



Avian Influenza Biosecurity and Training of Trainers for Georgia

February 2009



WELCOME!



Your Trainers

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Getting Started

- Welcome and Introductions
- Review of Schedule and Objectives
- Review of Materials



Course Schedule

TIME	Monday 14 February 2009	Tuesday 17 February 2009	Wednesday 18 February 2009	Thursday 19 February 2009	Friday 20 February 2009
AM	Opening and Introductions Overview of AI	Lesson 2: Biosecurity Practices for Large Commercial Farms and Small Commercial Farms Biosecurity Video Lesson 3: Biosecurity Practices for Transporting Poultry	Lesson 4: Biosecurity Planning 1. Determine Setting 2. Evaluate Biosecurity 3. Prioritize Measures 4. Write the Plan	Training of Trainers (TOT) • Adult Learning • Facilitator Skills	Training of Trainers (TOT) • Practice Sessions and Feedback
LUNCH					
PM	Biosecurity for Farms and Markets Lesson 1: Overview of Biosecurity Principles Lesson 2: Biosecurity Practices for Large Commercial Farms and Small Commercial Farms	Lesson 4: Biosecurity Practices for Live Bird Markets Lesson 5: Biosecurity Practices for People Who Move Between Farms Lesson 6: Biosecurity Planning • Introduction	3. Write a Standard Operating Procedure 4. Decide how to present Plan 7. Decide how to teach the SOP SOP Presentations: Evaluators and Comments	5. Training of Trainers (TOT) • Facilitator Skills • Preparing for Practical Training	Training of Trainers (TOT) • Practice Sessions and Feedback Application Planning Course Closing



Course Objectives

By the end of the course, 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 other species;
- Define the three principles of biosecurity: isolation, traffic control and sanitation;
- Identify potential biosecurity risks;
- Explain appropriate biosecurity measures for commercial and smallholder farms;
- Explain appropriate biosecurity measures for poultry transport and discuss transport of poultry in the Azerbaijan context;
- Explain appropriate biosecurity measures for live bird markets;
- Advise poultry growers, sellers, and live bird market administrators in developing a biosecurity plan for their farm or market;
- Transfer these concepts and techniques to various audiences.

Guidelines for Working Together

- Keep time (start on time, return from breaks on time)
- Switch mobile phones off or to "vibrate"
- Leave the room to make or take phone calls
- Participate fully
- Ask questions freely
- Balance talking and listening
- Respect each other's points of view
- Others?



7

Welcome!

Let's Get Started...



8

Avian Influenza Overview

Avian Influenza: Two-Day Training for Veterinarians
Georgia 2009

1a

Module Purpose

To provide an overview of the basic facts about Avian Influenza (AI).

Module Objectives

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

- Identify potential sources of introduction of avian influenza;
- Describe the potential threats to man and birds from avian influenza;
- Describe the clinical signs of avian influenza;
- Describe the typical incubation time of avian influenza;
- List the types of influenza that are highly pathogenic.

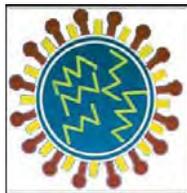
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Activity 1.1: Discussion

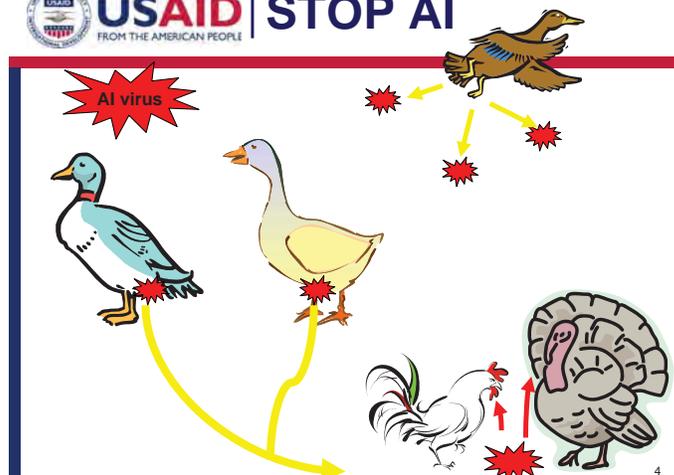
What is bird flu?

Where does it come from?

How is it spread?

