Montana Department of Public Health & Human Services

Pandemic Influenza Preparedness & Response Plan

Annex 4: Human Disease/Public Health Emergency Plan

Version 3.1

5/17/2006

APPROVAL & IMPLEMENTATION

STATE OF MONTANA

Pandemic Influenza Preparedness & Response Plan

DEPARTMENT OF PUBLIC HEALTH and HUMAN SERVICES

This plan is hereby approved for implementation and supersedes all previous editions.

_____

Joan Miles
Department of Public Health and Human Services

Director, DPHHS
Title of Signatory

_____
Date Signed

ANNUAL REVIEW CERTIFICATION

I hereby certify that I have reviewed the DPHHS Pandemic Influenza Preparedness & Response Plan and all necessary changes have been incorporated into the plan.

DATE	SIGNATURE

RECORD OF CHANGES

Date	Change Description	Initials

NOTE: Changes will be included in the next change to this plan.

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Acknowledgements

This document is the result of work by individuals from the following agencies and organizations:

- Montana Department of Public Health and Human Services
- Montana Department of Military Affairs, Disaster and Emergency Services Division
- Montana Department of Military Affairs, Army National Guard and Air National Guard
- Montana Office of Public Instruction
- Montana Fish Wildlife and Parks
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Special acknowledgement is made of valuable input provided by innumerable tribal and county health department workers and healthcare providers across Montana.

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Preface

The Montana Department of Public Health and Human Service (DPHHS) ***Pandemic Influenza Preparedness and Response Plan*** is an event-specific annex to the department's all-hazards ***Human Disease/Public Health Emergency Plan***. It is not a stand-alone plan. It was designed to be consistent with and subordinate to higher-level plans including the U.S. Department of Homeland Security ***National Response Plan***, and the Montana Department of Military Affairs, Disaster and Emergency Services Division ***Montana Disaster and Emergency Plan***. Higher-level plans describe response components that are not specific to pandemic influenza, but are broadly applicable such as the DPHHS incident command structure, and the agency's emergency operations center activation protocol.

Every effort has been made to assure that this plan is compatible with current Federal Emergency Management Agency policy, and with the emergency operation plans of other federal, state, and local government agencies. It is also in compliance with Executive Order #17-04 of the Governor of the State of Montana which formally recognized and adopted the National Incident Management System (NIMS), a nationwide standardized approach to incident management and response, as the state's official disaster and emergency management model[1].

This document is a work that has been in progress since 1999. It is continually being updated. Please check for the most current version.

[1]U.S. Department of Homeland Security, State of NIMS Integration; Integrating the National Incident Management System into State Emergency Operations Plans and Standard Operating Procedures, Version 1.0, 2005.

Acronyms

ACIP	Advisory Committee on Immunization Practices
AI	Avian influenza
CDC	U.S. Centers for Disease Control and Prevention
CDCPB	Communicable Disease Control and Prevention Bureau
DEQ	Montana Department of Environmental Quality
DMA	Montana Department of Military Affairs
DoD	Department of Defense
DOMS	Director of Military Support
DPHHS	Montana Department of Public Health and Human Services
DES	Disaster and Emergency Services Division of the Montana Department of Military Affairs
EMT	Emergency Medical Technician
EMS	Emergency Medical Services
EMSTS	Emergency Medical Services Trauma System
EOC	Emergency Operations Center
FDA	Food and Drug Administration
HAN	Health Alert Network
HCW	Health care worker
HIRMS	Health Information Resource Management System
HHS	U.S. Department of Health and Human Services
HSPD-5	Homeland Security Presidential Directive-5
ICAG	Incident Command Advisory Group
ICS	Incident Command System
ILI	Influenza-Like Illness
JFHQ-MT	Joint Force Headquarters-Montana
JIC	Joint Information Center
JTF	Joint Task Force
LHJ	Local Health Jurisdiction
MANG	Montana Air National Guard
MTNG	Montana National Guard
MTPHL	Montana Public Health Laboratories
NIH	National Institutes of Health
NIOSH	National Institute of Occupational Health
NIMS	National Incident Management System
NREVSS	National Respiratory and Enteric Virus Surveillance System
NVAC	National Vaccine Advisory Committee
PCR	Polymerase chain reaction
PIO	Public Information Officer
PHSD	Public Health & Safety Division
PHEPAC	Public Health Emergency Preparedness Advisory Committee
PPCC	Pandemic Preparedness Coordinating Committee
PPE	Personal protective equipment
SME	Subject matter experts
SNS	Strategic National Stockpile
VAERS	Vaccine Adverse Event Reporting System
WHO	World Health Organization

Glossary

Avian Influenza	A viral illness of birds caused by an influenza virus strain which is adapted to birds and, thus, spreads readily among birds but not humans. Avian influenza strains can be of high pathogenicity or low pathogenicity
Bird Flu	(See avian influenza)
Command Staff	The incident management staff consisting of the Incident Command and the special staff positions of Public Information Officer, Safety Officer, Liaison Officer, and other positions as required, who report directly to the Incident Commander
Epidemic	The occurrence of a disease in a community or region in excess of normal expectations
General Staff	A group of incident management personnel organized according to function and reporting to the Incident Commander
Health Alert Network	An internet-based computer application to communicate health and emergency information among health colleagues
HSPD-5	Homeland Security Presidential Directive-5 which specifies that the U.S. Department of Homeland Security is the lead federal agency in charge of preparedness and response to national disaster and emergencies
Incident Command System	A standardized emergency management construct specifically designed to provide for the adoption of an integrated organizational structure that reflects the complexity and demands of single or multiple incidents without being hindered by jurisdictional boundaries
Incident Commander	The individual responsible for all incident activities, including the development of strategies and tactics and the ordering and the release of resources
Incubation Period	The interval of time between the infection of an individual by a pathogen and the appearance of disease symptoms resulting from the infection
Influenza	A clinical condition characterized in humans by high fever, headache, chills, muscle aches, cough, sore throat and fatigue
Influenza-Like Illness	The presentation in humans of fever $\geq$ 100º F, with a cough or sore throat
Isolation	The separation of people who are ill with a communicable disease from those who are healthy
National Incident Management System	A system mandated by HPSD-5 that provides a consistent nationwide approach for Federal, State, local and tribal governments, the private Sector and nongovernmental organizations to work effectively and efficiently together to prepare for, respond to, and recover from domestic incidents, regardless of cause, size or complexity

National Response Plan	A plan mandated by HSPD-5 that integrates federal domestic prevention, preparedness, response and recovery plans into one all-discipline, all-hazards plan
Pandemic Influenza	A global outbreak of influenza that results from the emergence of a novel influenza A strain that causes serious human disease and spreads readily among people due to the absence of herd immunity
Quarantine	The physical separation or restriction of activities of people who are not ill with a particular disease, but are likely to have been exposed to the disease
Surveillance	The collection, analysis and dissemination of health and disease data

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I. INTRODUCTION

A. Purpose

The purpose of the Montana ***Pandemic Influenza Preparedness & Response Plan*** is to reduce morbidity and mortality, and minimize social disruption and economic loss in Montana by providing public health officials, health department staff, emergency management officials, health care administrators and community officials with a guide for the DPHHS response to an influenza pandemic. It is designed to support the DES ***Montana Disaster and Emergency Plan*** by outlining the procedures and actions that DPHHS will execute in response to an influenza pandemic. The strategies, guidelines, and tools included in this document are intended to achieve the following objectives:

- Rapidly and efficiently identify increases in ILI and increases in deaths due to pneumonia or influenza
- Rapidly and efficiently identify circulating influenza viral strains and submit to CDC specimens that cannot be readily identified by the MTPHL
- Ensure rapid information exchange among clinicians, public health officials and administrators of health care facilities about increases in ILI and/or potential novel influenza virus strains
- Rapidly and efficiently implement measures to limit or prevent the transmission of influenza and the development of secondary complications
- Continually monitor the course and characteristics of influenza outbreaks and promptly revise control strategies as needed.
- Implement effective communication and education strategies for the public, the media, community officials, health care communities , and public health communities to ensure an appropriate response to an developing influenza pandemic
- Coordinate and integrate influenza pandemic preparedness and response planning efforts with other local, state and federal preparedness plans and systems

B. Scope and Applicability

This plan addresses Montana's preparedness and response to a global epidemic of influenza. It includes those actions that state government would take to save lives and to protect public health and safety. This plan concentrates on operations involving duties that are statutorily mandated to DPHHS. It recognizes the responsibilities and respects the autonomy of other health jurisdictions and response agencies at the following levels:

- Local
- State
- Tribal
- Federal
- International

This plan provides for the coordination of activities among DPHHS, the federal government (particularly CDC), healthcare providers, healthcare facilities, charitable organizations, private businesses and other agencies of Montana state government. It also contains guidance and recommendations for local governments and communities.

C. Structure of the Plan

The DPHHS ***Pandemic Influenza Preparedness and Response Plan*** is an event-specific annex consistent with and subordinate to:

- The National Response Plan
- The Montana Disaster and Emergency Plan
- The DPHHS Human Disease/Public Health Emergency Plan

Other event-specific plans on a parallel level as this one include the DPHHS 1) ***Mass Vaccination/Prophylaxis Plan***, 2) ***Emergency Communication Plan***, and 3) ***Smallpox Plan***. The structure of this plan is modeled closely after the U.S. Department of Homeland Security's ***National Response Plan***.

D. Incident Management

While the Disaster and Emergency Services Division of the Montana Department of Military Affairs is responsible for the overall coordination of the state response to disaster and emergency situations in this state, the Montana Department of Public Health and Human Services is the designated lead agency responsible for preparedness and response to human diseases and other public health emergencies, including pandemic influenza. Within DPHHS, responsibility for the statewide control of communicable diseases lies primarily within the Communicable Disease Control and Prevention Bureau of the Public Health and Safety Division.

Command, control and management protocols already exist at DPHHS for the management of public health emergencies. The ICS structure under which DPHHS staff will operate during an influenza pandemic is outlined in the department's ***Human Disease/Public Health Emergency Plan***. Therein is contained the ICS organizational chart, and a listing of the cooperators involved in the response plan along with their expected roles and responsibilities.

To manage the unique challenges that could be presented by an influenza pandemic, DPHHS established a special, ad-hoc, incident-specific, planning task force. This group is called the DPHHS Pandemic Preparedness Coordinating Committee (PPCC). Members of the PPCC will provide input related to their required work duties as specified in their job profile. Members of the committee include, but are not limited to:

- State Medical Officer
- State Epidemiologist
- Communicable Disease Control and Prevention Bureau Chief
- Immunization Section Supervisor
- DPHHS Public Health Emergency Preparedness Coordinator
- CDC, Career Epidemiology Field Officer
- Communicable Disease Surveillance Coordinator
- MTPHL Technical Services Manager
- Strategic National Stockpile Coordinator
- Hospital Emergency Preparedness Coordinator
- Laboratory Services Bureau Chief
- Public Health Systems Improvement Bureau Chief
- DPHHS Public Health Information Officer
- DPHHS Emergency Risk Communication Coordinator

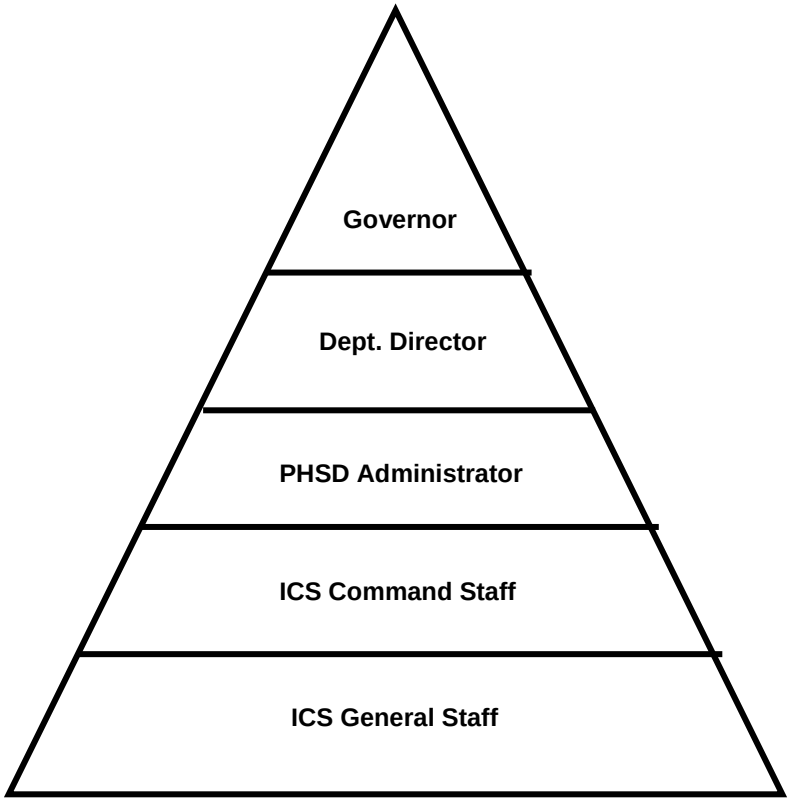
Responsibilities of the PPCC include:

- Develop the DPHHS ***Pandemic Influenza Preparedness and Response Plan*** (Note: this document is the result of this responsibility)
- Assist local and tribal health departments in preparing for and responding to an influenza pandemic
- Meet as needed to address emergent pandemic influenza preparedness issues in response to changes in the global/national influenza situation
- Advise DPHHS administration on issues regarding pandemic influenza preparedness and response, and provide recommendations as needed

While the ICS organizational structure outlined in the department's ***Human Disease/Public Health Emergency Plan*** does not specify the position or role of the PPCC in the DPHHS command structure, it is reasonably expected that the PPCC will function as the ICAG during a pandemic influenza incident.

Many important health decisions will need to be made by DPHHS workers during the course of an influenza pandemic. Some decisions will likely be more important than others. Decision making authority will be structured according to the hierarchy shown in Fig. 1. At each decision making level, subordinate decisions will be communicated to superiors. Superiors will be responsible for determining if decision making authority needs to be elevated to the next higher level. Ultimate decision making authority resides with the governor.

Figure 1. Management decision-making hierarchy



E. Statutory Authorities

Table 1. Statutory Authorities

Agency	Citation	Authority
US government	US Public Law 93-288	Provides federal authority to respond to emergencies and provide assistance to protect public health
DMA	MCA 10-1-102	Power & duty of DMA to coordinate and supervise state disaster control activities
DMA	MCA 10-1-106	Proclamation of martial law
DMA	MCA 10-1-702	Montana home guard ruled by the Governor
DMA	MCA 10-3-104(2)(a)	Authorizes governor to suspend laws that would hinder the response to a disaster or emergency
DMA	MCA 10-3-104(2)(b)	Authorizes governor to direct the evacuation of populations from an emergency or disaster area
DMA	MCA 10-3-105(2)	Establishes DES and its responsibility for disaster and emergency services of the state
DMA	MCA 10-3-111	Personnel immune from liability during an incident disaster or emergency
DMA	MCA 10-3-201	Establishes local agency responsibility for emergency and disaster preparedness and response
DMA	MCA 10-3-204	Establishes interstate mutual aid compacts
DMA	MCA 10-3-302	Governor's declaration of state of emergency
DMA	MCA 10-3-305	Governor as commander-in-chief during emergencies
DMA	MCA 10-3-313	Authorizes state to purchase or lease temporary housing units for disaster or emergency victims
DMA	MCA 10-3-901	The "Statewide Mutual Aid System Act"
DMA	MCA 10-3-1001	Emergency Management Assistance Compact
DPHHS	MCA 50-1-202(1)	Authorizes DPHHS to receive disease reports
DPHHS	MCA 50-1-202(2)	Mandates DPHHS to control diseases
DPHHS	MCA 50-1-202(18)	Grants DPHHS disease control rule-making authority
DPHHS	MCA 50-1-204	Authorizes DPHHS to adopt and enforce quarantine and isolation measures in order to control diseases
LHJ's	MCA 50-2-116(2)(a)	Authorizes local health boards adopt and enforce isolation and quarantine measures
LHJ's	MCA 50-2-116(2)(c)	Authorizes local health boards to prohibit the use of places in order to control diseases
LHJ's	MCA 50-2-116(2)(j)(i)	Authorizes local health boards to adopt rules for the control of communicable diseases
LHJ's	MCA 50-2-118(1)(c)	Authorizes local health officer to order buildings or facilities closed during epidemics
LHJ's	MCA 50-2-118(1)(g)	Authorizes local health officer to establish & maintain quarantine & isolation measures of their health board
LHJ's	MCA 50-2-118(2)	Authorizes local health officer to forbid persons to assemble if the assembly endangers public health
LHJ's	MCA 50-2-120	Provides for assistance from law enforcement officials

F. Response Agencies

Primary Agencies

State:	Montana Department of Public Health and Human Services
Federal:	U.S. Department of Health and Human Services
International:	World Health Organization

Support Agencies

State:	Governor's Office
	Office of the Attorney General
	Montana Department of Military Affairs
	Montana Department of Livestock
	Montana Department of Fish, Wildlife and Parks
	Montana Department of Agriculture
	Montana Department of Commerce
	Montana Department of Labor and Industry
	Montana Department of Justice
	Office of Public Instruction
County:	County Commissioners
	Health Department
	Disaster and Emergency Services
	Medical Examiner/Coroner
	Sheriff's Office
	Extension Office
Local:	Hospitals
	Emergency Medical Services
	Police Department
Federal:	U.S. Department of Homeland Security
	U.S. Public Health Service
	Indian Health Service
	Veterans Administration Medical Centers
	U.S. Department of Agriculture
	U.S. Department of Defense
Private:	Montana Medical Association
	Montana Hospital Association
	Montana Nurses Association
	Montana Funeral Directors Association
	Montana Association of Practitioners of Infection Control
	American Red Cross
	Salvation Army
	Montana Chamber of Commerce
	Montana Association of Churches
	Montana Healthcare Association
	Montana Pharmacy Association
	Montanan Primary Care Association
	Montana Association of County Officials

II. SITUATION AND ASSUMPTIONS

Situation:

Influenza is a viral illness with the potential to cause widespread sickness and death in all age groups across the globe. Pandemics occur sporadically because the influenza virus can change sporadically into new sub-types to which populations have little or no immunity. Influenza pandemics have occurred three times in the 20th century, (1918, 1957 and 1968); an estimated 500,000 deaths occurred in the U.S. during the 1918 pandemic. Recent, unprecedented, widespread outbreaks of highly-pathogenic avian influenza in Asia, Africa and Europe, coupled with the occurrence of high mortality in humans underscore the need to plan for an influenza pandemic.

Influenza pandemics differ from other emergencies for which public health plans and drills:

- Pandemics last much longer than most public health emergencies and may include "waves" of activity separated by 3-12 months
- The "impact zone" is the entire state, rather than just a single, isolated incident scene
- The simultaneous occurrence of outbreaks throughout the state will prevent shifts in humans and material resources that usually occur in the response to other disasters

The impact of an influenza pandemic may have devastating effects on the health and well-being of Montana residents; the following table shows the projected health impact of pandemic influenza in Montana.

