use subgroup discussion when you have sufficient time to process questions and issues. This is one of the key methods for obtaining everyone's participation.

5. Learning partners. Form participants into pairs and instruct them to work on tasks or discuss key questions. Use learning partners when you want to involve everybody but do not have enough time for small-group discussion. A pair is a good group configuration for developing a supportive relationship and/or for working on complex activities that would not lend themselves to large-group configurations.

6. Whips. Ask each participant for a short response to a key question. Use whips when you want to obtain something quickly from each participant. Sentence stems (for example, "One thing that makes a manager effective...") are useful in conducting whips. Invite participants to pass when they wish. Avoid repetition, if you want, by asking each participant for a new contribution to the process.

7. Panels. Invite a small number of participants to present their views in front of the entire class. An informal panel can be created by asking for the views of a designated number of participants who remain in their seats. Use panels when time permits to generate focused, serious responses to your questions. Rotate panelists to increase participation.

8. Fishbowl. Ask a portion of the group to form a discussion circle and have the remaining participants form a listening circle around them. Rotate new groups into the inner circle to continue the discussion. Use fishbowl discussions to help bring focus to large-group discussions.

9. Games. Use an enjoyable activity or a quiz game to elicit participants' ideas, knowledge, or skills. Use games to stimulate energy and involvement. Games also help to make dramatic points that participants seldom forget.

10. Calling on the next speaker. Ask participants to raise their hands when they want to share their views and request that the present speaker call on the next speaker (rather than the instructor performing this role). Use this method when you are sure there is a lot of interest in the discussion or activity and you wish to promote participant interaction.

10 Suggestions for Improving a Lecture

Lecturing is one of the most time-honored yet ineffective ways to teach. By itself, it will never lead to active learning. For a lecture to be effective, the trainer should build interest first, then maximize understanding and retention, involve participants during the lecture, and reinforce what has been presented. There are several ways to do just that.

Building Interest

1. Lead-off story or interesting visual. Provide a relevant anecdote, fictional story, cartoon, or graphic that captures the audience's attention.

2. Initial case problem. Present a problem around which the lecture will be structured.

3. Test question. Ask participants a question (even if they have little prior knowledge) so that they will be motivated to listen to your lecture for the answer.

Maximizing Understanding and Retention

4. Headlines. Reduce the major points in the lecture to key words that act as verbal subheadings or memory aids.

5. Examples and analogies. Provide real-life illustrations of the ideas in the lecture and, if possible, create a comparison between your material and the knowledge and experience that the participants already have.

6. Visual backup. Use flip charts, transparencies, brief handouts, and demonstrations that enable participants to see as well as hear what you are saying.

Involving Participants During the Lecture

7. Spot challenges. Interrupt the lecture periodically and challenge participants to give examples of the concepts presented thus far or to answer spot quiz questions.

8. Illuminating activities. Throughout the presentation, intersperse brief activities that illuminate the points you are making.

Reinforcing the Lecture

9. Application problem. Pose a problem or question for participants to solve based on the information given in the lecture.

10. Participant review. Ask participants to review the contents of the lecture with one another or give them a self-scoring review test.

10 Tips When Facilitating Discussions

Your role during a group discussion is to facilitate the flow of comments from participants. Although it is not necessary to interject your comments after each participant speaks, periodically assisting the group with their contributions can be helpful. Here is a ten-point facilitation menu to use as you lead group discussions.

1. Paraphrase what a participant has said so that he or she feels understood and so that the other participants can hear a concise summary of what has been said. *So, what you're saying is that you have to be very careful about asking applicants where they live during an interview because it might suggest some type of racial or ethnic affiliation. You also told us that it's okay to ask for an interviewee's address on a company application form.*

2. Check your understanding of a participant's statement or ask the participant to clarify what he or she is saying. *Are you saying that this plan is not realistic? I'm not sure that I understand exactly what you meant. Could you please run it by us again?*

3. Compliment an interesting or insightful comment. *That's a good point. I'm glad that you brought that to our attention.*

4. Elaborate on a participant's contribution to the discussion with examples, or suggest a new way to view the problem. *Your comments provide an interesting point from the employee's perspective. It could also be useful to consider how a manager would view the same situation.*

5. Energize a discussion by quickening the pace, using humor, or, if necessary, prodding the group for more contributions. *Oh my, we have lots of humble people in this group! Here's a challenge for you. For the next two minutes, let's see how many ways you can think of to increase cooperation within your department.*

6. Disagree (gently) with a participant's comments to stimulate further discussion. *I can see where you are coming from, but I'm not sure that what you are describing is always the case. Has anyone else had an experience that is different from Jim's?*

7. Mediate differences of opinion between participants and relieve any tensions that may be brewing. *I think that Susan and Mary are not really disagreeing with each other but are just bringing out two different sides of this issue.*

8. Pull together ideas, showing their relationship to each other. *As you can see from Dan's and Jean's comments, personal goal setting is very much a part of time management. You need to be able to establish goals for your- self on a daily basis in order to more effectively manage your time.*

9. Change the group process by altering the method for obtaining participation or by having the group evaluate ideas that have been presented. *Let's break into smaller groups and see if you can come up with some typical customer objections to the products that were covered in the presentation this morning.*

10. Summarize (and record, if desired) the major views of the group. *I have noted four reasons from our discussion as to why managers do not delegate: (1) lack of confidence, (2) fear of failure, (3) comfort in doing the task themselves, and (4) fear of being replaced.*

10 Steps to Use when Facilitating Experiential Activities

Experiential activities really help to make training active. It is often far better for participants to experience something rather than to hear it talked about. Such activities typically involve role playing, games, simulations, visualization, and problem-solving tasks. The following ten steps will help to make your experiential activities a success.