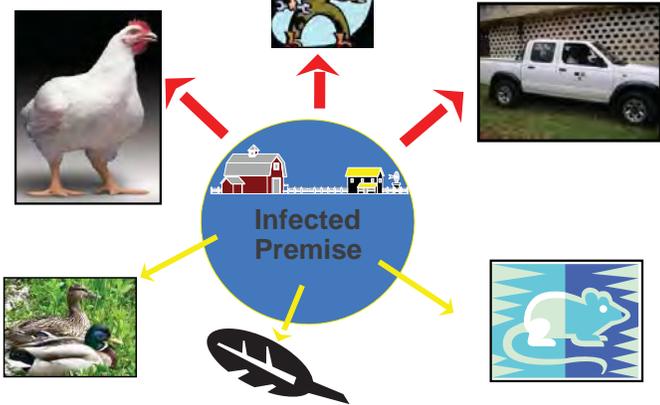


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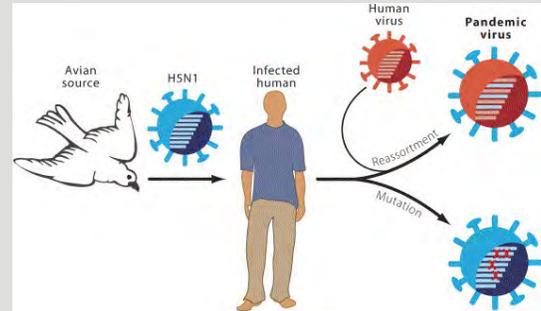
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How Virus Is Spread



Potential Genesis of an H5N1 Pandemic Virus

from Russell and Webster: Cell.2005.10.019

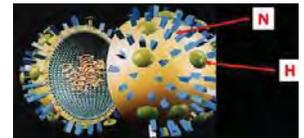


Threats from Highly Pathogenic Avian Influenza Virus

- Deadly for many poultry species
- Constantly evolving with unpredictable results
- Could lead to a human influenza pandemic
- Threatens livelihoods, especially for rural poor
- Has a negative economic impact on trade in poultry and poultry products

AI Pathogenicity

- Historically all highly pathogenic strains: H5 or H7
 - Example: H5N1 Asia, Europe and Africa; H7N3 Canada
- Not all H5 or H7 are highly pathogenic
 - Some are mildly pathogenic and change to become highly pathogenic (example H7N3 Canada)
 - Some mildly pathogenic viruses are also a problem for poultry (H9N2 Middle East)



Clinical signs of HPAI: acute death, depression, respiratory difficulty. What are the other clinical signs?



Epidemiology

- Incubation period: 3-7 days
 - May be as short as 24 hours for HPAI
- Highly contagious within a flock
- Virus survives best:
 - In live birds
 - Where it is cold and wet (bird feces)
- Due to fat in envelope, virus can be killed by:
 - Heat, sunlight, detergents, and disinfectants



Principles of Outbreak Response

1. **Protect people:** How?
2. **Protect animals:** What do we do to protect animals from disease outbreaks?
3. **Stop the virus from spreading:** How?
4. **Make it a single event:** How?

11

Check Your Knowledge Activity 1.2: Identifying the Transmission Paths

- Using the suggested list on the next slide (also Figure 5 in your Participant Manual), or those of your choosing, complete the diagram with the **3 most important sources or barriers** in Georgia for each block.
- Take 10 minutes to complete the task with your group.
- Choose one person from your group to report out.

	Source of Infection	Barriers to Infection
Wild Birds to Poultry		
Poultry to Other Poultry		
Poultry to Humans		

12

Sources of infection

- a** Feces
- b** Contaminated environment / body of water
- c** Contaminated equipment / vehicles
- d** Eggs and meat
- e** Secretions
- f** Carcasses / live infected individuals
- g** Pests (insects, rodents, cats, etc.)
- h** Blood
- i** Contaminated clothing / footwear

Barriers to transmission

- 1** Hand-washing / good hygiene
- 2** Personal protective equipment / dedicated clothing
- 3** Vehicle and equipment disinfection
- 4** Enclosing birds / avoiding attractants
- 5** Restricting movements on and off premises
- 6** Depopulation
- 7** Vaccination / medication (humans only)
- 8** Proper disposal of carcasses
- 9** Pest control
- 10** Avoiding contaminated environment / carcasses

Wildlife Health Center and Cooperative Extension

Global Livestock CRSP

Check Your Knowledge – Activity 1.3

Take a moment to check your knowledge:

- What are the most likely sources of a new outbreak of H5N1 HPAI in Georgia?
- What are the clinical signs of highly pathogenic avian influenza?
- Which avian influenza virus subtypes (H) can cause HPAI?
- How can the virus be killed or destroyed?

14

Reflection – Activity 1.4

- What are three points you want to remember from this module?
- Is there any additional information you need?



