



ONE HEALTH: COORDINATION OF AGENCIES FOR ZOO NOTIC DISEASE CONTROL from an Agricultural Perspective

Zoonotic Disease Update
June 23, 2011
Clarksville, MD

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Maryland Department of Agriculture

Zoonotic Disease Control in Maryland

- ONE HEALTH OVERVIEW
- AGENCY COORDINATION
 - ROUTINE PREVENTIVE HEALTH PROGRAMS
 - EMERGENCY RESPONSE ACTIONS
 - OPPORTUNITIES FOR COORDINATION
- TTX: AVIAN INFLUENZA IN A LAYER FLOCK
 - ROLES AND RESPONSIBILITIES
 - GAPS IDENTIFIED DURING 2011 AI EXERCISE



ONE HEALTH

“One Health is the collaborative effort of multiple disciplines – working locally, nationally, and globally – to attain optimal health for people, animals and our environment.”

AVMA

HISTORY OF ONE HEALTH



HISTORY OF ONE HEALTH:

DISCIPLINE

- HUMAN MEDICINE
- VETERINARY MEDICINE
- PUBLIC HEALTH/
• EPIDEMIOLOGY/
• ENVIRONMENTAL HEALTH/
• SANITARY ENGINEERING
- ANIMAL CONTROL
- WILDLIFE/NATURAL RESOURCES
MANAGEMENT

ORIGIN

- 400 BC - HIPPOCRATES



Relief on the sarcophagus of Ptolemy, depicting the physician Asclepius, showing Hippocrates.

HISTORY OF ONE HEALTH:

DISCIPLINE

- HUMAN MEDICINE
- **VETERINARY MEDICINE**
- PUBLIC HEALTH/EPI/EH/SE
- ANIMAL CONTROL
- WILDLIFE/NATURAL
RESOURCES MANAGEMENT

ORIGIN

- 200 BC King Asoka, India
- 1900 BC Egypt
- 1761 First Vet School,
Lyon, France
- 1876, Daniel Salmon, DVM



Daniel E. Salmon, DVM



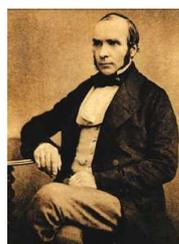
HISTORY OF ONE HEALTH:

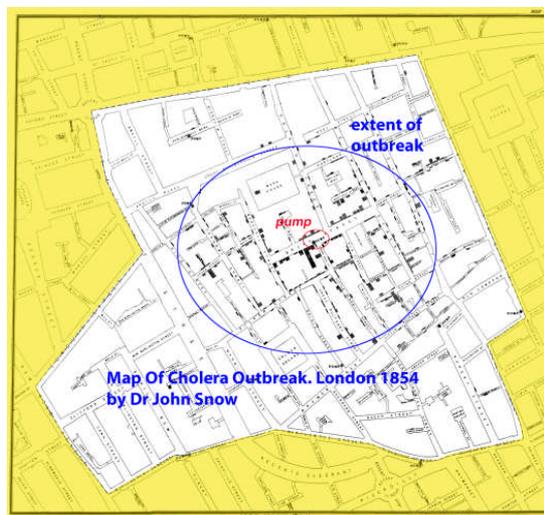
DISCIPLINE

- HUMAN MEDICINE
- VETERINARY MEDICINE
- **PUBLIC HEALTH/
EPIDEMIOLOGY/
ENVIRONMENTAL HEALTH/
SANITARY ENGINEERING**
- ANIMAL CONTROL
- WILDLIFE/NATURAL RESOURCES
MANAGEMENT

ORIGIN

- 1854 **JOHN SNOW**





BROAD STREET PUMP 1854: TRACEBACKS DISPUTED MIASMA THEORY
 GERM THEORY OF DISEASE: HINDU, 36 BC VARRO/SWAMPS, KOCH'S POSTULATES
 1890/ANTHRAX (MICROSCOPES ASSISTED IN PROVING CONCEPT)

HISTORY OF ONE HEALTH:

DISCIPLINE

- HUMAN MEDICINE
- VETERINARY MEDICINE
- PUBLIC HEALTH/EPI/EH/SE
- **ANIMAL CONTROL**
- WILDLIFE/NATURAL RESOURCES MANAGEMENT

ORIGIN



- **DOG CONTROL**

HISTORY OF ONE HEALTH:

DISCIPLINE

- HUMAN MEDICINE
- VETERINARY MEDICINE
- PUBLIC HEALTH/EPI/EH/SE
- ANIMAL CONTROL
- **WILDLIFE/NATURAL RESOURCES MANAGEMENT**

ORIGIN



- **Gamekeeping for Hunting**
- **1933 Aldo Leopold "Game Management"**

PRINCIPLES OF ONE HEALTH:

Use "Case Management Team" concept for Interspecialty/Interagency Cooperation

DISCIPLINE/"SPECIALTY"

- HUMAN MEDICINE
- Physicians, nurses, psychologists, social workers, teachers
- VETERINARY MEDICINE
- PUBLIC HEALTH/EPI/EH/SE
- ANIMAL CONTROL
- **WILDLIFE/NATURAL RESOURCES MANAGEMENT**

