HENDRICKS COUNTY HEALTH DEPARTMENT

PANDEMIC INFLUENZA & HIGHLY INFECTIOUS RESPIRATORY DISEASES

STANDARD OPERATING GUIDELINES

First Edition August 2006

Updated December 2007

355 S. Washington St. #210 Danville, Indiana 46122 317-745-9217 317-745-9218 fax Dr. David Hadley, Health Officer drhadley@ameritech.net 317-745-9531

Monica Smith, Nursing Director <u>msmith@co.hendricks.in.us</u> 317-745-9213

Cathy Grindstaff, Environmental Health Director cgrindstaff@co.hendricks.in.us 317-745-9609

Commissioners

David Whicker, President dawhicker@ccrtc.com 317-745-9221

Phyllis Palmer, Vice President ppalmer@indmasoncontractors.com 317-745-9221

> Eric Wathen ewathen@co.hendricks.in.us 317-745-9221

Authorization Signature Page

This plan has been reviewed and approved by:

Name of Health Officer		
Signature	Date	
Name of Nursing Director		
Signature	Date	
Name of Environmental Health Director		
Signature	Date	
County Commissioners		
Name		
Signature	Date	
Name		
Signature	Date	
Name		
Signature	Date	

ANNUAL REVIEW DOCUMENT

DATE	NAME/TITLE/SIGNATURE	DOCUMENT CHANGES (Page Number and Description)
12/07	Sarah Wortz, LPHC, Sarah Wortz	Pg. 2, updated Commissioners

TABLE OF CONTENTS

Annual Review Document4
Table of Contents5
Introduction
Planning Assumptions8
Federal and State Roles11
The Plan12
1. Command and Control12
2. Surveillance14
3. Prevention and Containment17
4. Emergency Response: Health Systems and Critical Infrastructure
5. Communicating with the Public25
Appendices26
A: Emergency Support Function # 1726
B: Flu Aid Predictions
C: Considerations for Avian Influenza
D: Health Care System Guidance
D: Health Care System Guidance
 D: Health Care System Guidance

Pandemic Influenza Response Packet

INTRODUCTION

Background

Influenza is a highly contagious viral disease, with epidemics of influenza affecting hundreds of thousands of people nearly every year. The ability for influenza viruses to "drift," or frequently make slight structural changes over time, results in the appearance of the different strains that circulate among the human population. Vaccines are developed to match the strains expected to circulate each year.

In contrast to the gradual drift process, the influenza virus can also change suddenly and dramatically, through "shift." Shift results in a new, or "novel" influenza virus to which very few people, if any, are immune. The potential for a pandemic exists if the novel virus has the ability to spread easily from person to person and can cause serious illness. It is important to note, however, that the influenza virus does not need to be novel to cause large-scale epidemics. The World Health Organization (WHO) has defined phases of a pandemic to assist with planning and response activities:

WHO Pandemic Phase	Overarching Public Health Goals
Inter-Pandemic Period <u>Phase 1</u> : No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals. If present in humans, the risk of human infection or disease is considered low	Strengthen influenza pandemic preparedness at the global, regional, national and sub national levels
<u><i>Phase 2</i></u> : No new influenza virus subtypes have been detected in humans. However a circulating animal influenza virus subtype poses a substantial risk of human disease	Minimize the risk of transmission to humans; detect and report such transmission rapidly if it occurs
Pandemic Alert Period <u>Phase 3</u> : Human infection(s) with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact. We are currently in this phase.	Ensure rapid characterization of the new virus subtype, notification and response to additional cases
<u>Phase 4</u> : Small cluster(s) with limited human-to-human transmission but spread is highly localized, suggesting that the virus is not well adapted to humans.	Contain the new virus within limited foci or delay spread to gain time to implement preparedness measures, including vaccine development
<u>Phase 5</u> : Larger cluster(s) but human-to-human spread still localized, suggesting that the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk)	Maximize efforts to contain or delay spread, to possibly avert a pandemic, and to gain time to implement pandemic response measures
Pandemic Period <u>Phase 6</u> : Pandemic – increased and sustained transmission in the general population	Minimize the impact of the pandemic

The Centers for Disease Control and Prevention (CDC) estimates that in the United States alone up to 200 million people would be infected if a pandemic were to occur, 50 million people would require outpatient care, two million people would be hospitalized and between 100,000 and 500,000 persons would die.

The impact of a pandemic is not measured only by how many people will die. If millions of people across the country get sick at the same time, major social consequences will occur. If many doctors and nurses become ill, it will be difficult to care for the sick. If the majority of a local police force is infected, the safety of the community might be at risk. If air traffic controllers are all sick at once, air travel could grind to a halt, interrupting not only business and personal travel but also the transport of life-saving vaccines or antiviral drugs. Therefore a vital part of pandemic planning is the development of strategies to address such potential problems.

Purpose

The purpose of the Standard Operating Guidance (SOG) *Pandemic Influenza and Highly Infectious Respiratory Diseases* is to provide an approach for the Hendricks County Health Department (HCHD) on how to respond before, during and after a pandemic situation. The HCHD response was through the guidance in the U.S. National Strategy for Pandemic Influenza (November 2005) and is intended as a companion to the Indiana State Department of Health Pandemic Influenza Plan (August, 2005). This SOG details the activities identified as the responsibility of the local health department within the state plan. It is imperative to interpret the HCHD Response Plan in the context of the state plan.

It is important to note that while the plan focuses on influenza, it is also intended to serve as the template for responding to large-scale outbreaks of other highly infectious respiratory diseases such as Severe Acute Respiratory Syndrome (SARS).

This SOG should be read and understood prior to a pandemic situation. It is a dynamic document that will be updated to reflect new developments in the understanding of the disease agent, its spread, treatment and prevention. The plan will also incorporate changes in response roles and improvements in response capability developed through ongoing planning efforts.

The primary goal of this document is the creation of a Pandemic Influenza Response Packet. This packet will contain a number of critical documents, including:

Local EMAs Response Plans and Contact List Local Health Departments Contact List Local Hospital Group Contact List Health Care Response Plans for each Hospital Funeral Directors/County Coroner Phone List Animal Control Contact List The Hendricks County Emergency Management Agency is responsible for the Hendricks County Comprehensive Emergency Management Plan, an "all-hazards" disaster plan that encompasses all County agencies. The HCHD has developed the HCHD Mass Prophylaxis Plan (MPP) as an Annex to this overall county plan.

PLANNING ASSUMPTIONS

Pandemic preparedness planning is based on assumptions regarding the evolution and impacts of a pandemic. Defining the potential magnitude of a pandemic is difficult because of the large differences in severity for the three 20th-century pandemics. While the 1918 pandemic resulted in an estimated 500,000 deaths in the U.S., the 1968 pandemic caused an estimated 34,000 U.S. deaths. This difference is largely related to the severity of infections and the virulence of the influenza viruses that caused the pandemics. The 20th century pandemics have also shared similar characteristics. In each pandemic, about 30% of the U.S. population developed illness, with about half seeking medical care. Children have tended to have the highest rates of illness, though not of severe disease and death. Geographical spread in each pandemic was rapid and virtually all communities experienced outbreaks.