15

BIOSECURITY FOR FARMS AND LIVE BIRD MARKETS

Avian Influenza: Two-Day Training for Veterinarians
Georgia 2009

Module Purpose

- To learn how disease spreads in the poultry industry and the basic principles of biosecurity to prevent the spread of disease.

Module Objectives

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

- Describe biosecurity principles;
- Use biosecurity checklists to identify potential biosecurity risks;
- Explain appropriate biosecurity measures for large and small farms as well as live bird markets;
- Explain appropriate biosecurity measures for poultry transport;
- Advise poultry growers, sellers, and live bird market administrators on effective biosecurity planning and practices.

2

LESSON 1: OVERVIEW OF BIOSECURITY PRINCIPLES

Avian Influenza: Two-Day Training for Veterinarians
Georgia 2009

Lesson Purpose

To learn how disease spreads in the poultry industry and the basic principles of biosecurity to prevent the spread of disease.

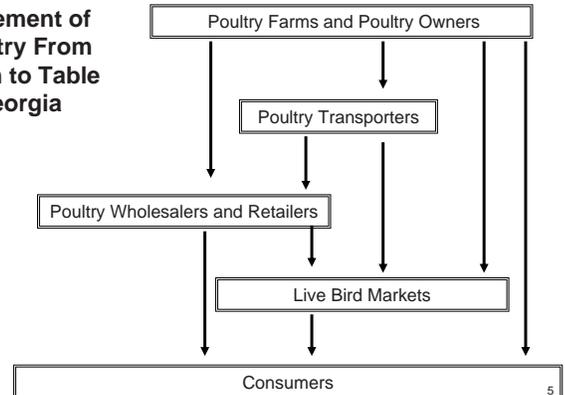
Lesson Objectives

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

- Identify potential routes of disease spread in poultry;
- Describe basic biosecurity principles.

4

Movement of Poultry From Farm to Table in Georgia



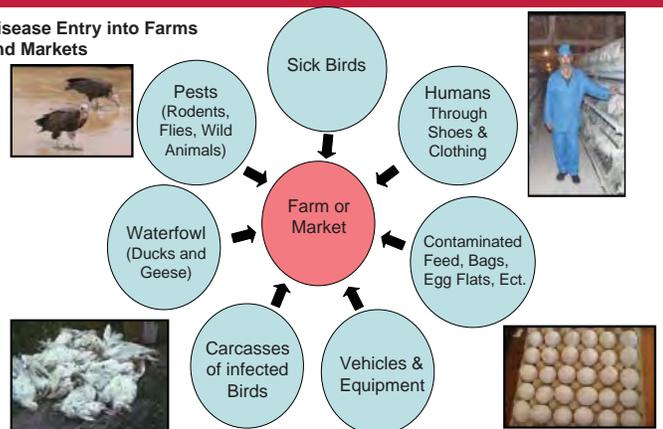
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How Disease Spreads



6

Disease Entry into Farms and Markets



Activity 2.1: Group Discussion on Biosecurity Risks

- Each group will be assigned one location or stakeholder group
 - large commercial farms
 - small commercial farms
 - live bird markets
- Identify the most common farm conditions and human behaviors that can lead to biosecurity risks (disease entry or spread).
- Identify one person to be the group leader and another to present your list.
- Take about 10 minutes to create your list.

8

Principles of Biosecurity

1. Isolation
2. Traffic Control
3. Sanitation



Prerequisite: Healthy Poultry

Good animal husbandry and management is essential!

9

Animal Husbandry and Management

Ensuring the good health and maintenance of poultry

For example:

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



10

Isolation

Create an environment where poultry are protected from carriers of disease – people, birds and other animals.



11

Traffic Control

Control the movement of people, animals, equipment, and vehicles into, out of, and within the farm or market.



12

Sanitation

Regular cleaning and disinfection of housing, equipment, vehicles and people.



Check your knowledge: Activity 2.2

- Take 5 minutes to discuss the most important points of this lesson.
- Report back 3 most important points in 5 minutes.
- Also, does your group have any questions?



14

Reflection: Activity 2.3

- What are three points you want to remember from this lesson?
- Is there any additional information you need?



15

LESSON 2: BIOSECURITY PRACTICES FOR LARGE COMMERCIAL FARMS

Avian Influenza: Two-Day Training for Veterinarians
Georgia 2008

Lesson Purpose

To learn principles and methods for preventing the spread of disease to and from large commercial poultry farms (FAO sectors 1 and 2).