Table 2. Projected Health Impacts of Pandemic Influenza in Montana

Impact	Average Flu Season Estimate	Moderate Severity Flu Pandemic Estimate	Severe Flu Pandemic Estimate
Illnesses	118,200	231,716	324,403
Outpatient visits	23,640	78,800	137,900
Hospitalizations	1,931	3,218	4,566
ICU care	353	588	823
Mechanical ventilation	176	294	412
Deaths	290	646	904

The expected phases of an influenza pandemic defined by the WHO in 1999 revised in 2005 based on the need for changes in public health action. Table 3 provides a summary of the new phases of pandemic influenza, and relates them (as much as possible) to the 1999 staging scheme. Each phase in the current staging scheme is associated with particular international and national public health actions recommended by WHO and CDC.

Table 3. Comparison of Pandemic Influenza Phases Published by WHO in 1999 and 2005

Phases as Published by WHO in 1999	2005 WHO Pandemic Stages
Interpandemic Period: Phase 0	**Interpandemic Period: Phase 1**. 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 animals, the risk[a] of human infection or disease is considered to be low.
	Interpandemic Period: Phase 2. No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk[a] of human disease.
Interpandemic Period: Phase 0, Level 1	**Pandemic Alert Period: Phase 3**. Human infection(s) with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact.
Interpandemic Period: Phase 0, Level 2	**Pandemic Alert Period: Phase 4**. Small cluster(s) with limited human-to-human transmission but spread is highly localized, suggesting that the virus is not well adapted to humans[b].
Interpandemic Period: Phase 0, Level 3	**Pandemic Alert Period: Phase 5**. Large 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) [b].
Pandemic Period: Phase 1 (Multiple countries)	**Pandemic Period: Phase 6**. Pandemic phase: increased and sustained transmission in general population[b].
Pandemic Period: Phase 2 (Multiple regions)	
Pandemic Period: Phase 3 (Case counts subsiding)	
Pandemic Period: Phase 4 (Next wave)	
Postpandemic Period: Phase 5	**Postpandemic Period.** Return to interpandemic period.

[a]The distinction between phase 1 and phase 2 is based on the risk of human infection or disease resulting from circulating strains in animals. The distinction would be based on various factors and their relative importance according to current scientific knowledge. Factors may include: pathogenicity in animals and humans; occurrence in domesticated animals and livestock or only in wildlife; whether the virus is enzootic or epizootic, geographically localized or widespread; other information from the viral genome; and/or other scientific information.

[b]The distinction between phase 3, phase 4 and phase 5 is based on an assessment of the risk of a pandemic. Various factors and their relative importance according to current scientific knowledge may be considered. Factors may include: rate of transmission; geographical location and spread; severity of illness; presence of genes from human strains (if derived from an animal strain); other information from the viral genome; and/or other scientific information.

Assumptions:

- A novel influenza virus strain will most likely emerge in a country other that the U.S. (It could emerge first in the U.S. and even possibly in Montana, but this plan assumes that it will not.)
- There will likely be very little time between the emergence of a pandemic strain and the onset of outbreaks in the U.S. and Montana
- Susceptibility to the pandemic influenza subtype will be universal
- Attacks rates may be extraordinarily high; up to 35%
- Outbreaks will occur simultaneously throughout much of the U.S. and Montana, limiting mutual aid of human and material resources that normally occurs with other natural disasters
- Federal and state declarations of emergency will change legal and regulatory aspects of providing public health services during a pandemic
- Attrition among health care workers and first responders will be high because they are at high risk of exposure, further straining the health care system
- The public health response to influenza will be prolonged, likely lasting more than a year
- Vaccine may not be available until 6-9 months after the onset of a pandemic
- When vaccine does become available, individuals will likely need 2 doses, thirty days apart, to achieve optimal protection
- Pharmaceuticals, especially antiviral agents and antibiotics to treat secondary infections will likely be in short supply
- Effective preventive and therapeutic measures, including vaccine and antivirals will be delayed and in short supply
- Hospital beds, medical equipment, emergency responders and health care staff will likewise be very limited; during a major pandemic, hospitals well be rapidly overwhelmed
- Funeral businesses may be unable to process the deceased from homes and health care institutions as fast as deaths occur, requiring the organization of state-run, regional mortuary services
- Essential community services will be disrupted due to staff shortages as a result of illness and death
- Well individuals, though uninfected, are still impacted by the need to care for sick family members or to care for children home from school or day care
- Widespread illness will result in shortages of personnel in sectors that provide essential community services
- Localities must be prepared to rely on their own response resources
- Liability protection for vaccine manufacturers and persons who administer influenza vaccine will likely be made available through congressional legislation
- Implementation of social distancing measures such as isolating the sick, and reducing the number of public gatherings may help to slow the spread of influenza early in the pandemic period
- Significant disruptions of public and private critical infrastructure, first response systems, and social services may occur due to high absenteeism
- WHO will notify CDC and other national health agencies of the pandemic phase changes
- CDC will develop guidelines and information templates that can be modified or adapted as needed at the state and local levels

II. ROLES AND RESPONSIBILITIES

Proper preparation for and response to an influenza pandemic will require a coordinated response by public health officials, emergency management authorities and other emergency response entities at the local, state and federal levels of government.

Federal

The Department of Health and Human Services is the U.S. Government's lead agency for the preparation, planning and response to pandemic influenza. As such, HHS will coordinate the federal government's response to the public health and health care requirements of pandemic influenza. The HHS Secretary's Command Center will serve as the national incident command center for all health and medical preparedness, response and recovery activities.

As the component of HHS responsible for disease prevention and control, CDC will have primary responsibility for tracking pandemic influenza and managing the operational aspects of the public health response. To effect this, CDC will augment local and state resources for disease surveillance, epidemiologic response, diagnostic laboratory services and reagents, education and communication, and disease containment and control. As a pandemic unfolds, CDC will assist state and local responders by posting updated guidelines and recommendations on the federal, pandemic influenza website: http://pandemicflu.gov.

HHS has assumed primary responsibility for a variety of key elements of the ***National Response Plan*** including:

- Vaccine research, development, evaluation and licensure (NIH, CDC, and FDA)
- Nationwide disease surveillance
- Laboratory support, and reagent development and distribution
- Arrange for liability protection for vaccine manufacturers and for persons administering vaccine
- Develop a national "clearinghouse" for vaccine availability information, vaccine distribution and redistribution
- Coordinate distribution and public sector procurement of vaccines and antivirals
- Develop and maintaining a vaccine efficacy and adverse events reporting system
- Develop a national information database/exchange/clearinghouse on the Internet
- Communicate essential health information to state response agencies

Federal roles and responsibilities in response to pandemic influenza are available in greater detail in the ***HHS Pandemic Influenza Response Plan*** (http://www.hhs.gov/pandemicflu/plan/)

State

Under the State of Montana Disaster and Emergency Plan, the Department of Public Health and Human Services is the lead agency for the state's response to outbreaks of communicable disease including pandemic influenza. While DPHHS is the lead state agency, the reader must recognize the statutory mandate of DES to coordinate state disaster control activities which, in the case of pandemic influenza, would include other state agencies including the Montana National Guard, plus non-governmental organizations such as the Red Cross, the Montana Hospital Association, the Montana Medical Association, the Montana Funeral Directors Association, Montana Emergency Medical Services Association.

DPHHS will oversee the general pandemic influenza preparedness and response planning process in cooperation with other state agencies and other partners. DPHHS will convene necessary

health professionals and consultants as needed to review the pandemic plan and provide technical advice to responders.

Specific responsibilities for DPHHS to prepare for and respond to an influenza pandemic include:

- Identify public and private sector partners needed for proper planning and response
- Prepare and maintain a pandemic influenza preparedness and response plan as an annex to the DPHHS ***Human Disease/Public Health Emergency Plan***
- Monitor and distribute information from WHO and CDC
- Collect and analyze epidemiologic information from LHJ's, i.e., characterize the outbreak in Montana
- Coordinate with tribal health agencies to ensure equitable delivery of vaccine, antivirals and other health service provisions to Montana's Native Americans
- Provide laboratory support for influenza testing
- Determination of populations at highest risk of influenza, and strategies for vaccination and antiviral use
- Make recommendations to local health officials to aid in controlling the spread of influenza
- Manage and distribute supplies from the federal government, including the SNS (vaccines and antivirals) to LHJ's
- Assist LHJ's in the development of local pandemic preparedness and response plans
- Cooperate with local health agencies in public education efforts, including identifying potential audiences for public education, and distributing fact sheets and other educational information to the community
- Create and maintain current and consistent messages and information for the news media, the public, health care workers and other partners
- Assessment of the efficacy of statewide control measures (e.g., travel restrictions, isolation and quarantine)

Local/Tribal

The response to, and mitigation of, the health and social consequences of a pandemic will take place at both the state and local levels. While DPHHS will assume the lead role for the state public health response, local and tribal health jurisdictions will be responsible for "on the ground" work to include:

- Obtain accurate and up-to-date disease surveillance data from local reporting sources
- Identify local and regional resources needed to deliver vaccine and antivirals to residents. This will include identification of facilities.
- Coordinate the dispensing of pharmaceuticals and vaccines to the public
- Facilitate cooperation among all local involved parties (e.g., government officials, emergency responders, health professionals, industry and the general public)
- Possible isolation of symptomatic victims and quarantine of exposed individuals
- Hospitals and Emergency Medical Services will collaborate in providing requested disease surveillance data to LHJ
- Protect the integrity of healthcare facility services and the safety of healthcare personnel and Emergency Medical Services personnel
- Coordinate with Emergency Medical Services and other local response partners to provide appropriate transport of patients as indicated
- Coordinate with local response partners to provide appropriate triage and treatment of patients as indicated

- Participate in public education efforts, including identifying potential audiences for public education, and distributing fact sheets and other educational information to the community
- Create and maintain current and consistent messages and information for the news media, the public, health care workers and other partners

Nongovernmental and Volunteer

The National Strategy for Pandemic Influenza makes an imperative that all segments of society become prepared for this threat. In the event of pandemic influenza, individuals, families, businesses, faith-based organizations, communities and assorted other nongovernmental and volunteer organizations will play a key role in protecting health and safety, as well as limiting the negative impact to the economy and society at large. The roles and responsibilities which nongovernmental and volunteer agencies are likely to assume for proper preparedness and response to an influenza pandemic are detailed in the Attachments section of this plan.

IV. CONCEPT OF OPERATIONS

The response to pandemic influenza will use much the same infrastructure as that needed for response to any public health emergency. However, there are areas that are specific to pandemic influenza and therefore require specific consideration. Following are six key operational considerations of the ***Montana Pandemic Influenza Preparedness and Response Plan***:

1. Command and management
2. Surveillance
3. Communications
4. Pharmaceutical Control
5. Nonpharmaceutical Control
6. Emergency Health/Medical Services

These six public health activities will be addressed in each of the following 3 WHO pandemic periods:

1. Interpandemic Period
2. Pandemic-Alert Period
3. Pandemic Period

A. Interpandemic Period

A1. Command and Management

The DPHHS, Communicable Disease Control and Prevention Bureau will be responsible for oversight of state preparations for influenza pandemic.

- The State Medical Officer and State Epidemiologist will convene a Pandemic Preparedness Coordinating Committee (PPCC) to develop a Pandemic Influenza Preparedness & Response Plan for Montana. (Note: This document is a product of this activity)
- The members of the PPCC will provide input related to their specific areas of expertise for implementation of the state's public health response to pandemic influenza. The composition of the PPC is described above under "Incident Management"
- Additional resources will provide advice and support to the committee as needed, and may include:
    1. Montana State Veterinarian
    2. MT Department of Livestock Veterinary Pathologist

3. DES Division Administrator
4. Montana APIC
5. Montana Hospital Association
6. Montana Medical Association

- Responsibilities of the PPCC:
  1. Develop the DPHHS pandemic influenza response plan
  2. Annually review and update as needed
  3. Assist local and tribal health departments in preparing for an influenza pandemic
  4. Assemble as needed to address emergent pandemic influenza preparedness issues in response to changes in the global/national influenza situation

A2. Surveillance

Influenza viruses have constantly changing antigenic properties. Surveillance for pandemic influenza must include both virologic surveillance, in which influenza viruses are isolated for antigenic and genetic analysis, and disease surveillance, in which the epidemiologic features and clinical impact of new variants are assessed. The goals of influenza surveillance are to detect the earliest appearance of a novel influenza virus in Montana and to describe the epidemiologic features of novel virus circulation in Montana. The following delineates relevant issues, roles and activities related to surveillance prior to an influenza pandemic:

- Surveillance for pandemic influenza is primarily a state function
- The Epidemiology & Communicable Disease Section, in close partnership with the MTPHL will have primary responsibility for surveillance of influenza activity and novel influenza viruses within the state.
- The Epidemiology & Communicable Disease Section will conduct surveillance for influenza-like illness (ILI) to identify increased influenza activity in the state. It is understood that ILI surveillance will not identify sporadic cases of a novel influenza virus.
- DPHHS will coordinate with local health agencies to conduct year around laboratory-based surveillance activities and compile weekly summary reports for submission to DPHHS. Surveillance will be expanded as necessary to include other key providers during the traditional influenza season (October through May) or during periods of unusual activity. DPHHS will provide a summary sheet to be faxed to DPHHS weekly for reporting purposes.

A3. Communications

In an emergency, accurate, consistent and timely messages are key in 1) notifying and educating the public, 2) Encouraging public compliance with public health instructions, i.e., social distancing, isolation and quarantine, mass vaccination or dispensing procedure 3) notifying and facilitating movement of emergency staff to their assigned duties and stations, and 4) roll-out of the emergency plan as intended. Following are communication-related issues that pertain to pandemic influenza:

- Assuring adequate communication systems will be a joint responsibility of federal, state and local public agencies
- The public will likely encounter some unreliable and possibly false information on the Internet, from others with motives contrary to public health, from rumors, from well-meaning, but un-informed or partially informed sources, etc. DPHHS will communicate time-sensitive, accurate, reliable information regarding the influenza pandemic, and will dispel rumors immediately.
- Mechanisms for communication with the public will vary depending on the phase of the pandemic and its impact on Montana communities
- DPHHS will continually strive to communicate with all essential partners. Keeping all essential partners and the public completely informed throughout the pandemic will

be difficult, but will remain the goal.

Following are communication activities to be initiated during the interpandemic period of an influenza pandemic:

- Develop a comprehensive communication plan in conjunction with DES that clearly establishes lines of communication and defines roles and responsibilities to avoid confusion and facilitate the best possible communication with partners, stakeholders, the general public, special populations and members of the news media
- Identify appropriate individuals and groups to notify of pandemic influenza activity in Montana
- Maintain a system of effective communication with target groups, including local public health officials and healthcare providers
- Distribute informational updates to all appropriate partners and the public as needed
- Create an emergency public information webpage to be ready to activate in emergency Situations
- Regularly monitor and respond to the DPHHS public communication email: hhsinfocenter@mt.gov
- Create the capacity for the public communication email to handle emergency situations
- Have a disease fact sheet specific to pandemic influenza, and begin public education, information and risk communication to build awareness about pandemic influenza and public trust of public health authorities
- Regularly update and maintain the DPHHS pandemic influenza preparedness website with the most current information available for the public, partners and stakeholders
- Have on-hand a disease fact sheet specific to pandemic influenza, and begin public education, information and risk communication to build awareness about pandemic influenza and trust
- Monitor the effectiveness of interpandemic risk communication activities
- Determine whether adequate human resources will be available for all phases of a pandemic. If not, plan to augment with other department or community resources, such as higher education communications students. Apprise key decision makers of plans to deploy staff and resources during an influenza pandemic.
- Review or establish procedures to ensure technology is working and use is understood, i.e., two-way radios, cell and satellite phones
- Establish process and procedure to set up toll free hotline and call center; train staff in advance

A4. Pharmaceutical Control – Vaccines

Influenza vaccine and influenza vaccinations have long been considered the cornerstones of influenza prevention and control. During the past 20 years, the annual delivery of influenza vaccine to the American public has increasingly become an institutionalized event. The WHO Collaborating Influenza Centers, of which the CDC is the North American representative, conducts laboratory-based surveillance for influenza viruses throughout the year to provide outcome data that helps in the formation of influenza vaccines for subsequent seasons. It is through this monitoring system that a potential pandemic strain of influenza virus should be detected. During a typical influenza season, vaccine strains are selected by early spring when licensed vaccine manufacturers in the U.S. begin the manufacturing process resulting in the development of approximately 70-85 million doses of vaccine each year.

Montana maintains relatively high levels of influenza vaccination among persons age $\geq$ 65 years old in non-institutional settings as well as in long-term care facilities. However, due to recent vaccine supply problems, it has become increasingly difficult and costly to ensure that patients at highest risk of complications from influenza infection receive vaccine. Vaccination programs during an influenza pandemic will present even greater challenges. Methods of vaccine delivery, administration, and inventory control depend on the vaccine supply and the epidemiologic

features of the illness. Close collaboration between public and private healthcare providers is essential to the success of a pandemic influenza vaccination program. The following are assumptions and/or statements of fact pertaining to influenza vaccine:

- Given currently available production techniques, it will take 4-6 months after the novel virus is identified and begins to spread among humans before a specific monovalent vaccine would likely be available for distribution
- Once confirmation of the pandemic has been declared, Local Health Jurisdictions will likely have one to six months to prepare for vaccine delivery and administration
- Recent clinical trials seem to indicate that two doses of influenza vaccine, administered four weeks apart will be needed to develop full immunity to the novel influenza virus
- Approximately 20% of the needed supply of vaccine will be produced each month. The first month's supply will be purchased by the federal government and distributed to state and local health departments to vaccinate prioritized individuals providing critical public services.
- If federal resources are not available to purchase the remaining 80% of needed vaccine, DPHHS will seek the necessary funds to purchase the vaccine for Montana residents, perhaps through a formal state emergency declaration
- Regardless of the availability of a vaccine that protects against the influenza pandemic strain, pneumococcal vaccine will reduce the risk of complications that can result from influenza infection. However, there are many complications of influenza that pneumococcal vaccine will not prevent.

During the period of time of preparation prior to an influenza pandemic, DPHHS will continue to emphasize the need for community-based infection control strategies such as:

- Promotion of the annual influenza vaccine and the use of pneumococcal vaccine along with the standard vaccine information statements detailing the risk/benefit of the vaccines
- Public education regarding the importance of respiratory hygiene or cough etiquette, hand hygiene and appropriate disposal of tissues
- Public and professional education regarding use of masks
- Social distancing to maintain a distance of 3 feet from others, stay away from work or school settings if ill
- Continue to emphasize the need for participation in mass-clinic exercises in the local health jurisdiction regarding vaccine distribution, administration of the biological, and security. Gaps in the local pandemic plans are being identified, and plans made to improve that component. The exercises will include the following objectives:
  - Written plans to accept the pandemic influenza vaccine and develop protocol to protect the cold chain requirements in an appropriate and secure storage area
  - Appropriate standing orders
  - List of personnel who will administer the vaccine
  - Suggested staffing needs and duties
  - List of training requirements for professionals and volunteers who will be conducting the mass clinic
  - Protocols for appropriate storage and monitoring of vaccine
  - Suggested list of supplies needed for clinic operations
  - Suggested clinic flow chart
  - Print materials for distribution to professionals in clinic and the public who will be attending the clinic
  - Address the needs of vulnerable populations, following the written operational plan for the LHJ
  - Written agreements and commitments of participant personnel and organizations to assist in the exercise and the actual vaccination operational plan. Have the written agreements signed and dated.
  - Written plan and a press release for where the vaccination clinics will take place

- DPHHS will participate in planned pandemic exercises to evaluate progress in the following areas:
  - Accept vaccine shipment(s) and store vaccine securely in either the Public Health Laboratory with monitored temperature control or at the DPHHS contract vaccine depot, Home IV Pharmacy in Butte, prior to shipment to local health jurisdictions as necessary
  - Practice transportation of the vaccine in coolers to maintain the cold chain requirements* enroute to the local health jurisdiction. Delivery methods of the vaccine will be via normal vaccine delivery channels such as United Parcel Service or Federal Express.
  - To evaluate the transportation of the vaccine in the event that security of the vaccine transport is threatened, the State Highway Patrol will be requested to provide security during transport from DPHHS to the local health departments or local tribal jurisdictions. Following delivery of vaccine to the local health jurisdiction, transport and security is the responsibility of the local health jurisdiction.
  - Gaps will be identified in the state plan, and changes made to improve the weak areas
- DPHHS will develop the Montana Countermeasure and Response Application (CRA) to track the vaccine recipients of the Pandemic Influenza Vaccine
- Develop contingency plans for administration of a vaccine under IND or EUA in the event the vaccine has not gone through the normal FDA licensure process
- Priority groups for use of the vaccine have been established to protect the critical services and infrastructure of a society. The Advisory Committee for Immunization Practices and the National Vaccine Advisory Committee provided recommendations to the DHHS regarding use of the Pandemic Influenza Vaccine. Local health jurisdictions (local county health departments and Tribal health departments) will develop their local pandemic plans to include an estimate of the number of persons in priority groups for vaccination.