Pandemic planning is based on the following assumptions about pandemic disease:

- 1. Susceptibility to the pandemic influenza subtype will be universal.
- 2. The clinical disease attack rate will be 30% in the overall population.
- 3. Illness rates will be highest among school-aged children (about 40%) and decline with age.
- 4. Among working adults, an average of 20% will become ill during a community outbreak.
- 5. Of those who become ill with influenza, 50% will seek outpatient medical care.
- 6. The number of hospitalizations and deaths will depend on the virulence of the pandemic virus. Estimates differ about 10-fold between more and less severe scenarios. Because the virulence of the influenza virus that causes the next pandemic cannot be predicted, two scenarios are presented below based on extrapolation of past pandemic experience.

Number of Episodes of Illness, Healthcare Utilization, and Death Associated with Moderate and Severe Pandemic Influenza Scenarios*

Characteristic	Moderate (1958/68-like)	Severe (1918-like)
Illness	90 million (30%)	90 million (30%)
Outpatient medical care	45 million (50%)	45 million (50%)
Hospitalization	865,000	9,900,000
ICU care	128,750	1,485,000
Mechanical ventilation	64,875	742,500
Deaths	209,000	1,903,000

* Estimates based on extrapolation from past pandemics in the United States. Note that these estimates do not include the potential impact of interventions not available during the 20th century pandemics.

- 7. Risk groups for severe and fatal infections cannot be predicted with certainty. During annual fall and winter influenza season, infants and the elderly, persons with chronic illnesses and pregnant women are usually at higher risk of complications from influenza infections. In contrast, in the 1918 pandemic, most deaths occurred among young, previously healthy adults.
- 8. The typical incubation period (the time between acquiring the infection until becoming ill), for influenza averages two days. We assume this would be the same for a novel strain that is transmitted between people by respiratory secretions.
- 9. Persons who become ill may shed virus and can transmit infection for one-half to one day before the onset of illness. Viral shedding and the risk for transmission will be greatest during the first two days of illness. Children will shed the greatest amount of virus and, therefore are likely to pose the greatest risk for transmission.
- 10. On average about two secondary infections will occur as a result of transmission from someone who is ill. Some estimates from past pandemics have been higher, with up to about three secondary infections per primary case.
- 11. In an affected community, a pandemic outbreak will last about six to eight weeks.
- 12. At least two pandemic disease waves are likely. Following the pandemic, the new viral subtype is likely to continue circulating and to contribute to seasonal influenza.
- 13. The seasonality of a pandemic cannot be predicted with certainty. The largest waves in the U.S. during 20th century pandemics occurred in the fall and winter. Experience from the 1957 pandemic may be instructive in that the first U.S. cases occurred in June but no community outbreaks occurred until August and the first wave of illness peaked in October.

(The above planning assumptions are listed in the *HHS Pandemic Influenza Plan* available at: <u>www.pandemicflu.gov</u>)

Issues surrounding prophylaxis and treatment are complex:

- The time from a candidate vaccine strain to the production of the first vaccine dosage could be six months or more.
- Once vaccine is available, it may take five months to produce an adequate supply of vaccine for the entire U.S. population (currently production capacity is approximately five million doses per week).
- Two doses of vaccine administered 30 days apart may be required to develop immunity to a novel virus.
- The federal government will purchase all influenza vaccine during a pandemic.
- A six to eight week course of antiviral is recommended for prophylaxis; a five day course is recommended for treatment.
- There is a limited supply of antiviral medications. Antiviral distribution to states will occur through the Strategic National Stockpile.

Local governments have the primary responsibility to provide public health, mental health and emergency medical services within their jurisdictions. State government will augment public health, mental health and emergency medical services that exceed the capabilities of the local government. The Federal Response Plan will support public health and medical activities as required by the State of Indiana in accordance with pre-established activation procedures.

Plans for responding to pandemic influenza are based on existing command and control templates developed at the local, state and regional levels, and integrate with existing emergency plans, activities and inventories.

FEDERAL AND STATE ROLES

The following is an excerpt from the U.S. Health & Human Services NVPO *National Influenza Preparedness and Response Plan*, Annex 1, *State and Local Health Departments Guidance*, August 2004

Federal Roles

The federal government is responsible for nationwide coordination of the pandemic influenza response. Specific areas of responsibility include the following:

- Surveillance in the U.S. and globally
- Epidemiological investigation in the U.S. and globally
- Development and use of diagnostic laboratory tests and reagents
- Development of reference strains and reagents for vaccines
- Vaccine evaluation and licensure
- Determination of populations at highest risk and strategies for vaccination and antiviral use
- Assessment of measures to decrease transmission (such as travel restrictions, isolation and quarantine)
- Deployment of federally purchased vaccine
- Deployment of antiviral agents in the Strategic National Stockpile
- Evaluation of the efficacy of response measures
- Evaluation of vaccine safety
- Deployment of the Commissioned Corps Readiness Force and Epidemic Intelligence Service
 Officers
- Medical and public health communications

State Roles

States will be individually responsible for coordination of the pandemic influenza response within and between their jurisdictions. Specific areas of responsibility include the following:

- Identification of public and private sector partners needed for effective planning and response
- Development of key components of pandemic influenza preparedness plan: surveillance, distribution of vaccine and antivirals and communications
- Integration of pandemic influenza planning with other planning activities conducted under CDC and the Health Resources and Services Administration's (HRSA) bioterrorism preparedness cooperative agreements with states (to include coordinated efforts of ISDH & ISHS)
- Coordination with local areas to ensure development of local plans as called for by the state plan and provide resources, such as templates to assist in the planning process
- Development of data management systems needed to implement components of the plan
- Assistance to local areas in exercising plans
- Coordination with adjoining jurisdictions

THE PLAN

1. Command and Control

An influenza pandemic is considered a national disaster. In Indiana, the Indiana Department of Homeland Security (IDHS) is the lead State agency for all emergency response. If an influenza pandemic were to occur, the Indiana State Department of Health (ISDH) would serve as the primary State agency for the medical and public health response to control and minimize the capacity of the pandemic virus to cause human disease. The ISDH will work with the Indiana Family and Social Services Administration (FSSA) to coordinate the mental health response for both responders and the community.

A public health emergency is included in the definition of a disaster per IC 10-14-3-1. In Indiana, the Governor may declare a disaster pursuant to IC 10-14-3-12. A local disaster declaration may only be made by the principal executive officer of a political subdivision pursuant to IC 10-14-3-29. The State Health Commissioner and the Local Health Officer serve to advise the relevant executive in declaring a disaster of a public health nature.

At the county or local jurisdictional level, the local EMA director coordinates local resources, and the LHD representative directs the local public health/medical plans and the public health response that requires these resources. This coordination may extend to the District level.

The IDHS and local EMA director will coordinate resources to include:

- The NIMS-compliant Incident Command System (ICS)
- Any needed agreements with neighboring jurisdictions to address communications, mutual aid, or other needs
- Defining the authority for declaring a law enforcement emergency
- Identification of law enforcement personnel to maintain public order
- Education of first responder personnel, with LHD assistance, so they can pre-plan for their families to sustain themselves during an emergency
- Provision of security personnel to assist LHD in carrying out their medical and public health response
- Communications for EMA and LHD needs.

