State of Wyoming

Department of Health

DRAFT Pandemic Influenza Response Plan

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**In development*

I. INTRODUCTION

Pandemic influenza is considered to be a relatively high probability event, yet no one knows when the next pandemic will occur and there may be very little warning. Most experts believe that there will be between one to six months between the identification of a novel influenza virus and the time that widespread outbreaks begin to occur in the United States. Outbreaks are expected to occur simultaneously throughout much of the U.S., preventing relocation of human and material resources. The effect of influenza on individual communities will be relatively prolonged, an estimated six to eight weeks, when compared to the minutes-to-hours observed in most other natural disasters. Due to the prolonged nature of a pandemic influenza event, the World Health Organization (WHO) has defined phases to a pandemic in order to facilitate coordinated plans. A description of each of these phases is presented in Table 1.

Table 1: WHO Pandemic Influenza Phases

Period	*Phase*	*Description*	*Overarching Public Health Goals*
Inter-pandemic	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.	Strengthen influenza pandemic preparedness at the global, regional, national and subnational levels.
	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.	Minimize the risk of transmission to humans; detect and report such transmission rapidly if it occurs.
Pandemic Alert	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.[b]	Ensure rapid characterization of the new virus subtype and early detection, notification and response to additional cases
	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]	Contain the new virus within limited foci or delay spread to gain time to implement preparedness measures, including vaccine development.
	5	Larger cluster(s) but human-to-human spread still localized, suggesting that the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk).	Maximize efforts to contain or delay spread, to possibly avert a pandemic, and to gain time to implement pandemic response measures.
Pandemic	6	Increased and sustained transmission in general population[b]	Minimize the impact of the pandemic.

[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 is 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, and/or other scientific parameters.
[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), and/or other scientific parameters.

II. PURPOSE

The purpose of this plan is to provide a guide for the Wyoming Department of Health (WDH) for detecting and responding to an influenza pandemic. This plan must be periodically reviewed and updated to ensure that its assumptions, resources, priorities, and plans are consistent with current knowledge and changing infrastructure. In addition, in the event of a pandemic, the judgments of the public health leadership, based on the epidemiology of the outbreak and the extent of population infection, may alter or override anticipated strategies and plans.

III. FEDERAL RESPONSIBILITIES

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

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

IV. STATE RESPONSIBILITES

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

- Identification of public and private sector partners needed for effective planning and response.

- Development of key components of pandemic influenza preparedness plan: surveillance, distribution of vaccine and antivirals, and communications; following guidance provided by the Department of Health and Human Services (HHS) in the national Pandemic Influenza Preparedness and Response Plan.
- Integration of pandemic influenza planning with other planning activities conducted under Centers for Disease Control and Prevention's (CDC) Public Health Preparedness and Response and Health Resources and Services Administration's (HRSA) Hospital Preparedness Program cooperative agreements with states.
- Coordination with local areas to ensure development of local plans as called for by the state plan and provide resources, such as templates to assist in planning process.
- Development of data management systems needed to implement components of the plan.
- Assistance to local areas in exercising plans.
- Coordination with adjoining jurisdictions.

V. ASSUMPTIONS

- A novel influenza virus strain will likely emerge in a country other than the United States, but a novel strain could emerge first in the U.S.
- With the emergence of a novel influenza virus strain, it is likely that all persons will need two doses of vaccine to achieve optimal antibody response.
- Although there may be isolated pockets, the pandemic could affect all geographic areas of the state.
- The emergency response element will require the substantial interaction of agencies beyond health departments.
- When the pandemic occurs, vaccines and antiviral medicines will be in short supply and will have to be allocated on a priority basis.
- In a pandemic, vaccine purchase and distribution options include:
    - public sector purchase and distribution of all pandemic influenza vaccine
    - a mixed public-private system where public sector supply may be targeted to specific priority groups (e.g., health care workers and those providing essential public safety services) and those who may be underserved by the current system
    - maintenance of the current, largely private, system
- The federal government has assumed responsibility for devising a liability program for vaccine manufacturers and persons administering the vaccine.
- Response to the demand for services may require non-standard approaches, including:

  - Discharge of all but critically ill hospital patients
  - Expansion of hospital capacity by using all available space and less than code compliance beds
  - Increase of patient ratio to hospital staff
  - Recruitment of volunteers who can provide custodial services under the general supervision of health and medical workers
  - Relaxation of practitioner licensure requirements as deemed appropriate, and
  - Utilization of general purpose and special needs shelters as temporary health facilities.
- Secondary bacterial infections following influenza illness may stress antibiotic supplies.
- There may be as little as one to six months warning before outbreaks begin in the U.S., if the pandemic emerges outside this country.
- The pandemic may occur during time periods not normally associated with our usual influenza season, and the pandemic strain may attack categories of people at different rates than that which normally occurs during the influenza seasons.

VI. COMMAND, CONTROL, AND MANAGEMENT PROCEDURES

A. Command Structure

The WDH Director (or his/her designee) is responsible for officially activating the Wyoming Pandemic Influenza Response Plan during an influenza pandemic. The WDH All Hazards Response Plan (AHRP) describes the WDH command structure that will be implemented in the event of a public health emergency, including an influenza pandemic. In addition, the AHRP outlines the procedures for activating and operating the WDH Intervention Resource Center (IRC). The WDH Director will decide when to activate this command system and/or the WDH IRC based on current information and recommendations from the State Health Officer and the State Epidemiologist.

1. Pandemic Influenza Working Group

   WDH has designated a working group to oversee planning, response and mitigation efforts and ensure that this plan is developed, reviewed, and periodically revised. This group will develop this response plan and other materials related to a pandemic influenza response. During a pandemic response, this group will be responsible for developing recommendations and guidelines, particularly for the use of limited vaccine and antiviral supplies.

The Working Group may need to be expanded to include other subject matter experts as a pandemic situation develops. Current group members are listed in Appendix A.

2. Pandemic Influenza Advisory Committee

WDH will designate an advisory committee consisting of stakeholders and representatives from WDH and partnering state agencies. This committee will be a subcommittee of the established Public Health and Terrorism Preparedness Advisory Committee. A list of proposed committee members is included in Appendix A.

B. Powers of the State Health Officer

1. Quarantine and Isolation

The WDH, through the State Health Officer, or under his/her direction and supervision, has the power to establish, maintain and enforce isolation and quarantine, and in pursuance thereof, and for such purpose only, to exercise such physical control over property and over the persons of the people within this state as necessary for the protection of the public health (W.S. 35-1-240). Any person who has been quarantined may appeal to the district court at any time for release from the quarantine (W.S. 35-4-112).

2. Closing of Public Buildings and Events

The State Health Officer has the authority to close theaters, schools and other public places, and to forbid gatherings of people when necessary to protect the public health (W.S. 35-1-240).

3. Mandatory Vaccination

In most cases, the State Health Officer does not have the authority to subject any person to any vaccination or medical treatment without the consent of that person (W.S. 35-4-113). However, during a public health emergency, the State Health Officer may subject a person to vaccination or medical treatment without consent in the following circumstances:

- If the parent, legal guardian or other adult person authorized to consent to medical treatment of a minor child cannot be located and consulted and the vaccination of or medical treatment for the minor child is reasonably needed to protect the public health or protect the minor child from disease, death, disability or suffering;

- If the person authorized to consent on behalf of an incompetent person cannot be located and consulted and the vaccination of or medical treatment for the incompetent person is reasonably needed to protect the public health or protect the incompetent person from disease, death, disability or suffering.
- If a person withholds or refuses consent for himself, a minor or other incompetent when the vaccination or medical treatment is reasonably needed to protect the health of others from a disease carrying the risk of death or disability, then the person for whom the vaccination or medical treatment is refused may be quarantined by the State Health Officer.

4. Liability

   During a public health emergency any health care provider or other person who in good faith follows the instructions of the State Health Officer is immune from any liability arising from complying with those instructions (W.S. 35-4-114). This immunity does not apply to acts or omissions constituting gross negligence or willful or wanton misconduct.

C. Activities by Pandemic Phase

1. Phases 1 and 2; Inter-pandemic Period
   a. WDH has established a Pandemic Influenza Working Group and is working to establish the Advisory Committee.
   b. WDH has developed this response plan as an annex to the state's existing All Hazards Response Plan. This plan will be reviewed and modified at least annually (more often if deemed necessary).
   c. WDH Public Health and Terrorism Preparedness Program is continually working to develop and maintain lists of partners, resources, and facilities to be utilized during a public health emergency.
   d. WDH will continue to coordinate planning activities with bordering jurisdictions, including counties, states, and unique populations (such as Native American nations).
   e. WDH is working with local public health and emergency management agencies to assist with the development of local pandemic plans. WDH has developed and distributed two documents to counties to help them in their planning process: Pandemic Influenza Planning Roles (Appendix B) and Pandemic Planning Guidance for Local Public Health and Emergency Management Agencies (Appendix C).

f. In addition, WDH has provided a canned tabletop exercise to counties to be used to exercise their local pandemic response plans (materials available upon request).