The recommendations for priority groups to receive the vaccine nationally are found in Attachment G. Local health jurisdictions will be encouraged to develop a priority ranking for vaccine use to protect the critical services and infrastructure of their communities. Local priority lists may be based on the national priority ranking.

A5. Nonpharmaceutical Control

Until animal-to-human spread of H5N1 or another novel influenza virus is confirmed, community disease control activities will be limited to planning and routine activities to prevent influenza as follows:

- Continue annual public health disease control measures including:
  - Promote influenza and pneumococcal vaccination
  - Recommend hygienic practices (hand washing and "cover your cough")
  - Recommend ill individuals stay at home to avoid exposure of others
  - Recommend standard emergency preparedness measures, such as keeping adequate food, water and essential medicines in case of a need to avoid exposure
- Convene meetings of the PPCC as needed to engage community partners to review planned disease control measures in effort to continually refine the DPHHS *Pandemic Influenza Preparedness and Reponse Plan*
- DPHHS will work with health and non-health care partners to develop policies and procedures relateing to pandemic influenza containmnet, including encouragement of voluntary social distancing statewide, identificationof potential isolation and quarantine facilities, and evaluation and care of persons who have been isolated or quarantined
- Risk communication staff will prepare informational risk communication and protocol materials on pandemic influenza for risk and public information hotline services
- DPHHS will prepare informational materials in all media formatas designed to imiprove the

public's understanding of pandemic influenza and the imortance of disease control practices, including social distancing measures. Information will be disseminated via vaarious delivery mechanisms including print, electronic and web access, public service messages via radio and TV, persoan speaking engagements, "town hall" meetings, and delivery through other public information strategies.
- Exercise local and state pandemic plans to improve preparedness and response

A6. Emergency Health/Medical Services

All state and local governments are encouraged to have an emergency management plan which addresses all hazards. However, pandemic influenza is likely to pose unique challenges that may not be addressed in current emergency management plans. Because of the many unique challenges that will arise, emergency management plans should incorporate a pandemic influenza plan as an appendix to the existing plan.

Assumptions pertaining to Emergency Health/Medical planning for pandemic influenza include:
- Medical services and healthcare workers will be overwhelmed during the influenza pandemic
- Healthcare workers may not be able to provide essential care to all patients in need
- Unlike the typical disaster, because of increased exposure to the virus essential community services personnel such as healthcare personnel, police, firefighters, emergency medical technologists, and other first responders, will be more likely to be affected by influenza than the general public

Following are activities related to Emergency Health/Medical Services that will be initiated during the interpandemic period:
- Facilitate a process to engage healthcare facilities, emergency management, local public health, emergency medical services, community health centers, primary care providers and other
  public and private partners in planning for the community level response to pandemic influenza. Community responses may include the establishment of alternate triage sites and alternate care sites.
- Ensure the hospitals and emergency medical services have plans to facilitate vaccination or prophylaxis to essential healthcare and pre-hospital personnel
- Ensure the availability of isolation capacity in each hospital and the availability of increased isolation capability in each region
- Develop the Healthcare Information and Resource Management System (HIRMS) to provide a statewide inventory of healthcare resources, including personnel, equipment and supplies
- Implement and update the Montana Healthcare Mutual Aid System to facilitate the exchange of personnel, equipment and supplies among Montana hospitals as needs are identified
- In collaboration with EMSTS, establish a standard statewide mutual aid system for emergency medical services agencies
- In collaboration with EMSTS, update the Montana Ambulance Mobilization Plan and provide an electronic management format for that plan
- Facilitate revision of hospital emergency response plans through mutual aid planning, training and exercises
- Collaborate with neighboring jurisdictions to establish mutual aid relationships and facilitate the exchange of information

B. Pandemic Alert Period

B1. Command and Management

- The Incident Advisory Group (IAG) will provide a pandemic influenza situation update to the DPHHS, PHSD Administrator
- In consultation with the IAG, the PHSD Administrator or their designee will decide on the need for activation of the DPHHS EOC. Topics of discussion will include:
  - Full or partial activation of the DPHHS EOC
  - Staffing of the EOC if/when activated
  - Identification and notification of additional staff to assist in the response to the pandemic

B2. Surveillance

- The Epidemiology & Communicable Disease Section in cooperation with the MTPHL will maintain Montana involvement in national influenza surveillance coordinated by CDC by assuming primary responsibility for implementing virologic, morbidity, and mortality surveillance components and compliance with future recommendations for surveillance enhancement
- Laboratory-based virologic influenza surveillance activities will be maintained year round:
  - Communication between local clinical laboratories and MTPHL facilitates rapid notification of laboratory-based influenza activity
  - Weekly reports from MTPHL, as a WHO collaborating laboratory, to CDC with numbers of specimens received, and the number and type of influenza viruses isolated
  - MTPHL participation in the National Respiratory and Enteric Virus Surveillance System (NREVSS) for reporting viral activity. One additional Montana clinical laboratory is also a participant.
  - Monitoring CDC bulletins regarding virologic findings
  - Voluntary submission of original specimens to MTPHL from clinical laboratories and medical providers for confirmation, viral typing, and sub-typing, by culture and/or PCR methods
    - First positive rapid influenza tests of the season in each area of Montana
    - Positive rapid influenza tests during times of low influenza disease activity
    - Positive rapid influenza tests from vaccinated persons who would be expected to be protected
  - Voluntary submission of influenza virus isolates by clinical laboratories to the MTPHL for viral typing and sub-typing, either by PCR or culture methods
  - Specimen collection and transport supplies and instructions for testing will be provided by MTPHL to identified fee-exempt sentinel surveillance providers, and to our clinical laboratory partners
  - Submission of selected influenza isolates from MTPHL to CDC for antigenic analysis and possible use in future vaccine strain selection, as appropriate
- LHJ's will support surveillance activites including case surveillance, laboratory surveillance and any enhanced surveillance activities
- The Epidemiology & Communicable Disease Section will collaborate with the Montana Department of Livestock, Veterinary Diagnostic laboratory regarding zoonotic cases of influenza, especially among avian and swine populations
- DPHHS will develop educational materials about influenza and pandemic influenza Surveillance procedures for healthcare providers, laboratories and the public (see Communications Section for distribution plans)

B3. Communications

- Partner with local public/tribal health, hospitals, partners, stakeholders, news media and public
- Identify lead subject matter experts (SME), spokespersons; train spokespersons, political and project leadership and emergency public communications staff about emergency public information/risk communication and DPHHS emergency public information plan and information center operations
- Familiarize yourself with counterparts from other agencies, local, state and regional jurisdictions
- Identify common communication opportunities or challenges with neighboring jurisdictions, with regard to reaching people in risk groups, and consider opportunities to pool resources
- Work with SME's to train public health, partners and stakeholders about issues related to pandemic influenza
- Identify and engage credible local and state resources as partners, including members of the Public
- Plan and coordinate emergency communication activities with private industry, education, emergency responders, government and political leadership, hospitals/healthcare, and non-profit partners (i.e., Red Cross, faith communities, AARP)
- Equip and exercise DPHHS emergency information center and multi-agency joint information center (JIC)
- Build and affirm relationships with news media to optimize effective working relationships during pandemic influenza
- Develop a consistent, specific plan to identify and address rumors and misinformation promptly, and test the plan
- Develop ongoing coordination procedures with other agencies and organizations to conserve resources and avoid duplication of efforts
- Develop and maintain up-to-date public information officer (PIO) and/or other communications contacts of key stakeholders and partners; exercise the plan to provide regular updates
- Update, exercise and maintain statewide PIO list of designated local health jurisdiction, hospital and state PIOs
- Coordinate with partner agencies to prepare appropriate public, healthcare, policy and media responses to outbreaks of pandemic flu that address:
    - health protection for the public
    - responsiveness, capabilities, and limitations of the public health systemroles and responsibilities of pandemic response stakeholders
    - resources to help people cope with escalating fear, anxiety, grief and other emotions
    - how public health procedures and actions may change during different pandemic phases and why unusual steps may be needed to protect public health
    - self-protection measures, such as hand washing, masks, stay home when ill, cover cough, etc.
- Implement and maintain communication resources, such as emergency hotlines, web site, public e-mail system, to respond to local questions from the public and partners
    - Prepare basic communication resources in advance and plan to update them during a pandemic
    - Maintain website with current, easily accessible information, so people get used to going to it
    - Work with IT professionals to identify development servers on which to build state or local emergency websites that can "go live" in an emergency
    - Work with subject matter experts to craft key messages to help educate public health and healthcare providers and partners about novel and pandemic influenza, infection control, clinical and laboratory diagnostics, isolation and quarantine procedures, social

distancing, stigmatization management, medical treatments, prioritization recommendations, antiviral use, access to care, travel control authority, fatalities and mortuary, and legal issues pertaining to the pandemic

- Ensure the provision of redundant communication systems that allow for expedited distribution and receipt of information (i.e., cell phones, pagers, wireless, phone tree, community messengers, short wave radio, etc.)

Establish protocols for information dissemination

- Establish expedited procedures for reviewing and approving pandemic related messages and materials
- Establish protocols for frequently updating information, including daily disease activity reports
- Establish procedure and exercise for activating the DPHHS emergency information center
- Establish procedure for activating a multi-agency, multi-jurisdictional joint information center (JIC)
- Begin now disseminating messages and materials to increase the knowledge and understanding of the public, healthcare professionals, policy makers, news media, and others about unique aspects of pandemic influenza that distinguish it from seasonal influenza, and what to expect during various stages of a pandemic, also personal, household and neighborhood/community preparedness
- Establish and exercise protocol for field public communication, i.e., SNS
- Establish and exercise protocol to provide back up PIO assistance in the field, i.e., SNS

Provide coordinated information on ways the public can access help and self-help

- Inform citizens in advance of pandemic where they will be vaccinated or medications will be dispensed (SNS); other procedures, such as how to get there, ID and other documents to bring, and follow up procedures, etc.
- Inform citizens in advance of pandemic what containment procedures may be used in the Community
- Assure the development of public health messages has included the expertise of behavioral health experts
- Identify preferred channels for target audiences and special population groups
- Ensure the availability of communication products for sight and hearing challenged persons, and persons with developmental, physical, mental and emotional disabilities
- Test the communication operational plan that addresses the needs of targeted public, private sector, governmental, public health, medical and emergency response audiences
- Identify priority and back-up channels of communication
- Delineate the network of communication personnel, including SME lead spokespersons, persons trained in risk com, and links to other communication networks (i.e., EAS, extension service agents,
  home health care, WIC field workers, meals on wheels, faith communities, etc.)
- Ensure the HAN reaches 80% of all practicing, licensed, frontline healthcare personnel and links via the communication network to other pandemic responders
- Ensure the HAN reaches 80% of local and tribal public health professionals and links via the communication network to other pandemic responders

B4. Pharmaceutical Control – Vaccines

During the Pandemic Alert Period, DPHHS will continue to emphasize the need for community-based infection control strategies such as:

- Promotion of the annual influenza vaccine and the use of pneumococcal vaccine along with the standard vaccine information statements detailing the risk/benefit of the vaccines
- Public education regarding the importance of respiratory hygiene or cough etiquette, hand hygiene and appropriate disposal of tissues
- Public and professional education regarding use of masks

- Social distancing to maintain a distance of 3 feet from others, remaining out of the work place or school settings if ill
- Continue to emphasize the need for participation in mass-clinic exercise(s) in the local health jurisdiction regarding vaccine distribution, administration of the biological, and security. The exercises will focus on weak areas and include the following:
    - Development of written plans to accept the pandemic influenza vaccine and develop protocol to protect the cold chain requirements in an appropriate and secure storage area. The location for delivery of vaccine will be forwarded to the Immunization Program, if at a location other than the County Health Department.
    - Development of appropriate signed standing orders that list the vaccine administrators
    - Development of a list of personnel who will administer the vaccine
    - Suggested staffing needs and duties
    - Develop a list of training requirements for professionals and volunteers who will be conducting the mass clinic
    - Develop protocols for appropriate storage and monitoring of vaccine
    - Development of a suggested list of supplies needed for clinic operations
    - Develop a suggested clinic flow chart
    - Print materials for distribution to professionals in clinic and the public who will be
    - attending the clinic
    - Address the needs of vulnerable populations, following the written operational plan for the LHJ
    - Develop written agreements and commitments of participant personnel and organizations to assist in the exercise and the actual vaccination operational plan. Have the written agreements signed and dated.
    - Develop a written plan and a press release for where the vaccination clinics will take place
- DPHHS will participate in planned pandemic exercises to evaluate progress in the following areas:
    - Accept vaccine shipment(s) and store vaccine securely in either the Public Health Laboratory with monitored temperature control or at the DPHHS contract vaccine depot, Home IV Pharmacy in Butte, prior to shipment to local health jurisdictions as necessary. The Home IV Pharmacy will be available for use through 2007.
    - Preparation for transportation of the vaccine in coolers to maintain the cold chain requirements will be finalized at DPHHS
    - Delivery methods of the vaccine will be via normal vaccine delivery channels such as United Parcel Service or Federal Express
    - If security of the vaccine transport is threatened, the State Highway Patrol will be requested to provide security during transport from DPHHS to the local health departments or local tribal jurisdictions. Following delivery of vaccine to the local health jurisdiction, transport and security is the responsibility of the local health jurisdiction
- DPHHS will communicate to the LHJ's that the web based Montana Countermeasure and Response Application (CRA) system will be utilized to track the vaccine recipients of the Pandemic Influenza Vaccine
- DPHHS will communicate to LHJs the protocol for administration of a vaccine under IND or EUA in the event the vaccine has not gone through the normal FDA licensure process
- Priority groups for use of the vaccine must be established to protect the critical services and infrastructure of a society. The Advisory Committee for Immunization Practices and the National Vaccine Advisory Committee provided recommendations to the DHHS regarding use of the Pandemic Influenza Vaccine. Local health jurisdictions (local county health departments and Tribal health departments) will develop their local pandemic plans to include an estimate of the number of persons in priority groups for vaccination.

The recommendations for priority groups to receive the vaccine nationally are found in Attachment G.

Local health jurisdictions will be encouraged to develop a priority ranking for vaccine use to protect the critical services and infrastructure of their communities. Local priority lists may be based on the national priority ranking.

B.5 Nonpharmaceutical Control

Once human-to-human spread (Phases 4-5) of a new strain of influenza is confirmed anywhere, public health activities in Montana will intensify. These activities include the following:

- Notify partners of changes in pandemic phases
- Work closely with local and tribal health agencies to evaluate possible cases of travel-related infection with novel strains of influenza
- Adapt risk communication and public information materials for current use
- Provide travel advisories for areas where the novel influenza strain has been confirmed
- Aggressively promote prevention activities previously described and add recommendations that advise the public to:
    - Limit the exposure of vulnerable individuals (infants, elderly, immunocompromised) to others as much as possible
    - Avoid unnecessary visits to hospitals, emergency rooms and urgent care clinics
- Encourage telecommuting and development of telecommuting options
- Encourage individuals to self-quarantine if they have been in an affected area and exposed to individuals with flu-like symptoms
- Convene the PPCC and community partners to review options and develop a prioritized list of public health disease control measures, both voluntary and mandatory, that could be implemented during pandemic Phase 6

B.6 Emergency Health/Medical Services

Following are activities to be initiated during the pandemic alert period:

- Facilitate the flow of accurate, timely information among healthcare facilities, emergency medical services providers, local health jurisdictions and other response partners
- Assist hospitals, community health centers and emergency medical services in exercising plans and participation in community wide exercises
- Assist hospitals, community health centers and emergency medical services in collecting disease surveillance data and appropriate reporting

C. Pandemic Period

C1. Command and Management

- With guidance from the IAG, the PHSD Administrator will determine whether or not to advise the DPHHS Director to recommend the Governor declare a "State of Emergency in Montana" in response to the influenza pandemic
- The ICS command staff will meet as often as needed to guide the implementation of Montana's pandemic influenza response
- All divisions, bureaus and sections within DPHHS will be prepared to assume a supportive role if needed, working with the management team in ways appropriate to their program authority and responsibilities

- The MTPHL will provide testing and technical support to the DPHHS pandemic response, coordinate the communication of local lab test results to MTPHL, consult with local clinical laboratories about influenza test results, and provide guidance to clinical laboratories statewide
- The DPHHS, ICS Command Staff will monitor departmental staffing needs, and reassign personnel or request additional assistance as necessary

C2. Surveillance

- Continue Montana influenza surveillance activities as described in the pandemic alert period
- Inform/update LHJ's about the novel influenza virus detected via the HAN
- Implement enhanced active surveillance for cases by LHJ
- Implement enhanced active surveillance efforts by requesting each LHJ to contact key providers weekly to provide updated information and ensure complete cases reporting of suspected cases, and
    - As advised by DPHHS, consider implementation of relevant hospital admissions and mortality data, and
    - Maintain line-listings of any suspected and/or confirmed cases and contacts of interest utilizing DPHHS data applications or a local equivalent
- Implement enhanced laboratory surveillance to include the following:
    - Encouragement of local rapid influenza testing and/or collection of respiratory specimens for submission to MTPHL from patients who present with ILI and:
        - had recent travel to a region where the novel strain of influenza has been identified; or
        - present with unusually severe symptoms of ILI regardless of their travel history
    - Submission of these specimens to MTPHL to test for the novel influenza virus is requested. The submitter may send a duplicate specimen to their usual laboratory provider for detection of influenza viruses, if desired.
- Maintain MTPHL enhanced testing and surveillance capability
    - Cross-trained Clinical Laboratory Specialists (CLSps) in virologic and molecular influenza methods are available for reassignment of duties to meet surge demands or in the face of high absenteeism
    - Adequate inventory of laboratory reagents and supplies are maintained, and lists of sources are in place to quickly order supplies for increased demands. Molecular equipment will be upgraded to meet the increased demand for testing.
    - Triage of specimens will be performed using existing protocols. Working with the Epidemiology Section, specimens will be prioritized as needed for patient management.
    - Promotion of safe laboratory work practices. None of the state clinical laboratories or the MTPHL has BSL-3+ facilities. If the novel influenza virus requires BSL-3+ capabilities to provide safe working conditions for virus propagation, only molecular testing would be performed at the MTPHL. Those specimens would be referred to the Centers for Disease Control for viral culture, if requested through communications. Safety messages to our laboratory partners would be communicated through our Laboratory e-mail/fax distribution list.
    - Laboratory staff manipulating Influenza specimens will be encouraged to receive seasonal influenza vaccinations and will be followed under the MTPHL Medical Surveillance Policy if exposed to a novel virus

Statewide enhanced influenza surveillance will be advised until the novel influenza virus has been identified in all regions of the state during any of the phase of the pandemic or when transmission of the novel virus has ceased. DPHHS will advise local jurisdictions via the HAN of surveillance recommendations at regular intervals during the event.