ROOT CAUSES

- Genetics
- Environment (Bio, Chemical, Physical)
- Husbandry/Nutrition
- Social/Stress
- Education
- Financial
- Access to Medical Care

Historic AG Focus: Economic Impact

Species/ Cash Receipts

- Cattle & Calves \$ 81,000,000
- Dairy (Milk) \$ 186,000,000
- Poultry \$ 565,000,000
- Horse Racing \$ 700,000,000
- Sheep & Lambs \$ 1,010,000
- Swine \$ 6,900,000



- Pets ??????
- Wildlife Resources ????
- Human Health Priceless



USDA APHIS VETERINARY SERVICES 2015 AND BEYOND: ONE HEALTH GOALS

- **BEYOND ERADICATION AND CONTROL:**
Support locally important One Health activities other than JUST regulatory diseases (e.g. TB, Brucellosis)
- Develop pre-harvest food safety policy (e.g. antibiotic use, sanitation)
- Provide veterinary support with “Veterinary Services Assessment Teams”

DISEASE CONTROL: THE GAME

- PREVENTION
- SURVEILLANCE/DETECTION
- RESPONSE
- CONTROL
- RECOVERY

DISEASE CONTROL: THE PLAYERS

Disease Control Team



Combatants



DISEASE CONTROL: THE STRATEGY

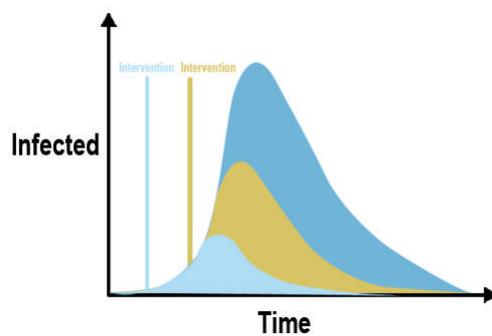
ROUTINE PREVENTIVE MEASURES

- SURVEILLANCE
- OUTREACH & EDUCATION
- REGULATORY CONTROLS
- ENGINEERING,
ADMINISTRATIVE,
PERSONAL PROTECTION
CONTROLS

EMERGENCY RESPONSE MEASURES

- RAPID DETECTION
- RAPID NOTIFICATION
- RAPID
ISOLATION/QUARANTINE
- RAPID CONTROL MEASURES
 - DEPOPULATION
 - ISOLATION
 - VACCINATION
- EFFICIENT COORDINATION

Surveillance, Detection, & Intervention



Time to Outbreak Discovery:

23 days average

Maryland One Health Bulletin

- Near Real Time Reporting of Zoonotic and other Diseases of Significance
- Maryland Department of Agriculture
- Maryland Department of Health and Mental Hygiene
- Maryland Department of Natural Resources

**COORDINATION OF
ROUTINE PREVENTIVE MEASURES for Zoonotic Diseases**

Livestock & Poultry Zoonotic Dz	Detected in Livestock or Poultry in Maryland - Past 12 months
• RABIES	• 4
• TUBERCULOSIS	• 0
• SALMONELLA	• 3 (<i>Salmonella</i> Altona)
• AVIAN INFLUENZA	• 0
• BRUCELLOSIS	• 0
• SWINE INFLUENZA (H1N1)	• 0 (+100 H3N2 positive)



Rabies Testing



- **If human exposure is determined, DHMH and local health department have lead on case**
- Farmers have **close** contact with exposed animals
- If livestock on property, contact MDA for notification and evaluation
- Cattle, other livestock usually NOT vaccinated
- Horses often not vaccinated



Rabies Testing



- If ruminant is exposed and requires testing, contact MDA to acquire sample first so that obex can be taken for BSE (“Mad Cow”) surveillance
- Sample should be submitted to Frederick or Salisbury Laboratories for brain removal
- Treating Vet should be able to remove head; MDA can assist as needed