2. Phases 3, 4 and 5; Pandemic Alert Period
   a. Convene the Working Group, the Advisory Committee, and other partners and stakeholders to review plan.
   b. Notify local jurisdictions and encourage them to review their pandemic response plans and current capabilities.
   c. Coordinate with other states and federal agencies and bordering jurisdictions.

3. Phase 6; Pandemic Period
   a. As a pandemic situation unfolds, meet with appropriate partners and stakeholders as appropriate to review and update the plan.
   b. Notify key government officials and legislators of the need for additional monetary resources and other additional resources as needed.
   c. Coordinate with other states, federal agencies, and bordering jurisdictions.
   d. Monitor staffing and other agency resource needs.
   e. Document expenses related to the pandemic response.

VII. SURVEILLANCE

A. Existing Surveillance System

1. Passive Surveillance of Confirmed Cases
   Influenza and "unusual incidence" of influenza-like illnesses are reportable in the state of Wyoming. Reports are received from physicians, hospitals, and laboratories. Both rapid test and culture positives are reported through this system.

2. Influenza-Like Illness Sentinel Reporting System
   Wyoming currently has 20 healthcare providers participating in the U.S. Influenza Sentinel Surveillance (USISS) Project coordinated by the CDC. This system consists of two components.

   a. Influenza-Like Illness Reporting: The sentinel sites report influenza-like illness (ILI) morbidity data directly to the CDC via internet, telephone or fax on a weekly basis starting in early October. Sentinels are asked to continue to report ILI throughout the

year, but participation typically declines as the season progresses. The weekly transmission includes the number of patients seen for ILI during the week in four age categories (0-4 years, 5-24 years, 25-64 years and 65+ years) and the total number of patients seen for any reason during the week.

b. Submission of Laboratory Samples: The sentinel sites are asked to submit nasal, nasopharyngeal, and/or throat swab specimens from a sample of their patients presenting with ILI to the Wyoming Public Health Laboratory (WPHL) for influenza testing and typing. Both positive and negative results are reported to the WDH Epidemiology Section.

3. Pediatric Deaths

WDH investigates all reports of deaths in patients < 18 years old, with evidence of influenza virus infection using CDC-provided materials.

4. Laboratory Testing for Influenza

The WPHL will work with sentinel providers to ensure the proper collection and transport of influenza specimens during all stages of an influenza pandemic. In addition to testing specimens submitted by sentinel sites, the WPHL will test a small number of samples submitted from other Wyoming providers when needed (e.g. to determine the cause of a cluster of influenza-like illness).

The WPHL will provide virus culture collection kits to sentinel providers for nasal and throat swab specimens for laboratory testing. Currently, the WPHL performs three tests for influenza virus detection and characterization and are as follows:

a. RNA detection by Real-Time Reverse Transcriptase Polymerase Chain Reaction (rRT-PCR)- rRT-PCR is performed on the original patient specimen. Positive results identify the virus type as either influenza A or influenza B and also subtype all influenza a samples as either H1 or H3, the currently circulating subtypes. If a sample is identified as influenza A but cannot be subtyped as H1 or H3 by rRT-PCR, then an immediate investigation would ensue with the support of CDC to determine the possibility of infection by a new subtype of influenza.

b. Virus culture- The patient specimen is placed into cell culture for the isolation of influenza virus.
    i. Antigen Detection by Direct Fluorescent Antibody (DFA) - Virus cultures positive for influenza are typed as either influenza A or influenza B by DFA testing.
    ii. Antigen Detection by Indirect Fluorescent Antibody (IFA) - All samples identified as influenza A are also subtyped as H1 or H3 using IFA testing.

A few selected isolates will also be sent to CDC for complete subtype characterization as part of the WHO surveillance to determine which strains of influenza virus should be included in next season's vaccine. If at any phase of subtyping, WPHL tests indicate that an influenza virus isolate may be a strain other than those currently circulating; the WPHL will immediately notify CDC for investigative assistance.

5. Deaths from Influenza and Pneumonia

The Vital Statistics program of the WDH reports the total number of deaths processed each week as well as the number of those deaths attributable to pneumonia and influenza to the WDH Epidemiology Section.

B. Activities by Pandemic Phase

1. Phases 1 and 2; Inter-pandemic Period

In the preparation for an influenza pandemic, routine surveillance systems should be expanded where feasible. Activities to be considered include:

a. Maintain the routine sentinel physician network and expand to one physician or clinic for each county (23 sites)
b. Institute an aberration detection system (syndromic surveillance) that monitors daily patient load at selected urgent care facilities to detect variation in emergency outpatient visits that would then be investigated to determine a cause, which could be influenza
c. Develop an unusual and unexplained deaths surveillance system that would serve as a dual system with bioterrorism surveillance, to monitor daily/weekly the number of deaths

d. Emphasize reporting of outbreaks in nursing homes and other institutional settings and provide epidemiologic support for investigation activities, including laboratory support to identify causes.
e. Explore feasibility of new surveillance system to monitor school absenteeism.

2. Phase 3; Pandemic Alert Period; Human infection with novel virus identified
   a. Continue with active and passive surveillance systems that are described in sections A and B1 of this section.
   b. Monitor CDC weekly influenza updates regarding clinical, epidemiological, and virologic characteristics of the novel strain.
   c. Provide updates to public and private health care providers, including, but not limited to county health officers, public health nurses, infection control practitioners, sentinel providers, hospitals, clinics, and private physician offices, through the Epidemiology Section website, Epidemiology Alerts, Epidemiology Bulletins, and telephone and video conferences as needed.
   d. WPHL will obtain reagents from CDC to detect and identify the novel strain.
   e. Request that sentinel providers collect specimens from patients presenting with ILI, especially those with a recent travel history to a region where the novel strain is circulating or persons with unusual/severe symptoms. These specimens would be sent to the WPHL for viral culture, typing, and subtyping.
   f. Request that all providers collect specimens from patients presenting with ILI with a recent travel history to a region where the novel strain is circulating or persons with unusual/severe symptoms. These specimens would be sent to the WPHL for viral culture, typing, and subtyping.
   g. As usual, if at any phase of subtyping, WPHL tests indicate that an influenza virus isolate may be a strain other than those currently circulating; the WPHL will immediately notify CDC for investigative assistance.
   h. Develop surveillance system for severe respiratory illnesses and unexplained deaths through active surveillance of infection control practitioners. Develop a reporting form to be completed daily by infection control. Activate this system if/when novel strain is identified in the US.
   i. If not already in place, implement appropriate enhanced surveillance activities outlined in the prior phase (B1).

3. Phases 4 and 5; Pandemic Alert Period; Human-to-human transmission confirmed
    a. Continue with activities listed in section B2.
    b. WDH Epidemiology will assess functionality, timeliness, and completeness of reporting, data entry, and data dissemination, and will make improvements where warranted.
    c. Assess the need to screen travelers arriving in the state from affected countries.
    d. WDH Epidemiology will investigate outbreaks and increases in ILI, including those detected through the sentinel provider surveillance system.
    e. CDC will provide guidelines to assist with triage of specimens for testing and choosing which isolates to forward to CDC for further testing.

4. Phase 6; Pandemic Period
    a. Continue with activities listed in section B3.
    b. Give consideration to collaboration with the CDC for any special studies that could be conducted without further compromise of existing limited resources:
        i. Assessment of control measures such as closing of schools and businesses
        ii. Description of unusual clinical syndromes
        iii. Description of unusual pathological features for death cases
        iv. Assessment of the effectiveness of vaccination or chemoprophylaxis
    c. Surveillance for adverse events from the vaccine using the CDC's Vaccine Adverse Events Reporting System (VAERS).
    d. Consider a hospital beds-filled and beds-available surveillance system to locate and monitor available inpatient health care space by enrolling selected hospitals to monitor daily or weekly capacity.
    e. Coordinate receipt of selected autopsy specimens for submission for testing.
    f. Periodically assess surveillance activities in order to eliminate or modify those lacking support due to limited or no resources.
    g. As needed, provide materials to surveillance sources to convince them that their contributions are still essential because of the likelihood of a second and possible third wave of illness.