Lesson Objectives

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

- Identify potential biosecurity risks for large commercial farms;
- Describe basic biosecurity measures for large commercial farms;
- Explain the purpose of a flock health record and how to fill one out.

2

Biosecurity Preview, Class Discussion: Activity 3.1

What are the *most common* biosecurity risks you've seen on large commercial farms?



3

Biosecurity Messages for Large Commercial Farms

Prerequisite: Healthy Poultry: Practice good animal husbandry

- **Isolation:** *Design and maintain your farm* to keep out disease brought by people, wild birds and other pests
- **Traffic Control:** Limit entry to and movement *on your farm and poultry houses*
- **Sanitation:** Keep your farm clean

4

Healthy Poultry: Good Animal Husbandry and Management

- Keep records of flock health (see handout, appendix C)
 - Daily mortality, culling, eggs laid
 - Vaccinations and medications
 - Feed and water intake
- What are the benefits of keeping these records?



5

Isolation: Design and Maintain Your Farm to Keep Diseases Out

- Restrict access to the entire farm through the use of gates and fences



6

Isolation: Design and Maintain Your Farm to Keep Diseases Out

- Buildings should be secure, with no holes in screens to allow entry of wild birds



7

Isolation: Design and Maintain Your Farm to Keep Diseases Out

- No standing bodies of water on property that might attract wild birds



8

Traffic Control: Limit Entry to and Movement on Your Farm

1. No unauthorized visitors
2. Keep an authorized visitor log book (see handout, appendix B)
What are the benefits of keeping this type of record?
3. Provide personal protective equipment for authorized visitors



Traffic Control: Limit Entry to and Movement on Your Farm

Vehicles and Equipment

Clean and disinfect any vehicles that must enter the farm

Be particularly aware of:

Feed trucks, bird dealers and poultry crates/egg flats that leave the farm



10

Traffic Control: Limit Entry to and Movement on Your Farm

Farm Workers

- Don't hire workers who keep birds at home
- Provide farm workers with poultry meat or eggs
- Have dedicated clothing and footwear for workers



11

Traffic Control: Limit Entry to and Movement on Your Farm

Buying day-old birds

- Never purchase from a country where there are active HPAI outbreaks



12

Traffic Control: Control Entry to and Movement on Your Farm

Selling Eggs –

- NEVER bring paper egg flats back to farm



Sanitation: Keep Your Farm Clean

- *Good Practice*: workers should disinfect or change shoes and clothes upon entering farm
- *Best Practice*: provide clean uniforms and shoes for workers to change into when they arrive at the farm



14

Sanitation: Keep Your Farm Clean

- Clean and disinfect equipment regularly



15

Sanitation: Keep Your Farm Clean

Keep pests away from feed
Clean up spills immediately



Group Exercise: Activity 3.2

- Behavior change is usually gradual, based on small steps. It is more likely to start with easy small steps.
- Of the important biosecurity risks for large commercial farms in Georgia, what *fairly easy to do biosecurity practices* could be adapted to mitigate these risks?
- Select a group leader and someone to present 3 ideas from your group.
- Take about 5 minutes for your discussion.

17

Reflection: Activity 3.3

- What three points do you most want to remember from this lesson?
- What additional information do you need?



**LESSON 2:
 BIOSECURITY PRACTICES FOR
 SMALL COMMERCIAL FARMS**

**Avian Influenza: Two-Day Training for Veterinarians
 Georgia 2009**

Lesson Purpose

To learn principles and methods for preventing the spread of disease to and from small commercial poultry farms (FAO sectors 2 and 3).

Lesson Objectives

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

- Identify potential biosecurity risks for small commercial farms;
- Describe basic biosecurity measures for small commercial farms.

2

Class Discussion: Activity 4.1

- What biosecurity risks are different or specific to small holder farms compared to large commercial farms?



Biosecurity Messages for Small Commercial Farms

Prerequisite: Healthy Poultry: Practice good animal husbandry

- **Isolation:** Design and maintain your farm to keep out disease brought by people, wild birds and other pests
- **Traffic Control:** Limit entry to and movement on your farm and poultry houses, and traffic flow
- **Sanitation:** Keep your farm clean

4

Healthy Poultry: Good Animal Husbandry and Management

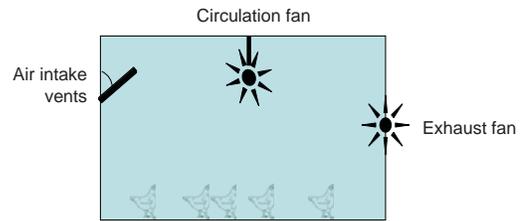
- Keep records of flock health and management
 - Daily mortality, eggs laid
 - Number of bags of feed used for the flock
 - Vaccinations and medications



