

A “One Medicine” Approach to Influenza Preparedness

A North Carolina Perspective

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Presentation Overview

- Evolution of “One Health” concept between NCDA&CS, USDA, Public Health, industry, and others
- History of state level “One Health” preparedness activities
- H5N1 Avian and pH1N1 influenzas as models for collaborative influenza preparedness

Core Principles

- ❖ Surveillance in all species is the foundation of pandemic influenza preparedness
- ❖ It is in the best interest of both public health and animal health that interspecies transmission does not occur
- ❖ NCDA prides itself on its ongoing cooperative relationship with USDA, PH, and industry, enhanced through collaboration and trust, with decisions driven by science

Challenges in Integrated Disease Response

- Prior to 2001, the State Veterinarian's field staff, diagnostic lab system, Public Health, state Emergency Management, Wildlife Resources, USDA, etc. were "stove piped"- less than ideal collaboration
- Establishment of Dept. of Homeland Security with mission of assuming some of USDA's traditional roles- "bioterrorism"

Disease Events/History

- 1999- **Hurricane Floyd**- mass mortality and secondary disease/public health impact
- 2001- **Foot and Mouth Disease** in UK- development of response plans: biomass disposal impact on PH and environment
- 2001- **9/11 World Trade Center**- increased emphasis on bioterrorism
- 2000- Confirmation of **West Nile Virus** in NC wild bird- later evolution of the Arboviral Task Force
- 2002- **LPAI H7N2** event- our first emergency disease response incident
- 2003- **BSE (Mad Cow Disease)**- first confirmed US case

Disease Events/History- cont.'d

- 2003- **Monkeypox** outbreak in the US
- 2003- **SARS**- EP Division provides facility surveillance mapping support to PH
- 2004- **E. coli 0157:H7** at state fair- coordination with PH
- 2005- **H5N1 “Bird Flu”** threat and preparedness
- 2007- **Melamine contaminated swine feed**- USDA, FDA , PH components
- 2008- **LPAI H7N7** in mixed species backyard flock
- 2009- **Pandemic H1N1 influenza**- human, swine, other species

Remedies/Accomplishments

- ✓ 2002, Establishment of **Emergency Programs division** within the department
- ✓ **ICS training** of division and department employees with DHHS liaison
- ✓ PH and animal industry **education and collaboration** in zoonotic disease planning

Public Health, NCDA, USDA, and Industry Historical Collaboration

- **PH Rapid Response Training (2007)**
- **Poultry Strike Team Trainings with industry**
- **“Operation Flock Together” -Avian Influenza functional exercise (2008)**
- **Vectorborne Disease Task Force- EEE, WNV**
- **Annual “One Medicine” Symposium**

Collaboration- cont.'d

- **PHRST teams-** MD, Epidemiologist, Industrial Hygienist, Nurse, Veterinarian, etc. Both agencies have worked to build the local relationship
- **DHHS and USDA pass through funding** to NCDA Emergency Programs division:
 - PH Liaison Veterinarian
 - PH Surveillance Veterinarian
 - FAD training, PPE, communication equipment
- **AI/Human Health Task Force- 2005**

AI/Human Health Task Force

- Created in June 2005.
- Members:
 - **NCDA&CS- Veterinary Division,**
Emergency Programs
 - **Division of Public Health -**
Immunization, Epidemiology, PHP&R
 - **USDA, APHIS**
 - **Local Health Directors** (Burke, Cumberland,
Duplin, Randolph, Wilkes, Union)
 - **Industry**



Goals of the Task Force

1. Improve communications between Ag, PH, USDA, industry & University for disease event planning and preparedness
2. Critique the NC HPAI Plan and fine tune
3. Address issues/concerns of the Poultry Industry
4. Address Responder safety and health



Pandemic Flu Taskforce Leadership

NCDA&CS' Principles of an Effective Disease Response

1. Data and information from which to make **informed, scientifically based** decisions
2. Established and exercised response plans and Incident Command Structure (ICS)
3. Accurate laboratory data with rapid turn around time- NCVDLS, SLPH, NVSL, CDC
4. **Preexisting working relationships**
5. Subject matter expertise- lab and ICS level
6. **Seamless communication and cooperation**

Pre- Existing Working Relationships

- USDA, APHIS, NVSL, NAHLN
- Industry
- State Public Health
- State Emergency Management, DENR, Wildlife Resources Commission
- Private veterinary practitioners, CVM
- Cooperative Extension, others

Pandemic H1N1 Challenges

- Emerging disease- unknown epidemiology in humans and other species
- Stigmatized with “swine flu” nomenclature
- Media attention and misinformation created mistrust within swine industry
- Lack of clear expectations for response between state, USDA, and public health- quarantine?? depopulation??
- Fear of irrational response leads to diminished sampling and surveillance for influenza viruses in swine
- Political trade restrictions drove decreased surveillance- **Not a food safety issue!**

Pandemic H1N1 coordinated planning

- April 21- CDC reports first human cases- CA
- April 24- Conference call- NPPC, AASV, State Vets- biosecurity ramp up
- May 1- Conference call- USDA AVIC's, SV's, CDC
- May 6 - NCDA industry partners call
- May 7- NCDA meeting with swine industry
- May 13- USDA, CDC, SV's call
- May 22- USDA draft surveillance and response plan released
- June 18- NCDA/swine industry meeting

Pandemic H1N1 Planning (cont'd)

- June 29- Industry and SV's meeting in Wash. DC with Dr. Clifford and staff (USDA, APHIS, VS)
- July 24- Industry, NCDA meeting with state Public Health director and staff
- USDA continues ongoing dialogue with CDC, Mexico and Canada, Homeland Security, swine industry, packers, state veterinarians, FSIS, and the National Governors Association

Industry/ DPH Coordination Meeting

July 24, 2009

- 17 attendees: NC Pork Council representatives; Dr.'s Engel, Moore, Williams, et al; NCDA&CS (Vet, EP, laboratory); 3 swine industry veterinarians

- Discussion items:
 - Industry overview, integrated flow, biosecurity, vaccination
 - Worker seasonal vaccination compliance
 - Response plan updates, human surveillance incorporation

- **“If it behaves like seasonal swine flu, the response will be seasonal”** Dr. Engel

- **DHHS’ primary role will be human/worker monitoring, and look to NCDA for lead agency role in swine infections**

Core Planning Completed

- August 13- USDA releases final Surveillance and Response Guidelines, Version 2
 - refined after state and industry input
 - CDC and Public Health agreed upon communications and talking points
 - “monitoring and controlled movement” rather than quarantine
 - media communication plan
 - case definitions and surveillance guidelines

ATTENTION

Our animals are
HEALTHY.
ARE YOU?

IF YOU ARE SICK or have been
in the last 7 days,
PLEASE DO NOT ENTER
the barn area.



Steve Troxler, Commissioner



North Carolina
Public Health
Lanier M. Cansler,
Secretary of the Department of
Health and Human Services

Future Challenges

- CDC Influenza Branch has stated response plan is appropriate – HOWEVER, they are not satisfied with current level of surveillance
- Ongoing discussions with CDC regarding a comprehensive swine surveillance program
- Influenza viruses ability to mutate necessitate coordinated surveillance and transparency in reporting to detect future novel variants.

Thank you

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IT'S DEFINITELY
HUMAN FLU.
SOUND THE ALARM!



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