FARM AND ANIMAL CONDITIONS: IDEAL



REALITY



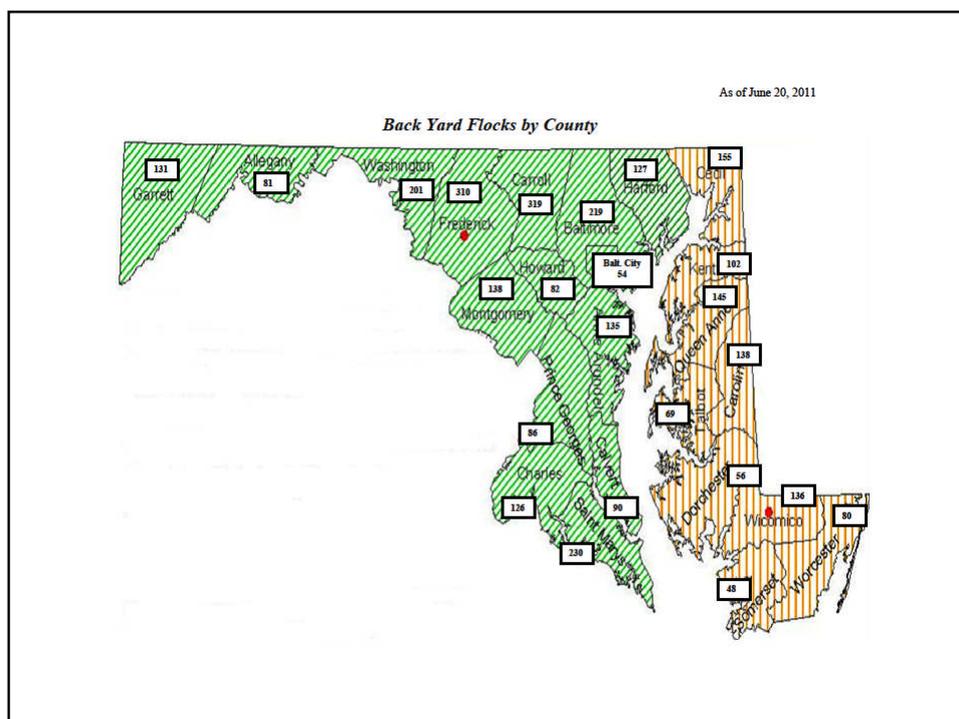
POULTRY HEALTH: Backyard Flock vs. Layer House



Big AGRICULTURE vs. “Traditional” Agriculture

Diseases don’t know the difference

- Zoonotic disease hazards are evaluated and controlled in “commercial” agriculture
- “Backyard” and small farmers may not be informed of disease prevention principles
- Small farming operations are exempt from regulation, oversight and surveillance



Coordination of
ROUTINE ZOO NOTIC DISEASE PREVENTIVE MEASURES:
Roles and Responsibilities

Strategy

- SURVEILLANCE
- OUTREACH & EDUCATION
- REGULATORY CONTROLS
- ELIMINATION, ENGINEERING, ADMINISTRATIVE, PERSONAL PROTECTION CONTROLS

Agency Actions

- MDA & DNR, USDA, DHMH, FD
- MDA AH, UMD EXTENSION, DNR, LOCAL HEALTH, DHMH, USDA, CDC
- MDA, DHMH, USDA, FDA, DNR
- INDUSTRY/AGENCY
FOUR PRONG APPROACH:
 - ERADICATION
 - VENTILATION, FILTERING, VACCINATION
 - TRAINING IN HAZARDS AND PROCEDURES
 - PPE: RESPIRATORS, GLOVES, TYVEK, BOOTS (BIOSECURITY)

Coordination of
ROUTINE PREVENTIVE MEASURES:
GAPS IN STRATEGIC MEASURES

Strategy

- SURVEILLANCE
- OUTREACH & EDUCATION
- REGULATORY CONTROLS
- ELIMINATION, ENGINEERING, ADMINISTRATIVE, PERSONAL PROTECTION CONTROLS

Agency Actions

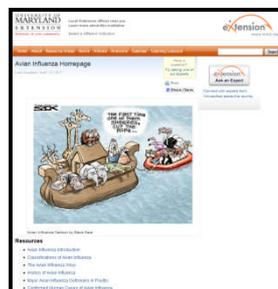
- NOTIFICATION TO STAKEHOLDERS (MOHB) OF AT RISK PREMISES AND DISEASE DETECTION
 - LOCAL HEALTH, ANIMAL CONTROL, DHMH
- IMPROVE WEBSITE(S) TO LINK TO UMD EXTENSION, DHMH, DNR, USDA, CDC INFORMATION SITES & SOCIAL MEDIA, PRESS.
 - Notify us of new online materials!
 - Add to Poultry Premise Database
- POULTRY REGULATIONS UNDER REVIEW: INPUT FROM LOCAL, STATE AGENCIES, INDUSTRY, OTHER STAKEHOLDERS TO BE SOLICITED
- INDUSTRY OCCUPATIONAL HEALTH INITIATIVES; O/E, INCREASE KNOWLEDGE BASE – DEPDTF
- PUBLIC EDUCATION TO PROMOTE USE OF CONTROL MEASURES, BIOSECURITY

University of Maryland Extension Poultry Biosecurity Program

❖ **Community of Practice:**

- Avian influenza information for the general public from university faculty.

www.extension.org/pages/24425/avian-influenza-homepage



❖ **Quick Reference Guide:**

- Avian influenza prevention, preparedness, response and recovery for emergency responders.

www.scribd.com/doc/46660623/Quick-Reference-Guide-for-Emergency-Responders



University of Maryland Extension Poultry Biosecurity Program

❖ **Moodle Courses**

Free online avian influenza certification courses

- **Backyard Flock Owners:**
<http://campus.extension.org/course/view.php?id=423>
- **Youth and 4-H Members:**
<http://campus.extension.org/course/view.php?id=285>
- **Emergency Responders:**
<http://campus.extension.org/course/view.php?id=422>



❖ **Second Life**

- Virtual hands on biosecurity training for backyard flock owners.