5

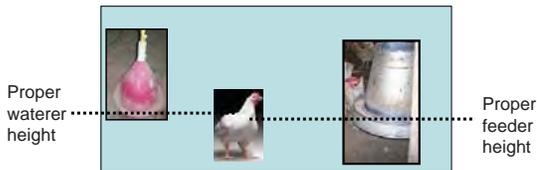
Healthy Poultry: Good Animal Husbandry and Management

- Provide adequate ventilation to dry litter and remove ammonia



Healthy Poultry: Good Animal Husbandry and Management

- Adjust the height of feeders and waterers at least once each week
 - Lip of feeder should be at top of breast bone
 - Waterer should be high enough for birds to crouch and walk underneath



Isolation

Restrict access to the entire farm

- Fence and gate farm or at least the poultry area



8

Isolation

- Buildings should be secure, with no holes in screens to allow entry of wild birds



9

Isolation

Have a sanitary method for disposing of dead birds



10

Isolation

- Separate poultry from other animals and from other poultry species



Traffic Control

- Good practice: Do not allow buyers or transporters into bird housing
- Best practice: Do not allow them onto your farm
- If selling from your farm, sell from the farm gate



Traffic Control

Selling Eggs –

- NEVER bring paper egg flats back to farm
- If selling from farm, sell from gate, not inside fence



Traffic Control

- Never visit a neighbor who has sick poultry
- Never visit poultry you do not own

If you must: disinfect footwear when returning to your farm and bathe and change clothes before entering your poultry house



Sanitation

- Clean and disinfect equipment regularly
- Waterers: at least once a week
- Crates after every use



Sanitation

- Use traps or poisons to control rodents, insects and wild birds





Activity 4.2 What Biosecurity Risks Do You See?

17

Activity 4.3: Group Exercise

- From your knowledge and material just presented identify which biosecurity practices are the **most important for small poultry farms in Georgia**.
- Of the important biosecurity practices, which are fairly **easy to do** on poultry farms in Georgia.
- Which 3 are both important and easy to do?
- Be ready to share your ideas.
- Take about 10 minutes for your discussion.

18

Reflection: Activity 4.4

- What three points do you most want to remember from this lesson?
- What additional information do you need?



LESSON 3: BIOSECURITY PRACTICES FOR TRANSPORTING POULTRY

Avian Influenza: Two-Day Training for Veterinarians
Georgia 2009

Lesson Purpose

To learn principles and methods for preventing the spread of disease when transporting poultry

Lesson Objectives

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

- Identify potential biosecurity risks for people who transport poultry;
- Describe basic biosecurity measures poultry transporters.

2

Safely Transporting Birds to Market

Start with Healthy Poultry

1. **Isolation:** Keep things separate to prevent the spread of disease
2. **Traffic Control:** If transporter is not from the farm, they must not go into poultry houses
3. **Sanitation:** Keep your shoes, transportation, and crates clean

3

Class Discussion: Activity 5.1

How are poultry transported to market in Georgia?
What are the important biosecurity risks?



4

Isolation: Keep Things Separate

- Avoid collecting birds from multiple farms in one day
- Avoid carrying multiple species together
- Avoid carrying people and birds at the same time



5

Traffic Control: Don't go into Poultry Houses

- Transporters/buyers should NEVER ENTER the poultry house, have the owner/workers bring birds out to examine before purchase



6

Traffic Control: Don't allow non-farm workers into poultry houses

- *Best practice:* owner/workers bring birds to farm gate to load onto transport
- *Good practice:* owner/workers bring birds out of poultry house to load onto transport



7

Traffic Control

- Respect poultry movement bans during outbreaks



8

Sanitation: Keep It Clean

- Crates/cages should be cleaned and disinfected before each bird pick-up



9

Sanitation: Keep It Clean

Keep the inside of your vehicle clean



10

Sanitation: Keep It Clean

- Disinfect your shoes or wear shoe covers on each farm



11

How to Clean and Disinfect Vehicles and Cages

1. Remove cages from vehicle
2. Remove all dirt, feathers and manure with a shovel
3. Clean and scrub vehicles and cages with soap and water to remove all remaining dirt, feathers, blood, and manure before disinfecting.



12

How to Clean and Disinfect Vehicles and Cages

- Clean the vehicle's wheels, wheel arches, underbody, and surfaces that have come in contact with birds or cages on the exterior **and interior** of the vehicle.