In an influenza pandemic, controlling and minimizing the capacity of the virus to cause human disease is dependent on how well local agencies and individuals understand their respective roles and responsibilities in order to manage resources for an optimal outcome. Jurisdictional planning may be needed to coordinate plans at the District level. This is very important for counties and local jurisdictions that do not contain hospitals or community health centers (CHCs).

1.A. Interpandemic Period

- 1. HCHD will be the primary agency in planning the public health response to pandemic influenza for Hendricks County. HCHD will coordinate with other emergency response agencies to ensure that planning and response activities are coordinated within Hendricks County.
- 2. The HCHD will encourage timely data gathering and sharing from medical offices, health clinics, hospitals, and the various county schools so that off-normal public health events, be

they pandemic influenza or some other public health issue, are recognized and the appropriate action initiated.

- 3. The HCHD with guidance from the Indiana State Department of Health will define and quantify local priority population groups to receive vaccine or antiviral medications in case of a vaccine shortage during a pandemic
- 4. The HCHD will work with the District partners and with ISDH in planning for the procurement of vaccines, antivirals and supplies, particularly in the event the supplies are limited.
- 5. The planning for the distribution of vaccines, antivirals and supplies will be in accordance with the HCHD Mass Prophylaxis Plan and Pandemic Countermeasure Annex.
- 6. The HCHD will maintain contact with treatment centers regarding information about the facility capacity for patients with influenza.
- 7. The HCHD will work through the Hendricks County Coroner regarding plans to address mass fatality events.
- 8. The HCHD in conjunction with area veterinarians, and Purdue Extension Agents, will coordinate activities related to planning for the public health response to an identification of avian influenza in the animal population
- 9. The HCHD in conjunction with the District 5 Public Information Officer will coordinate the education of the stakeholders and public regarding the county's, the district's and the state's plans for responding to a pandemic influenza emergency
- 10. The HCHD will review and update this pandemic influenza procedure on an ongoing basis
- 11. HCHD will work with community partners to enhance community capacity for responding to pandemic flu
- 12. The Hendricks County Health Officer or the Public Health Preparedness Coordinator (PHPC) will provide the Plan to key policymakers and other stakeholders

1.B. Pandemic Alert Period

- 1. The HCHD Public Health Officer will initiate communication with local and state counterparts including District 5 Field Epidemiologist and various ISDH players.
- 2. The PHPC will monitor the Indiana Health Alert Network (IHAN) and other channels of information and will provide ongoing assessments of the situation to the Public Health Officer, other relevant HCHD personnel, and the EMA Director.
- 3. The District 5 Field Epidemiologist will assist the county with local surveillance activities and, if applicable, initiate case tracking activities.
- 4. The Public Health Nursing Supervisor and/or Public Health Communicable Disease Nurse through IHAN and/or blast fax will provide an advisory to local health care providers about recent travel to affected areas among patients presenting with severe respiratory illness and to consider implementing severe respiratory illness precautions.
- 5. HCHD will notify the POD's established in the MPP about the possibility of activating the Plan for opening mass vaccination sites, in accordance with Memorandum of Understandings (MOU's) currently in place.
- 6. The Public Health Officer and/or the District 5 PIO will develop and disseminate appropriate information to the public.

1.C. Pandemic Period

- 1. The Public Health Officer will activate an incident command structure to:
 - Continue surveillance and tracking activities
 - Determine the availability of, need for and scope of mass vaccination activities and dispensing of antivirals

- Coordinate delivery of vaccine and/or antivirals with ISDH
- Carry out mass vaccination activities and dispensing of antivirals in accordance with the HCHD Mass Prophylaxis Plan and Pandemic Countermeasure Annex.
- Evaluate the capacity of treatment centers for additional influenza victims and explore alternate options for caring for the sick
- Develop and disseminate appropriate information to the public
- Ensure ongoing communications with local, state and federal authorities
- 2. The Public Health Officer will consider implementing quarantine and isolation measures for residents of Hendricks County and coordinate with Hendricks County EMA Director, Red Cross and the Hendricks County Sheriff's Department, should a quarantine or isolation facility need to be opened.

1.D. Post-Pandemic

- 1. The PHPC will convene relevant parties to have them complete an After Action Report, and schedule a time for debriefing.
- 2. The Public Health Officer will conduct a meeting to review the After Action Reports and to make assignments to respond to the feedback for improving the Pandemic Influenza Procedure (After Action Follow up).
- 3. The PHPC will ensure that the lessons learned are properly incorporated into the HCHD plans and procedures.

2. Surveillance

There are four primary national surveillance components:

- Virologic surveillance Each week, approximately 75 U.S. collaborating laboratories that are part
 of the WHO Influenza Surveillance Network and 50 National Respiratory and Enteric Virus
 Surveillance System laboratories report the number of clinical specimens tested for influenza and
 the number of positive results by virus type and subtype.
- Surveillance for influenza-like illness (ILI) Approximately 1000 sentinel health care
 providers/clinics located in 50 states regularly report the number of patient visits for ILI by age
 group and the total number of patient visits each week.
- Surveillance for influenza and pneumonia deaths The Vital Statistics Offices of 122 U.S. cities report each week the percentage of total deaths that may be influenza-related
- State and District epidemiologists assess influenza activity levels in their respective states each week and report it as "widespread," "regional," "local," "sporadic" or "no activity."
- Information regarding these national surveillance components is updated weekly and can be accessed at <u>www.cdc.gov/ncidod/diseases/flu/weeklychoice.htm</u>.

State Activities

The ISDH uses five different surveillance components to monitor influenza activity in Indiana. These components assist in determining where, when, and what influenza viruses are circulating as well as determining the level of influenza activity. Prior to and during a pandemic, the ISDH will disseminate surveillance information to LHDs, hospitals, and other stakeholders through the Indiana Health Alert Network (IHAN) and other means. The five surveillance components include:

Influenza Sentinel Providers Surveillance Network

Approximately 30 Indiana health care providers (sentinel sites) report the total number of patients seen and the number of those patients with influenza-like illness (ILI) by age group to the ISDH each week, year-round. ILI is defined as fever (temperature of >100°F) plus either a cough or sore throat. The ISDH continues to update and to recruit sites as necessary. The percentage of patient visits to sentinel providers for ILI reported each week is weighted on the basis of the weekly sentinel's patient population. This percentage is compared each week with the national baseline of 2.5 percent. Sentinel sites also send nasopharyngeal swabs to the ISDH Laboratories for viral isolation. This is a key component to Indiana's surveillance, because it identifies the exact subtypes of influenza viruses that are circulating. The ISDH Laboratories has the ability to test suspected H5N1 specimens by RT-PCR (results within 3-6 hours) and viral isolation (2 weeks) under normal conditions. The protocol for suspect pandemic specimen submission is located on the ISDH Web site at www.IN.gov/isdh. Currently, the case definition must be met as well as prior approval from the ISDH Epidemiology Resource Center to submit suspect pandemic specimens to the ISDH Web site.