C3. Communications

Following are communication activities to be initiated during the pandemic period;

- Place DPHHS Communications Plan (Annex 3: Montana Human Disease/Public HealthEmergency Plan) into action
- Mobilize emergency communications staff per National Incident Management System (NIMS) of incident command
  DPHHS Risk Communication staff should meet as needed with Epidemiology Section and Laboratory Bureau staff to maintain a proficient level of understanding of the unfolding influenza pandemic
  Operations Section staff will develop technical communiqués appropriate to specific target audiences. A separate "package" of messages will be developed as needed focusing on issues particular to the group. Information may include:
  - vaccine development and supply
  - isolation and quarantine recommendations
  - antiviral use
  - contact investigation
  - prevention and infection control methods
- Utilize the state HAN system to notify health partners of new developments, share treatment/prophylactic protocols and other relevant information
- Activate the DPHHS emergency information center or multi-agency joint information center as pandemic evolves, to provide one reliable, official place for the news media to gather for credible information
- Provide regular news updates and briefings that the public and news media come to rely on
- Provide regular updates and offer opportunities to address questions
- Distribute practical information, such as travelers' advisories, and be prepared to immediately address questions related to initial cases and provide guidance to the public about disease susceptibility, diagnosis, and management
- Provide communication resources to the public, i.e., emergency website, email system, hotline, community meetings, media (news and PSAs), community "connectors" or group leaders, short wave radio network, EAS or emergency alert system through DES
- Reinforce and verify ways to help people protect themselves, their families and others, including self-care information for psychological well-being
- Address rumors and misinformation promptly and persistently
- Take steps to minimize stigmatization
- Address psycho-social issues of pandemic through risk communication
- Reassess and adjust as necessary, messages to meet emerging needs
- Consider additional recruitment and training of community subject matter experts and spokespersons
- Review the effectiveness of procedures for keeping communications lists, materials, and databases current and accurate
- Make certain there are open and accessible channels for advice to the public, including ongoing functioning of hotlines, website updating
- Work with state and local officials to involve communications professionals on senior leadership teams, including roles as liaisons to national communications teams at CDC and other agencies, as well as communication professional liaisons to local/tribal jurisdictions, county or regional JICS (joint information centers)
- Maintain strong working relationships with colleagues in other jurisdictions and regions such as:
  - Public affairs directors and PIOs at all levels
  - Communications staff, PIOs, at congressional and other government offices

- Communications staff, PIOs, at state government, local and regional public health, police, fire and emergency management offices, hospitals
- State, local and regional emergency management, also inter-State
- State and local mental health agencies
- State and local emergency operations center coordinators
- Federal emergency operations centers

- Promote public acceptance and support for state, local, and national response measures and contingency plans
- Monitor news media reports and public inquiries to identify emerging issues, rumors, and misperceptions, and respond accordingly
- Conduct desk-side briefings and editorial roundtables with news media decision makers
- Proactively address groups that voice overly critical, unrealistic expectations
- Establish trust with marginalized groups subject to or experiencing stigmatization
- Engage and empower the public as partners in public health and safety
- Maintain scheduled access to pandemic subject matter experts to balance the media's needs with other subject matter expert priorities

C4. Pharmaceutical Control - Vaccines

During the Pandemic Period, DPHHS will continue to emphasize the need for community-based infection control strategies such as:

- Promotion of the annual influenza vaccine and the use of pneumococcal vaccine along with the standard vaccine information statements detailing the risk/benefit of the vaccines
- Public education regarding the importance of respiratory hygiene or cough etiquette, hand hygiene and appropriate disposal of tissues
- Public and professional education regarding use of masks
- Social distancing to maintain a distance of 3 feet from others, remaining out of the work place or school settings if ill
- Plan for implementation of the mass-clinic exercise(s) in the local health jurisdiction as soon as vaccine for the pandemic influenza strain is available. Security will be very important.
    - Review and revise written plans as necessary to accept the pandemic influenza vaccine and develop protocol to protect the cold chain* requirements in an appropriate and secure storage area
    - Obtain appropriate standing orders, listing vaccine administrators. Obtain signature for standing orders
    - Review and revise the list of personnel who will administer the vaccine,
    - Review training requirements for professionals and volunteers who will be conducting the mass clinic and make assignments
    - Review with staff the protocol for appropriate storage and monitoring of vaccine
    - Review and obtain the suggested list of supplies needed for clinic operations
    - Review the clinic flow chart
    - Organize the print materials for distribution to professionals in clinic
    - Organize the print materials for the public who will be attending the clinic
    - Develop assignments for which staff will be providing vaccine to the non-mobile vulnerable portion of the population
    - Review the written agreements, signatures and dates of the commitments of participant personnel and organizations to assist in the exercise and the actual vaccination operational plan
    - Review the written plan and press release for where the vaccination clinics will take place. Make current plan for distribution of the press release.
  - DPHHS will:

- Accept vaccine shipment(s) from the federal sources and store vaccine securely in either the Public Health Laboratory with monitored temperature control or at the DPHHS contract vaccine depot, Home IV Pharmacy in Butte, prior to shipment to local health jurisdictions as necessary. The Home IV Pharmacy will be available for use through 2007.
    - Prepare for transportation of the vaccine in coolers to maintain the cold chain* requirements will be finalized at DPHHS. Delivery methods of the vaccine will be via normal vaccine delivery channels such as United Parcel Service or Federal Express.
    - If security of the vaccine transport is threatened, the State Highway Patrol will be requested to provide security during transport from DPHHS to the local health departments or local tribal jurisdictions
    - Following delivery of vaccine to the local health jurisdiction, transport and security is the responsibility of the local health jurisdiction

- DPHHS will remind the LHJs that the web based Montana Countermeasure and Response Application (CRA) system is to be utilized to track the vaccine recipients of the Pandemic Influenza Vaccine
- DPHHS will communicate to LHJs the plans for administration of a vaccine under IND or EUA in the event the vaccine has not gone through the normal FDA licensure process
- Early Pandemic Vaccine doses will be made available based on the local health jurisdiction's designated priority groups to protect the critical services and infrastructure of a society. The Advisory Committee for Immunization Practices and the National Vaccine Advisory Committee provided recommendations to the DHHS regarding use of the Pandemic Influenza Vaccine. Local health jurisdictions (local county health departments and Tribal health departments) will have developed their local pandemic plans to include an estimate of the number of persons in priority groups for vaccination.

The recommendations for priority groups to receive the vaccine nationally are in Attachment G.

After vaccination of the priority groups, remaining vaccine distribution will be phased in according to population estimates. Vaccine safety will be monitored with the VAERS system.

*Cold chain requirements are maintaining refrigeration temperature at 2 to 8 degrees C (or 35 to 46 degrees F) during shipping and storage. The vaccine should not have been frozen or exposed to freezing temperatures.

Cold chain requirements for frozen vaccines are to maintain shipping and storage of vaccine at -15 to -20C degrees (or 4 – 5 degrees F).** Vaccine should be frozen on arrival and kept frozen during storage.

C5. Nonpharmaceutical Control

The application of nonpharmaceutical interventive measures will be guided by the evolving epidemiology of the pandemic and by recommendations from federal and international health authorities. Opportunities for averting a pandemic or appreciably slowing its spread will likely end when efficient and sustained human-to-human transmission is established. Nevertheless, once sustained human-to-human transmission (Phase 6) of a novel strain of influenza has been confirmed anywhere in the world, health promotion activities will become more aggressive, and direct public health disease control measures will be considered and possibly implemented as follows:

- Collect and analyze surveillance data to determine the need to imiplement various community disease control strategies

- Regularly provide situation reports to DPHHS administration and DES EOC detailing current pandemic epidemiology and anticipated impact of pandemic influenza in the state
- Provide appropriate travel advisories for areas where the novel influenza strain has been confirmed
- DPHHS Epidemiology Section will work closely with local health agencies to undertake contact tracing and quarantine as feasible and practical depending upon the epidemiology of the pandemic
- Recommend as appropriate the use of social-distancing measures individually, and within groups and communities
- Support mass vaccination clinics if effective vaccine is available
- Consider implementing, on a voluntary basis, the following community disease control measures based upon the epidemiology of the disease
    - Isolation of symptomatic individuals or groups
    - Quarantine of individuals or groups exposed to symptomatic persons
    - Cancellation of large group meetings
    - School closures
    - "Snow days"
    - Closures of places where large groups congregate (e.g., malls, theaters, clubs, etc.)
- Containment measures will be adapted to the epidemiologic context of each pandemic phase, and recommendations regarding specific measure will change as needed over the course of the pandemic
- Measures with limited effectiveness that the public chooses to adopt may be acceptable as long as they do not divert resources and supplies, are not discriminatory, and are clear and reasonable, e.g., the benefit of wearing masks in community settings has not been established and may prove ineffective in limiting transmission. As long as this practice does not affect mask supplies needed for use in other settings, and is not used as a substitute or other recommended measures, it will likely do no harm
- With public health partners at the local and state level, assist in the provision for basic life support requirements (food, water, necessary medical supplies, etc.) for individuals who area isolated or quarantined as a result of public health measures

C6. Emergency Health/Medical Services

Following are activities relating to emergency health/medical services that will be initiated during the pandemic period:

- DPHHS will be available to coordinate requests for additional human resources for hospitals and emergency medical services
- DPHHS will access the registry of volunteer healthcare personnel (MHMAS) to identify and alert available volunteers
- DPHHS will access HIRMS to identify and facilitate the movement of available resources to requesting hospitals and emergency medical services
- In collaboration with SNS, DPHHS will facilitate the distribution of requested assets to hospitals, community health centers, alternate care sites
- DPHHS will be responsible for collecting updates from healthcare facilities and emergency medical services statewide. These updates will include, at a minimum:
    1. The status of inventories and services maintained
    2. Census reports from each facility
    3. Activation of emergency response plans

V. Plan Management and Maintenance

A. The contents of this plan must be known and understood by those people responsible for its implementation. The State Medical Officer and State Epidemiologist are responsible for assuring briefings for staff members and management concerning their role in emergency management and the contents of this plan in particular.

B. The State Medical Officer and State Epidemiologist are responsible for the further development and maintenance of this plan and their appropriate supporting SOPs as stated here and set forth in the DPHHS Emergency Operation Guide.

C. The PPCC will ensure an annual review of this plan is conducted by all officials involved in its execution. The State Medical Officer and State Epidemiologist will coordinate this review and any plan revision and distribution found necessary.

D. The plan will be tested at least once a year in the form of a simulated emergency exercise in order to provide practical, controlled experience to those tasked within the plan.

Appendix A
Influenza Antiviral Medications: Use and Distribution

Overview

If a pandemic strain of the influenza virus is susceptible to available antiviral medications, then use of these medications could decrease the impact of an influenza outbreak (pandemic). Treatment with antiviral medications may decrease severe complications such as pneumonia and bronchitis, and may decrease the need for hospitalization. Prophylactic use of antiviral medications may prevent symptomatic influenza infections. To the extent, an effective vaccine is not available; use of influenza antiviral medications along with a variety of other community-based prevention steps would provide a core prevention strategy for control of pandemic influenza. CAUTION: It will be important to avoid inappropriate use of influenza antiviral medications to decrease the risk that a pandemic strain of the virus would become resistant to both treatment and prophylaxis by the medications.

The Department of Health and Human Services (DHHS) and the National Vaccine Advisory Committee (NVAC) have provided guidance regarding the use, including prioritization for use, of these medications during a pandemic. The current Montana plan is based on this guidance. NOTE: It is likely that this guidance would be modified based on data derived during various phases of an influenza pandemic. To the extent national guidelines are modified the Montana strategy for control of influenza is likely to also be modified. If this happens revised guidelines will be distributed in a timely manner to Montana health care providers and others who need to know.

This section of the Montana Pandemic Influenza Plan provides recommendations for distribution and use of influenza antiviral medications for treatment and prophylaxis during an influenza pandemic.

Strategies for use of influenza antiviral medications from the state stockpile during an influenza pandemic

A decision regarding whether to treat or prophylactically treat with influenza antiviral medications should be made based on the pandemic phase and the population group being considered. Use of these medications for treatment would be more efficient than use for prophylaxis for the purpose of preventing adverse health outcomes. Treatment steps require less medication and focuses on ill (symptomatic) persons who will benefit directly from the intervention. Prophylactic steps, on the other hand, require more medication because administration over a longer period of time would be required. Prophylactic use of the medications may be more effective than treatment use to maintain health care services and public safety functions. It is also possible that prophylactic use of these medications would decrease absenteeism related to fear of acquiring symptomatic infection and/or time lost from work due to influenza illness.

Information about currently available influenza antiviral medications and recommended dosages for treatment and prophylaxis can be found in Attachment A.

A. Treatment: The effectiveness of influenza antiviral medications against a pandemic strain of the influenza virus cannot be predicted. A rational choice for

antiviral medication use will depend on what is known at the time of a pandemic about antiviral resistance patterns as well the availability of the medication(s). As noted above, early treatment will likely be more efficient than prophylactic use of these medications [prophylaxis requires daily use for weeks during the pandemic period while a treatment course takes only 5 days]. In all likelihood, if the circulating strain of virus is susceptible to the medication, it will be important to deliver the medication to an ill person within 48 hours of the onset of symptoms. Treatment strategies will vary depending on the stage of the outbreak (pandemic).

1. At all stages of outbreak (pandemic): A mechanism must be in place to collect viral specimens from persons who develop influenza while on prophylaxis or whose illness progresses in severity while being treated. The goal of studying these specimens is to identify and monitor during-resistant strains. Throughout a pandemic treatment is likely to be targeted to persons whose illness requires hospitalization. To the extent, the supply of influenza antiviral medications is limited; use of these medications should be focused in the priority groups listed in Appendix Y.
2. When pandemic influenza has been reported elsewhere in the world, or when sporadic cases of a pandemic strain of influenza have been identified in the U.S.: Treatment decisions in Montana should be based on laboratory confirmation of disease caused by the pandemic strain. Treatment with an antiviral medication may be initiated based on a positive rapid antigen test result for influenza A. This treatment may be ceased if a confirmatory test result is negative for the pandemic strain. NOTE: Use of influenza antiviral medications to contain a small, well-defined cluster of cases in order to delay or reduce spread may be indicated. Local and state public health authorities will consult with the involved health care providers in this type of circumstance to determine availability of influenza antiviral medications from the state stockpile of medications.
3. When there is limited transmission of pandemic influenza in the U.S.: Treatment decisions in Montana would be based on either laboratory confirmation of the pandemic strain (e.g., viral isolation or RT-PCR) or detection of influenza A by a rapid antigen test, or certain epidemiologic and clinical characteristics (to be determined by direct consultation between local and state public health authorities and the involved health care provider). Treatment should be initiated before laboratory confirmation is obtained in order to achieve timely treatment for an ill patient, and should continue while awaiting confirmatory test results.
4. When there is widespread transmission of pandemic influenza in the U.S.: Treatment decisions would be based on clinical features (influenza-like illness) and epidemiologic risk characteristics which are likely to be updated at regular intervals based on epidemiologic assessments of disease caused by the pandemic strain. Laboratory test results would no longer be needed to initiate or to continue treatment during this phase of a pandemic. To the extent, the supply of influenza antiviral medications is limited; use of these medications should be focused in the priority groups listed in Attachment B.

B. Prophylaxis: Prophylaxis is the use of antiviral medications in persons who have not become ill from infection. To be effective prophylaxis must be continued until the risk of exposure has been reduced. Except for certain post exposure prophylaxis situations (see below), prophylaxis requires long-term use of influenza antiviral medications. Options to use these medications prophylactically are likely to be influenced by limited supplies of the medication(s), risks for side effects, and the potential for emergence of antiviral resistant influenza virus stains. For these reasons the number of persons to receive prophylactic antiviral medications should be minimized. In addition limited supplies should be used preferentially with ill persons to save lives and decrease severe morbidity. The need for prophylactic use of influenza antiviral medications would decrease substantially once an effective vaccine was available.

Prophylaxis with these medications would be used according to a prioritization strategy described below. Use would be determined also by information about the susceptibility of the circulating pandemic influenza strain and epidemiologic information derived during the pandemic. These medications may be used prophylactically during early phases of a pandemic to control outbreaks in limited, contained settings.

1. Post-exposure prophylaxis: Post exposure prophylaxis (PEP) is the use of influenza antiviral medications for persons with known exposure to the influenza virus, in this case a pandemic strain of influenza virus. The current recommendation for PEP is to administer influenza antiviral medications for 10 days after exposure. This use of these medications may be effective to control small, well-defined clusters. It may also be useful to prevent disease among persons in institutional settings (e.g., nursing homes) after a case has been identified in the institution's population. Local and state health department authorities will recommend which contacts should receive PEP based on epidemiologic evidence for efficacy of the available antiviral medications, and the supply of these medications.
2. Prophylaxis during the pandemic alert period: A person known or suspected to be infected by a strain of influenza virus with pandemic potential should be isolated. If the case is identified within 48 hours of onset of influenza-like symptoms, an influenza antiviral medication may be administered. Influenza antiviral medications may also be considered for PEP for close personal contacts, including health care workers, of the case.
3. Prophylaxis when pandemic influenza has been reported elsewhere in the world, or when sporadic cases of a pandemic strain of influenza have been identified in the U.S.: In addition to use for treatment of cases and suspected cases identified in Montana (see II. A.2) influenza antiviral medications may be used for prophylaxis of persons exposed to these cases (i.e., PEP).
4. Prophylaxis when there is limited transmission of pandemic influenza in the U.S.: Use of influenza antiviral medications should be focused on the priority groups for prophylaxis listed in Attachment B. Decisions to provide prophylactic antiviral medications will be contingent on availability and evidence regarding the efficacy of the medications during the course of the

pandemic. Use of influenza antiviral medications for prophylaxis would be decreased when an effective vaccine was available.

5. Prophylaxis when there is widespread transmission of pandemic influenza in the U.S.: Use of influenza antiviral medications should be prioritized for treatment of persons at highest risk of severe illness and death (see II.A.4). To the extent there is a supply of influenza antiviral medications and the medications are effective, prophylactic use should be focused to preserve health care and other essential services prioritized in Appendix Y. After a vaccine is available prophylactic use of influenza antiviral medications may be indicated for persons likely to have an inadequate antibody response to the vaccine (e.g., persons with immune suppression), persons for whom the vaccine cannot be used (e.g., persons with anaphylactic hypersensitivity to eggs), or to persons who have had only one dose of vaccine (e.g., if more than one dose of vaccine is needed to achieve protective antibody levels).