<http://secondlife.com> on Morrill3

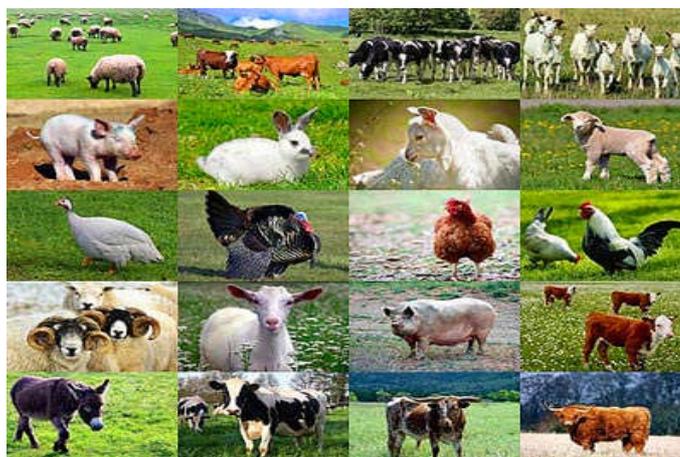


RESPONSE TO AN OUTBREAK OF HIGHLY PATHOGENIC AVIAN INFLUENZA IN MARYLAND TABLE TOP EXERCISE

March 3, 2011
Eastern Shore Hospital Center
Cambridge, MD

Sponsored by: Maryland Department of Agriculture

**Approach the same for
Any highly pathogenic
zoonotic disease**



Overarching Goals

For HPAI preparedness, response, and recovery:

- Identify roles, responsibilities, objectives, and actions of organizations
- Develop a consensus strategy
- Improve coordination

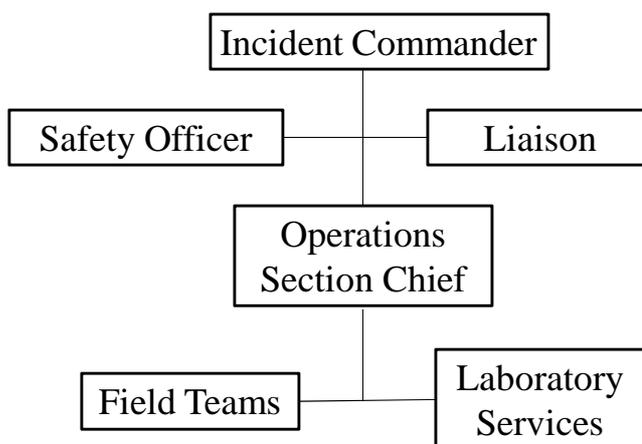
MODULE 1: Initial Animal Health Response Initial Report Received



MODULE 1: Initial Animal Health Response
Outbreak Starts at Backyard Flock and Layer House



MODULE 1: Initial Animal Health Response
MDA Programmatic Response



Module 1: Initial Animal Health Response

Day 2 Monday March 7 (0700 hrs)

Inject 2: Risk-Based Field Work Begins

The MDA Incident Commander deploys separate field teams to the two subject facilities. The Teams are comprised of a veterinarian and animal health inspector. Each Team is equipped with personal protective equipment, field necropsy kits, sample and specimen bags, and Blackberry devices and cell phones. The Incident Commander has directed the teams to conduct initial investigations and to then immediately contact Incident Command for further instructions.

Module 1: Initial Animal Health Response

Day 2 Monday March 7 (1300 hrs)

Inject 3: Field Report

The field teams report the following:

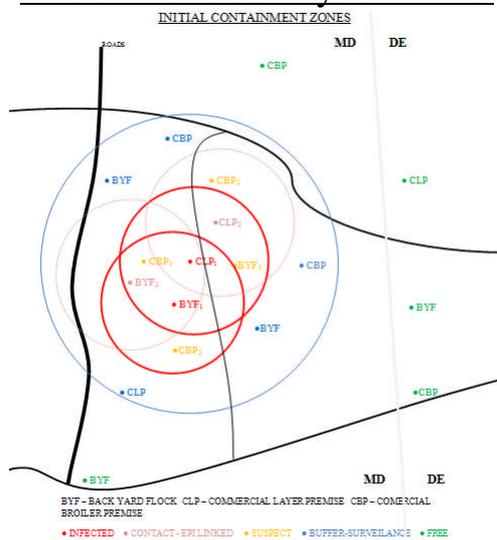
At suspect CLP₁, there are six separate houses each containing 85,000 birds. In two of these houses, there is increased morbidity and mortality (currently at 15%). Signs started on Saturday March 5 and included decreased egg production. Birds are exhibiting signs of respiratory infection. From CLP₁, which processes shell eggs, washed and sanitized eggs were shipped up to March 6. This team contacted two neighboring CLPs by phone, and the operators reported no signs or indications of disease. However, at CLP₂, neighboring the Infected Premise CLP₁, the feed source is shared creating an epidemiological link.

At suspect BYE₁ that initially housed 200 birds, high mortality (currently at 50%) reported with initial signs occurring on Friday March 4. Birds had been slaughtered, dressed, and sold on-farm until March. Shell eggs had also been sold until March 6. The MDA team, based on phone contacts to operators, reports no signs of disease at two neighboring BYFs, however, an epidemiological link was established with BYE₂ as a result of person traffic.