State and Territorial Epidemiologists Report

The ISDH reports the estimated level of influenza activity each week to the Centers for Disease Control and Prevention (CDC). These levels are defined as:

- **No Activity:** No laboratory-confirmed cases of influenza and no reported increase in the number of cases of ILI.
- **Sporadic:** Small numbers of laboratory-confirmed influenza cases or a single influenza outbreak has been reported, but there is no increase in cases of ILI.
- **Local:** Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in a single region of the state.
- **Regional:** Outbreaks of influenza or increases in ILI and recent laboratory- confirmed influenza in at least 2 but less than half the regions of the state.
- Widespread: Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in at least half the regions of the state.

Influenza-associated pediatric mortality is a newly added nationally notifiable condition. The ISDH reports the laboratory-confirmed influenza-associated deaths in children younger than 18 years of age through the Nationally Notifiable Disease Surveillance System.

Public Health Emergency Surveillance System (PHESS)

The PHESS, the ISDH syndromic surveillance system, uses data from hospital emergency department chief complaints and school absenteeism reports. Chief complaints are categorized into syndromes, including respiratory. Alerts are generated when syndromic counts exceed baseline value. Alerts are then analyzed for necessity of follow-up. Indiana public schools and accredited nonpublic schools must report student absenteeism rates ≥20 percent to LHDs. LHDs will determine if the increased rate is possibly outbreak related and notify the ISDH.

Pandemic Tracking System

The ISDH will procure a system to track and report hospital data during a pandemic, such as the number of hospitalized cases, number of hospital staff ill, those in quarantine and isolation, number of deaths, number of beds available, and the availability of essential equipment, such as ventilators. This information will be disseminated to LHDs and hospitals.

Local Activities

2.A. Interpandemic Period

- 1. HCHD will collaborate with area clinics to establish a system whereby counts of positive rapid influenza test kits and influenza viral cultures are provided to HCHD on a weekly basis during the months of September through May
- 2. HCHD will collaborate with county school districts to develop a system whereby counts of reports of ILI occurrences are provided to HCHD on a regular basis
- 3. HCHD will establish and maintain linkages with the Indiana State Board of Animal Health to stay informed about suspect clinical symptoms identified and investigated through their passive surveillance in local avian populations.

2.B. Pandemic Alert Period

- HCHD will ensure that all interpandemic influenza surveillance activities are underway regardless of the time of year, enhancing activities as needed based on information from IHAN alerts, District 5 Field Epi alerts, communication from state and federal partners and other sources and investigating the epidemiology of early cases through case tracking activities
- 2. HCHD will monitor the IHAN, CDC's Epi-X and other appropriate sources for updates regarding international, federal and state surveillance activities
- 3. HCHD will monitor and institute recommendations from CDC for any additional surveillance activities that should be undertaken given the specific circumstances
- 4. If necessary, HCHD will utilize IHAN to notify area hospitals, physicians, emergency rooms and urgent care centers, requesting that they increase laboratory diagnosis of influenza for persons presenting with ILI, especially those with recent travel history to regions where the pandemic strain of influenza is circulating or those with unusual or severe symptoms. HCHD, through ISDH and CDC, will provide instructions for the safe handling of a potential novel influenza virus
- 5. HCHD will issue regular alerts regarding surveillance and case tracking activities to the health community through IHAN and via e-mail

2.C. Pandemic Period

- 1. HCHD will enhance ongoing surveillance activities to the include the following:
 - Monitoring health impacts, including deaths and hospitalizations
 - Monitoring community impacts, including absenteeism in schools and essential services
 - Monitoring reports of antiviral resistance
 - Monitoring reports of vaccine effectiveness

2.D. Post-Pandemic Period

- 1. HCHD will develop a detailed summary of the pandemic, utilizing surveillance data to evaluate the efficacy of local response activities. Analysis may include:
 - Severity of influenza outbreaks among demographic groups
 - Age-specific attack rate, morbidity and mortality
 - Efficacy of vaccination distribution and implementation of infection control measures

• Extent of medical, social and economic impact

Surveillance in Poultry and Migratory Waterfowl

Surveillance for the Highly Pathogenic Avian Influenza (HPAI) virus in poultry flocks is being accomplished by the poultry industry, the Indiana Board of Animal Health (IBOAH), and the United States Department of Agriculture (USDA). Prior to moving birds from the farm to market, all lots of birds are tested for the presence of H5N1 influenza virus. Any lots found positive will not be sent to market. IBOAH and USDA work with the poultry industry to investigate any evidence of an HPAI outbreak in poultry. At time of slaughter, the IBOAH and USDA will conduct both pre-slaughter and post-slaughter examination of birds to prevent any ill birds from reaching the consumer. Poultry owners who have birds with symptoms of HPAI should inform the USDA at 866.536.7593

The Hendricks County Animal Control will work under ESF #17 to conduct surveillance and collection of dead birds in Hendricks County if deemed necessary and will work under guidance from the IBOAH. Contact information for Animal Control is located in the Pandemic Influenza Response Packet. ESF #17 is in Appendix A.

Pandemic Alert Period – Tasks and Responsibilities

Task 1. Community Education

The key strategy in containing the spread of the pandemic influenza virus is community education. The HCHD is providing education on personal infection control measures, as well as family preparedness and infection control, to the community through County-wide meetings, media, health fairs and distribution of material at the health department. The Health Department website is also utilized for conveying information. Packets of information that included the *pandemicflu.gov* checklist have been distributed to local schools, businesses, faith-based groups and organizations.

While the hospitals are also doing community education, they are focusing their efforts towards their staff. Clarian West Medical Center's Education Services is recommending pandemic influenza education to be a hospital-wide mandatory education requirement for 2007. Additional plans include providing mechanisms for patient/family education. Clarian West is working with the Clarian Health Partners and utilizing/adapting materials available from the World Health Organization. Both Hendricks Regional Health and Clarian West Medical Plan are included in the Pandemic Influenza Response Packet.

3. Prevention and Containment

Three methods for preventing influenza and containing its spread include community control measures, antiviral medication and vaccines.

3.A. Implementation of Community Level Control Methods

The goal of community level containment measures is to slow the spread of pandemic influenza as much as possible and to provide additional time for the development, manufacture, distribution and administration of influenza vaccine and antiviral medications. Strategies to achieve this goal must take into consideration the modes of transmission of influenza, the short incubation period, the non-specific clinical presentation, the likelihood of asymptomatic infected persons who may be

transmitting infection and past experience in the use of containment measures during pandemic influenza.

There are two key strategies for preventing transmission, each with varying degrees of efficacy. The first involves decreasing the probability that contact will result in infection, and may include activities such as providing education to the public about practicing cough etiquette and proper hand and respiratory hygiene. The second involves decreasing contact between infected and uninfected individuals, and may include activities such as isolating suspected cases and quarantining case contacts, issuing travel advisories and canceling schools and large gatherings. "Isolation" for purposes of IC 16-41-9, means the physical separation, including confinement or restriction, of an individual or a group of individuals from the general public if the individual or group is infected with a dangerous communicable disease, in order to prevent or limit the transmission of the disease to an uninfected individual. "Quarantine", for purposes of IC 16-41-9, means the physical separation, including confinement or restriction of movement, of an individual or group of individuals who have been exposed to a dangerous communicable disease, during the disease's period of communicability, in order to prevent or limit the transmission of the disease.