Prioritization for use of influenza antiviral medications: The goals for use of influenza antiviral medications during an influenza pandemic are: (i) prevent severe morbidity and mortality from infection with the pandemic strain of virus; (ii) maintain essential healthcare and community services; (iii) minimize disruption of life in communities in Montana. Use of influenza antiviral medications would be most important during a time period when an effective influenza vaccine was not available or not available in an adequate supply.

Priority groups for treatment and prophylactic use if influenza antiviral medications are listed in Attachment B.

Monitoring use of influenza antiviral medications: Once an influenza virus with pandemic potential is identified anywhere in the world national and international public health authorities are very likely to conduct careful assessments related to use of whichever influenza antiviral medications are available at that time. The assessments would in all likelihood focus on the effectiveness of the medications for treatment and prophylaxis, evidence of viral resistance to the medications, and adverse events among persons who use the medications. To the extent cases of illness caused by a pandemic strain occur in Montana and influenza antiviral medications are used by these cases, local and state public health workers may participate in the conduct of assessments of this type.

If during the course of an influenza pandemic it was judged necessary to use unlicensed antiviral medications, use of these unlicensed medications would comply strictly with the Food and Drug Administration's Investigational New Drug (IND) protocol. This protocol currently includes required completion of a signed informed consent form from each person who receives an IND medication, and required reporting of certain types of adverse events. In addition, strict inventory control and record keeping as well as approval from an Institutional Review Board in required.

The DPHHS in collaboration with local public health authorities will develop and implement methods for monitoring the distribution and use of influenza antiviral medications from the state's stockpile.

Appendix B
Montana Army/Air National Guard

PURPOSE

Military support to civilian authorities may play an integral role in achieving objectives of the Montana Pandemic Influenza Preparedness and Response Plan. This appendix addresses how the Montana National Guard will be involved and function in the response to pandemic influenza in Montana.

SCOPE OF OPERATIONS

The Office of the Governor has directed all agencies of state government to cooperate fully with each other and with the Disaster and Emergency Services (DES) Division of the Department of Military Affairs in the execution of the Montana Disaster and Emergency Plan, of which the DPHHS Pandemic Influenza Preparedness and Response Plan is part of.

The Montana Army National Guard and the Montana Air National Guard will operate within the established Montana Department of Military Affairs, Disaster and Emergency Services Incident Command structure under the ultimate state command of the Governor of Montana.

The mission of JFHQ-MT is to perform military support to civilian authorities (MSCA) to supplement civilian authority's response to stop, slow, or limit the spread, mitigate the disease, minimize death, save lives and reduce the economic impact of a pandemic influenza outbreak

ASSUMPTIONS

1. The strain of influenza that will cause the next influenza pandemic, its virulence, and the time and place of emergence cannot be determined in advance

2. Community disease control measures at the national and state level are unlikely to prevent the introduction of pandemic influenza into Montana once sustained human-to-human transmission of the agent occurs in the world

3. The identification of a novel influenza virus with sustained human-to-human spread may give warning of a pandemic weeks or months before the first cases appear in Montana

4. Communities across the state and country may be impacted simultaneously

5. Montana may not be able to rely on resources from other states or the federal government

6. The number of ill people requiring outpatient medical care and hospitalization may overwhelm the state's health care system resulting in the need for alternative sites for aggregate care

7. People who have access to clean water, food, sanitation, fuel and nursing and medical care while sick will be more likely to survive

8. Providing services to isolated populations in rural Montana is a crucial part of response planning for pandemic influenza

9. Shortages of vaccines and antivirals will have the potential to create widespread community unrest and civil disturbances

10. Local law enforcement capacity to respond to civil unrest may be inadequate

11. Significant disruption of public and privately-owned critical infrastructure is likely

12. An influenza pandemic may pose substantial short-term and long-term physical, personal, social and emotional challenges to communities in Montana

13. Widespread illness in the community could cause sudden and significant shortages of personnel in other sectors who provide critical services

14. Continuity of essential community services will be a critical concern during an influenza pandemic

15. The effect of pandemic influenza on communities in Montana will be relatively prolonged (weeks to months) in comparison to other types of disasters

SUMMARY OF ACTIVITIES BY PANDEMIC PERIOD

The Montana National Guard intends to respond immediately with the appropriate forces and equipment upon receiving a resource request from the Governor or DES. The Montana National guard may be confronted by a wide range, complex mission if mobilized to support a pandemic influenza response operation throughout the state. The J-3 Director of Military Support will lead the efforts in identifying and coordinating National Guard Resources used to support requesting agencies. Responding to pandemic influenza may require a total mobilization of all Army and Air Guard units in a State Active Duty status. The rapid deployment of MTNG personnel and resources throughout the state in multiple areas simultaneously will be critical to the operation. It is expected that an influenza pandemic will occur in the phases listed below. The MTNG/MANG response is detailed in each phase.

Interpandemic Period

- No operations are needed or planned during the interpandemic period
- Working together with DPHHS and DES, MTNG/MANG will review and update as needed Annex P (Pandemic Influenza Response Plan) to 20060-2007 MSCA

Pandemic Alert Period

- **Situation Assessment and Preparation**
  - DOMS conducts liaison and coordination with local agencies
  - DOMS monitors the situation to determine when the military and its resources may be needed
  - Commanders and logistics soldiers conduct planning, maintain alert rosters, conduct training, prepare/stow equipment and validate vehicle/personnel load plans

Pandemic Period

- Following a support request from DES as a result of an influenza pandemic, the Joint Operations Center will receive the state mission, and issue an order to assigned units to form a Joint Task Force to operationalize the mission
- Possible pandemic influenza response missions may include:
  - Medical evacuation
  - Transportation of food, water, and medicine
  - Troop transport for civil disturbance operations
  - Quarantine enforcement
  - Security of health care facilities
  - Augmentation of law enforcement
  - Cordon operations
  - Security checkpoints and/or road blocks
  - Perimeter security
  - Provision of medical support (Surgeon, Physician Assistants, Registered Nurses, and Medics) for pandemic influenza response operations as requested
  - Personnel to support mass care, housing and human services to quarantined personnel
  - Distribution of food and essential items to quarantined/isolated persons
  - Coordination for use of facilities in support of federal, state or local agencies
  - Assistance with mass vaccination operations by civil authorities
  - Augmenting public health screening at points of entry to U.S.
  - Provision of lodging, storage and mess facilities for units activated for emergency response operations
  - General field medicine, triage and first aid
  - Provision of personnel to support Graves Registration/Mortuary Affairs
- Upon notification of a potential mission, but prior to receipt of a DES mission, the Joint operations center will issue a verbal or written warning order to the appropriate directorate/command to allow the start of the planning process.
- Receipt of a written order serves as the formal authority for deploying forces
- Upon arrival at the site, the deployed Joint Task Force will report to the Incident Commander for processing and further mission guidance. Emergency Response Coordinators may be designated for multiple locations. Each Emergency Response Coordinator is responsible for all resources assigned to the incident.
- The Joint Task Force Commander may reorganize forces and assign personnel to new positions as the incident management team dictates

- The use of military forces at incident locations ends with the DES determination that military support is no longer required. As the scope and magnitude of the required support diminishes, the Joint Operations Center will coordinate with DES and the primary supported agencies while planning for transition
- As directed by DES, the JFHQ-MT will withdraw military resources from emergency response operations and transition all emergency activities to civil authorities. When military assistance is no longer required, the Joint Task Force Commander will develop a withdrawal plan with the incident management team. No movement or demobilization will occur without prior approval from the Joint Operations Center.

Appendix C
Montana Office of Public Instruction

PURPOSE

Local educational agencies and schools will play an integral role in achieving objectives of the Montana Pandemic Influenza Preparedness and Response Plan. This appendix addresses how the Montana Office of Public Instruction (OPI) will be involved and function in the response to pandemic influenza in Montana.

SCOPE OF OPERATIONS

The Office of the Governor has directed all agencies of state government to cooperate fully with each other and with the Disaster and Emergency Services (DES) Division of the Department of Military Affairs in the execution of the Montana Disaster and Emergency Plan, of which the DPHHS Pandemic Influenza Preparedness and Response Plan is part of.

The Office of Public Instruction will operate within the established incident command structure.

While the Health Enhancement and Safety Division of OPI functions to prevent major health problems and health-risk behaviors among staff, students and families, operations during an influenza pandemic will extend to all individuals within Montana.

ASSUMPTIONS

1. An influenza pandemic will threaten the capability of school systems to properly function due to illness and attrition among staff

2. Student absenteeism will be high

3. Assembling of students together into classrooms may facilitate and increase the rate of transmission of respiratory pathogens such as influenza virus

4. Good health habits such as frequent hand washing, covering one's mouth and nose when sneezing and coughing, and ensuring that students stay home when sick will help to slow the spread of germs at school

5. Widespread illness in the community could increase the likelihood of sudden and significant shortages of personnel in other sectors who provide critical services to schools

6. An influenza pandemic may pose substantial short-term and long-term physical, personal, social and emotional challenges to students and/or the community at large

7. The effect of pandemic influenza on communities and schools will be relatively prolonged (weeks to months) in comparison to other types of disasters
8. Hospital and healthcare surge capacity may be rapidly exceeded during an influenza pandemic resulting in the need for alternative sites for aggregate care which may potentially be provided by school systems

SCOPE OF OPERATIONS

The Montana Office of Public Instruction will appoint a person, along with a first backup and a second backup, to act as the agency representative to DPHHS with regard to pandemic influenza preparedness and response planning.

The OPI agency representative will interface with DPHHS by serving as an ad hoc, ex officio member of the DPHHS, Public Health Emergency Preparedness Advisory Council (PHEPAC) Pandemic Influenza Preparedness Subcommittee.

In order to comply with federal funding requirements, the OPI agency representative and backups will be required to satisfactorily complete:

1. U.S. Department of Homeland Security, Federal Emergency Management Agency, Emergency Management Institute's ICS-100 (Introduction to ICS) and ICS-200 (Basic ICS)
2. U.S. Department of Homeland Security, Federal Emergency Management Agency, ICS-700 NIMS (Introduction to National Incident Management System)

The above training is online, and can be completed from the workers office. No travel is required to meet this training requirement. Additionally, there are no costs associated with the training.
The ICS 100 course can be accessed at http://training.fema.gov/EMIWeb/IS/is100.asp
The ICS 200 course can be accessed at http://training.fema.gov/EMIWeb/IS/is200.asp
The IS-700 NIMS course can be accessed at http://training.fema.gov/EMIWeb/IS/is700.asp

OPI is responsible for annually reviewing and updating this appendix as needed to ensure that information contained within is consistent with current knowledge and infrastructure. While this appendix serves as a guide specifically for influenza intervention activities during a pandemic, the judgment of public health command staff based on the epidemiology of the disease may alter strategies that have been presented herein.

SUMMARY OF ACTIVITIES BY PANDEMIC PERIOD

It is expected that an influenza pandemic will occur in the phases listed below. The OPI response is detailed in each phase.

Interpandemic Period

- Identify private and public sector preparedness and response partners. Foster coordination and participation among partners in the planning process
- Work within agency to develop a continuity of operations plan for a large scale public health disaster such as pandemic influenza
- Develop and distribute educational materials to constituency regarding pandemic influenza, and the role of schools in proper preparedness and response planning
- Assist local education associations in the development of plans for continuity of operations in case of critical loss of staff during a pandemic
- Utilizing the CDC School District (K-12) Pandemic Influenza Planning Checklist, identify major gaps in current ability to effectively respond to an influenza pandemic. Explore avenues for redressing gaps

Pandemic Alert Period

The OPI will assign a "Crisis Management Team" (CMT) that will include persons designated to:

- *provide information to the media,*
- *work with the school(s),*
- *refer the LEA request for assistance checklist to appropriate OPI staff, and*
- *coordinate with management.*

The following steps will be taken in dealing with a crisis alert:

A. *Initial Report of Crisis Event -- When an OPI staff person receives word of an LEA crisis, the staff person is to report this information to the most senior person immediately available on the Crisis Management Team. That individual will call the Crisis Management Team (CMT) together.*

B. Media -- The central voice to the media will be the OPI Public Information Officer. As the CMT liaison to the media, the liaison will determine who, if anyone other than the liaison, will talk with the media and what can be talked about with the media.

C. Deputy Superintendent's Role --The Deputy's role is to contact the district to verify the incident and determine the facts. This is reported back to the team. The Deputy will also ask the LEA superintendent whether or not OPI assistance is needed. If possible, this should be done within 24 hours of an incident or of the time OPI is notified.

(1) If OPI's assistance is not needed, the Deputy monitors the situation. Staff and other LEAs are informed as necessary.

(2) If OPI's assistance is requested, a designated CMT member will fax the request for assistance form to the district. This form will identify the type of assistance requested by the LEA. Once the form is returned, the designated CMT member or alternate will secure the appropriate OPI personnel to assist in the response.

D. Information to OPI Staff – The OPI Public Information Officer or alternate will inform OPI staff concerning the crisis, deal with rumors and provide updates as required.

E. Information to Other LEAs – The Chief of Staff or alternate will inform other Montana LEAs regarding events, known facts of the situation and will dispel rumors. That person will be the contact point for incoming calls about the crisis incident from other schools as well as from the media. Responsibilities also include notification to School Administrators of Montana (SAM), Montana School Board Association (MTSBA), Montana Education Association/Montana Federation of Teachers (MEA/MFT) and the Montana Board of Public Education (MBPE).

F. Follow-up Meetings of the CMT --The Crisis Management Team will meet as necessary following the crisis. The need for these meetings will be determined by the Deputy Superintendent.

G. Follow-up Communication with the Affected LEA -- The Deputy Superintendent or alternate will follow-up with the LEA as necessary after the crisis.

Pandemic Period

The OPI "Crisis Management Team" (CMT) will include persons designated to:

- *provide information to the media,*
- *work with the school(s),*
- *refer the LEA request for assistance checklist to appropriate OPI staff, and*
- *coordinate with management*
- *coordinate with DPHHS, Homeland Security and other state and federal agencies, as necessary.*

The following steps will be taken in dealing with a crisis:

A. *Initial Report of Crisis Event -- When an OPI staff person receives word of an LEA crisis, the staff person is to report this information to the most senior person immediately available on the Crisis Management Team. That individual will call the Crisis Management Team (CMT) together.*

B. Media -- The central voice to the media will be the OPI Public Information Officer. As the CMT liaison to the media, the liaison will determine who, if anyone other than the liaison will talk with the media and what can be talked about with the media.

C. Deputy Superintendent's Role --The Deputy's role is to contact the district to verify the incident and determine the facts. This is reported back to the team. The Deputy will also ask the LEA superintendent whether or not OPI assistance is needed. If possible, this should be done within 24 hours of an incident or of the time OPI is notified.

(1) If OPI's assistance is not needed, the Deputy monitors the situation. Staff and other LEAs are informed as necessary.

(2) If OPI's assistance is requested, a designated CMT member will fax the request for assistance form to the district. This form will identify the type of assistance requested by the LEA. Once the form is returned, the designated CMT member or alternate will secure the appropriate OPI personnel to assist in the response.

D. Information to OPI Staff – The OPI Public Information Officer or alternate will inform OPI staff concerning the crisis, deal with rumors and provide updates as required.

E. Information to Other LEAs – The Chief of Staff or alternate will inform other Montana LEAs regarding events, known facts of the situation and will dispel rumors. That person will be the contact point for incoming calls about the crisis incident from other schools as well as from the media. Responsibilities also include notification to School A Montana Board of Public Education (MBPE).

F. Coordination with other federal and state emergency management agencies – the Deputy Superintendent will consult with the designated agencies and direct actions for the OPI. The Public Information Officer and/or Deputy Superintendent will provide information to the Lea's as required.

G. Follow-up Meetings of the CMT --The Crisis Management Team will meet as necessary during and following the crisis. The need for these meetings will be determined by the Deputy Superintendent.

H. Follow-up Communication with the Affected LEA(s) -- The Deputy Superintendent or alternate will follow-up with the LEA as necessary after.

Appendix D
Surveillance for Early Detection of Highly Pathogenic Avian Influenza H5N1 in Wild Birds:

2006 Montana Sampling Plan

Version 5-16-2006

By

Interagency Coordinating Committee for HPAI H5N1 Wild Bird Surveillance in Montana

Table of Contents

Surveillance for Early Detection of Highly Pathogenic Avian Influenza HPAI H5N1 in Wild Birds:

2006 Montana Sampling Plan

Version 5-15-2006

1.0 INTRODUCTION

1.1 Broad Scale Overview

Inserted with some edits and updates from "Surveillance for Early Detection of Highly Pathogenic Avian Influenza HPAI H5N1 in Wild Migratory Birds – A Strategy for the Pacific Flyway"

Avian influenza is widely endemic in wild populations of waterfowl and many other species of birds. The emergence and spread of a Highly Pathogenic Avian Influenza (HPAI) H5N1 subtype in Asia over the past few years (hereafter called HPAI H5N1) has elevated concerns about potential expansion of this virus to North America.

Concerns of government agencies and the public are based on a range of possibilities that include sickness and mortality in wild bird populations, introduction of a disease that could devastate the poultry industry, and potential mutation of the virus into a form that could be highly infectious and pathogenic to humans—possibly the source of the next flu pandemic. Currently, public concern has been heightened by extensive media coverage about this virus in Asia, its spread to Europe, and the very small number of human infections—much of it includes speculation that migratory birds are a primary vector and will bring it to North America. Thus, government agencies, particularly state and federal wildlife agencies, are being called upon to develop an early detection system to determine if and when the virus arrives here.

Some clarifications of terms and the current situation are warranted because the terminology of avian influenza is often confusing, and it is important that a shared understanding of this disease is accurate. For purposes of this strategy, here are some key points and assumptions:

- Migratory aquatic birds are the natural reservoir for many of the 144 subtypes of avian influenza, named for their protein components hemagglutinin (H) and neuraminidase (N). Most avian influenza types are not very pathogenic, but the H5 and H7 types seem to be more pathogenic to domestic poultry.
- The terms "highly pathogenic" (HPAI) and "low pathogenic" (LPAI) refer specifically to pathogenicity to domestic poultry—testing for HPAI is documented by mortality rates in dosed poultry.
- Some avian influenza varieties may mutate into forms that become pathogenic to specific taxa (e.g., birds, swine, humans). The currently prominent HPAI H5N1virus is highly

pathogenic to some birds, particularly domestic poultry, but is not easily transmitted to people. This is primarily a bird disease that has infected a small number of people who have been heavily exposed to infected poultry or raw poultry parts.

- The HPAI H5N1 strains have not been detected in North America. Low pathogenic H5N1 and a wide variety of other AI types have been documented in poultry and wild waterbirds.
- The degree to which migratory birds may be agents in the spread of HPAI H5N1 is unknown. Mortalities of wild birds due to HPAI H5N1 have occurred. Migratory waterfowl, however, are tolerant of avian influenza and could be vectors. Experimentally this has been shown for HPAI H5N1, and surveillance of live birds in several locations have found HPAI H5N1 in apparently normal birds (including waterfowl and gulls).
- Currently, there is inadequate information about the virulence of HPAI H5N1 in wild bird species, its persistence in wild populations, and the degree to which it can spread from bird to bird during seasonal and annual cycles. Fecal contamination is assumed to be the primary mode of transmission, and viruses can remain viable for extensive periods in cold, fresh water.
- The onset of a major human influenza pandemic could result if some form of AI—HPAI H5N1 or any other type—adapted into a form that was able to sustain easy human to human transmission. HPAI H5N1 is the most immediate threat for a global human pandemic but the likelihood of that occurring is unknown.