5. Pandemic over
    a. Provide a detailed retrospective characterization of the pandemic and evaluate the efficacy of protective action strategies.
        i. Review death certificates for influenza-related pneumonia and influenza deaths.

ii. Conduct retrospective studies of vaccine efficacy.
iii. Develop a list of lessons learned to be used to improve the existing response plan.
iv. Summarize and report findings.

b. Discontinue enhanced surveillance activities.

VIII. VACCINE DELIVERY

A. Assumptions

1. Vaccine will serve as the central preventive strategy during the next pandemic.
2. It will take six to eight months after the novel virus is identified before the vaccine is available for distribution, unless a DNA vaccine is developed and deemed safe and necessary.
3. Because of the six to eight month production period needed to produce vaccine, the demand for vaccine will be greater than the supply early in the course of the pandemic. It is also possible that no vaccine will be available.
4. Once vaccine is available, it will need to be distributed as quickly as possible.
5. A second dose of vaccine (2-4 weeks after the first) may be required to develop immunity to the novel virus.
6. Due to vaccine shortage, a priority list of vaccinees will need to be developed and adhered to following national recommendations.
7. Educating the public about the rationale for priority groups will be an important aspect of public education.
8. Although unlikely, all vaccine available to the state may arrive via a single allotment.
9. Eventually, sufficient vaccine will be available for mass vaccination of the population. Local jurisdictions must be prepared to hold mass vaccination clinics to distribute the vaccine
10. CDC will develop a standard vaccine information statement (VIS) that details the risks and benefits of the disease and the vaccine.
11. Monitoring of vaccine adverse events will be necessary and could be based on the traditional VAERS (Vaccine Adverse Event Reporting System) process where providers report directly to VAERS at the national level with subsequent feedback to the state.

B. Annual Vaccination Campaign

1. Influenza and Pneumococcal Vaccine Distribution

   The Wyoming Immunization Program (WIP) in the Department of Health Community & Family Health Division (CFHD) is responsible for bulk ordering vaccine from manufacturers,

receipt, storage, handling, packing, shipping, and disposal of all publicly purchased vaccines in Wyoming. Vaccines are ordered and stored centrally, and transported by Federal Express and/or United Parcel Service from the General Injectables and Vaccines (GIV)/Henry Schein Depot in Grapevine, Texas to providers in Wyoming. Mary Sue Neal acts as a primary contact in Grapevine and may be reached at (817) 416-9770 x 4356 or marysue.neal@henryschein.com.

The vaccine depot in Wyoming is located at 557 Hathaway Building, 2300 Capitol Avenue in Cheyenne. No influenza vaccine is currently kept in the Hathaway Building. Currently, all vaccine storage units in the Hathaway Building reside in a locked room after hours. All refrigerators that contain vaccine are equipped with locks. Temperatures are monitored twice daily. All vaccine storage units at local Public Health Nursing (PHN) offices are also equipped with locks.

Standard operating procedures to safeguard vaccines during power outages include the availability of backup generators for the power refrigerators in the event of a power outage. GIV and the units located in the Hathaway Building have backup power generators, while Vaccine for Children (VFC) providers have backup plans in the event of a power outage or refrigerator malfunction.

C. Vaccine Management During a Pandemic Response

The entire population will be susceptible and will likely require two doses of vaccine for adequate protection. This means that the state of Wyoming could potentially use up to 1 million doses. Even if the maximum amount of 1 million doses were to become available, it would most likely arrive in batches over an extended period of time. The amount of vaccine that will have to be managed by the WIP will be affected by the following factors:

- Vaccine availability (The manufacturers' ability to produce and distribute vaccine)
- The proportion of available vaccine that will be purchased and distributed by the public versus the private sector.
- Amount of vaccine available for public purchase through federal contract(s).
- Amount of vaccine available for public purchase through contracts negotiated between the state and manufacturers.

The proportion of influenza vaccine to be distributed and administered through the public versus the private sector is unknown. It is possible that during an emergency, the public sector will be given the responsibility for distribution of all vaccine. Control of vaccine distribution by WIP and PHN will help to ensure equitable distribution to priority groups regardless of income or access to care and will also facilitate distribution of vaccine to essential community servants. All vaccine available to the public sector will be administered during clinics held by local PHN offices. If a portion of the available vaccine is distributed through the private sector, the WIP will need to coordinate efforts with their existing partners.

1. Ordering

   CDC will notify the WIP as to how much vaccine will be available for Wyoming through federal contract. Vaccine may also be available through contracts negotiated directly between WIP and vaccine manufacturers. Once the total amount of vaccine available is known, WIP will consult with the State Health Officer and other WDH officials to determine how much vaccine will be distributed to each county. These amounts will most likely be based on county populations. The WIP will contact each of the county PHN managers to coordinate the distribution of the vaccine. The WIP is not responsible for the ordering or distribution of vaccine available to the private sector.

2. Personnel

   In order to process the additional doses of vaccine and the accompanying paperwork, staffing of WDH, in particularly the WIP, may have to be supplemented. Personnel to assist with vaccine management will be obtained through reassignment of WDH staff and/or hiring of temporary staff. The need for additional staff will depend upon the amount of vaccine that will be available for distribution through the public sector. With no additional resources, the WIP could manage an estimated 10,000 doses a month.

   Written protocols for vaccine distribution will be developed to facilitate new or reassigned staff to assist with vaccine distribution functions. During the months between a novel virus alert and the availability of vaccine, other PHSD, CFHD and/or temporary staff will be given specific assignments related to vaccine management and will be trained for their new duties by the WIP.

2. Vaccine Storage

Once vaccine is available, it is most likely that WIP will receive relatively small allotments of vaccine as it is manufactured. WDH will use the services of GIV (as usual) to handle the storage and distribution of this vaccine. In the unlikely event that GIV is not able to provide this service, storage and transport of vaccine will still not be a problem, as the WIP is very proficient at managing up to 10,000 doses of vaccine at one time.

a. Current vaccine storage capacity at the Hathaway Building is 100,000 doses above the usual amount of vaccine stored on a daily basis. In order to minimize storage problems in the county offices, vaccine will be transported from the Hathaway Building to the county offices on a weekly basis. Currently, all vaccine storage units in the Hathaway Building reside in a locked building after hours. All refrigerators that contain vaccine also are equipped with locks. All vaccine storage units at PHN offices are also equipped with locks.

b. It is the responsibility of WDH to review the adequacy of the current security measures at the Hathaway Building and PHN offices and to have a plan in place to enhance security, if needed. Should WDH become unable to meet the need for security of vaccine, WDH may request assistance from law enforcement agencies. The WIP would remain responsible for management of vaccine, including coordination of distribution. Enhanced security for vaccine at the local distribution sites will be the responsibility of the local authorities.

4. Transportation of Vaccine to County Public Health Nursing Offices

Vaccines are currently transported between the Hathaway Building and PHN offices by Federal Express. If Federal Express and/or other courier services are not able to deliver vaccine for any reason, WIP will transport vaccine by state automobile. Up to 4000 doses could be transported in the passenger compartment of an automobile at one time. If security during transport of vaccine is a concern, a law enforcement escort could be arranged.

5. Vaccination Clinics

a. Staffing

PHN offices may not have adequate staff to hold large-scale vaccination clinics. Volunteer agencies could be used to help with non-medical services such as data

entry/data management, management of supplies, and others. Local agencies should contact private providers in their community to create a list of those willing to assist with vaccination administration in the event of a pandemic or other public health emergency. Additionally, the WDH Public Health and Terrorism Preparedness Program has established a list of licensed nurses who have agreed to offer their services during a public health emergency.

b. Alternate Clinic Sites

PHN offices might not be large enough to accommodate a large immunization clinic. If this is the case, an alternate site should be identified. Any large, open-area building with handicap access and adequate parking would be adequate. Types of facilities recommended for large-scale vaccination clinics include schools, auditoriums, conference halls, and theatres. In many communities, facilities for vaccination clinics have already been identified for smallpox planning purposes (Appendix D). If possible, local agencies should establish Memorandums of Understanding (MOUs) with facilities in advance of a public health emergency.

PHN offices might consider distribution points such as police or fire stations, hospitals, or mobile vans to target specific groups of high priority workers. PHN offices might consider having hospitals administer vaccine to their staff members.