3.A.1. Interpandemic Period

- 1. HCHD will conduct ongoing education regarding the importance of hand hygiene, cough etiquette and annual influenza vaccination
- 2. HCHD will review appropriate legal authorities regarding the implementation of community level control measures, including quarantine laws. HCHD will maintain templates of documentation needed to enact community level control measures
- 3. HCHD will develop and maintain contact information with partners through whom HCHD may communicate information about community level control measures, including hospitals, county school districts, Head-Start facilities, private daycare/school facilities, parks and recreation departments, homeowners associations, chambers of commerce, sports organizations, etc.
- 4. HCHD will develop plans for communicating information to the public about community level control measures

3.A.2. Pandemic Alert Period

Possible containment measures if cases are first detected outside the U.S.

- 1. HCHD may recommend isolation of persons who are recent travelers to affected regions if they have ILI. If influenza is suspected or confirmed, HCHD may recommend isolation at home or in a hospital until isolate sub typing is accomplished. Isolation should continue for at least seven days, until viral shedding is no longer detected or until the isolate is laboratory confirmed not to be a novel influenza A virus
- 2. HCHD may recommend quarantine for contacts of cases
- 3. HCHD will increase education about the importance of hand hygiene, cough etiquette and annual influenza vaccination

Possible containment measures if cases are first detected in the U.S. outside Hendricks County

- 1. HCHD may recommend that persons who are positive for influenza A be placed in isolation at home or in a hospital until isolate sub typing can be accomplished. Isolation should continue for at least seven days, until viral shedding is no longer detected or until the isolate is laboratory confirmed not to be the novel virus
- 2. HCHD may recommend quarantine for contacts of cases

3. HCHD will increase public education regarding the importance of hand hygiene and cough etiquette

Possible containment measures if cases are first detected in Hendricks County

- 1. HCHD may recommend that persons who have ILI be placed in isolation at home or in a hospital until sub typing of their isolate can be accomplished. Isolation should continue for at least seven days, until viral shedding is no longer detected or until the isolate is laboratory confirmed not to be the novel virus
- 2. HCHD may recommend quarantine for contacts of cases
- 3. If an animal source is identified and there is ongoing transmission within the animal population, HCHD may recommend that persons who may be in contact with potentially infected animals wear appropriate personal protective equipment. Refer to Appendix B for more information about procedures when an animal source is identified
- 4. HCHD may recommend that citizens limit travel to destinations outside of Hendricks County, as well as limit non-essential travel within Hendricks County
- 5. HCHD may recommend cancellation of large gatherings depending on the level of person-toperson transmission. Based on the epidemiology of the known infected cases, HCHD may consider closure of schools and closure of office buildings
- 6. HCHD will increase public education regarding the importance of hand hygiene and cough etiquette

3.A.3. Pandemic Period

- 1. HCHD may recommend that all persons who are ill and their contacts remain in isolation at home
- 2. HCHD may recommend limitation or suspension of large gatherings and recreation activities
- 3. HCHD may recommend the closure of schools and closure of office buildings
- 4. HCHD may recommend the limitation of non-essential work activities, encouraging telecommuting when possible
- 5. HCHD may recommend an area quarantine

3.A.4. Post-Pandemic Period

- 1. HCHD will suspend all community level control measures
- 2. HCHD will assess the compliance with community level control measures and evaluate the efficacy of community level control measures

3.B. Use of Antivirals

Antiviral medications may play an important role for the control of influenza, particularly in the period of time in a pandemic event before vaccine becomes widely available. Antiviral medications can be used for both prophylaxis and treatment. Currently, a 6-8 week course of antivirals is recommended for prophylaxis, and a 5-day course of antivirals is recommended for treatment. Because of the limited supply of antivirals, utilizing antivirals for prophylaxis may not be feasible except in very limited circumstances. Therefore planning must be focused on the use of antivirals for treatment of exposed persons rather than on prophylaxis. Further, plans should designate the treatment delivery site for antivirals to be the point of care (e.g. hospitals) rather than a Point of Dispensing (POD) site such that is used in mass prophylaxis planning.

Because it is best suited for treatment, Oseltamivir will likely be the primary antiviral utilized during a pandemic event. Zanamivir will likely be utilized for Oseltamivir-resistant viruses and for pregnant women.

Though in summer 2005 the NVPO has recommended that the federal government stockpile 133 million courses of antiviral, the existing supply and production capacity for antiviral drugs is far less than would be needed to provide treatment for the anticipating number of persons exposed during a pandemic event. Therefore, it is crucial to develop recommendations for prioritizing population groups to receive antivirals for therapy during a pandemic event.

3.B.1. Interpandemic Period

1. On an ongoing basis HCHD will review CDC guidance defining priority populations to receive antivirals for therapy and, where indicated, prophylaxis during a pandemic before antivirals and/or vaccine is widely available to all citizens. In July 2005 CDC adopted the following populations for receipt of antiviral treatment, listed in order of priority:

Hospitalized patients with influenza

Healthcare workers with direct patient contact

Highest-risk outpatients

Pandemic health responders, public safety and key government decision makers Increased-risk outpatients

Persons involved in outbreak response activities (post-exposure prophylaxis only)

Healthcare workers working in emergency rooms, intensive care units, emergency medical services and dialysis (prophylaxis)

Pandemic society responders and other healthcare workers Other outpatients

If additional antiviral is available, following CDC guidance HCHD will prioritize the following groups for antiviral prophylaxis:

Highest-risk outpatients

Other healthcare workers with patient contact

- 2. HCHD will determine and maintain estimates of the number of persons within each priority population, revising the estimates on an annual basis.
- 3. HCHD will coordinate among area hospitals to ensure that plans are in place to provide antiviral therapy
- 4. HCHD will collaborate with Hendricks County health clinics/health care providers, and other area jurisdictions, to coordinate plans for the provision of antiviral therapy

3.B.2. Pandemic Alert Period

- 1. HCHD will review and modify its plan for the provision of antivirals as needed to account for updates received regarding the novel virus. Such updates may include recommended target groups and projected antiviral supply
- 2. HCHD will notify the medical community of the status of antiviral availability and plans to disseminate it to the established priority groups
- 3. HCHD will disseminate antiviral use guidelines to the medical community
- 4. HCHD will assess its human resources and logistics capabilities to ensure that appropriate staff and supplies are available to support activities associated with the provision of antiviral therapy at treatment centers, if necessary

3.B.3. Pandemic Period

- 1. HCHD will communicate with District 5 Field Epidemiologist and with the ISDH regarding the availability and, if applicable, the delivery of antivirals through the Strategic National Stockpile (SNS). HCHD will provide ISDH with an estimated number of persons within each priority population as well as the population as a whole.
- 2. HCHD will coordinate with ISDH and area treatment centers to ensure that antivirals are appropriately allocated among treatment centers.
- 3. HCHD will evaluate antiviral delivery and administration procedures and modify plans as necessary

3.B.4. Post-Pandemic Period

- 1. HCHD will discontinue and demobilize antiviral administration, ensuring that supplies are inventoried and returned as appropriate
- 2. HCHD will evaluate antiviral delivery and administration procedures and modify plans as necessary

3.C. Use of Vaccine

Vaccine will serve as one preventive strategy during an influenza pandemic. Unlike annual production of influenza vaccine, wherein strains are selected in the spring and vaccine is manufactured and delivered during the summer to be used during the fall and winter influenza season, a pandemic strain could be detected at any time. Because current manufacturing procedures require four to eight months before large amounts of vaccine are available for distribution, there could be a large gap between identification of a pandemic strain and availability of vaccine. Further, once vaccine becomes available, production capacity may allow for just 1-2% of the population being vaccinated per week. Therefore it is necessary to plan for the allocation of vaccine based on priority population groups.