13

How to Clean and Disinfect Vehicles and Cages

- Use an appropriate disinfectant (Chlorine bleach and Detrol are available in Georgia) at the manufacturer recommended concentration, allow 10 to 30 minutes contact time, then rinse.



14

Activity 5.2: Group Exercise

- From your knowledge and material just presented identify which biosecurity practices are the **most important for poultry transporters in Georgia**.
- Of the important biosecurity practices, which are fairly **easy to do**?
- Which 3 are both important and easy to do?
- Be ready to share your ideas.
- Take about 10 minutes for your discussion.

15

Reflection: Activity 5.3

- What three points do you most want to remember from this lesson?
- What additional information do you need?



LESSON 4: BIOSECURITY PRACTICES FOR LIVE BIRD MARKETS

Avian Influenza: Two-Day Training for Veterinarians
Georgia 2009

Lesson Purpose

To learn principles and methods for preventing the spread of disease to and from live bird markets.

Lesson Objectives

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

- Identify potential biosecurity risks live bird markets;
- Describe basic biosecurity measures live bird markets.

2

Activity 6.1: Group Discussion

Answer these 3 questions, you have 10 minutes!

1. What are the different places where people can buy live birds in Georgia?
2. Who brings the birds to these markets?
3. What are the common biosecurity risks?

3

Live Bird Markets

Prerequisite: Start with healthy birds

- **Isolation:** Separate birds by species
- **Traffic Control:** Keep people out of bird pens
- **Sanitation:** Locate markets away from human food, keep things clean



Isolation: Separate Birds by Species

- Keep chickens separate from ducks and geese



Isolation: Separate Birds by Species

- Don't mix chickens, guineas, ducks and rabbits together



Isolation: Taking birds back home

- Best practice: slaughter any birds returning home
- Good practice: keep birds returning home in a separate pen from other birds for at least 2-weeks

Traffic Control

- Close the market if there are sick birds
- Keep people out of bird pens



Sanitation: Live Bird Markets should not be located near human food



Sanitation: Metal cages are easy to sanitize, but string and tie-wraps make it more difficult



Sanitation: Daily municipal markets must clean and disinfect at least once each week

- Outdoor areas can be cleaned and disinfected while birds are in overnight pens
- Indoor areas can be cleaned and disinfected while birds are in outdoor area



Sanitation: Roadside markets must clean and disinfect at least once each week

- Birds can be moved to crates cages or shifted to another pen during cleaning and disinfection



Activity 6.2: Group Discussion

Behavior change is difficult; it comes in small steps. Market owners are more likely to implement practices that are both easy and important.

1. In your group come up with the three biosecurity recommendations for market owners you think are most important and easiest to implement.
2. How can you encourage adoption of these practices?

You have 10 minutes for your discussion, then you will report your ideas. 13

Reflection: Activity 6.3

- What three points do you most want to remember from this lesson?
- What additional information do you need?



**LESSON 5:
BIOSECURITY PRACTICES FOR
PEOPLE WHO MOVE BETWEEN
FARMS**

**Avian Influenza: Two-Day Training for Veterinarians
Georgia 2009**

1a

Lesson Purpose

To learn concepts and methods for preventing avian influenza infections in people.
To learn methods of preventing the movement of disease from one location to another on people, their clothing or footwear.

Lesson Objectives

By the end of this lesson, participants will be able to:

- Practice basic infection prevention;
- List the clinical signs of H5N1 infection in people and the steps that should be taken for treatment;
- Explain simple and safe procedures for putting on and taking off PPE.

2

Why Use Personal Protective Equipment (PPE)?

- Virus can be carried to farms
- Virus can survive in the environment
- You may not be aware that it is there



Why Use PPEs?

- You can be infected by HPAI through your eyes, nose or mouth



What is the difference between a SURGICAL MASK and a RESPIRATOR?



Surgical mask



Respirator

Particulate Respirators

- N-95, N-99 or N-100, dependent on particle size allowed through the mesh
- Filter out most infectious agents transmissible by air
- Not appropriate for persons with beards

All 3 of the respirators shown are n95

Fits many faces



Has a valve



Least expensive



Personal Protective Equipment (PPE)



- Tyvek Coveralls
- Shoe Covers
- N-95 Respirator
- Goggles
- Plastic Apron
- Gloves (2 pairs)
- Germicidal Wipes
- Alcohol Wipes
- Infectious Waste Bag

Big is good: Coveralls should be 2 sizes larger than you normally wear



Before You Put on the PPE

- Remove your watch and any jewelry
- Remove extra clothing
- Remove all tobacco products (cigarettes, snuff, etc.)
- It is recommended to leave cell phones behind.
- Wash your hands

Where do we put on and take off PPE?