If clinic sites other than the health department are deemed necessary or preferable, local law enforcement should be sought as partners to help determine sites that can be secured.

c. Vaccine Accountability

The vaccine may be unlicensed and need to be used under emergency investigational new drug (IND) provisions. Such provisions call for strict inventory control and record keeping. All vaccinations administered during clinics held by PHN offices will be recorded in the WIP's Immunization Registry (First Responder Mass Clinic Program). All PHN offices have access to this registry and have been trained to enter data into this system. All of the data entered into this system can be accessed by WDH staff. Record keeping is also critical in that each individual vaccinated may need to be re-vaccinated 2-4 weeks after the initial vaccination.

For all privately purchased vaccine, private providers administering vaccine will be asked to tally the number of doses administered to each of nine age groups and record the information on an Influenza Doses Administered form (Appendix E; *in development*). These forms will then be returned to WIP, where the information will be entered into a spreadsheet. Information on doses administered can be totaled and sorted on a daily basis.

6. Targeted Recipient Groups

   a. Establishing Target Recipient Groups

      In view of the likely vaccine shortage, the United States Public Health Service (USPHS), in conjunction with various advisory committees has formulated draft recommendations for a rank-order list of high priority target groups for vaccination (see 6.b.). The order of these groups is based on a number of factors including the need to maintain those elements of community infrastructure that are essential to carrying out the pandemic response plan. Other factors include limiting mortality among high-risk groups, the reduction of morbidity in the general population, and the minimization of social disruption and economic losses. The draft rank-order list is subject to change depending on the epidemiological and clinical features exhibited by the actual pandemic strain and the availability of vaccine.

      The Working Group is responsible for developing a Priority Groups List to be approved by the WDH Director and the Advisory Committee. Once the final list has been approved, it will be sent to the Governor for his/her approval prior to the beginning of the vaccination campaign. The Working Group and the Advisory Committee are responsible for providing clear guidelines for using the Priority Groups List to all healthcare providers that would be administering vaccine. All providers administering vaccine will be required to follow these guidelines.

   b. USPHS Recommended Priority Groups List (Rank-Order List of High-Risk Groups)

      - Health-care workers and public health personnel involved in vaccine distribution.
      - Persons responsible for community safety and security, e.g., police, firefighters, paramedics, military personnel, National Guard, “local responders” not included in first priority group (e.g., ambulance drivers).

- Other highly skilled persons who provide essential community services whose absence would either pose a significant hazard to public safety (e.g., nuclear power workers) or severely disrupt the pandemic response effort (e.g., persons who operated regional telecommunications or electric utility grids).
- Persons traditionally considered being at increased risk of severe influenza illness and mortality, as currently defined by the Advisory Committee on Immunization Practices.
    - Persons of any age with high-risk medical conditions.
    - Pregnant women.
    - Persons in nursing homes and other long-term care facilities.
    - Persons age 65 or older without high-risk medical conditions.
    - Infants between the ages of 6 to 12 months, if supported by epidemiological and clinical data.
- Persons who, in the judgment of state and local health officials, provide critical community services (e.g., utility workers, funeral services personnel, persons involved in the transport of essential goods such as food).
- Household contacts of persons with high-risk medical conditions and household contacts of persons in the first three groups.
- Pre-school age children (especially those attending day-car-centers)
- Healthy persons between the ages of 18 to 64.
- School age children (the population least likely to have severe illness).

c. Estimates of and Plans to Vaccinate Priority Group Members

Once the Priority Groups List has been developed, WDH will work with PHN offices and local emergency management agencies to estimate how many persons fall into each of the established groups. PHN offices, in collaboration with their partners, will need to develop plans for vaccinating persons who fall into the priority groups.

d. Education Regarding the Priority Groups List

Special attention must be paid to educating the general public about the Priority Groups List for receipt of vaccine, including the rationale for the list, the process by which the decisions were made, and what other control measures people can take until influenza vaccine is available for everyone.

IX. ANTIVIRAL AGENTS

Because vaccine will likely not be available when the novel virus first affects communities, antivirals may play an important role for the control and prevention of influenza, especially during the period before vaccine is available. Existing production capacity for influenza antiviral drugs is less than would be needed to provide prophylaxis or treatment for the entire population and the current supply of antivirals in the Strategic National Stockpile (SNS) is very limited.

As in the case of vaccine use, recommendations for priority groups for antivirals will be established at the national level. The Working Group and Advisory Committee will be responsible for reviewing the recommended groups, developing Wyoming-specific guidelines, and distributing those guidelines to all physicians and pharmacists in the state. For antivirals purchased with public funds, WDH will be responsible for local distribution of the antivirals in collaboration with the private sector. If there is no state or federal purchase, WDH's role will largely be one of public and provider education around appropriate use of antivirals. As with vaccine, it will be critical to clearly communicate with the public about the rationale for priority groups. Coordination with and education of the private sector needs to be an important aspect of planning.

A. Background Information on Antiviral Agents

Four antiviral agents are approved for preventing influenza: amantadine, rimantadine, zanamivir, and oseltamivir. All of the agents, except for zanamivir, are also approved for prophylactic use.

The adamantane derivatives, amantadine and rimantadine, are approved for treatment and prophylaxis of influenza A. When administered for treatment within 48 hours of illness onset, controlled studies have found that both drugs are effective in decreasing viral shedding and reducing the duration of illness of influenza A by approximately one day compared with placebo. No prospective trials have documented reductions in influenza complications such as pneumonia or in the need for hospitalization. When used for prophylaxis during annual influenza outbreaks, amantadine and rimantadine generally have been approximately 70% - 90% effective in preventing symptomatic illness caused by influenza A. To be effective prophylaxis must be continued until exposure has ceased. The amantadanes are considered best suited for prophylaxis because of the high potential for viral resistance to emerge during treatment, the potential supply, and their cost. Identification of influenza within a community should be the trigger for initiating prophylaxis.

Neuraminidase inhibitors (oseltamivir and zanamivir) should be used for therapy because of the potential for viral resistance when adamantanes are used for therapy. Oseltamivir can also be used for prophylaxis. When treatment is initiated within 48 hours of illness onset, both drugs are effective in decreasing shedding and reducing the duration of symptoms of influenza by approximately one to two days compared with placebo. Distribution of drugs for therapy is a challenge given the limited amount available, the large number of points of care, and the need to initiate the course of treatment within 48 hours of onset of symptoms.

Additional information on antiviral treatments and their use can be found in Appendix F and in the Draft Pandemic Influenza Preparedness and Response Plan, by the Department of Health and Human Services, Annex 2: Planning Guidance for Health Care Systems.

B. Strategies for Antiviral Drug Use

Five overarching principles guide antiviral drug use strategies for an influenza pandemic:

1. Because antiviral drug supply is limited, planning for the use of antiviral drugs should be based on defined goals and identified priority groups that should be targeted to achieve those goals.
2. Be flexible in deciding optimal use of antiviral drug supply based on the available supply, and the local impacts and epidemiology of the pandemic.
3. The duration of prophylaxis is estimated to be six to eight weeks if used while influenza is circulating in a community or may be longer. Because prophylaxis would be provided to a group of people who were at risk of exposure to the pandemic virus and its consequences, many of those who receive prophylaxis may not become infected and may not have become ill even in its absence. Therefore, for a given quantity of antiviral drugs, treatment is generally considered a more efficient strategy than prophylaxis.
4. Use of adamantanes for therapy can lead to the development and subsequent spread of resistant influenza viruses.
5. Administering any antiviral drug therapy more than 48 hours after onset of influenza symptoms is unlikely to be effective and should be avoided.

C. Activities by Pandemic Phase

1. Phases 1 and 2; Inter-pandemic Period
    a. Review and modify as needed the national recommendations for priority groups

b. Quantify high priority populations for prophylaxis and therapy, and develop drug distribution contingency plans for the different possible distribution scenarios.
c. Develop plans for education and notification of the medical community and of the public around appropriate prescribing information.
d. Review workman's compensation laws as they apply to health care workers and other essential workers who have taken antivirals for prophylaxis.
e. Consider developing data management system to track supplies, distribution, and use.

2. Phases 3, 4, and 5; Pandemic Alert Period
   a. Convene the Working Group, the Advisory Group, and appropriate partners and stakeholders to review major elements of the antivirals plan. Modify plan as needed to account for updates, if any, on recommended target groups and projected drug supply.
   b. Notify the medical community of the status of the plan and antiviral availability.
   c. Disseminate antiviral use guidelines to the medical community and conduct training for public health staff involved in antiviral distribution protocols and procedures.
   d. Ensure that the human resources and logistics are in place to begin drug distribution and administration, taking into account the need for added staff due to illness.

3. Phase 6; Pandemic Period
   a. Fully activate antiviral drug distribution plan.
   b. Implement data management system for antiviral distribution, use, and supply (if applicable).