1. Explain your objectives. Participants like to know what is going to happen and why.

2. Sell the benefits. Explain why you are doing the activity and how the activity connects with any preceding activities.

3. Speak slowly when giving directions. You might also provide visual backup. Make sure the instructions are understood.

4. Demonstrate the activity if the directions are complicated. Let the participants see the activity in action before they do it.

5. Divide participants into the subgroups before giving further directions. If you do not, participants may forget the instructions while the sub- groups are being formed.

6. Inform participants how much time they have. State the time you have allotted for the entire activity and then periodically announce how much time remains.

7. Keep the activity moving. Don't slow things down by endlessly recording participant contributions on flip charts or blackboards and don't let a discussion drag on for too long.

8. Challenge the participants. More energy is created when activities generate a moderate level of tension. If tasks are a snap, participants will get lethargic.

9. Always discuss the activity. When an activity has concluded, invite participants to process their feelings and to share their insights and learnings.

10. Structure the first processing experiences. Guide the discussion carefully and ask questions that will lead to participant involvement and input. If participants are in subgroups, ask each person to take a brief turn sharing his or her responses.

10 Assignments to Give Learning Partners

One of the most effective and efficient ways to promote active training is to divide a class into pairs and compose learning partnerships. It is hard to get left out in a pair. It is also hard to hide in one. Learning partnerships can be short term or long term. Learning partners can undertake a wide variety of quick tasks or more time-consuming assignments, such as those in the list below.

1. **Read,** critique, or edit each other's written work.
2. **Interview** each other concerning reactions to an assigned reading or a video.
3. **Read** and discuss a short written document with each other.
4. **Question** each other about an assigned reading.
5. **Recap** a lecture or demonstration with each other.
6. **Develop** questions together to ask the facilitator.
7. **Analyze** a case problem, exercise, or experiment together.
8. **Test** each other.
9. **Respond** to a question posed by the facilitator.
10. **Compare** notes taken in class.

10 Tricks for Calling Participants to Order

When training is active, the room can become busy with activity and even noisy. From time to time, you will need to get the attention of participants to indicate that a time period is up and that you will be leading the group into a new phase. There are several ways to accomplish this.

1. Flick a light switch. This isn't offensive if you do it rapidly and briefly.

2. Make a dramatic announcement. Grab attention by saying something like "Testing, 1, 2, 3. Testing," "Now hear this, now hear this," or "Earth to group, earth to group." Use a megaphone or microphone for large groups.

3. Create a verbal wave. Instruct the group to repeat after you whenever they hear you say "time's up." In no time at all, the participants will be assisting you in indicating that it is time to stop what they are doing.

4. Use clapping. Instruct the group members to clap their hands once if they can hear you. Within a few seconds, the first participants to hear your instructions will clap and by doing so, will get the rest of the group's attention.

5. Play prerecorded music. Select music that can quickly command attention. You may elect to quiet participants gently, using meditative music, or with a bang, using something like the opening bar of Beethoven's Fifth.

6. Use a silent signal. Explain to participants that they should quiet down whenever they see you using a particular signal (for example, holding up your index and middle fingers). Encourage the participants to do the signal as well.

7. Use a sound signal. A gavel, bell, whistle, or kazoo will do. Novelty stores also have a variety of sound-making gag toys.

8. Tell a joke. Inform participants that you have a storehouse of jokes or riddles that will serve as a cue to quiet down.

9. "Can we talk?" Use this famous line as a way to reconvene the entire group for discussion.

10. Announce "Break Time!" This will surely get everyone's attention.

10 Timesavers When Active Training Takes Time

Active training takes time. Therefore, it is crucial that no time is wasted. The following are some ways to avoid wasting time.

1. Start on time. This act sends a message to latecomers that you are serious. If all of the participants are not yet in the room, begin the session, if you wish, with a discussion or filler activity for which complete attendance is not necessary.

2. Give clear instructions. Do not start an activity when participants are confused about what to do. If the directions are complicated, put them in writing.

3. Prepare visual information ahead of time. Do not write lecture points on flip charts or a blackboard while participants watch. Have the notes prerecorded. Also, decide if recording participant input is really necessary. If so, don't record the discussion verbatim. Use "headlines" to capture what participants are saying.

4. Distribute handouts quickly. Prepare handouts in stapled packets prior to the session. Distribute packets to key areas of the room so that several people can assist with distribution.

5. Expedite subgroup reporting. Ask subgroups to list their ideas on flipchart paper and to post their lists on the walls of the room so that all the work can be viewed and discussed at the same time. Or, going from group to group, have each group report only one item at a time so that everyone can listen for possible overlap. Subgroups should not repeat what has already been said.

6. Do not let discussions be too long. Express the need to move on, but be sure in a later discussion to call on those who didn't have a chance to contribute previously. Or begin a discussion by stating a time limit and suggesting how many contributions time will permit.

7. Obtain volunteers swiftly. Don't wait endlessly for participants to volunteer. You can recruit volunteers during breaks in the session. Continue to call on individual participants if there are no immediate volunteers.

8. Be prepared for tired or lethargic groups. Provide a list of ideas, questions, or even answers and ask participants to select ones they agree with; frequently, your list will trigger thoughts and issues from participants.

9. Quicken the pace of activities from time to time. Often, setting time limits for participants energizes them and makes them more productive.

10. Elicit prompt attention. Use a variety of cues or attention-getting devices to inform the participants that you are ready to reconvene after a small group activity.