1.2 Montana Context

Montana overlaps with both the Pacific and Central Flyways. Each flyway council developed an early detection plan for HPAI H5N1, which were stepped down from the U.S. Interagency Strategic Plan (Interagency HPAI Early Detection Working Group 2005). This plan reflects objectives and strategies described in both flyway plans.

Montana Fish, Wildlife & Parks (MFWP) and USDA/APHIS Wildlife Services (WS) are the lead agencies (hereafter referred to as lead agencies) in Montana for sampling wild birds for early detection of HPAI H5N1. This Plan is a product of considerable coordination between the two agencies and other state and federal agencies including Montana's Department of Livestock, Department of Public Health and Human Services, and the U.S. Fish and Wildlife Service.

All of the cooperating agencies in Montana recognize this document as the sole HPAI H5N1 early detection implementation plan through which they will work in a coordinated fashion to achieve the plan's goal and objective.

2.0 GOAL AND OBJECTIVE

The goal of this plan is <u>early detection</u> of HPAI H5N1 in wild migratory waterfowl and shorebirds and semi-wild flocks of urban waterfowl if it occurs in Montana.

The objective of this document is to provide an implementation plan that describes priority species for sampling, locations, sampling levels, methods, and resource and communication needs for the upcoming fall migration period (July-December 2006). Depending on circumstances and funding, this plan may extend beyond this timeframe.

<u>This plan is strictly a surveillance plan and does not address coordination and integration of a response to the discovery of HPAI H5N1 in Montana, if that occurs.</u>

3.0 APPROACH

3.1 Priority Species for Sampling

Certain species of waterfowl and shorebirds are believed to be natural reservoirs for most kinds of avian influenza viruses, including 144 "subtypes" as well as genetic variants within each subtype (Interagency HPAI Early Detection Working Group 2005). Some of these species exhibit three or more of the following characteristics that make them priorities for early detection sampling in Montana including:

- Carry avian influenza viruses, often without outward signs of illness
- Associated with water-borne avian influenza viruses
- Migrate or move between Asia and North America
- Assimilate with birds that are associated with Asia
- Resident (urban) waterfowl flocks that assimilate with priority migrating waterfowl and people
- Occur in sufficient abundance in Montana to allow effective sampling

The following list of bird species were derived from national and flyway early detection surveillance plans (Table 1). Generally, these "priority" birds occur in Montana with sufficient abundance to provide opportunities for sampling. For the purposes of this plan, sentinel species are semi-domestic waterfowl (primarily mallards) that occur in urban settings and mix with priority migrating waterfowl.

Table 1. Candidate waterfowl and shorebird species for HPAI H5N1 surveillance in Montana, Pacific and Central Flyways combined.

Primary Species	**Secondary and Sentinel Species**
Tundra Swan	Mallard
Snow Goose	American Wigeon

Northern Pintail	Gadwall
Long-billed Dowitcher	Northern Shoveler
Red-necked Phalarope	
Pectoral Sandpiper	

In addition to species listed in Table 1, the Central Flyway early detection plan has identified additional priority species that occur in Montana. These may be "opportunistically" sampled as circumstances allow and include: Blue-winged Teal; Green-winged Teal; Common Goldeneye; Greater Yellowlegs; Lesser Yellowlegs; Solitary Sandpiper; Spotted Sandpiper; and Lesser Sandhill Crane. Samples of these species are likely to be small but, when added to samples from other states, are intended to be a sufficient sample for HPAI H5N1 surveillance.

3.2 Sampling Locations

National Wildlife Refuges and Wildlife Management Areas: Sampling on national wildlife refuges or by NWR staff will initially be coordinated through Dr. Tom Roffe, Chief, Wildlife Health, with the Mountain Prairie Region of the U. S. Fish and Wildlife Service in Bozeman, Montana. FWS will select an HPAI point of contact for Montana who will help coordinate surveillance activities among the refuges under this plan.

Benton Lake NWR plans to run a pre-hunting season duck banding operation. Staff from the lead agencies will assist with these operations to retrieve and ship samples. Several refuges, yet to be determined, may be asked about the feasibility of getting some samples from hunter-killed birds during the hunting season. The lead agencies will provide assistance with collecting and processing samples.

Freezout Lake Wildlife Management Area northwest of Great Falls, in the Pacific Flyway part of the state, is expected to be an important area for obtaining samples from hunter-killed birds. This will be the main source of hunter-harvested Western Population tundra swans and Wrangel Island snow geese, both of which are primary species for sampling. There will also be several priority duck species available until the wetlands freeze over.

Benton Lake NWR, Medicine Lake NWR, Lee Metcalf NWR, and Bowdoin NWR provide waterfowl hunting and will also be focus areas for sampling hunter-harvested birds during periods of peak hunting activity.

Some national wildlife refuges and Freezout Lake WMA provide stopover habitat for migrating shorebirds. Additional investigation and coordination will be undertaken by lead agencies to determine locations and peak times for sampling shorebirds in these areas.

Urban Areas and Sentinel Flocks: Semi-domestic ducks found in several urban areas of the state attract wild waterfowl and will serve as sentinel flocks. These sites provide opportunities for

live-trapping both wild and semi-domestic birds as well as environmental sampling. Sites that have been identified thus far include the following:

Great Falls	Gibson Pond and Park*
Kalispell	Woodland Park
Missoula	Bilo Pond*
Missoula	McCormick Pond
Anaconda	Washoe Park Duck Pond*
Butte	Park along I-90
Helena	Fairgrounds Pond*
Bozeman	Bozeman Ponds at MSU
Livingston	Sacajawea Park*
Billings	Fuddrucker/Fairfield Inn ponds*
Billings	Riverfront Park
Billings	Spring Creek Park

Those sites marked with an asterisk (*) are considered to be good candidates for sampling given what is known at present. Further assessment will be done for all of the above sites and any others that are identified including: number of flightless ducks; whether the flightless birds are rounded up and housed in the winter; and the number and species of wild waterfowl that typically intermingle with the resident flock. Those sites where there is considerable direct or indirect contact between wild waterfowl and people will be a higher priority. Each candidate site will require coordination with appropriate city or county agencies prior to initiating sampling.

Other Areas: Additional sampling may occur, with U.S. Fish and Wildlife Service permission, on Waterfowl Production Areas in northeastern and north central Montana. Some of these areas are stopover places for migrating shorebirds and provide waterfowl hunting opportunities until freeze up, usually in late October or early November. Some wetlands administered by the Bureau of Land Management and privately owned wetlands may also be considered, with permission, as sampling areas.

Late in the waterfowl season, after the shallow wetlands freeze over, the only areas that provide open water for waterfowl include some rivers and springs. Many of these are hunted through accesses provided by MFWP fishing access sites or through private land and may provide sampling opportunities primarily for hunter-harvested mallards. Many potential hunting areas are dispersed over the state and may be difficult to efficiently sample.

3.3 Sampling Intensity

Currently, there is no reliable information on the prevalence of HPAI H5N1 in wild bird populations. The national and Pacific Flyway plans suggest that a minimum of 200 samples would be required to detect one positive HPAI H5N1 sample in a defined population with

>1,000 individuals (probability 95%) if the virus had a prevalence of only 1.5%. This hypothetical approach assumes that the population of interest is homogenous and entirely accessible for sampling, that H5N1 is uniformly distributed within that population, and that representative sampling can be done in a random or otherwise unbiased manner, which is not the expected case in wild migratory waterfowl. Because of these factors, where possible, sampling intensity will be increased over the 200-bird minimum for larger populations of wild birds (Appendix A). Some species are a priority, given their link to breeding habitats in Asia and coastal Alaska, but may provide only limited opportunities for sampling. In this case, statistically reliable sample sizes may be extrapolated to multi-state or flyway sampling efforts.

Generally speaking, sampling of shorebirds and waterfowl will begin as southerly migrations begin to occur. Some target shorebirds will begin entering Montana from breeding grounds by mid-July. Northern Pintails start early migration movements by early August. Fall duck migration typically continues through November or early December, depending on general weather conditions and weather events. Detecting arrival of these first migrants will be coordinated with agency field staff who are familiar with identifying priority species.

The lead agencies (primarily WS) will also be responsible for 1,000 environmental samples, which will be taken mostly in urban settings where semi-domestic waterfowl and wild waterfowl mix during migration. These samples will be spaced geographically and temporally over the migration period.

3.4 Sampling Strategies

This section describes several strategies that will be used to detect HPAI H5N1 in both the Central Flyway and Pacific Flyway portions of Montana. To ensure adequate coverage, geographically and temporally, it is important to spread sampling effort from flocks of priority species across the migration period and at appropriate geographic scales (Appendix A). The migration period is defined as July 15 through December 2006. Spatially, if a target population can be effectively sampled at one major staging area, sampling at many locations may not be necessary. This is, in part, why sampling efforts are being coordinated with other states through the flyway systems. Sampling a population during banding in late summer may mean that sampling hunter-killed birds at that location early in the season may not be needed.

For some species such as tundra swans and snow geese there is no banding program in Montana and no practical way of starting one, so hunter-killed birds will be the only way to obtain samples. Mid-continent sandhill cranes are a primary species and population, and although large numbers migrate through eastern Montana in the fall, there are no traditional stopping places in the state where they can be hunted effectively. Hunter-killed samples of cranes cannot be obtained in Montana. The Central Flyway Plan coordinates effort in other states where samples can be more effectively obtained. For some species at certain locations, samples of feces may at least provide composite samples for testing for the presence of HPAI H5N1. Overall, more

efficient surveillance will result if an array of methods is designed in the context of state, regional, flyway, and national efforts.

Live Birds: Routine waterfowl banding operations in Montana will provide live bird sampling opportunities. Sampling priority duck species during banding would be useful for both intercepting migrant birds potentially infected with HPAI H5N1 and also for sampling locally produced ducks that may indicate local occurrence of the virus. Duck trapping and banding operations will be run August and September, prior to the hunting seasons. Duck banding operations in Montana are planned for Benton Lake National Wildlife Refuge (NWR) north of Great Falls and in the Ninepipes vicinity, both in the Pacific Flyway portion of the state. Additional duck capture efforts may support this surveillance effort but have not been fully investigated at this time.

Mallard and northern pintail are two duck species most likely to be captured during bait trapping operations. The migration period for these species will have begun during the banding period. Both migrant and locally produced birds are important for HPAI H5N1 sampling because: (1) mallards and pintails are known reservoirs of low pathogenic viruses with higher prevalence rates than some other species; (2) juvenile ducks have the highest prevalence of LPAI among North American surveys; and (3) the rate of virus shedding is high during late summer and early migration staging.

Live capture and sampling of semi-domestic and wild waterfowl at urban sites is supported by recent research showing that domestic ducks can excrete large quantities of highly pathogenic virus without showing signs of illness, making this an effective option for detection of avian influenza. There are several sites in Montana where these sentinel flocks attract concentrations of wild migratory waterfowl that could carry and transfer HPAI H5N1. Selected sites that provide geographic representation will be sampled on a scheduled basis spread over the 5-month sample period.

Shorebirds make up 3 primary and secondary priority species for sampling. These species migrate in late summer from their nesting areas in Siberia or Alaska or are likely to mix with Asian birds during migration. There is no existing capture and banding program for shorebirds in Montana. Live capture of shorebirds by means of mist nets or other methods will be considered, with any efforts focused mainly on long-billed dowitchers, pectoral sandpipers, and red-necked phalaropes, primarily at stopover areas such as Freezout WMA. However, given the numbers and distribution of these shorebirds in the state and the reported difficulty in mist netting them, live capture may not be an effective means of sampling. Given the potential variability in terms of abundance and duration of migration through Montana, the estimated sample of shorebirds collectively is 200 birds (Appendix A).

Hunter-Harvested Birds: If HPAI H5N1 enters North America through Alaska, it could then move south via infected birds among the 150,000 swans, 1 million geese, and 12 million ducks

that begin leaving Alaska in August. Waterfowl hunters in Montana typically harvest about 450 tundra swans, 65,000 geese, and 110,000 ducks each season. Once Montana's waterfowl hunting seasons start, likely September 30, 2006, there are opportunities to sample harvested birds and sampling can be spread out to some extent to different parts of the state and throughout the hunting season. Emphasis will be placed especially on species on the primary list, with efforts also on those species on the secondary list.

There are no mandatory waterfowl hunter check stations in Montana, but there are important harvest areas where hunters could be checked as they finish their hunts. This method will generate samples of several priority duck species. Northern pintails will be available mostly during the first six weeks of the hunting season, as they are an early migrant and tend to frequent shallow wetlands that freeze over early. Mallards will be available throughout the season on a number of areas. Sampling ducks late in the hunting season would consist mostly of mallards. Western Population tundra swans and snow geese that will have a low percentage of Wrangel Island birds will also be harvested by hunters and sampled in the Freezout Lake and Benton Lake areas.

Depending on need for additional samples, lead agencies may also coordinate with hunters to voluntarily stop at one or more centrally located check stations for sampling harvested waterfowl.

Lethal Collection: Some of the highest priority species for sampling, such as Long-billed Dowitcher, Pectoral Sandpiper, and Red-necked Phalarope, are relatively abundant continent-wide but will be the most difficult to capture. Lead agencies will keep as an option to lethally collect these or other priority species, depending on ability to live trap and need for sufficient samples. A scientific collection permit for Montana Fish, Wildlife & Parks will be obtained from the U. S. Fish and Wildlife Service, and collection will be conducted according to conditions stated in the permit. Lethal collection may be the sole means of obtaining samples for some species given the difficulty of capture and the fact that they are not hunted species. Lethal collection would also make collecting samples over time and space more feasible. Given the potential variability in terms of abundance and duration of migration through Montana, the estimated sample of shorebirds collectively is 200 birds (Appendix A). Any lethally collected birds will be made available to museums or for scientific study. For example, a researcher has been found who would use feathers from some of the shorebird species for stable isotope studies to determine the migration areas used by individual birds in relation to known wintering areas.

Mortality/Morbidity Events: The primary causes of mortality in wild birds include infectious disease caused by bacterial, fungal, viral and parasitic agents, and non-infectious disease including toxicity and physical injury. Disease events in wild birds often remain invisible and unrecognized, even for those diseases that may be lethal. Investigation of disease events in wild birds is however considered to be one of the best opportunities to detect HPAI H5N1 virus if introduced into Montana by migratory birds. Increased vigilance and timely and accurate

identification of causes of morbidity and mortality will therefore be required to properly guide disease investigations in the state.

MFWP will establish a 1-800 phone number and a web-based reporting system for the public to report dead or sick bird incidents. All reports and corresponding information will be accumulated in a central database. Incidents will be field investigated when reported events meet certain response criteria. These response criteria will emphasize the primary and secondary avian species identified in this plan. The HPAI Coordinator will determine appropriate response and, if necessary, contact an MFWP field biologist or WS employee for further investigation and sampling. In certain cases, a report of a single bird from a primary species may trigger a response for collection. Investigators will perform site visits and will collect and submit samples to the USGS National Wildlife Health Center (NWHC) in Madison, Wisconsin for necropsy and testing. These collections may involve submission of a swab samples and/or or entire carcass for analysis.

In addition to general surveillance, systematic monitoring of primary migratory bird use areas may occur during staging and wintering periods. It is anticipated that up to 400 samples in Montana may be collected through response to mortality and morbidity events.

3.5 Culture Samples

Given the substantial investment of resources to implement HPAI H5N1 surveillance in Montana and the requirement for strict quality control during sample collection, there is an immediate need for training of agency personnel. The USGS National Wildlife Health Center (NWHC) and USDA have developed training materials and all MFWP personnel potentially involved in the collection of samples will be required to undergo suitable training focused on the correct and safe handling of specimens. Field personnel should follow the recommendations provided in the NWHC Guidelines for Handling Birds, Wildlife Health Bulletin #5-03 or newer: (http://www.nwhc.usgs.gov/publications/wildlife_health_bulletins/WHB_05_03.jsp).

Bird Samples: The National Strategic Plan includes procedures and protocols for the collection of tracheal and cloacal swabs as well as the collection of fecal samples, and for shipping carcasses, and all samples to laboratories (IAEDWG 2005). All personnel involved in the collection of samples will be required to adhere to these protocols.

Environment Samples: Analysis of water and fecal material from waterfowl habitat may provide evidence of HPAI H5N1 in wild bird populations. Environmental sampling is considered a reasonably cost-effective method of assessing risk to humans and poultry, one that does not require the handling or capturing of animals. While the technology to allow accurate surveillance based on water samples is still under development, fecal sampling is an established technique. Efforts are likely to focus on urban waterfowl settings and other areas of concentrated waterfowl use in Montana. Technical aspects of the collection of water and fecal samples for identification

of virus are detailed in the IAEDWG, 2005. All MFWP and WS personnel involved in the collection of samples will follow these guidelines.

Lab Support: We request that samples be submitted to the CSU Diagnostic Lab, or other certified laboratory:

Colorado State University Veterinary Diagnostic Laboratory
College of Veterinary Medicine and Biomedical Sciences
300 West Drake
Fort Collins, CO 80523

Primary contact: Dr. Barbara Powers
970-297-1281
970-297-0320

CSU Diagnostic Lab also has a contingency back-up lab in California in the event they cannot process all of the samples they receive.

Up to 400 mortality/morbidity samples will be submitted to the USGS lab in Madison, Wisconsin:

National Wildlife Health Center
U.S. Geological Survey/U.S. Department of the Interior
6006 Schroeder Road
Madison, WI 53711-6223

Primary contact: Dr. Hon Ip
608-270-2464

3.6 Resources and Responsibilities

Surveillance activities described in this document will be performed primarily by personnel from the lead agencies–Montana Fish, Wildlife & Parks (MFWP) and USDA/APHIS Wildlife Services (WS). In total, lead agencies intend to collect 3,400 samples. Because these activities are largely above and beyond normal duties, temporary staff, dedicated entirely to this function, will fulfill most of MFWP's surveillance obligation, 1,000 cloacal swab samples and 400 mortality/morbidity samples. WS has an additional obligation for collecting 1,000 cloacal swab samples and 1,000 environmental samples. WS employs 21 field staff distributed across Montana. WS in Montana intends to provide MFWP with additional funds to help collect their obligation of 1000 swab samples. Collecting and submitting samples will be a coordinated and shared responsibility between the lead agencies.

Dedicated MFWP surveillance staff will include: 1) a statewide HPAI Coordinator, whose responsibility will be to track samples, enter data into centralized data storage, serve as a point contact for bird mortality/morbidity reports, determine which mortality reports merit further investigation, and supervise and coordinate field activities with appropriate agencies and staff and 2) 3 field crew members responsible for capture, collecting samples at various locations around Montana, making hunter field checks, mortality/morbidity monitoring, and tracking/submitting samples. MFWP field biologists will also provide support, particularly for mortality/morbidity sampling on an as-needed basis. WS field staff will coordinate with MFWP to avoid redundant efforts, provide mutual field support, and to assure broad systematic spatially and temporally-distributed sampling. Table 2 is a breakdown of MFWP resource needs and their associated costs:

Table 2. MFWP expenses associated with HPAI H5N1 early detection in Montana, 2006.