X. EMERGENCY RESPONSE

Emergency response, including maintenance of critical services and surge capacity issues in the health care system, is addressed in the WDH AHRP being worked on through the CDC and HRSA cooperative agreements. The Working Group has been collaborating with the above groups to ensure that these groups consider pandemic influenza as one of the scenarios they plan for and address issues specific to pandemic influenza.

A. Estimate of Need for Healthcare Services

Although there is great uncertainty associated with any estimate of an influenza pandemic's impact, the following estimates of the potential impact of an influenza pandemic on Wyoming are derived from calculations using the CDC software, *FluAid 2.0*. All of the following calculations

are based on Wyoming population estimates from 2000 U.S. Census Bureau data. These estimates (Table 2) are based on the assumption of 12 weeks of pandemic influenza activity. (For more information on the model used to develop these projections see Meltzer MI, Cox NJ, Fukuda K. *The Economic Impact of Pandemic Influenza in the United State: Priorities for Intervention*. Emerging Infectious Diseases 1999; 5: 659-71.)

Table 2: Potential Impact of an Influenza Pandemic in Wyoming

	15% Attack Rate	25% Attack Rate	35% Attack Rate
Outpatient Visits	38,565	64,274	89,984
Hospitalizations	817	1363	1907
Deaths	183	304	427

B. Evaluation of Existing Healthcare Infrastructure

The WDH Emergency Medical Services and HRSA Programs are working to complete a survey of all hospitals in the state to determine a number of healthcare infrastructure indicators. Once complete, this information will be available by request from these programs.

The WDH Working Group, in coordination with the HRSA program, will consider developing a tracking system to routinely collect and communicate information on:

- number of available emergency department (ED), Intensive Care Unit and medical beds
- number of patients and/or waiting time in the ED
- number of patients waiting for inpatient beds (in ED, clinics, etc)
- number of hospitals on ED diversion
- morgue capacity
- shortages of medical supplies or equipment

C. Maintenance of Healthcare Services

Guidelines for healthcare facility management (including infection control recommendations) during an influenza pandemic (Appendix G) will be further developed by the Working Group and will be distributed to hospitals and long-term care facilities in the state following approval of the State Health Officer and the Advisory Committee. WDH has previously developed basic influenza infection control guidelines for the public and for schools, which are available on the WDH website. In addition, WDH can promote CDC-developed influenza transmission prevention strategies for healthcare settings and the community (Table 3).

Table 3: Influenza Transmission Prevention Strategies[c]

	Healthcare Setting	Community
Decrease potential for contact	• Private rooms or cohorting with other influenza patients • Negative pressure room, if feasible • Designate specific wards or hospitals for admission of patients • Minimize transportation of patients • Limit number of healthcare workers caring for influenza patients • Limit number of visitors to influenza patients • Environmental decontamination for influenza following existing guidelines	• Provide advisories or limit travel to areas where a novel influenza strain is circulating • Cancel large group gatherings • Close schools and/or businesses • Encourage telecommuting • Limit availability of public transportation • Avoid unnecessary hospital visits • Discourage hand shaking • Quarantine of contacts of cases early in the pandemic
Decrease potential for infection if contact occurs	• Vaccination of healthcare workers • Antiviral chemoprophylaxis for healthcare workers • Strict hand hygiene • Respiratory/cough etiquette • Standard and droplet precautions including use of gowns, gloves, and masks by healthcare workers and visitors to influenza patients	• Hand hygiene • Respiratory/cough etiquette • Wear masks in public • Vaccination or antiviral chemoprophylaxis if available

[c]*From: Draft Pandemic Influenza Preparedness and Response Plan, Department of Health and Human Services, Annex 8: Strategies to Limit Transmission, August 2004.*

Because health care personnel will be as affected by illness in addition to the general population, we can expect that there will be high absenteeism rates among health care staff, at least until vaccine becomes available. While retired health care providers and volunteers can be called on to assist in the care of the ill, it is likely that much of the care will become the responsibility of families, whether the patient is at home or in the hospital. It may become necessary to develop informational materials on the care of influenza patients in the home as well as guidelines regarding when to seek professional medical care.

D. Wyoming Incident and Information Management System

The WDH is developing the Wyoming Incident and Information Management System (WI^2MS) in collaboration with the Wyoming Office of Homeland Security (WOHS) to assist in the management of a public health emergency in the state. This system is a database that interfaces with electronic mapping tools to generate real-time coordination of public health and emergency resources. This system is discussed in detail in the WDH Smallpox Response Plan.

XI. COMMUNICATIONS

A. Assumptions

- Dissemination and sharing of timely and accurate information among state and local public health and government officials, medical care providers, the media, and the general public will be one of the most important facets of the pandemic response.
- Different types of information will have to be communicated, often to different audiences.
- There will be widespread circulation of conflicting information, misinformation, and rumors. Communication must be coordinated among all relevant agencies to ensure consistent messages to the general public.
- There will be a great demand for accurate and timely information regarding:
  - Circulation of a pandemic strain;
  - Disease burden;
  - Disease complications and mortality;
  - Disease control efforts, including availability and use of vaccines, antiviral agents, and other preventive and treatment measures;
  - Recommendations for the general public; and
  - Maintenance of essential community services.
- CDC will make a number of materials available before and during influenza pandemic, including
  - Basic communication materials (such as question and answer sheets and fact sheets) on influenza, influenza vaccine, antiviral agents, and other topics in various languages
  - General preventive measures such as “do's and don'ts” for the general public
  - Information and guidelines for health care providers
  - Training modules (Web-based, printed, and video)
  - Presentations, slide sets, videos, documentaries
  - Symposia on surveillance, treatment, and prophylaxis.
- There will be a special need for information for the general public about how and why a Priority Group List for receipt of vaccine was developed.
- Public education will be an important part of the immunization campaign because, as in a mass immunization with any vaccine, it is likely that the following problems will be encountered:
  - any symptom or illness that follows vaccination may be attributed to the vaccine, and
  - any febrile respiratory illness that later occurs will be viewed as vaccine failure.

- Certain groups will be hard to reach, including people whose primary language is not English, people who are homeless, people who are hearing and visually impaired, etc.
- Demand for information by health care providers will be so great that existing methods for educating health care providers will have to be expanded during the inter-pandemic period.

B. Protocols for Information Dissemination

- The WDH Public Information Officer (PIO) will oversee all public and media relations for the WDH in coordination with WOHS and other state agencies.
- The WDH Epidemiology Section will lead the development and release of any pandemic influenza related materials or information to the public, healthcare community, and media under the direction of the State Epidemiologist and the State Health Officer.
- The State Health Officer and the State Epidemiologist (or their designee) will serve as the principle spokespersons for the WDH.
- On the local level, the County Health Officers (or their designee) will serve as the spokespersons under the direction of the State Health Officer.
- A public information committee comprised of the WDH PIO, State Epidemiologist or his designee, State Health Officer and representatives from the Epidemiology Section will review talking points, FAQs, and fact sheets before distribution to the public. In the event that time is of the essence, the committee may be abbreviated to include a smaller number of reviewers.
- WDH will disseminate information to all audiences through press conferences, press releases, media interviews, the WDH website, local public health contacts, the Health Alert Network, professional medical organizations, and other resources.
    - A toll-free hotline (1-888-996-9104) has been established by the WDH to respond to public health emergencies on a 24/7 basis.
    - A toll-free hotline (1-877-996-9000) is being established by Epidemiology Section staff to respond to telephone calls from providers during normal working hours.
    - WDH has the capacity for broadcast faxing to a number of groups: public health employees, infection control practitioners, emergency rooms, physicians, and others.
    - Information could be distributed through mass mailings on a limited basis.
    - The Epidemiology Section of WDH publishes a newsletter on a bi-monthly basis.
    - WDH provides articles for publication in the newsletters of professional associations.
- For non-English speaking populations, WDH will use translated materials provided by the CDC.

C. Activities by Pandemic Phase

1. Phases 1 and 2; Inter-pandemic Period
    a. Identify and train state and local spokespersons (and backups).
    b. Develop risk communications messages (Appendix H; *in development*).
    c. Develop a plan for coordination of messages between state and local public health officials, and all involved partners.
    d. Educate public health officials, politicians, and the media about what information will and will not be available during a pandemic.
    e. Review CDC materials as they become available. Adapt and revise as needed.

2. Phases 3, 4, 5 and 6; Pandemic Alert and Pandemic Periods
    a. Review and modify developed materials and messages as needed.
    b. Disseminate information to the public, partners, and the media on ongoing basis.
    c. Prepare spokespersons.
    d. Monitor media coverage and address misinformation.
    e. Coordinate with bordering jurisdictions as needed.