3.C.1. Interpandemic Period

- 1. HCHD will initiate and/or continue activities to enhance annual influenza vaccination coverage levels in traditional high-risk groups, particularly subgroups in which coverage levels are low. Activities will be carried out prior to the beginning of the traditional influenza season each year and will include:
 - Evaluating and implementing epidemic control strategies, e.g. recommendations from ISDH and CDC
 - Disseminating educational materials to area health care providers, including a summary of the most current influenza vaccine recommendations, suggested strategies for reaching at-risk populations and a list of resources to help promote and deliver influenza vaccine to patients
 - Providing education to area hospital staff about the importance of vaccinating healthcare workers and patients with high-risk medical conditions
 - Providing education to area nursing home and assisted living facility staff about the importance of vaccinating persons over the age of 65
 - Recommending that all healthy schoolchildren over age 5 receive the appropriate influenza vaccine and working with area pediatricians and school nurses to operationalize this recommendation

- Recommending that all persons responsible for community safety and security receive annual influenza vaccination, including emergency medical personnel, police and firefighters
- Utilizing traditional and non-traditional communications channels to educate the general public about the importance of annual influenza vaccination
- Maintaining current information about influenza and influenza vaccination on the HCHD website. Information will be targeted to the healthcare community and to the general public
- · Educating corporate partners about the importance of a vaccinated workforce
- HCHD will initiate and/or continue activities to enhance pneumococcal vaccination coverage levels in traditional high-risk groups to reduce the incidence and severity of secondary bacterial pneumonia. Such activities will occur in concert with the activities described in the bullets above
- On an ongoing basis HCHD will review ISDH and CDC guidance defining priority populations to receive vaccine for prophylaxis during a pandemic before vaccine is widely available to all citizens. In July 2005 CDC adopted the following populations for receipt of vaccine, listed in order of priority:
 - 1a)Healthcare workers involved in direct patient contact, critical healthcare support staff and vaccine and antivirals manufacturing personnel. Applicable healthcare workers include those in the following settings: inpatient, outpatient, home care, EMS, blood collection, supporting laboratories, vaccinators and public health providers with direct patient contact plus their critical support personnel.
 - 1b)Highest risk group, including persons >64 years with 1+ high-risk condition, persons 6 months-64 years with 2+ high-risk conditions and persons who have been hospitalized in the prior year with pneumonia, influenza or an ACIP high-risk condition.
 - 1c)Household contacts of children aged <6 months, severely immunocompromised persons and pregnant women
 - 1d)Key government leaders and critical pandemic public health responders Other high-risk persons, including persons ≥65 years with no high-risk conditions, persons 6 months-64 years with 1 high-risk condition and persons 6-23 months Critical infrastructure personnel, including public health emergency responders not including in 1a; public safety personnel (fire, police, 911 dispatchers, correctional facility staff); utility workers essential for maintaining power, water and sewage systems; transportation workers critical for transporting fuel, food, water and medical supplies and for public ground transportation; and telecommunications/IT personnel essential for maintaining functional communication and network operations Other key government health care decision makers not included in 1d and mortuary services

Healthy persons aged 2-64 not included in the above categories

- 4. HCHD will review and update the methodology within its *Mass Prophylaxis Plan* for providing vaccination during a pandemic in the event of a severe or moderately severe vaccine shortage
- 5. HCHD will review and update its *Mass Prophylaxis Plan* to ensure that it addresses issues relevant to the provision of influenza vaccine. This plan includes information relevant to providing vaccination to the general public once vaccine becomes widely available, including:
 - Sites to use as mass vaccination PODs
 - Staffing needs and duties
 - Protocols for proper storage of vaccine
 - Protocols for vaccine POD operations
 - Supplies needed for vaccine POD operations

- Model POD flow design
- 6. HCHD will identify and maintain information about local sources of supplies needed for administering vaccine
- 7. HCHD will ensure that appropriate legal authorities are in place that will allow for the implementation of measures relevant to mass vaccination activities during a pandemic

3.C.2. Pandemic Alert Period

- 1. HCHD will review and modify its *Mass Prophylaxis Plan* as needed to account for updates received regarding the novel virus. Such updates may include recommended target groups and projected vaccine supply
- 2. HCHD will assess its human resources and logistics capabilities to ensure that appropriate staff and supplies are available to begin vaccination activities, if necessary

3.C.3. Pandemic Period

- 1. HCHD will communicate with ISDH regarding the availability and delivery of vaccine. HCHD will provide ISDH with an estimated number of persons within each priority population to better define the quantity of vaccine required for Hendricks County
- 2. Prior to widespread vaccine availability, HCHD will provide vaccine as it is available to priority groups based on the methodology described the *Mass Prophylaxis Plan*
- 3. Upon widespread vaccine availability, HCHD will fully activate mass vaccination activities according to the *Mass Prophylaxis Plan*
- 4. HCHD will track and monitor adverse vaccine reactions. HCHD will provide persons receiving vaccine with information about reporting such reactions to the Health Department. HCHD will then report any reactions to ISDH
- 5. HCHD will log vaccination activities, ensuring that supplies are inventoried and returned as appropriate
- 6. HCHD will evaluate vaccine delivery and administration procedures and modify plans as necessary

3.C.4. Post-Pandemic

- 1. Following the *Mass Prophylaxis Plan*, HCHD will discontinue and demobilize mass vaccination activities, ensuring that supplies are inventoried and returned as appropriate
- 2. HCHD will evaluate vaccine delivery and administration procedures (HCHD After Action Report) and modify plans as necessary (HCHD After Action Follow Up)

4. Emergency Response: Health Systems and Critical Infrastructure

While Hendricks County's disaster plan addresses all hazards, pandemic influenza differs from many threats due to the magnitude and duration of its impact and the likelihood of subsequent waves of disease. Of great concern during a pandemic event is its effect on the capacities of the healthcare system and other critical community services.

4.A. Interpandemic Period

1. HCHD will work with local health clinics/health care providers to ensure that policies, plans and protocols for pandemic influenza are developed and maintained and that those procedures and

that of the Health Department are compatible. Key policies will include those regarding reporting to HCHD and those regarding infection control procedures.