Expense Type	Amount	Cost
Temporary MFWP Personnel (4 surveillance technicians/6 months and 1 HPAI Coordinator at 8 months)	2.67 FTE/Benefits	$103,500
Travel Expenses (per diem, lodging, mileage, vehicles)	$8.5K per diem + $14.5K lodging + $6K rent + $5K field bio mileage @ 10,000 miles* + 4 vehicles @ 8,000 miles apiece for $18K	$52,000
Misc. supplies and materials**		$16,000
Shipping	250 packages, overnight shipping @ $60 apiece	$15,000
Total Sampling Cost		$186,500
Fed. Overhead charge 16.04%		$29,950
Grand Total		$216,450

*In addition to field technicians, MFWP field biologists will be collecting morbidity/mortality samples in response to public calls, as coordinated by the HPAI Coordinator.
** Field supplies, safety equipment, trap materials, mist nets, optics, PDA and/or laptop computers, GPS, cell phones, bar code reader (for tracking samples and associated data)

4.0 INTEGRATION AND SUPPORT

The key to implementing a successful surveillance strategy will be cooperation and communication among state and federal agencies. Agencies directly involved in surveillance activities are USDA/APHIS Wildlife Services (WS), MFWP, and USFWS. MFWP and WS are the lead surveillance agencies as described earlier in this plan. All surveillance activities will be coordinated between the lead agencies and in communication and cooperation with other state and federal agencies. As earlier described, the lead agencies will fulfill their sampling obligations as shared responsibilities, taking advantage of each agency's unique resources and opportunities to achieve this plan's goal. In addition, cooperation may be necessary from the Montana Department of Livestock, Montana DPHHS and USDA/APHIS Veterinary Services. Collectively, all of these agencies are referred to as the Interagency Coordinating Committee for HPAI H5N1 Wild Bird Surveillance. Results from surveillance efforts will be reported to the agency partners, the MFWP Director, Montana State Veterinarian and USDA/APHIS Area Veterinarian in Charge.

4.1 Notification

Positive tests will result in immediate notification to the state veterinarian, the Area Veterinarian in Charge, the chief state public health official, and the CDC/USDA Select Agent program. Because of the importance and public impacts of a confirmation of HPAI H5N1, notification will also go to top federal and state officials (e.g., Secretaries of Agriculture and Interior, Governor, Directors, etc.).

This document is strictly a surveillance plan and will not address coordination and integration of a response to the discovery of HPAI H5N1 in Montana. This plan assumes that the State Veterinarian, Area Veterinarian in Charge, and Public Health officials will mobilize an integrated and appropriate response to HPAI if it is discovered in wild birds. It is assumed that state/federal agency response to HPAI H5N1 will be prescribed according to existing Disaster Emergency Response Plans for Montana and/or National Emergency Preparedness Plans.

4.2 Agencies Implementing Wild Bird Surveillance

All agencies involved with surveillance will promptly direct appropriate information or public calls on mortality/morbidity occurrences to the MFWP reporting web site or 1-800 number or the MFWP HPAI Coordinator for possible field investigation.

MFWP: MFWP will serve as the primary coordinating agency for surveillance of HPAI H5N1 in wild migratory birds in Montana. MFWP will designate a person to act as the HPAI Coordinator and will provide a field crew for surveillance sampling and monitoring (see Resources and Responsibilities section). MFWP is responsible for collecting 2,000 cloacal swab samples (this includes 1,000 of WS' obligation) and up to 400 mortality/morbidity samples. MFWP will submit a work plan to the funding agencies (USFWS and WS) reflective of this plan. MFWP will be responsible for coordinating development of an annual report that provides results from HPAI H5N1 surveillance activities in Montana. Direct reporting of any significant finding will be the responsibility of the HPAI Coordinator and supporting laboratories confirming the findings, as earlier described.

USDA/APHIS Wildlife Services: Wildlife Services (WS) staff will be available to collect samples at locations designated in this plan or where other opportunities arise. WS is obligated to collect 1,000 cloacal swab samples and 1,000 environmental samples in Montana. WS in Montana intends to provide MFWP with funding to undertake collection of their 1,000 cloacal samples. WS coordination will be accomplished through the Montana State Directors office.

While conducting routine agency activities WS will inform the State HPAI Coordinator of any unusual mortality and morbidity events on refuges within Montana.

U.S. Fish and Wildlife Service: Coordination between the USFWS agency refuge staff will be necessary to meet the Montana surveillance goal. USFWS intends to assign a point of contact

for HPAI in Montana through whom MFWP and APHIS, WS personnel can coordinate surveillance activities.

Refuge staff may be directly involved in surveys for HPAI H5N1 within the refuge system. The MFWP HPAI Coordinator will coordinate with USFWS refuges to determine opportunities and provide assistance for collecting samples.

Dr. Tom Roffe, a USFWS Wildlife Veterinarian, can provide critical technical counsel as this plan is implemented.

USFWS will inform the HPAI State Coordinator of any mortality and morbidity events on refuges within Montana.

4.3 Agencies Supporting Wild Bird Surveillance

All supporting agencies will promptly direct appropriate information or public calls on mortality/morbidity occurrences to MFWP or the MFWP HPAI Coordinator for possible field investigation.

Montana Department of Livestock: The Montana Department of Livestock Diagnostic Laboratory could be incorporated into surveillance support if they develop a capacity to conduct HPAI diagnostics and become NAHLN certified.

The Montana State Veterinarian or Assistant State Veterinarians will be key contacts for MDOL. MDOL will support wild bird surveillance with technical counsel and will report any wild bird mortality or morbidity events to the MFWP HPAI Coordinator. MFWP will likewise support domestic bird surveillance as possible and report any unusual mortality or morbidity events in game birds or other domestic birds in captivity for which MFWP is responsible.

USDA/APHIS Veterinary Services: The Area Veterinarian in Charge will be the key agency contact for Veterinary Services in Montana. Area Veterinary Medical Officers (VMO's) will be informed of the plan and may occasionally participate in wild bird surveillance as needed. Veterinary Services will provide supportive information about domestic bird surveillance to help direct the wild bird surveillance in order to improve surveillance efficiency. USDA/APHIS/VS will inform the MFWP HPAI Coordinator of any unusual mortality and morbidity events observed by VMO's while conducting routine duties within Montana.

Montana Department of Public Health and Human Services: Communications between MFWP and DPHHS are important to assure any significant findings are reported immediately.

Bird Surveillance will be coordinated as best it can be with surveillance activities of the Montana DPHHS within the constraints of the U.S. Strategic and Flyway Surveillance plans.

4.4 Interagency Coordinating Committee for Wild Bird Surveillance

To facilitate coordination and cooperation, an Interagency Coordinating Committee for HPAI H5N1 Wild Bird Surveillance has been established in Montana. The committee will assist the MFWP HPAI Coordinator in planning and implementing surveillance and reporting results. Representatives from various collaborating agencies have participated in development of this plan will continue to communicate as the plan is implemented. In part, the committee will discuss coordination of various agency communication plans and will help disseminate wild bird health information and surveillance results to the public. Given the high level of public and agency concern, and the level of media coverage about the disease, Montana cooperators will collaborate and coordinate their public information products and outreach programs.

The Interagency Committee is made of agency representatives from MFWP, USFWS, USDA/APHIS Wildlife Services, USDA/APHIS Veterinary Services, MDPHHS and MDOL. University experts or other key technical experts may be involved as needed. A representative from the MFWP Communication and Education Division will participate in each meeting. Other agency Public Information Officers will be notified of meetings and may elect to attend.

5.0 AVIAN INFLUENZA PUBLIC INFORMATION PLAN

This section describes an information outreach strategy that will be circulated via multiple media outlets for both agency and public consumption, including the following background and information points:

5.1 Purpose/Opportunity

Montana Fish, Wildlife & Parks (MFWP) and USDA/APHIS Wildlife Services (WS) will participate in a national "early detection" effort with several state and federal agencies to detect arrival of the HPAI H5N1 strain of avian influenza in migratory birds, if that should occur in North America.

MFWP will begin wild bird surveillance efforts in late July. The effort will primarily focus on migratory birds from Alaskan and Asian breeding areas as well as species that mix with those birds during migration.

The movement of the HPAI H5N1 Asian strain in some wild bird migrations has been indicated by the European and some Asian data, but the significance of wild birds in establishing new foci of poultry infections is unknown and only been documented in limited cases (e.g., France). FWP will participate in a federal effort to monitor wild birds and their possible connection to the spread of the HPAI H5N1 virus.

It is important to understand that avian influenza is primarily a disease of birds, not humans. An early detection of the avian influenza virus in wild birds does not signal the start of a pandemic among people.

This information plan strives to impart that a variety of strains of avian influenza will be detected in Montana, that birds commonly contract flu, and not all avian influenza is the Highly Pathogenic Avian Influenza, H5N1 subtype, Asian lineage.

5.2 Objectives of Public Information Plan

- Public awareness of Montana's wild bird surveillance and early detection effort.
- Public understanding that there are several strains of Avian influenza and that FWP will likely detect flu, including low pathogenic H5N1, in wild birds, but that it does not signal the start of a pandemic among people nor indicate the Asian lineage of HPAI is present.
- Public understanding that detection of HPAI H5N1 in birds in Montana or elsewhere does not signal the start of a pandemic among people.
- Increase understanding among all Montanans that even the HPAI H5N1 Avian Influenza is primarily a disease of birds, not humans.
- Increase understanding among hunters that avian influenza should not preclude them from hunting this fall.

5.3 Audience

- MFWP staff
- Staff of other agencies
- Elected officials
- Montana residents
- Resident and nonresident hunters

The following will help with delivery of appropriate messages:
- MFWP’s web site, magazine (Montana Outdoors), and TV spots
- Media
    - Montana newspaper outdoor editors

    - Montana radio and television news
- Local sportsmen's clubs
- Statewide sportsmen's and outdoors organizations
    - Montana Wildlife Federation
    - Montana Outfitters and Guides Association
    - Montana Bowhunters Association
    - Montana Rifle and Pistol Association
    - Pheasants Forever
    - Duck Unlimited
    - Pheasants Unlimited
    - Montana Trappers Association
    - Local RMEF Chapters
    - Montana hunting license providers
    - Montana Audubon

5.4 Messages

Montana's early detection effort

- Montana will begin its early detection effort for avian influenza in late July
- About 2,000 birds—including tundra swans, snow geese, pintails, and mallards--will be sampled in 2006
- Sampling will emphasize the Pacific Flyway
- Wildlife biologists will sample live birds during normal waterfowl banding operations
- Hunters may participate during the fall hunting seasons by allowing sampling of harvested birds when requested of them, but they should not expect a health approval for their birds
- Use common sense practices in handling, cleaning, and preparing wild fowl
- Because samples of sick or dead wild birds could increase the probability of detecting the HPAI H5N1, biologists will investigate reports of waterfowl and shorebird deaths.
- All sample submissions will be coordinated through the MFWP Wildlife Research Laboratory. Viral testing will be completed at a federally accredited diagnostic laboratory
- Federal funding for the early detection efforts is provided by USDA/APHIS Wildlife Services and the U.S. Fish and Wildlife Service

Avian Influenza

- There are 144 subtypes of avian influenza based on the surface proteins, hemagglutinin and neuraminidase.
- Migratory ducks, geese, and shorebirds are natural reservoirs for many strains of avian influenza.
- Most avian influenza types are of little concern to public health professionals.
- Reported cases of humans contracting the disease from contact with wild birds are rare and associated with aerosolization of the virus, likely through defeathering processes.

- HPAI H5N1 is most lethal to poultry, and outbreaks originated from chickens in China, not from wild birds.
- MFWP's early detection effort will be focused on finding HPAI H5N1

5.5 Techniques/Strategies

- Develop Q&A and related fact sheets specific to the effort. Person responsible: Palmer – July
- Develop MFWP Avian Influenza flyer. Persons responsible: Duran, Palmer – July
- Develop MFWP Avian Influenza website. Persons responsible: Palmer, Stephenson – July
- Prepare news releases for distribution to all media outlets in Montana. Persons responsible: Palmer, Robson – May/July/August/September/October.
- Distribution of the release to Montana's sportsmen's clubs. Person responsible: Robson – May/September
- Distribution of the release and flyer to state hunter and conservation organizations with the intent of it being included in their publications. Person responsible: Aasheim – August
- Brief in Montana Outdoors Magazine. Person responsible: Dickson – Sept/Oct
- Information in Hunter Education newsletter. Person responsible: Baumeister – Fall edition.
- Flyers delivered to license providers. Persons responsible: Robson – August
- License provider notification of waterfowl hunters' possible participation at field checks. Persons responsible: Aasheim, C.Carroll, H. Worsech – Aug/Sept/Oct
- Inclusion in upland game bird and waterfowl hunting regulations. Person responsible: C. Lere.
- Pursue opportunities with Travel Montana. Person responsible: Aasheim.
- T.V. Outdoors Reports. Persons responsible: Gurnett, Greely – July/Sept.
- Radio PSA's. Person responsible: Tipton – Late summer.
- Montana Outdoors Radio. Person responsible: Aasheim – Late summer.
- Flyers at MFWP offices. Person responsible: Robson.
- Local media opportunities. Persons responsible: RI&EPMs
- Providing flyers and information at fairs and outdoor shows. Persons responsible: RI&EPMs

6.0 REFERENCES

Central Flyway Council. 2006. Surveillance Plan for the Early Detection of Highly Pathogenic Avian Influenza-H5N1 in Migratory Birds in the Central Flyway. Unpubl. Draft Rept. 19pp.

Interagency HPAI H5N1 Early Detection Working Group. 2005. An early detection system for HPAI H5N1 highly pathogenic avian influenza in wild migratory birds: U.S. Interagency

Strategic Plan. Unpubl. Final Draft Rept. Report to the Department of Homeland Security, Policy Coordinating Committee for Pandemic Influenza Preparedness. http://www.usda.gov/documents/wildbirdstrategicplanpdf.pdf

Pacific Flyway Council. 2006. Surveillance for early detection of highly pathogenic avian influenza H5N1 in wild migratory birds: a strategy for the Pacific Flyway. Pacific Flyway Council. [c/o USFWS], Portland, OR. Unpubl. Rept. 13pp.+ appendices. http://pacificflyway.gov/Documents/AIS_plan.pdf

APPENDIX A

Table A-1. Potential HPAI H5N1 surveillance sampling in Montana, July-December 2006.

Location	Method	Tundra Swan	Pintail	Snow Goose	Shorebirds	Mallard	Wigeon	Shoveler	Gadwall	Total
Live Bird / Collection Sampling										
Benton Lake NWR	Bait traps		100			100				200
Ninepipes Vicinity	Bait traps					50				50
Freezeout Lake	mist nets (shorebirds)				50					50
Various Urban Sites	Bait traps					330				330
Misc. location	Bait traps/mist nets (shorebirds)		50		50	30				130
Hunter-killed Bird Sampling/Lethal Collection Sampling										
Freezout Lake	Field checks	150	60	150		70	30	30	30	520
Benton Lake NWR	Field checks		20			20	20	20	20	100
Bowdoin NWR	Field checks		20			20	20	20	20	100
Medicine Lake NWR	Field checks	20	20			20	20	20	20	120
Ninepipes NWR	Field checks		20			20	20	20	20	100
Misc. location	Field Checks		20			80	30	30	40	200
Misc. location	Lethal Collection Sampling				100					100
Mortality Events										
Statewide	Mortality collection (up to 400)		100			150	50	50	50	400
Total for Bird Sampling		**170**	**410**	**150**	**200**	**890**	**190**	**190**	**200**	**2400**
Environmental Samples										0
Various Urban Sites	Field sampling					1000				1000
Total for Environmental Sampling		**0**	**0**	**0**	**0**	**1000**	**0**	**0**	**0**	**1000**
Total Samples										**3400**

Attachment A.

Influenza antiviral medications available in the Montana state stockpile and recommended daily dosage for treatment and prophylaxis

At the current time (May 2006) it is anticipated that the following antiviral medications will be available in the Montana SNS: oseltamivir and zanamivir. The anticipated supply will be at least 136,800 courses of theses medication about 80% of which will be oseltamivir.

The recommended daily dosage of these medications is displayed below. (These recommendations may be updated based on experience during a pandemic of influenza.)

A. Oseltamivir: treatment course of 5 day duration

Age Group (years_	Daily dosage
1-12	Varies by child's weight*
≥13	75mg twice daily**

B. Oseltamivir: prophylactic course during period of potential exposure to influenza virus (PEP course: 10 days)

Age Group (years)	Daily Dose
1-12	(Not applicable)
≥13	75mg per day**

C. Zanamivir: treatment course of 5 day duration

Age Group (years	Daily Dose
1-6	(Not applicable)
7-12	10 mg twice daily***
≥13	10mg twice daily***

D. Zanamivir: not currently indicated for prophylactic use

* for children ≤ 15kg: 30mg twice daily
for children > 15kg to 23kg: 45mg twice daily
for children > 23kg to 40kg: 60mg twice daily
for children > 40kg: 75mg twice daily

**reduced dose recommended for persons with creatinine clearance <30 ml/min

***administered via inhalation using a plastic device included in the medication package

NOTE: None of the available influenza antiviral medications are currently FDA approved for use in children <1 year of age.

Attachment B.
Recommended Priority Groups* for Use of Influenza Antiviral Medications in Montana

Group (in priority order)	Medication use: Treatment or Prophylaxis	# Courses
1. Patients with influenza admitted to a hospital	Treatment	30,000
2. Health care workers with direct patient contact and emergency medical service providers	Treatment	6,000
3. Highest risk outpatients (e.g., immunocompromised persons, pregnant women)	Treatment	6,000
4. Pandemic health responders (e.g., public health workers, vaccinators), public safety workers (e.g., police, fire, corrections) and key government decision makers	Treatment	4,500
5. Increased risk outpatients (e.g., children 12 to 23 months old, persons >65 years old, persons with underlying medical conditions)	Treatment	45,000
6. Outbreak response in nursing home and other residential settings	Prophylaxis (specifically: PEP)	10,000
7. Health care workers in certain settings (e.g., mergency departments, dialysis centers) and emergency medical service workers	Prophylaxis	40,000
8. Pandemic societal responders (e.g., critical nfrastructure groups identified in the vaccine priorities listing, see Section ___ and health care workers ithout direct patient contact	Treatment	9,000
9. Other outpatients	Treatment	To be determined
10. Highest risk outpatients	Prophylaxis	To be determined
11. Other health care workers with direct patient contact	Prophylaxis	To be determined

*The priority groups are those recommended in the "HHS Pandemic Influenza Plan", Appendix D.

** The number of courses of medication needed was estimated using the following assumptions:

(i) 30% of the Montana population would be infected and ill;
(ii) 10% of the infected would be ill enough to require hospital level of care;
(iii) the number of primary care providers (2700), RNs and LPNs (13,700), allied health care workers (3800), EMTs (2800), law enforcement officers (2900) and fire fighters (7500) would total approximately 33,500 persons, and
(iv) the number of persons in the highest and increased risk groups were estimated from BRFSS and vital record data.

Attachment C
Influenza Specimen Collection & Transport Guidelines

Montana Department of Public Health and Human Services
Public Health Laboratory

The following collection and transport guidelines are applicable to both influenza virus culture and real time PCR testing. Subtyping of Influenza isolates (H1, H3, H5) can be done on both culture and PCR, but further characterization (Fujian-like strain) requires a cultured isolate.