Based on phone contacts made by Incident Command to several neighboring commercial broiler premises (CBP) with 50,000 – 60,000 birds each, there are no signs of disease and no epidemiological links established. Birds from CBP₁ are scheduled to be shipped for processing within 48 hours.

Module 1: Initial Animal Health Response

Location of Poultry Facilities



TASK 2: Field Investigation, Sample Accession, and Transport PART 2

Questions for discussion:

1. What immediate actions are prudent, necessary, or mandated based on differential diagnoses?
2. Are alternate methods of control and containment other than depopulation available?
3. Which plans are or have been activated at this point?
4. How is immediate action at facilities authorized?

Module 1: Initial Animal Health Response
Laboratory work begins



Module 1: Initial Animal Health Response
Day 2 Monday March 7 (1400 hrs)
Inject 4: Laboratory testing begins

Samples consisting of tracheal, oropharyngeal, and cloacal swabs and dead birds (double-bagged) were received at the Salisbury Animal Diagnostic Laboratory under chain of custody. The laboratory which is part of the National Animal Health Laboratory Network prepared and tested the samples using real time reverse transcriptase polymerase chain reaction (RRT-PCR) to determine whether a virus was of H5 or H7 sub-type. Sample preparation and testing was completed in approximately 4 hours.

TASK 3: Animal Health Laboratory Testing

Assuming HPAI:

1. WHAT IS THE INCIDENT COMMAND STRUCTURE?
2. WHO AND HOW ARE INCIDENT COMMAND, LAB AND FIELD TEAMS COORDINATED?
3. ARE RESOURCES, STAFFING, CONTINGENCY PLANS, AND CONTINUITY OF OPERATIONS PLANS ADEQUATE TO ENSURE QUICK, RELIABLE, AND CERTIFIED RESULTS?

MODULE 1: Initial Animal Health Response

DAY 2 Monday March 7 (2000 hrs)

INJECT 5: Presumptive Test Results

The Salisbury Animal Health Diagnostic Laboratory reports presumptive H5 positive AIV. Samples were shipped to NVSL Ames Laboratory for confirmation, sub-typing, virus isolation, and pathogenicity testing. Per existing protocol the presumptive testing results were reported to the following:

- *Maryland State Veterinarian, Assistant State Veterinarians, and Animal Health Section Operations;*
- *USDA Area Veterinarian In Charge;*
- *USDA Veterinary Epidemiologist;*
- *Delaware State Veterinarian;*
- *Virginia State Veterinarian; and*
- *Lasher Labs – University of Delaware*

At-Risk AG Infrastructure



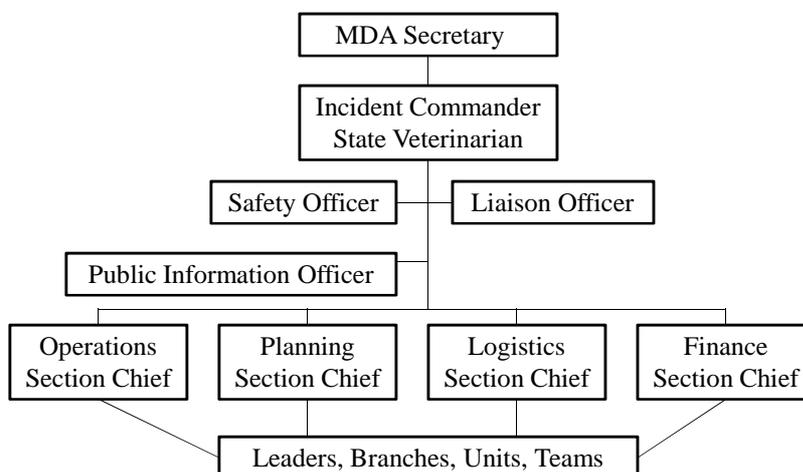
TASK 4: Initiate Incident Command System and Action Plans

Questions for discussion:

Based on H5 presumptive positive report:

1. What should be the current ICS structure?
2. Provide details of an Action Plan for needed, prudent, and mandated actions and for triggering follow-on notifications and communications
3. Describe the current roles of each constituent of the group
4. Identify response plan(s) being used

Module 1: Incident Command System
MDA Departmental Response



MODULE 2: Coordination to Ensure Animal and Public Health

ONE HEALTH APPROACH



MODULE 2: Coordination for Animal/Public Health

DAY 4 Wednesday March 9 (0800 hrs)

INJECT 6: Update on Poultry and Poultry Products

- *Poultry morbidity at the commercial layer premise has reached 65%; classic AI signs in birds.*
- *Based on investigations by MDA Food Quality Assurance Program, CLP, has:*
 - *1) voluntary recalled the shell eggs distributed from March 1 through March 6 (18,000 cases of eggs);*
 - *2) alerted the FDA through the Reportable Foods Registry; and*
 - *3) began evaluating the options for disposition of the 9,000 cases of eggs produced between March 6 and March 8.*

MODULE 2: Coordination for Animal/Public Health

DAY 4 Wednesday March 9 (0800 hrs)

INJECT 6: Update on Poultry and Poultry Products

- *The backyard flock has a similar mortality.*
- *No on-farm sales of eggs or poultry have occurred since March 6.*
- *Currently, there are no reports of poultry disease at commercial broiler facilities and*
- *Poultry products are being processed and distributed.*

ROLES AND RESPONSIBILITIES:
WHAT ARE YOU AND YOUR AGENCY DOING NOW???