XII. Appendices

Appendix A: Pandemic Influenza Working Group and Advisory Committee Members

Pandemic Influenza Working Group Members

- State Health Officer
- State Epidemiologist
- Public Health Laboratory Manager
- Epidemiology Section Chief
- Epidemic Intelligence Service Officer
- Representative from Public Health Nursing Program
- Representative from Immunization Program
- Influenza Surveillance Epidemiologist
- HRSA Hospital Preparedness Program Coordinator
- Public Health and Terrorism Preparedness Epidemiologist
- WDH Public Information Officer

Proposed Pandemic Influenza Advisory Committee Members

Representatives from the following:

- Governor's Office
- Wyoming Office of Homeland Security
- Wyoming Department of Health:
  - Director's Office
  - Public Health and Terrorism Preparedness Program
  - Emergency Medical Services Program
  - Epidemiology Program
  - Immunization Program
  - Mental Health Division
  - Office of Rural Health
  - Pharmacy Program
  - Public Health Laboratory
  - Public Health Nursing Program
- Wyoming Hospital Association
- Wyoming Medical Society
- Wyoming Board of Medicine
- Indian Health Services

Appendix B: Pandemic Influenza Planning Roles

Pandemic influenza planning is essential, but in order to plan effectively it is important to know what is being done at each level of the public health system. This fact sheet contains examples of planning roles at the federal, state, and local level.

Federal Planning Roles

- National and international surveillance
- "Pandemic Phase" declarations
- Development and use of diagnostic laboratory tests and reagents
- Development of reference strains and reagents for vaccines
- Vaccine evaluation and licensure
- Determination of populations at highest risk and strategies for vaccination and antiviral use
- Assessment of measures to decrease transmission (travel restrictions, isolation, and quarantine)
- Deployment of federally purchased vaccine
- Deployment of antiviral agents in the Strategic National Stockpile
- National adverse events surveillance system
- Evaluation of vaccine safety
- Deployment of Commissioned Corps Readiness Force and Epidemic Intelligence Service officers
- Medical and public health communications
- National information database/ exchange/clearinghouse on the internet
- Development of the following:
    - Fact sheets on influenza disease, vaccine and antivirals
    - Strategies and guidelines for interacting with the media and communicating with public health agencies, medical communities, and the general public
    - Guidelines for triage and treatment of influenza patients

State Planning Roles

- Development of state pandemic preparedness and response plan
- Coordination of state-wide influenza surveillance
- Vaccine procurement and distribution plan
- Development of data management systems needed to implement components of the plan.
- Identification of essential service *groups* as first round vaccine recipients
- State emergency response
- Statewide media messages
- Legislative/administrative measures
- Coordination with local areas to ensure development and exercise of local plans.
- Coordination with adjoining jurisdictions.

Local Planning Roles

- Development of local emergency operations plan
- Surveillance assistance as requested
- Vaccine administration plan
- Identification of essential service *persons* as first round vaccine recipients
- Local emergency response
- Continuation of operations

Appendix C: Pandemic Planning Guidance for Local Public Health and Emergency Management Agencies

Because pandemic influenza outbreaks are expected to occur simultaneously throughout much of the United States, shifts in human and material resources that normally occur with other natural disasters will not be possible. This unique challenge should be considered during pandemic influenza planning. This guidance document highlights a number of issues that should be considered during the pandemic planning process at the local level.

I. Command and Control

A. Inter-pandemic Period

- Identify persons/agencies responsible for writing and updating the plan.
- Determine often the plan be revised.
- Review existing emergency response or similar plans that have already been developed and determine how the pandemic plan be incorporated into exisitng plans.
- Identify leaders and decision makers for pandemic response activities in your jurisdiction.
- Identify services which support pandemic response activities.
- Maintain resource lists of staff and services which support pandemic response activities.
- Identify essential services of your agency which must be continued during a pandemic.
- Identify who is responsible for documentation of costs of the pandemic response.
- Identify facilities within the jurisdiction that can be used to support response activities including:
    1. Local Emergency Operations Center
    2. Vaccination sites (small and mass clinics)
    3. Vaccine storage sites
    4. Identify who is responsible for obtaining permission to use facilities.
    5. Establish Memorandums of Understanding (MOUs) for facility use.

B. Pandemic Alert and Pandemic Periods

- Identify public health and emergency management roles.
- Identify agencies with whom activities should be coordinated.
- Identify an individual or agency who will track the status of pandemic response activities
- Identify who re-assigns staff for pandemic response activities and who monitors staffing needs.
- Identify who is responsible for coordination with other local and state agencies.

- Have decision-makers meet to discuss local response activities.

C. Pandemic Over

- Identify who summarizes pandemic activities.
- Identify who decides when staff will return to usual activities.

II. Surveillance

Surveillance is primarily a state public health activity; local public health may be asked to assist in disease surveillance.

A. Inter-pandemic Period

- Support routine influenza surveillance activities of the WDH.
- Assist in identifying sentinel physicians and school nurses for surveillance.

B. Pandemic Alert Period

- Work with the WDH to ensure that all health care providers within your jurisdiction are aware of the recommendation to culture patients presenting with ILI with recent travel history to an affected area.

C. Pandemic Period

- Continue to work with the WDH to ensure that all health care providers within your jurisdiction are aware of the recommendation to culture patients presenting with ILI with recent travel history to an affected area.
- Assist sentinel sites with specimen collection and/or data collection as appropriate.

D. Pandemic Over

- Assist WDH in data collected for retrospective characterization of the pandemic.

III. Vaccine Management

Obtaining vaccine, distribution to regional centers, and identification of priority vaccination groups is a state responsibility. Local agencies will be responsible for identifying persons in priority groups and administering vaccine. .

A. Inter-pandemic Period

- Develop contingency plans for mass and small vaccination clinics
  - Identify facility, storage unit, supplies, and staffing requirements.
- Develop a system in your jurisdiction to identify number of persons in priority groups for vaccination (reminder: coordinate with local emergency management).
- Identify an estimated number of persons in priority groups for vaccination based on job

description

- Assist WDH to improve current seasonal influenza and pneumococcal vaccination efforts
- Make sure that all providers are aware of influenza and pneumococcal vaccine recommendations.
- Encourage providers to administer influenza and pneumococcal vaccine to ACIP recommended groups.

C. Pandemic Alert and Pandemic Periods

Before vaccine is available:

- Identify individuals (actual people) in priority groups for vaccination as defined by the WDH.
- Develop standing orders (modify prototype developed by the WDH as needed and have your County Health Officer sign).
- Identify sites to administer vaccine.
- Identify staff who can assess patients for eligibility.
- Identify staff who can administer vaccine and determine the need for volunteers.

When vaccine is available:

- Coordinate transportation and security with local emergency management.
- Use WDH Immunization Registry to track clinic participation, lot numbers.
- Use VAERS to track adverse vaccine reactions.

D. Pandemic Over

- Summarize pandemic influenza vaccination response
- Summarize lessons learned from vaccination efforts.

V. Emergency Response

A. Inter-pandemic Period

- Inventory relevant medical supplies, facilities, and services in your jurisdiction.
- Identify individuals and agencies who will need to be notified within your jurisdiction.
- Identify individual responsible for make local recommendations.
- Identify who will be represented on local planning and assessment teams
- Identify local technical advisors.
- Determine who within local agencies should be notified (may want to develop contingencies for multiple vs. sporadic cases).
- Determine who outside of local agencies should be notified.

C. Pandemic Alert and Pandemic Periods

- Notify agencies within jurisdiction.
- Have decision makers meet.
- Review current policies and new recommendations.
- Coordinate response activities with neighboring jurisdictions.
- Activate local Emergency Operations Center (EOC) as appropriate.
- Refer to local and agency EOP plans.

D. Pandemic Over

- Review current policies, standing orders, and new recommendations.
- Coordinate response activities with other localities.
- Reduce staffing/close EOC as appropriate.
- Evaluate pandemic response.
- Summarize pandemic response and debrief.

VI. Communications

A. Inter-pandemic Period

- Identify personnel and agencies within the county to be notified during the stages of a pandemic.
- Determine communication network and responsibilities between local public health and local emergency management.
- Develop/coordinate communication with your jurisdiction's health care professionals
- Coordinate media messages with state agencies and other local agencies.
- Identify deficiencies in your communications systems.

B. Pandemic Alert and Pandemic Periods

- Identify personnel within the agency to be notified.
- Develop/coordinate communication with health care professionals.
- Identify other agencies to be notified.
- Coordinate media messages with state agencies and other local agencies.