Influenza Specimen Collection Guidelines

Collection and Transport kits are available from the Montana Public Health Laboratory (MTPHL) by calling 800-821-7284. Collection kits are comprised of a tube of pink Viral Transport Media (M4), with three different types of swabs. One swab is a Dacron swab on a flexible wire, for NP collection. The throat swab is collected with the larger Dacron swab on a plastic stick. The third swab is for urethral collections, and is not used for respiratory specimen collection.

Viral Transport Media (M4) is stored at room temperature until used. Check the expiration date to ensure an adequate in-date supply.

Respiratory specimens should be collected within the first 72 hours post onset, since viral shedding is at a peak during this time, and recovery will be optimized.

Throat Swab Collection

1. Gather collection materials and use the large plastic shafted Dacron swab.
2. Using a tongue depressor, insert the swab and vigorously rub the tonsils and the posterior pharynx.
3. Carefully remove the swab, not touching any area of the mouth.
4. Insert the swab into the Viral Transport Media tube and break off the swab at the score line.
5. Cap the tube tightly; label the tube with the patient's name and date of collection.
6. Refrigerate the specimen until transport.
7. Complete the request form (DPHHS Form PHL 0804).

Nasopharyngeal Swab Collection

1. Gather collection materials and use the flexible wire swab.
2. Instruct the patient to sit with head slightly tilted backwards.
3. Bend the flexible wire in a small arc, and insert the swab into the nostril back to the nasopharyngeal cavity. The patient's eyes will momentarily tear.
4. Slowly rotate the swab as it is being withdrawn.

5. Insert the swab into the Viral Transport Media tube, bending or cutting the wire to fit entirely inside the tube.
6. Cap the tube tightly; label the tube with the patient's name and date of collection.
7. Refrigerate the specimen until transport.
8. Complete the request form (DPHHS Form PHL 0804).

Nasopharyngeal Wash Collection

1. Gather collection materials and bring saline to room temperature. Use only sterile saline to collect the NP wash.
2. Instruct the patient to sit with head slightly tilted backwards, and to hold the sterile collection cup.
3. Instruct the patient on how to constrict the muscles at the back of the throat by saying the "K" sound rapidly and repetitively. Inform the patient that this process may prevent the saline from draining down the throat.
4. Fill a 5 cc syringe with sterile saline. Gently push the tip of the patient's nose back with your thumb, and quickly inject 1 – 2 ml. of sterile saline into each nostril.
5. Instruct the patient to contain the saline in the nostrils for approximately 10 seconds while repetitively saying the "K" sound. After 10 seconds, ask the patient to tilt their head forward and collect the saline in the sterile cup.
6. Pour the saline collected from the patient into the tube containing Viral Transport Media. The saline and VTM media should be in approximately equal amounts.
7. Cap the tube tightly; label the tube with the patient's name and date of collection.
8. Refrigerate the specimen until transport.
9. Complete the request form (DPHHS Form PHL 0804).

Specimen Transport

1. Ensure that specimens are properly labeled and the request form is completed.
2. Place labeled specimen in a small biohazard specimen bag containing absorbent packing material and seal.
3. Put the smaller bag into a larger bag and seal. Place the lab request form in the pocket of the larger bag.
4. Place bagged specimen(s) in a Styrofoam cooler with frozen blue ice packs, seal cooler for shipment to the MTPHL and affix correct address label to cooler.
5. Ship specimen without delay. Specimens must be delivered to the laboratory within 48 hours of collection.
6. Each shipment of specimens must comply with shipping regulations for diagnostic specimens, detailed in IATA 1.5 and 49 CFR Section 1720700 (U.S. Department of Transportation).
7. Ship specimens to the following address:

   Montana Public Health Laboratory
   1400 Broadway, PO Box 6489
   Helena, MT 59604-6489

Result Reporting

Negative cultures and real time PCR results are mailed to the submitter. Positive cultures and PCR results are telephoned to the provider and to the DPHHS Disease Surveillance Coordinator.

Specimen Rejection

Specimens with unresolved labeling issues, leaking containers, or with insufficient volume may be rejected. The provider will be notified and asked to resubmit.

Requests for Additional Information or Specimen Collection Questions:

For additional information or questions, or to order collection kits, contact the MTPHL at 800-821-7284 or 406-444-3444.

Attachment D.
Influenza Vaccination Standing Orders

Standing Order Guidelines for Influenza Vaccination

1. Outline a plan in writing for vaccine administration or distribution of antivirals.

2. List key service-delivery components and quality assurance measures.

3. Identify persons eligible for vaccination based on established priority list.

4. Outline the screening measures for each client, based on known contraindications to vaccination or use of the anti-viral medications.

5. Provide adequate information to recipients regarding the risks for and benefits of a vaccine, and document the delivery of that information.

6. Provide for a method to document refusals or medical contraindications.

7. Develop a standardized method to record administration of a vaccine dose.

8. Provide for standardized method for vaccine recipients to notify appropriate provider of any post-vaccination adverse events. Use of the Vaccine Adverse Events Reporting System (VAERS) should be reviewed and implemented.

9. The history of a client, made available from a primary health care office may over-ride a standing order.

10. Vaccine providers and their titles or qualifications to administer vaccine and antiviral medications should be listed on the orders.

11. A committee should be formed to review the standing orders. The committee may include a medical director, nursing director, infection-control and quality-assurance personnel, and medical or nursing staff representatives.

12. The standing orders should be signed and dated by; a physician licensed to practice medicine in any jurisdiction in the United States or Canada, and who holds a degree as a Doctor of Medicine or as a Doctor of Osteopathy.

Attachment E.
Vaccine Adverse Event Report Form

WEBSITE: www.vaers.hhs.gov E-MAIL: info@vaers.org FAX: 1-877-721-0366

VACCINE ADVERSE EVENT REPORTING SYSTEM
24 Hour Toll-Free Information 1-800-822-7967
P.O. Box 1100, Rockville, MD 20849-1100
PATIENT IDENTITY KEPT CONFIDENTIAL

VAERS

For CDC/FDA Use Only
VAERS Number _____
Date Received _____

Patient Name:
Last First M.I.
Address
City State Zip
Telephone no. (___) _____

Vaccine administered by (Name):
Responsible Physician _____
Facility Name/Address
City State Zip
Telephone no. (___) _____

Form completed by (Name):
Relation to Patient ☐ Vaccine Provider ☐ Patient/Parent ☐ Manufacturer ☐ Other
Address *(if different from patient or provider)*
City State Zip
Telephone no. (___) _____

1. State	2. County where administered	3. Date of birth mm / dd / yy	4. Patient age	5. Sex ☐ M ☐ F	6. Date form completed mm / dd / yy

7. Describe adverse events(s) (symptoms, signs, time course) and treatment, if any

8. Check all appropriate:
☐ Patient died (date mm / dd / yy)
☐ Life threatening illness
☐ Required emergency room/doctor visit
☐ Required hospitalization (_____days)
☐ Resulted in prolongation of hospitalization
☐ Resulted in permanent disability
☐ None of the above

9. Patient recovered ☐ YES ☐ NO ☐ UNKNOWN

10. Date of vaccination mm / dd / yy Time _____ AM PM

11. Adverse event onset mm / dd / yy Time _____ AM PM

12. Relevant diagnostic tests/laboratory data

13. Enter all vaccines given on date listed in no. 10

	Vaccine (type)	Manufacturer	Lot number	Route/Site	No. Previous Doses
a.					
b.					
c.					
d.					

14. Any other vaccinations within 4 weeks prior to the date listed in no. 10

	Vaccine (type)	Manufacturer	Lot number	Route/Site	No. Previous doses	Date given
a.						
b.						

15. Vaccinated at:
☐ Private doctor's office/hospital ☐ Military clinic/hospital
☐ Public health clinic/hospital ☐ Other/unknown

16. Vaccine purchased with:
☐ Private funds ☐ Military funds
☐ Public funds ☐ Other/unknown

17. Other medications

18. Illness at time of vaccination (specify)

19. Pre-existing physician-diagnosed allergies, birth defects, medical conditions (specify)

20. Have you reported this adverse event previously? ☐ No ☐ To health department ☐ To doctor ☐ To manufacturer

Only for children 5 and under

22. Birth weight _____ lb. _____ oz.

23. No. of brothers and sisters

21. Adverse event following prior vaccination (check all applicable, specify)

	Adverse Event	Onset Age	Type Vaccine	Dose no. in series
☐ In patient				
☐ In brother or sister				

Only for reports submitted by manufacturer/immunization project

24. Mfr./imm. proj. report no.

25. Date received by mfr./imm.proj.

26. 15 day report? ☐ Yes ☐ No

27. Report type ☐ Initial ☐ Follow-Up

Health care providers and manufacturers are required by law (42 USC 300aa-25) to report reactions to vaccines listed in the Table of Reportable Events Following Immunization. Reports for reactions to other vaccines are voluntary except when required as a condition of immunization grant awards.

Form VAERS-1(FDA)

Attachment F.
Directions for Completing VAERS Forms

"Fold in thirds, tape & mail — DO NOT STAPLE FORM"

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES
OR APO/FPO

BUSINESS REPLY MAIL
FIRST-CLASS MAIL PERMIT NO. 1895 ROCKVILLE, MD

POSTAGE WILL BE PAID BY ADDRESSEE

VAERS
P.O. Box 1100
Rockville MD 20849-1100

DIRECTIONS FOR COMPLETING FORM

(Additional pages may be attached if more space is needed.)

GENERAL

- Use a separate form for each patient. Complete the form to the best of your abilities. Items 3, 4, 7, 8, 10, 11, and 13 are considered essential and should be completed whenever possible. Parents/Guardians may need to consult the facility where the vaccine was administered for some of the information (such as manufacturer, lot number or laboratory data.)
- Refer to the Reportable Events Table (RET) for events mandated for reporting by law. Reporting for other serious events felt to be related but not on the RET is encouraged.
- Health care providers other than the vaccine administrator (VA) treating a patient for a suspected adverse event should notify the VA and provide the information about the adverse event to allow the VA to complete the form to meet the VA's legal responsibility.
- These data will be used to increase understanding of adverse events following vaccination and will become part of CDC Privacy Act System 09-20-0136, "Epidemiologic Studies and Surveillance of Disease Problems". Information identifying the person who received the vaccine or that person's legal representative will not be made available to the public, but may be available to the vaccinee or legal representative.
- Postage will be paid by addressee. Forms may be photocopied (must be front & back on same sheet).

SPECIFIC INSTRUCTIONS

Form Completed By: To be used by parents/guardians, vaccine manufacturers/distributors, vaccine administrators, and/or the person completing the form on behalf of the patient or the health professional who administered the vaccine.

Item 7: Describe the suspected adverse event. Such things as temperature, local and general signs and symptoms, time course, duration of symptoms, diagnosis, treatment and recovery should be noted.

Item 9: Check "YES" if the patient's health condition is the same as it was prior to the vaccine, "NO" if the patient has not returned to the pre-vaccination state of health, or "UNKNOWN" if the patient's condition is not known.

Item 10: and 11: Give dates and times as specifically as you can remember. If you do not know the exact time, please indicate "AM" or "PM" when possible if this information is known. If more than one adverse event, give the onset date and time for the most serious event.

Item 12: Include "negative" or "normal" results of any relevant tests performed as well as abnormal findings.

Item 13: List ONLY those vaccines given on the day listed in Item 10.

Item 14: List any other vaccines that the patient received within 4 weeks prior to the date listed in Item 10.

Item 16: This section refers to how the person who gave the vaccine purchased it, not to the patient's insurance.

Item 17: List any prescription or non-prescription medications the patient was taking when the vaccine(s) was given.

Item 18: List any short term illnesses the patient had on the date the vaccine(s) was given (i.e., cold, flu, ear infection).

Item 19: List any pre-existing physician-diagnosed allergies, birth defects, medical conditions (including developmental and/or neurologic disorders) for the patient.

Item 21: List any suspected adverse events the patient, or the patient's brothers or sisters, may have had to previous vaccinations. If more than one brother or sister, or if the patient has reacted to more than one prior vaccine, use additional pages to explain completely. For the onset age of a patient, provide the age in months if less than two years old.

Item 26: This space is for manufacturers' use only.

Attachment G.
Recommendations for Prioritization of Pandemic Influenza Vaccine

Tier	Subtier	Population	Rationale
1	A	• Vaccine and antiviral manufacturers and others essential to manufacturing and critical support (~40,000) • Medical workers and public health workers who are involved in direct patient contact, other support services essential for direct patient care, and vaccinators (8-9 million)	• Need to assure maximum production of vaccine and antiviral drugs • Healthcare workers are required for quality medical care (studies show outcome is associated with staff-to-patient ratios). There is little surge capacity among healthcare sector personnel to meet increased demand
	B	• Persons > 65 years with 1 or more influenza high-risk conditions, not including essential hypertension (approximately 18.2 million) • Persons 6 months to 64 years with 2 or more influenza high-risk conditions, not including essential hypertension (approximately 6.9 million) • Persons 6 months or older with history of hospitalization for pneumonia or influenza or other influenza high-risk condition in the past year (740,000)	• These groups are at high risk of hospitalization and death. Excludes elderly in nursing homes and those who are immunocompromised and would not likely be protected by vaccination
	C	• Pregnant women (approximately 3.0 million) • Household contacts of severely immunocompromised persons who would not be vaccinated due to likely poor response to vaccine (1.95 million with transplants, AIDS, and incident cancer x 1.4 household contacts per person = 2.7 million persons) • Household contacts of children <6 month olds (5.0 million)	• In past pandemics and for annual influenza, pregnant women have been at high risk; vaccination will also protect the infant who cannot receive vaccine. • Vaccination of household contacts of immunocompromised and young infants will decrease risk of exposure and infection among those who cannot be directly protected by vaccination
	D	• Public health emergency response workers critical to pandemic response (assumed one-third of estimated public health workforce=150,000) • Key government leaders	• Critical to implement pandemic response such as providing vaccinations and managing/monitoring response activities • Preserving decision-making capacity also critical for managing and implementing a response

2	A	• Healthy 65 years and older (17.7 million) • 6 months to 64 years with 1 high-risk condition (35.8 million) • 6-23 months old, healthy (5.6 million)	• Groups that are also at increased risk but not as high risk as population in Tier 1B
	B	• Other public health emergency responders (300,000 = remaining two-thirds of public health work force) • Public safety workers including police, fire, 911 dispatchers, and correctional facility staff (2.99 million) • Utility workers essential for maintenance of power, water, and sewage system functioning (364,000) • Transportation workers transporting fuel, water, food, and medical supplies as well as public ground public transportation (3.8 million) • Telecommunications/IT for essential network operations and maintenance (1.08 million)	• Includes critical infrastructure groups that have impact on maintaining health (e.g., public safety or transportation of medical supplies and food); implementing a pandemic response; and on maintaining societal functions
3		• Other key government health decision-makers (estimated number not yet determined) • Funeral directors/embalmers (62,000)	• Other important societal groups for a pandemic response but of lower priority
4		• Healthy persons 2-64 years not included in above categories (179.3 million)	• All persons not included in other groups based on objective to vaccinate all those who want protection

*The committee focused its deliberations on the U.S. civilian population. ACIP and NVAC recognize that Department of Defense needs should be highly prioritized. DoD Health Affairs indicates that 1.5 million service members would require immunization to continue current combat operations and preserve critical components of the military medical system. Should the military be called upon to support civil authorities domestically, immunization of a greater proportion of the total force will become necessary. These factors should be considered in the designation of a proportion of the initial vaccine supply for the military.

Attachment H.
Risk for Viral Spread from Bodies of Persons Dead From Avian Influenza

CDC has determined personnel handling the remains of patients who die of H5N1 AI are at minimal risk for infection. While viral spread from dead bodies to people handling the remains is possible, it is unlikely to be a major contributor to additional cases. This assessment is based, in part, on the assumption that H5N1 AI transmission characteristics will largely mimic those of other human influenza viruses.

- Specific data on H5N1 AI transmission from infected human remains are lacking. However, the H5N1 AI virus has been isolated from human cerebrospinal, fecal, throat and serum specimens from infected patients
- According to the WHO, if H5N1 AI becomes easily transmissible from person to person, the risk factor for infection increased for persons having unprotected contact with infectious respiratory secretions and body fluids from dead bodies or objects contaminated with those secretions. Conservative estimates by the WHO suggest secretions from dead bodies of AI patients who die within 7 days after fever resolution (adults) or up to 21 days after symptom onset (children) could transmit virus
- In other strains of influenza, use of widely recognized transmission-based standard precautions (including PPE) in handling the bodies of dead patients mitigates the risk of influenza infection

Personal Protective Equipment for Handling Human Remains

The WHO recommends the following PPE for individuals handling dead bodies of H5N1 patients:

- Disposable, long-sleeved, cuffed gown (waterproof if potentially infectious body fluid is visible on the outside of the body)
- Single-layer gloves
- Surgical mask (a particulate respirator if handling the body immediately after death)
- Balaclava-type cap and face shield if splashing of body fluids is anticipated

After removing PPE, proper hand washing is highly recommended. Transfer of the body to a mortuary should occur as soon as possible after death. The body, tissues, secretions and excretions should be sealed in an impermeable body bag, and the bag should be kept clean and free of leaks.

For the full recommendations, see the WHO website:
http://www.who.int/csr/disease/avian_influenza/guidelines/infectioncontrol/en/index.html

Attachment I.
WHO Recommendations for Mortuary Personnel

Mortuary personnel are at risk of infection from exposure to H5N1 AI-infected respiratory secretions or body fluids, particularly during procedures likely to aerosolize the virus (e.g., splashing of body fluids, bone sawing). Exposure to lung tissue is of particular concern (according to primate models, H5N1 AI virus was concentrated in the lungs). Specific precautions for mortuary personnel will minimize transmission of virus particles during autopsies.

WHO Recommendations for Mortuary Personnel

- Have at least two autopsy personnel wear full mortuary PPE
- Scrub suits
  - Disposable, waterproof, long-sleeved gowns
  - Particulate respirators (NIOSH-certified N95, EU FFP2, or equivalent) if small particle aerosols may be generated, otherwise surgical masks
  - Face shield
  - Autopsy gloves or double layers of latex gloves
  - Balaclava-type caps
  - Boots, canvas or similar slip-on shoes or overshoes
- Avoid having extraneous personnel in the area
- Avoid use of power saws
- Avoid splashing when excising the lungs
- Conduct procedures under water if aerosolization is anticipated

Dead bodies pose limited risk of infection. If highly pathogenic H5N1 AI becomes easily transmissible from person to person, exposure to H5N1 AI-infected people in the community is anticipated to be a much more predominant rout of disease transmission. Should the H5N1 virus change from a bird virus to a human-adapted influenza virus, credible USG sources assess that spread will occur most efficiently through respiratory transmission among live humans and direct and indirect contact with objects contaminated with virus particles.

- Seasonal human influenza viruses are transmitted from person to person through large (>5 microns), virus-laden respiratory droplets expelled during coughing or sneezing; direct and indirect contact with respiratory secretions or surfaces contaminated with such secretions also can transmit the virus
- The H5N1 AI virus has been shown to survive in bird feces for several months, in water for 4 days at 22 °C, for more than 30 days at 0 °C, and indefinitely in frozen material