- LOCAL HEALTH
- STATE HEALTH
- ANIMAL CONTROL
- DEPT OF NATURAL RESOURCES
- EMERGENCY PREPAREDNESS OFFICERS
- DEPT OF ENVIRONMENT
- MEMA
- OTHER STATE AGENCIES
- FEDERAL AGENCIES

MODULE 2: Coordination for Animal/Public Health

DAY 4 Wednesday March 9 (0830 hrs)

INJECT 7: Release of Information

Based on recent events, the MDA Secretary authorizes a press release to inform the public and the agricultural community of the disease outbreak and to provide information on potential ramifications and risks.



***TASK 5: Public Information and
Risk Communication***

**QUESTIONS FOR AGRICULTURE, PUBLIC HEALTH
WILDLIFE AGENCIES AND INDUSTRY:**

1. How is the information release coordinated between stakeholders?
2. What information is provided and how?
3. Do individual stakeholders have talking points, pre- approved messages, message mapping?
4. Is there information that needs to be withheld?

**MODULE 2: Coordination for Animal/Public Health
Disease Containment**



MODULE 2: Coordination for Animal/Public Health
DAY 4 Wednesday March 9 (0900 hrs)
INJECT 8: Containment: Quarantine, Biosecurity, C&D, Depopulation, etc.

The MDA in coordination with stakeholders makes widespread direct interventions at poultry premises to contain animal disease outbreak and mitigate negative outcomes.

The MDA Secretary has authorized the use of the Department's Agricultural Response Teams and any other resources available to the Department.

Agricultural Responders Essential Equipment

1 Farm Infected		1 Field Team		3 People		1 Lab		Quantity	Amount	Ca/Ba/Ea	Stps	Price/Unit	Total Cost
Equipment	#Person	Total #	Kit Lab	Total #	Total	Equipment							
Yuckem Hooded Coveralls	5	15	8	8	23	Yuckem Hooded Coveralls	23	1	Ca	XL		\$ 62.82	\$ 62.82
Yuckem Hooded Coveralls	2	6	2	2	8	Yuckem Hooded Coveralls	8	1	Ca	XL		\$ 117.26	\$ 117.26
latex HALZMAT boots	5 pair	15	8	8	23	latex HALZMAT boots	23	23	Ea	BL, BK, & TXXL		\$ 2.05	\$ 47.15
Nitrile gloves	1 box	3 boxes	1 box	1 box	4	Nitrile gloves	4	1	Bc			\$ 10.00	\$ 10.00
Indirect Vent Goggles	1	3	4	4	7	Indirect Vent Goggles	7	7	Ea			\$ 1.40	\$ 9.80
MSA Multi-gas & P100 Filters	2 pair	12	2 pair	2 pair	12	MSA Multi-gas & P100 Filters	12	12	Ea	3 Pack		\$ 18.04	\$ 216.48
MM8511 N 95 Respirator	5	15	8	8	23	MM8511 N 95 Respirator	23	2	Bc	35low		\$ 12.45	\$ 24.90
MM8293 N 100 Respirator	2	6	4	4	10	MM8293 N 100 Respirator	10	10	Ea			\$ 8.25	\$ 82.50
Chem Tape	1	3	1	1	4	Chem Tape	4	4	Ea			\$ 26.60	\$ 106.40
Medicous Waste bags 10 gal	5	15	5	5	20	Medicous Waste bags 10 gal	20	1	Bc	10 gal		\$ 26.68	\$ 26.68
Disinfectant	1	3	1	1	4	Disinfectant	4	4	Ea	10 lbs		\$ 75.00	\$ 300.00
NV Foam	0	1	0	0	1	NV Foam	1	1	Ea	55 gal		\$ 841.50	\$ 841.50
First Aid Kit	1	2	1	1	4	First Aid Kit	4	4	Ea	1 person		\$ 34.00	\$ 136.00
												Total	\$ 1,981.69