2. HCHD will collaborate with community partners to develop and maintain an inventory of the following resources:

Hospital and long-term care bed capacity Intensive care unit capacity Ventilators Personal protective equipment Specimen collection and transport materials Sources of consumable medical supplies Medical personnel who may be utilized during an emergency situation Pharmacies and pharmacists Contingency medical facilities Mortuary/funeral services Social services/mental health services/faith services

- 3. HCHD will develop and maintain a list of personnel whose absence would pose a serious threat to public safety or would significantly interfere with pandemic response activities
- 4. Using inputs from A.1 and A.2, HCHD will estimate the impact of pandemic influenza on healthcare services and critical infrastructure within Hendricks County. HCHD will utilize the CDC FluAid program to derive these estimates

4.B. Pandemic Alert Period

- 1. Through IHAN, HCHD will regularly provide updated information about the epidemiology and spread of the novel virus to the local healthcare community, including emergency medical providers and community partner hospitals
- 2. Through IHAN, HCHD will recommend that emergency medical providers and hospitals activate severe respiratory illness protocols and provide guidance about the appropriate use of personal protective equipment
- 3. HCHD will maintain regular communication with the general public, providing updated information about good health practices that will help minimize the spread of the novel virus

4.C. Pandemic Period

- 1. In accordance with Hendricks County Comprehensive Emergency Management Plan, EMA will activate a local Emergency Operations Center (EOC) to manage the needs of health, medical and essential service agencies during the pandemic. HCHD will designate a liaison to the EOC to communicate timely and accurate information about the epidemiology of the pandemic
- 2. HCHD will continually review information about the epidemiology of the pandemic. Based on this data HCHD will develop and provide the EOC with protective action recommendations for the health, medical and essential services sectors

4.D. Post-Pandemic Period

- 1. HCHD will participate in recovery and demobilization efforts in coordination with the EOC
- 2. HCHD will provide EMA and other stakeholders with an assessment of the impact, response and control of the public health response during the pandemic (After Action Report)

5. Communicating with the Public

Communicating information to the public about pandemic influenza will be carried out according to policies and procedures described in the HCHD *Crisis Communication Plan*. This document details the means, organization and process by which HCHD will provide information and instructions to the public before, during and after a public health threat or emergency such as pandemic influenza.

The unique nature of a pandemic requires crisis and risk communications planning. Guided by its *Crisis Communication Plan*, HCHD PIO and the District 5 PIO will develop messages to ensure that the public receives timely and accurate information about the following during a pandemic event: Basic information about influenza, high-risk populations and recommended preventive practices The epidemiology of the pandemic

The symptoms that should prompt seeking medical assistance

The availability of vaccines and antivirals and the rationale for providing medication to priority groups during vaccine and antiviral shortages

Instructions for receiving vaccine and antivirals at mass vaccination sites

Directives for community level containment activities

Explanations of concepts such as isolation and quarantine

The Crisis Communication Plan is maintained by the HCHD.

Volunteers

Initially the first wave of a pandemic will require containment of the disease through personal protective measures and self-quarantine, self-isolation and good family emergency planning. The use of volunteers to help in this initial phase might actually promote spread of disease. After the first wave, typically 6 to 12 weeks maximum, volunteers who were exposed but recovered are immune and can help in numerous ways if a second wave strikes.

The Hendricks County Health Department houses a database with both medical and non-medical volunteers on the County Network as well as a USB drive that is located with the Public Health Preparedness Coordinator.

APPENDIX A: EMERGENCY SUPPORT FUNCTION #17

EMERGENCY SUPPORT FUNCTION (ESF) # 17

ANIMAL PROTECTION

Hendricks County, Indiana Comprehensive Emergency Management Plan

PRIMARY AGENCY: Hendricks County Animal Control (Providing coverage for Hendricks County, including all Cities within)

SUPPORT AGENCIES:

Hendricks County Humane Society Central Indiana Veterinary Medicine Association Hendricks County Health Department Purdue Co-op Extension Various small local rescue groups and donors

SECONDARY SUPPORT AGENCIES:

State of Indiana Board of Animal Health Department of Agriculture/Farm Services Fish and Wildlife Service Local veterinary offices Various small local rescue groups and donors

I. GENERAL

The purpose of ESF-17 is to coordinate the efforts of numerous government and private organizations responsible for administering to the needs of animals following a disaster. Areas of concern include, but are not limited to: animal emergency veterinary care, evacuation, rescue, temporary confinement, shelter, food, water and identification of strays and returns to owners, and field euthanasia. Such coordination may involve diagnosis, treatment and control of animal-borne diseases of public health significance and the disposal of dead animals.

II. CONCEPT OF OPERATIONS

The development of operating procedures for ESF-17 shall be the responsibility of the Hendricks County Animal Control. HCAC shall develop plans for assisting local, associate, parallel and volunteer agencies in the performance of duties in advance of, during, and following the occurrence of a disaster. Overall, management and coordination of these procedures are the primary responsibilities of HCAC. These duties are delineated as follows:

- 1. Provide emergency care for animals including companion animals, exotics, livestock (commercial and privately owned), zoo animals, and wildlife.
- 2. Coordinate efforts to shelter and feed animals, and store and distribute food, care, and medical supplies that may arrive via private donor or State aid.
- 3. Coordinate with ESF-14, Public Information, to provide information regarding shelter services, animal identification and return to owners, and other animal-related issues.
- 4. Assess needs for coordinated efforts to rescue, impound, treat and euthanization of animals including wildlife displaced from their natural habitat.
- 5. Assist ESF-18, Health and Medical, with the prevention and control of animal-borne diseases that have public significance.
- 6. Investigate animal bites and attacks while providing rabies control and quarantine.
- 7. Coordinate public information and training efforts to educate animal owners and advocates in disaster response measures, including evacuation, sheltering considerations, first aid and other emergency responses.

The majority of ESF-17's effectiveness will be governed by the careful coordination of all rescue, treatment, and care activities among all support agencies to provide efficient service delivery with minimal redundancy. This preplanned coordination of efforts will allow the primary agency the ability to ensure comprehensive animal-related services throughout greater Hendricks County. As HCAC is the largest animal welfare agency in this community and tasked with the priority of ensuring public safety, the majority of these efforts will be projected and information disseminated from within its ranks.

The largest concentration of animals, identified as most at risk, is located within the limits of Guilford, Washington, Lincoln and Brown Townships. Areas bordering on county lines to the west represent the largest concentrations of livestock.

III. ORGANIZATION AND TASKS

- **A.** The Hendricks County Animal Shelter/Control is designated as the primary agency for ESF-17 and is responsible for the following:
 - 1. Notifying, activating and mobilizing all agencies identified as possessing animal care and control issues.
 - 2. Coordinating all support agencies in the performance of assigned duties.
 - 3. Coordinating requests for assistance and additional resources necessary during performance of assigned duties.
 - 4. Investigating all animal bites and attacks and transporting injured, at-large and nuisance animals as assigned through the inter-disciplinary coordination of efforts.
 - 5. Assisting the emergency response team with animal-related problems.

- 6. Coordinating with the Hendricks County Landfill and the Department of public Works for the immediate disposal of dead animals.
- 7. Coordinating with ESF-14, Public Information, and ESF-8, Health and Medical, for the release of public information regarding animals and related health issues.
- 8. Enforcing local animal-related ordinances and regulations.
- 9. Providing for and managing the proper quarantine procedures for biter animals.
- 10. Impounding at-large animals.
- 11. Euthanizing, treating and/or transporting sick/injured animals for vet care.
- 12. Returning wild animals to their natural habitat.
- 13. Responding to animal-related inquiries.
- 14. Investigating and responding to animal care and treatment complaints or queries.