Appendix D: Facilities Identified for Mass Immunization Clinics by County

County	Name of Location	Address	City	Contact Name	Phone	MOU
Albany	UW Arena Auditorium		Laramie	Dan Baccari	766-3306	
Big Horn	Greybull High Gym SD#3		Greybull			
Campbell	Gillette Fire Stations	200 Rohan Avenue	Gillette	FC Gary Scott	682-5319	
	Wright Fire Station		Wright	FC Gary Scott	682-5319	
Carbon	Jeffrey Center	315 West Pine	Rawlins	Ann Taylor	324-4311	
Converse	Douglas Recreation Center	1701 Hamilton Street	Douglas	Barb Stinson	358-4231	
Crook	Crook Co Courthouse Basement	309 Cleveland	Sundance	Veronica Canfield	283-8390	
Fremont	Community Center	950 Buena Vista	Lander	Dan Shatto	332-3958	
	Popo Agie Senior Center (Alt)	205 South 10th	Lander	Jan Nolde	332-2746	
	Riverton High School	2001 West Sunset	Riverton		856-9407	
	Fremont Co Fair Building (Alt)	814 South Federal Blvd	Riverton		856-6611	
	School	700 North 1st	Dubois		455-2490	
	Senior Center (Alt)	504 Hays	Dubois		455-2990	
	School	112 West 3rd	Shoshoni		856-7505	
	Senior Center (Alt)	209 Main	Shoshoni		876-2703	
	Ft. Washakie Health Center		Ft Washakie			
	Rocky Mountain Hall (Alt)		Ft. Washakie			
	Arapahoe Health Center		Arapahoe			
	Great Plains Hall (Alt)		Arapahoe			
Goshen	Goshen Co Public Health	2025 Campbell Dr. # 1	Torrington	Cathy Grace	532-4069	
Hot Springs	Thermopolis Middle School	1450 Valley View	Thermopolis	Jodie Dico	864-6551	
Johnson	Catholic Rec Hall	196 East Snider	Buffalo	Father Taylor	684-7268	
	Public Schools		Buffalo	Rod Kessler, Super	684-9571	
	Johnson Co YMCA	101 Klondike	Buffalo	Doug Schultze, Dir	684-9558	
Laramie	Central Field House; E Gym		Cheyenne	Dave Adams	771-2633	
Lincoln	Star Valley High School	445 West Swift Creek	Afton	Ron Tolman, Super	885-3811	
	Church of Jesus Christ LDS	246 East 3rd Avenue	Afton	McKell Allred	886-9443	
	LDS Stake Center	62 McGovern	Kemmerer	Mark Dearden, Pres	877-3620	
	Kemmerer High School	1525 3rd West	Kemmerer	Terry Ebert, Super	877-9095	
Natrona	Casper Events Center	#1 Events Drive	Casper	Max Torbert	235-8441	
Niobrara	Niobrara Co Public Health	611 East 6th	Lusk			
Park	Cody Auditorium	1240 Beck Avenue	Cody	Jerry Parker	587-3247	
Platte	Former Jail/Sheriff's Office	Courthouse Basement	Wheatland	Dr. Steve Peasley	322-3861	
Sheridan	Gold Dome/Sheridan College	3059 Coffeen Avenue	Sheridan	Mark Englert	674-6446	
Sublette	Pinedale School Gym/Cafet.	665 North Tyler Street	Pinedale	Chuck Grove, Super	367-2139	
Sweetwater	Sweetwater Co Events Center	3321 Yellowstone Rd	Rock Springs	Chad Banks	352-6789	
Teton	Presbyterian Church	1251 South Park Loop	Jackson	Dr. Paul Hayden	734-0388	
Uinta	National Guard Armory	419 2nd Street	Evanston	Sgt. Bob June	789-2797	
	Elks Lodge	100 Cty Road 109	Evanston	Lynn Nelson	789-6902	
	Urie Elementary	1707 Powers Avenue	Lyman	Lane Parmenter	782-6429	
Washakie	Worland Middle School	1200 Culbertson	Worland	Mike Hejtmanek	347-4285	
	Washakie Co Public Health	1007 Robertson	Worland	Lori Schaal, RN	347-3221	
Weston	Salt Creek Vet Clinic	5362 US Hwy 16	Newcastle	Dr. Pete Vorhapll	746-4995	

Appendix E: Influenza Doses Administered Form (*in development*)

Appendix F: Antivirals and Influenza Overview

Amantadine Manufactured under the trade name Symmetrel® by Endo Laboratories Also available in generic forms	• Used to treat uncomplicated illnesses due to influenza A in individuals 1 year of age and older (must be given within two days of illness onset) • Used prophylactically to reduce chance of getting influenza A in individuals 1 year of age and older (approximately 70%-90% effective) • Also used in the treatment of Parkinson's disease and drug-induced extrapyramidal reactions • Available in tablet or syrup form • Adverse reactions reported most frequently include nervousness, anxiety, nausea, dizziness, and insomnia • More serious but less frequent side effects including behavioral changes, delirium, hallucinations, agitation, and seizures have been observed among individuals with renal insufficiency, seizure disorders, or certain psychiatric disorders • Should not be used for patients with untreated angle closure glaucoma because of anticholinergic effects • To reduce the emergence of antiviral drug-resistant viruses, amantadine therapy for treatment of influenza should be discontinued as soon as clinically warranted, typically after 3-5 days of treatment or within 24-48 hours after disappearance of signs and symptoms
Rimantadine Manufactured under the trade name Flumadine® by Forest Pharmaceuticals, Inc.	• Used to treat uncomplicated illnesses due to influenza A in adults (must be given within two days of illness onset) • Used prophylactically to reduce chance of getting influenza in individuals 1 year of age and older (approximately 70%-90% effective) • Available in tablet or syrup form • Adverse events reported most frequently include insomnia, dizziness, headache, nervousness, fatigue, nausea, vomiting, anorexia, dry mouth, abdominal pain, and asthenia • To reduce the emergence of antiviral drug-resistant viruses, rimantadine therapy for treatment of influenza should be discontinued as soon as clinically warranted, typically after 3-5 days of treatment or within 24-48 hours after disappearance of signs and symptoms
Zanamivir Manufactured under the trade name Relenza® by Glaxo Wellcome, Inc.	• Used to treat uncomplicated illnesses due to influenza A and B in individuals 7 years of age and older (must be given within two days of illness onset) • Not used to prevent the flu or to decrease the risk of transmitting the virus to others • Available as a dry powder, inhaled twice a day from a breath-activated plastic device included in the package with the medication • Some patients, especially those with asthma or chronic obstructive pulmonary disease (COPD), have had bronchospasms or serious breathing problems after using zanamivir • Zanamivir is not recommended for patients with underlying airway disease; if physicians prescribe it after careful consideration of risks and benefits, the drug should be prescribed under careful monitoring and supportive care, including the availability of fast acting bronchodilators. • Side effects, in addition to bronchospasms, may include headache, diarrhea, nausea, bronchitis, cough, sinus inflammation, infections of the ear, nose, and throat, and dizziness. • Recommended duration of treatment is 5 days
Oseltamivir Manufactured under the trade name Tamiflu® by Roche Laboratories, Inc.	• Used to treat uncomplicated illnesses due to influenza A and B in individuals 1 year of age and older (must have been given within two days of illness onset) • Used prophylactically to reduce the chance of getting influenza in persons 13 years of age and older (approximately 70%-90% effective) • Available in capsule or oral suspension form • Possible side effects include nausea and vomiting. Side effects are similar whether oseltamivir is taken for treatment or prophylaxis • Recommended duration of treatment is 5 days

Adapted from Appendix E of the Virginia Department of Health Pandemic Influenza Plan (6/2005). Information was taken from: Centers for Disease Control and Prevention. Prevention and Control of Influenza: Recommendations of the Advisory Committee on Immunization Practices. MMWR 2004; 53 (RR06): 1-39.

Appendix G: Guidelines for Healthcare Facilities Management[d]

These guidelines were created to help health care facilities maximize staffed beds, maximize resources available, and decrease disease transmission within the facility during an influenza pandemic.