2 Farms Infected		2 Teams		6 People		1 Lab		Quantity	Amount	Ca/Ba/Ea	Stps	Price/Unit	Total Cost
Equipment	#Person	Total #	Kit Lab	Total #	Total	Equipment							
Yuckem Hooded Coveralls	5	30	20	20	50	Yuckem Hooded Coveralls	60	2	Ca	1L, 1 XL		\$ 62.82	\$ 125.64
Yuckem Hooded Coveralls	2	12	6	6	17	Yuckem Hooded Coveralls	17	2	Ca	1L, 1 XL		\$ 117.26	\$ 234.52
latex HALZMAT boots	5 pair	30	20	20	50	latex HALZMAT boots	50	50	Ea	17L, 17XL, 16,XXXL		\$ 2.05	\$ 102.50
Nitrile gloves	1 box	6 boxes	2 boxes	2 boxes	8	Nitrile gloves	8	1	Bc			\$ 10.00	\$ 10.00
Indirect Vent Goggles	1	6	4	4	10	Indirect Vent Goggles	10	10	Ea			\$ 1.40	\$ 14.00
MSA Multi-gas & P100 Filters	2 pair	12	4 pair	4 pair	12	MSA Multi-gas & P100 Filters	12	12	Ea	3 Pack		\$ 18.04	\$ 216.48
MM8511 N 95 Respirator	5	30	20	20	50	MM8511 N 95 Respirator	50	3	Bc	35low		\$ 12.45	\$ 37.35
MM8293 N 100 Respirator	2	12	8	8	20	MM8293 N 100 Respirator	20	20	Ea			\$ 8.25	\$ 165.00
Chem Tape	1	6	1	1	7	Chem Tape	7	7	Ea			\$ 26.60	\$ 186.20
Medicous Waste bags 10 gal	5	30	5	5	35	Medicous Waste bags 10 gal	35	1	Bc	10 gal		\$ 26.68	\$ 26.68
Disinfectant	1	6	2	2	8	Disinfectant	8	8	Ea	10 lbs		\$ 75.00	\$ 600.00
NV Foam	0	1	0	0	1	NV Foam	1	1	Ea	55 gal		\$ 841.50	\$ 841.50
First Aid Kit	1	6	1	1	7	First Aid Kit	7	7	Ea	3 person		\$ 34.00	\$ 238.00
												Total	\$ 2,797.87

**MODULE 2: Coordination for Animal/Public Health
Depopulation**



**MODULE 2: Coordination for Animal/Public Health
Disposal**



MODULE 2: Coordination for Animal/Public Health

DAY 4 Wednesday March 9 (0900 hrs)

INJECT 8: Containment: Quarantine, Biosecurity, C&D,
Depopulation, etc.

The MDA in coordination with stakeholders makes widespread direct interventions at poultry premises to contain animal disease outbreak and mitigate negative outcomes. The MDA Secretary has authorized the use of the Department's Agricultural Response Teams and any other resources available to the Department.

MODULE 2: Coordination for Animal/Public Health

DAY 4 Wednesday March 9 (1600 hrs)

INJECT 9: Disease Spread

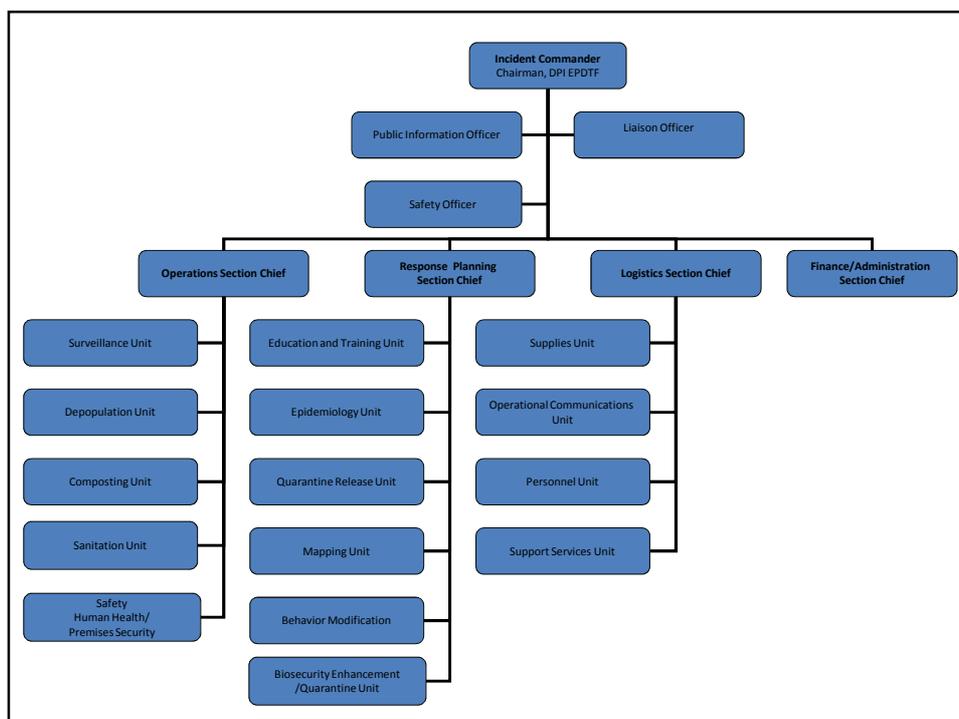
Based on pre-slaughter surveillance of chickens using Flu Strips, presumptive positive AI is reported from CBP₁, a Delmarva Poultry Industry commercial broiler flock premise.



***TASK 6: Containment Actions: Quarantines,
Biosecurity, Restrict Movement, C&D,
Depopulations, etc. PART 2***

Questions for discussion: Based on spread to broiler industry:

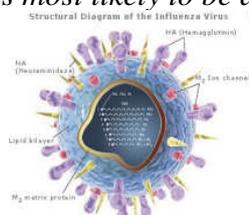
1. Does the Incident Command System change?
2. What new necessary, prudent, or mandated actions come into play?
3. Are the available resources for response affected?
4. Does the risk assessment change?