B. Support Agencies

Support agencies will be responsible for the following:

- 1. Notifying, activating, and mobilizing personnel and equipment resources to perform their assigned or identified duties.
- 2. Identifying, designating, and preparing personnel for staffing of facilities established by ESF-17.
- 3. Coordinating all actions of the support agency with the ESF-17.
- 4. Identifying resources and personnel requirements to perform assigned duties which exceed the support agency's capabilities including:
 - a. Contingency plans for evacuation of animals housed at their proper facilities,
 - b. Creating internal animal emergency support function plans for all facilities housing animals, and
 - c. Outlining euthanasia and disposal plans for extremely large animals.
- 5. Monitoring and reporting weather events which may cause a need for disaster or emergency response for natural resources in close proximity to their facilities.

APPENDIX B: FLU AID PREDICTIONS

These estimates are from Hendricks Regional Health.

Clarian West Medical Center's predictions are in their plan which is located in the Pandemic Influenza Response Packet.

APPENDIX C: CONSIDERATIONS FOR AVIAN INFLUENZA

Background

Avian influenza viruses are endemic worldwide and are frequently associated with disease in domestic poultry. Not all strains cause disease and the ones that do can vary from low to high pathogenicity. The virus frequently mutates and can change from a low to a high pathogenic strain as well as develop the ability to infect mammals, such a pigs and humans.

Since the virus is usually found in fowl, the Indiana State Board of Animal Health (ISBOAH) and United States Department of Agriculture (USDA) are responsible for surveillance and control in the state of Indiana. Depending on the size of the response necessary and the pathogenicity of the virus strain, local and state governments may not have enough resources to handle all of the operations and activities involved in control of the disease. Therefore, the command structure will involve multiple jurisdictions and agencies.

There are many things to consider when working with avian influenza. The virus may be extremely difficult to isolate and control, especially if it moves into wild birds or mammals. Once the virus is identified, a "hot zone" will be identified by ISBOAH/USDA and all of the domestic fowl in this area will have to be identified, depopulated and disposed of properly. There will be a considerable amount of emotional stress for owners, responders and communities and all of the owners will expect reimbursement for the animals.

The priorities in this Plan are centered on stopping the spread of the disease in animals and the economic implications, which might likely impact the human health risks and the possibility for virus mutation.

HCHD Response to the Identification of Avian Influenza in the Animal Population

If avian influenza were identified among the animal population within Hendricks County, HCHD will undertake the following activities:

- HCHD will work closely with ISDH and ISBOAH to monitor persons who have had contact with the infected birds for any sign of respiratory illness
- The HCHD, ISBOAH and ISDH will prepare information for distribution to area veterinarians and, Purdue Extension Agents, describing the outbreak, discussing the clinical signs and encouraging local practitioners to report any suspect cases to HCHD

It must be understood, however, that Avian Flu, is an animal flu and not a human flu.

APPENDIX D: HEALTH CARE SYSTEM GUIDANCE

The following is excerpted from the U.S. Department of Health and Human Services' *National Influenza Preparedness and Response Plan*, Annex 2, *Health Care System Guidance*, August 2004

An influenza pandemic will create significant challenges for the health care system. The number of children and adults seeking care for febrile and respiratory illnesses will increase substantially; some disease will be severe, requiring inpatient care; and many of those infected will have underlying risk factors for adverse outcome, including death. Influenza also will occur among health care workers and their family members, resulting in shortages of trained staff to care for others. Physical resources, such as hospital beds and respiratory therapy equipment, may not be sufficient to meet demand. Shortages of antiviral medications and vaccine will limit the ability to implement these preventive interventions.

Although these stresses on the health care system are inevitable in an influenza pandemic, coordination, planning and exercising preparedness plans can improve the effectiveness of a pandemic response and limit mortality and morbidity.

HCHD will work with hospitals, treatment centers and long-term care facilities to share information about preparing for and responding to pandemic influenza. Central to this will be the *Health Care System Guidance*.

The goal of the *Health Care System Guidance* is to assist medical provider organizations, health care systems, hospitals, long-term care facilities, home health agencies and other groups that provide health care services plan for and respond to pandemic influenza. This Guidance, which can be accessed at http://www.hhs.gov/nvpo/pandemicplan/annex2.pdf, contains information to aid in the development of a comprehensive pandemic influenza preparedness and response plan. The Guidance provides recommendations for developing a plan with the following components:

Preparedness and Response Activities

- A. Decision-Making and Coordination
- B. Surveillance and Triage
- C. Triage and Clinical Evaluation of Patients
- D. Human and Physician Resources for Inpatient Care Staffing Bed Availability Equipment and Supplies
- E. Education, Training and Communications
 Health Care Systems, Antiviral Drugs and Influenza Vaccine
 Infection Control
 Background
 General Principles of Routine Infection Control
 Standard Precautions
 Respiratory Hygiene/Cough Etiquette
 Droplet Precautions
 Other Components of Infection Control for Influenza Pandemic
 Staff Education

Bed Management Patient Transport Cleaning, Disinfection and Sterilization Patient Education Visitors Health Care Workers with Influenza-Like Illness Elective Utilization of Health Care Facilities Home Health Care

Outbreak Control Medical Care at Non-Traditional Facilities

APPENDIX E: CONTACT INFORMATION

Contact to HCHD is available 24 hours a day, 7 days a week by calling 317-745-9217 during office hours (8:00 am-4:00 pm, Monday through Friday). After hours, please call our emergency phone (317-491-5692 or 317-491-5693) for specific information about emergency contact numbers. For HCHD staff, see HCHD Crisis Communication Plan.

APPENDIX F: ACRONYMS

BOAH	Board of Animal Health
CDC	Centers for Disease Control and Prevention
EMA	Emergency Management Agency
EOC	Emergency Operations Center
IDHS	Indiana Department of Homeland Security
ISDH	Indiana State Department of Health
IHAN	Indiana Health Alert Network
ILI	Influenza-Like Illness
ISBOAH	Indiana State Board of Animal Health
HCHD	Hendricks County Health Department
MPP	Mass Prophylaxis Plan
NVPO	National Vaccine Program Office
PHPC	Public Health Preparedness Coordinator
PIO	Public Information Officer
POD	Point of Dispensing
SOG	Standard Operating Guidance
SARS	Severe Acute Respiratory Syndrome
USDA	United States Department of Agriculture
WHO	World Health Organization

APPENDIX G: REFERENCES

- 1. Indiana State Department of Health Pandemic Influenza Plan, August 23, 2005
- 2. National Strategy for Pandemic Influenza, Homeland Security Council, November, 2005
- 3. Mass Prophylaxis Plan (Draft), Hendricks County Health Department, March, 2006
- 4. Hendricks County Emergency Response Plan, September, 2004
- 5. Internet links helpful in understanding Pandemic Influenza:
 - a. http://www.hhs.gov/pandemicflu/plan
 - b. http://www.hhs.gov/nvpo/pandemicplan/annex2.pdf
 - c. http://www.cdc.gov/flu/about/qa/disease.htm
 - d. http://www.cdc.gov/flu/protect/espanol/preventing.htm