Staffing: One of the greatest challenges in a pandemic response is expected to be the management of high patient load in the face of reduced staff. Many hospitals already have high census protocols and emergency preparedness plans that may be adapted to pandemic planning. Specific preventive interventions may reduce staff absenteeism during a pandemic. Health care personnel are among priority groups for antiviral chemoprophylaxis and vaccination. However, available supply of antivirals likely will be far less than the need and the efficacy of chemoprophylaxis may be compromised by antiviral resistance. If available, vaccine is also likely to be in short supply early in a pandemic. Assuming insufficient vaccine initially to protect all hospital staff, health departments and health care organizations should work together to define front-line health care workers who would have priority for vaccination or chemoprophylaxis. Absenteeism may result from illness, the need to care for ill family members, and possibly from fear of exposure and infection. As part of preparedness planning, health care organizations should develop strategies to cope with staffing shortages.

Strategies to increase available staff:

1. Ensure that the facility's time-off policies and procedures adequately consider staffing needs in periods of clinical crisis.
2. Consider or expand hospital-sponsored sick care services for the children of hospital staff to reduce staff absenteeism.
3. Within reasonable limits of clinical competency, consider use of registered nurses and other health care providers serving in administrative positions to provide patient care.
4. Consider appropriate clinical care roles for trainees (such as medical or nursing students), retired health care providers, and community volunteers for some patient care roles and other functions such as patient or specimen transport and for maintaining good patient flow in crowded emergency department settings.
5. When vaccine becomes available, sponsor local immunization programs for all staff members, physicians and their families, and other at-risk members of the community.
6. Preferentially use immunized staff to care for those with suspected or confirmed influenza infection.

7. Generally, health care workers who have respiratory illness should be excluded from work to avoid infection of patients, many of whom are at high risk for severe or complicated disease. In a pandemic, health care workers who have mild respiratory illness could provide care for cohorted influenza patients.
8. In addition to chemoprophylaxis begun before exposure and vaccination, other strategies to decrease the risk that a health care worker will be infected include good infection control and post-exposure chemoprophylaxis. Antiviral treatment using a neuraminidase inhibitor shortly after onset of symptoms can markedly decrease the duration of illness and time missed from work as well as reducing the amount of viral shedding and risk to other staff and patients. Early therapy also is the most efficient approach to antiviral use when supplies are limited.

Bed Availability: Additional beds can be made available for those who require admission for influenza or its complications by decreasing other admissions, implementing more stringent triage, and decreasing the length-of-stay. Hospitals also may be able to add acute care beds in a public health emergency, although staffing those beds may be a limitation.

Strategies to increase the availability of hospital beds:

1. Review policies for scheduling elective procedures and develop guidelines and contingency plans to limit elective admissions and surgery. Decreasing elective utilization of health care facilities during a pandemic will increase bed availability, allow redistribution of staff and equipment, and may decrease the elective patient's exposure to influenza infected persons. Consideration should be given to performing any necessary surgeries in a surgical ambulatory care center to reduce the likelihood of exposure to influenza infected patients in hospital.
2. Consider appointment of a triage officer to manage patient flow in the emergency department, including appropriate patient referral to other clinics within the facility or to local physicians' offices or nontraditional care settings when emergency department care is not required.
3. Review and revise criteria for admission. Consider directing patients referred for admission by their physician to the emergency department where the need for admission can be directly evaluated (by a triage officer) in the context of bed and staff shortages.
4. Review guidelines and policies allowing expeditious transfer of patients between units, especially from critical care units, when indicated.
5. Develop plans and policies to promptly transport discharged patients home or to other facilities. Consider creating a patient discharge holding area or discharge lounge to free up bed space.

6. Ensure that the facility has effective rules for expediting patient discharge during periods of anticipated high demand. These rules might include allocation of a sufficient number of triage physicians and nurses to the appropriate services and procedures for discharge and transfer of patients to home, a skilled nursing facility, or other facilities.
7. Coordinate with home health care agencies to provide follow-up for persons who are not admitted to the hospital or are discharged earlier than usual.

Equipment/Supplies: Plan for the limited availability and increased need for equipment and supplies such as respirators, gurneys and supply carts within the facility and for potential disruption in the normal delivery of supplies and repair services. Although several thousand ventilators are included in the Strategic National Stockpile (SNS), this quantity is small relative to what the national need may be. Because a pandemic will not affect all areas simultaneously, it may be possible to shift some resources between areas; this may be most feasible if a pandemic wave already has passed through a community and ventilators become available rather than an area that has not yet experienced disease sending its equipment elsewhere.

Consumable resource needs are those specific to an outbreak of infectious respiratory disease, including hand hygiene supplies, gowns, gloves, and surgical masks, as well as other supplies associated with routine patient care. Since these types of supplies have no expiration, it would be possible to establish stockpiles (either in individual facilities or regionally).

Infection Control: Influenza viruses are spread from person-to-person, primarily through inhalation of small particle aerosols and large droplet infection. Influenza can be highly contagious, particularly among persons without pre-existing antibodies against influenza, such as young children during normal influenza seasons and anyone during a pandemic. The typical incubation period of influenza is two days (range one to four days). Viral shedding, and the period during which a person may be infectious to others, generally peaks on the second day of symptoms, but may begin the day before symptoms start, and typically lasts five to seven days in adults. Young children and immunocompromised persons may shed virus and be infectious for three weeks or longer. The amount of virus shed and the length of time of viral shedding may be prolonged during initial infection with a new influenza subtype.

Special guidelines for infection control should be in place during pandemic influenza, taking into account the likelihood that a high proportion of the population will be affected and that secondary infections are a

major source of morbidity and mortality. Healthcare facilities, in addition to standard, droplet, and contact precautions, should consider the following:

1. Conduct annual staff education about the prevention and control of influenza.
2. Strongly encourage annual vaccination of staff.
3. Healthcare workers and visitors should wear a surgical mask when they are within three feet of the patient. N95 respirators are not required for influenza.
4. Consider separate waiting rooms for patients potentially infected with influenza
5. Patients should be educated about what they can do to decrease transmission of influenza to other patients, health care workers, and visitors. Information on Respiratory Hygiene/Cough Etiquette should be posted and communicated individually to patients hospitalized with respiratory disease.
6. Visitors should be limited as much as possible to reduce the likelihood of transmission of influenza among visitors, patients, and health care workers. The use of family members and volunteers to assist in patient care during a pandemic may be considered with documented policies and education in place.
7. Ideally, patients with suspected or diagnosed influenza should be in a private room. During a pandemic, private rooms are unlikely to be available and containment of infection is likely to be difficult. Consideration should be given to cohorting patients with active confirmed or suspected influenza infection. If for some reason cohorting is not achievable, at least 3 feet spatial separation should be maintained between the infected patient and other patients and visitors. Special air handling and ventilation are not necessary, and the door may remain open. It is recommended that all influenza specific bed management measures should be maintained for at least 7 days after onset of illness or longer if symptoms persist.
8. Limit the movement of patients with suspected or diagnosed influenza to essential purposes only. If a patient must be transported, the patient should wear a surgical mask to decrease the risk of virus transmission to other patients and health care workers.

[d] *The information in this Appendix was adapted from the Draft Pandemic Influenza Preparedness and Response Plan, Department of Health and Human Services, Annex 2: Planning Guidance for Health Care Systems, August 2004. For more detailed information, please reference this document.*

Appendix H: Key Risk Communications Messages (*in development*)

These messages should be supported as much as possible by current facts, including: case numbers and mortality by age group and by locality, priority groups for vaccine and antiviral use, and clear explanations of risks associated with both the disease and the vaccination.

1. We have learned a great deal about influenza and this information is helping us prepare for an influenza pandemic.

2. Pandemic influenza can be controlled by rapid, appropriate public health action that includes surveillance, identification and isolation of influenza cases, infection control, and intense contact tracing. These measures can be a temporary inconvenience to those involved but are essential for containing a pandemic outbreak.

3. CDC and WDH are preparing for a possible influenza pandemic by:
   a. educating healthcare workers about pandemic influenza,
   b. enhancing surveillance systems to determine if and where influenza strains with pandemic potential have emerged,
   c. developing the capacity to rapidly produce vaccines that will work against pandemic strains,
   d. improving laboratory tests for influenza, and
   e. enhancing influenza treatment options.

4. Because we will be faced with a limited supply of vaccine, it is vital that we look at ways to do the most good for the most people.

5. To make sure healthcare providers are available to be there to care for those who develop influenza, it is imperative that we vaccinate healthcare workers immediately.

6. To ensure that our community is safe and has water, electricity and other services we all rely on, we must prioritize vaccinating these essential services workers.

7. (*Insert appropriate age group)* appear to be more seriously affected by this strain of influenza. They are most at risk and, therefore, must be vaccinated early on.

8. Although this vaccine has not been approved by the FDA and will be given as an investigational new drug, its benefit far outweighs the potential associated risks.