Dirty



Clean



Using a car as the CLEAN ZONE



Using a car as the CLEAN ZONE: remove boots and gloves without touching the inside of the car



Donning the PPE properly: Activity 7.1

SEQUENCE

- Coveralls
- Shoe covers
- Respirator
- Goggles
- Pull hood over head
- Apron
- 2 pairs of gloves



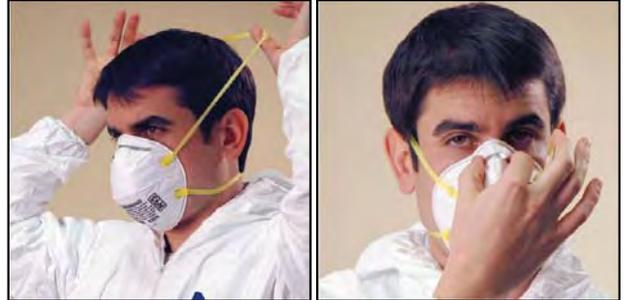
Put On Coveralls



Put on Shoe Covers



Put On Your Respirator



Put on Goggles and Pull Up Hood



Put On Apron



Put on Inner and Outer Gloves



You May Also Want To:

- Tape on a sample bag to carry back samples



Ready to Go!

Leave your biohazard bag at the intersection of the clean and dirty area



Group Photo Questions

Return to seats for a brief presentation on protecting people from H5N1 HPAI, while wearing PPE.



Everyone who works with poultry must be taught:

- Where and how the H5N1 virus survives
- How to avoid exposure to HPAI, importance of hand-washing and general hygiene
- Actions to take if they have sick or dead birds
- Symptoms of the virus in people and what to do if infection is suspected



Case Definition for Suspect Human HPAI

Any individual presenting with an unexplained lower respiratory tract infection with:

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

AND.....

Case Definition for Suspect Human HPAI

And one or more of the following exposures in the 7 days prior to symptom onset:

- **Exposure to poultry or wild birds** or their remains or to an environment contaminated with **their feces** in an area where **H5N1 infections** in animals or humans have been suspected or confirmed in the last month
- Close contact with a suspect, probable or confirmed human or animal case
- Consumption of raw or undercooked poultry products in an area where H5N1 infections in animals or humans have been suspected or confirmed in the last month
- Handling animal / human samples suspected of containing H5N1

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 with suspect symptoms
- Referral for evaluation of any suspected cases of human HPAI
- Prompt isolation for anyone exhibiting symptoms

Management of Suspect Human HPAI Case

- Initiate prompt infection control activities: patient should wear a surgical mask, everyone in contact with patient should wash hands regularly and wear an n95 respirator and gown.
- CALL the nearest health facility.
- 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 Oseltamivir (TAMIFLU) 75 mg twice a day immediately pending confirmation of positive or negative Influenza A H5 test.

Accidental Exposure of Workers to HPAI

- Active daily surveillance for symptoms and fever.
- WHO does not recommend prophylaxis;
 - Oseltamivir (Tamiflu) 75 mg once a day for 10 days
- Call a health facility if patient meets case definition.
- Consider quarantine.

Proper Doffing of PPE: Activity 7.2

- Wipe off gloves with germicidal wipes
- Remove:
 - Apron
 - Shoe covers
 - Outer gloves
 - Coveralls
 - Goggles
 - Respirator
 - Inner gloves
- Tie off biohazard bag, sanitize hands
- Wash hands with soap and water



Biohazard Bag Should Be Opened at The End Of The Donning Process

Preparation For Doffing: Clean Gloves



Remove Apron: pull from the front, don't reach behind your neck



Remove Shoe Covers: pull from outside of shoe cover



Remove Outer Gloves



Roll down coveralls without touching outside



Remove goggles by the strap that was covered by hood, not by the front piece!



Remove Respirator:
Bottom Strap first!



Remove gloves, tie bag, sanitize hands with alcohol wipe, and wash hands



Questions?