MODULE 2: Coordination for Animal/Public Health

DAY 4 Wednesday March 9 (1800 hrs) INJECT 10: NVSL Reports H5N2

The National Veterinary System Laboratory in Ames, Iowa reports to the Salisbury Animal Diagnostic Laboratory that it has confirmed H5 positive AIV and that further sub-typing using PCR indicates a H5N2 strain. The genetic sequencing of the virus is consistent with HPAI. Viral isolation and definitive pathogenicity are pending with results most likely to be available on or about Day 9.



MODULE 2: Coordination to Ensure Animal and Public Health Operation Centers



TASK 7: Use of Command Centers and Joint Information Center

Questions for discussion:

1. From what location(s) is response led –where are command centers?
2. How is the response organized, ICS or UC?
3. Are electronic communications systems (i.e. WebEOC) used?
4. How are the organizations' PIOs coordinated?

TASK 8: Ensuring the Safety of Food Supply
Shell Egg Processing Facility



TASK 8: Ensuring the Safety of Food Supply
Poultry Processing Plant



TASK 8: Ensuring the Safety of Food Supply

Questions for discussions :

1. Describe needed, prudent, and mandated actions such as trace-forward and trace-back, quarantine, embargo, recall, food diversion, risk communication, use of reportable foods registry, and product destruction
2. How are food protection actions coordinated and legally authorized or ordered?
3. Describe needed resources and potential sources of resources.
4. Are special precautions (health and safety, environmental, or bio-security) required for the disposal of potentially contaminated foods?

MODULE 2: Coordination for Animal/Public Health

DAY 6 Friday March 11 (1400 hrs)

INJECT 11: Poultry worker febrile illness

*A person who works at the commercial layer facility
CLP₁ reports to the local health department that as of
0800 hrs Day 6 they have a flu-like illness with fever.*

***TASK 9: Veterinary and Public Health
Disease Control Part 1***

Questions for discussion:

1. Identify and characterize the risks to public and animal health and describe how a comprehensive and integrated risk assessment can be achieved
2. Describe needed, prudent, and mandated actions
3. Describe the investigational protocols and surveillance systems used for disease control.
4. Identify how human health operations are incorporated into the Incident Command System

MODULE 2: Coordination for Animal/Public Health

DAY 9 Monday March 14 (0900 hrs)

INJECT 12: Human health update

The poultry worker reporting febrile illness is not infected with H5N2 and is recovering from a flu-like illness. No new cases have been reported. DHMH syndromic and other surveillance show no increase in respiratory illness within Maryland.

MODULE 2: Coordination for Animal/Public Health

DAY 9 Monday March 14 (1600 hrs)

INJECT 13: Poultry health update

Poultry depopulation has occurred at all infected premises and additional premises as directed by Incident Command. Approximately 1,200,000 chickens in 22 houses were depopulated. All facilities have undergone cleaning and disinfection. Investigations have not revealed any increased poultry morbidity or mortality within restriction zone and no new reports of poultry disease have been received. Testing of poultry at premises not part of depopulation protocol are negative for AI.

NVSL report confirms that virus is H5N2 and is a highly pathogenic strain with 75% lethality.

***TASK 9: Veterinary and Public Health
Disease Control Part 2***

Questions for discussion:

Based on no indication of current disease:

1. What surveillance continues and for how long?
2. What information is needed and what conditions established to transition from response to recovery?
3. Are existing resources available for extended surveillance?

MODULE 2: Coordination for Animal/Public Health

DAY 25 Wednesday March 30 (1200 hrs)

INJECT 14: Disease update

No signs or reports of poultry disease. No reports of human disease. Human health surveillance does not show increased flu-like illness in population. Testing of poultry and waterfowl continues to be negative for AI. Environmental swab testing and the use of sentinel birds suggest that C&D at all disinfected premises was efficacious.



MODULE 3: Recovery

DAY 25 Wednesday March 30 (1300 hrs)

INJECT 15: Disaster designation

The MDA Secretary receives authorization from the Governor to initiate a formal request for federal disaster assistance. The Governor also requests that all State agencies do what they can for community recovery.

***TASK 10: Restoring Public Confidence***

Questions for discussions :

1. What are the major elements to restoring public confidence in the safety of poultry and poultry products?
2. Are operations center(s) or joint information centers maintained to ensure this aspect of recovery?
3. What messaging and risk communication occur and which organization leads?

***TASK 11: Ending Restrictions and Restocking
Poultry***

Questions for discussion:

1. What actions are taken (needed, prudent, mandated)?
2. What are the pre-requisites for ending restrictions on movement of poultry and poultry products?
3. How is this aspect of recovery coordinated?

***TASK 12: Assistance, Support, Valuation, and
Indemnity***

Questions for discussion:

1. Identify all potential sources for assisting community and industry recovery : e.g. Financial, social, and mental support systems
1. What prerequisite actions must be taken to ensure indemnification and other economic support?

GET 'ER DONE!



Thank you!

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