When You Take a Break:

- Remove PPE
- Take your break
- Put on new PPE



Do Not Reuse PPE

- PPE kit contents are designed for single use only
- Do not wash and reuse
- Reuse could result in:
 - Self-contamination
 - Contaminating someone else
 - Contaminating a new location



Discard PPE:

- Immediately if it is wet, torn or heavily soiled
- Immediately after use
- Dispose of it by burial or autoclaving, burning is not recommended because of air pollution
- Proper disposal is important to prevent disease spread



Case Study #1: Activity 7.3

- A worker reports for duty, helping to clean up a chicken yard where an outbreak of highly pathogenic avian influenza is suspected, but has not yet been confirmed. He has been trained on the use of PPE, but this is his first time to put on the equipment. He opens his PPE Kit from USAID and cannot believe how many things are in it. But instead of being pleased with the PPE, he sees it as exaggerating the danger of the situation. You walk up to him and ask him if he needs help getting into his gear and he tells you,
 - *"There is no way I am putting on all of this to clean up a chicken yard! We do not need all of this. I have on my own boots. I can cover my face with a scarf or cloth. Let's get the job done, and get out of here. All this stuff is just a waste of time. Why is everyone being so dramatic?"*

Case Study #2: Activity 7.4

- You have been called to a site to help with the de-population of a sick flock. When you arrive and go to the designated place to get your PPE Kit, many other workers are already there putting on their PPE. You hear a worker say:
 - *"I cannot believe all of this stuff! It is so wasteful to use it once and then throw it away. I think when I'm finished today I'm going to keep some of the equipment. After all, I am probably going to need it again."*
- You notice that a couple of other workers are nodding in agreement. You know that it is important to dispose of equipment after it has been used once and want to say something, but you are not sure how to approach the worker. After all, you do not know him and you are not from his village.

Reflection: Activity 7.5

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

LESSON 6: BIOSECURITY PLANNING FOR FARMS AND MARKETS

Avian Influenza: Two-Day Training for Veterinarians
Georgia 2009

1a

Lesson Purpose

To learn methods for working with farmers and live bird market owners to prevent a H5N1 HPAI outbreak.

Lesson Objectives

By the end of this lesson, participants will be able to:

- Explain the steps required in developing a biosecurity plan;
- Write a standard operating procedure;
- Write a simple biosecurity plan;
- Use a biosecurity checklist.

2

Suggested Process for Developing a Biosecurity Plan for Small Holder Farm or Live Bird Market

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

3

Define Objectives

- Prevent all disease?
- Prevent HPAI?
- Minimize the risk of disease introduction
- Prevent the spread of disease from an infected area to an uninfected area

Assess Risks

- Determine conditions present that may increase the risk of disease
- Risk assessment checklists:
 - A: Commercial Farms
 - B: Small Holder Farms
 - C: Live Bird Markets

Establish Biosecurity Plans

- Work with owner, farmer, employees
- Evaluate what is needed
 - Which biosecurity measures are already implemented?
 - Which biosecurity measures have not been implemented?
- Prioritize
 - Of the biosecurity measures not implemented, which are most important and easiest to address first?
- Analyze the obstacles to implementation
- Write a plan with standard operating procedures
- Review and Revise

Training Staff

- Everyone involved should have training on the biosecurity plan and SOPs
- Training for all new workers
- Training at least annually
- Who should do this?
 - At Large farms?
 - At Small farms?
 - At Live Bird Markets? Link to licensing?

Monitor the Effectiveness of the Biosecurity Plan

- Disease surveillance
- Biosecurity checklist audit
- Biosecurity plan audit
- SOP audit
- Make changes whenever they are needed

Activity 8.1: Preview Simple Biosecurity Plans and SOPs

- Tomorrow you will be writing a plan. The basis of that plan can be one of these examples:
 - Commercial Farm
 - Urban Live Bird Market
 - Effective plans also have SOPs (see example and template at the end of the manual), with details on how to do activities (see example of procedure details):
 - Thoroughly clean and wash your stall weekly
 - REVIEW Checklists A,B&C, Plans and Activities Tonight in Preparation for Tomorrow!!!!

Activity 8.2: Simple Biosecurity Plans

1. Using your selected site, work through the Biosecurity Planning activity in your manual.
2. For one of the selected biosecurity measures for implementation, write an SOP, with details on how to do activities
 - see the manual for Example
 - see the manual for a Template

Biosecurity Planning Timing

- 9:00-10:00: Describe Setting
- 10:00-11:00 Evaluate Biosecurity
- 11:30-12:00 Prioritize Biosecurity Measures
- 12:00-1:00 Write Plan and SOP
- 2:00-3:00 Decide how your group will:
 - Describe your setting
 - Present your plan
 - TEACH us your SOP
- 3:30 Group Presentations

Activity 8.3: Reflection

- What are the 3 most important learning points that you want to remember from this discussion about biosecurity planning?
- How could this part of the training experience have been improved?