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

Tanya Houston, Health Officer
Cascade City-County Health Department

December 19, 2014

Record of Changes

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<th>Change(s) Made</th>
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<tr>
<td>Applicable PHAB Standard and Measures added to footer</td>
<td>11/20/13</td>
</tr>
<tr>
<td>Mass care, mass fatality references added</td>
<td>12/9/14</td>
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Record of Distribution

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Cascade City-County Health Department
Emergency Response Plan Annex K: Pandemic Influenza
Revised November 2013, December 2014
This document helps meet PHAB Standard 2.2.1
Pandemic Influenza Response

PRIMARY AGENCY
Cascade City-County Health Department

INTRODUCTION

Purpose
This annex to the Cascade City-County Health Department (CCHD) Emergency Response Plan addresses how to respond to specific situations relating to a pandemic influenza. This attachment will be periodically reviewed and updated to ensure that information contained within the document is consistent with current knowledge and changing infrastructure.

Priorities of CCHD during pandemic influenza will be to assure the continuation and delivery of essential public health services while providing for the emergency needs of the population. This annex addresses issues such as command and control, surveillance and epidemiologic investigation, medication and vaccine management, hospital and emergency medical services coordination, infection control, communications, education, and training.

SCOPE

Situation
It is likely that CCHD will have advance warning before a pandemic influenza strikes Cascade County. Public health officials should also have some advance information regarding the pandemic’s anticipated impact. For planning purposes, the worst-case scenario is projected. If the situation does not fully develop, the response can be adjusted.

Phases of Pandemic Influenza
The World Health Organization (WHO) and the CDC have defined phases of pandemic influenza. Identification and declaration of the stages outlined in Table 1 will be done at the national level. Refer to Appendix D for a listing of activities that will be conducted during each phase of pandemic influenza.
Table 1. Pandemic Influenza Phases

<table>
<thead>
<tr>
<th>Period</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Interpandemic</strong>&lt;br&gt;Phase</td>
<td>This is the period between influenza pandemics.</td>
</tr>
<tr>
<td><strong>Alert Phase</strong></td>
<td>This is the phase when influenza caused by a new subtype has been identified in humans. Increased vigilance and careful risk assessment, at local, national, and global levels, are characteristic of this phase. If the risk assessments indicate that the new virus is not developing into a pandemic strain, a de-escalation of activities towards those in the interpandemic phase may occur.</td>
</tr>
<tr>
<td><strong>Pandemic Phase</strong></td>
<td>This is the period of global spread of human influenza caused by a new subtype. Movement between the interpandemic, alert, and pandemic phases may occur quickly or gradually as indicated by the global risk assessment, principally based on virological, epidemiological, and clinical data.</td>
</tr>
<tr>
<td><strong>Transition Phase</strong></td>
<td>As the assessed global risk reduces, de-escalation of global actions may occur, and reduction in response activities or movement towards recovery actions by countries may be appropriate, according to their own risk assessments.</td>
</tr>
</tbody>
</table>

**Morbidity**\(^2\) and **Mortality**\(^3\) Projections
The CDC has developed a model (FluSurge 2.0) for predicting estimates of the impact of deaths and hospitalizations due to an influenza pandemic. The model was used to develop Cascade County specific estimates of morbidity and mortality from pandemic influenza. Calculations were based on county population estimates from 2009 U.S. Census Bureau data (population total: 82,178). Twelve weeks of pandemic influenza activity were assumed, with attack rates of 15%, 25% and 35%. While attack rates of a pandemic cannot be predicted with certainty, the range used in the calculations includes the range of attack rates from previous pandemics. Gross attack rates reflect the percentages of the population with a case of influenza causing some measurable impact.

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\(^3\) Mortality—the incidence or number of deaths in a population.

Morbidity—an incidence of disease or illness in a population.
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Table 2. Pandemic Influenza Impact Estimates

<table>
<thead>
<tr>
<th>Influenza Pandemic Impact/ Gross Attack Rate</th>
<th>15%</th>
<th>Influenza Pandemic Impact/ Gross Attack Rate</th>
<th>25%</th>
<th>Influenza Pandemic Impact/ Gross Attack Rate</th>
<th>35%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Hospital Admissions</strong></td>
<td></td>
<td><strong>Total Hospital Admissions</strong></td>
<td></td>
<td><strong>Total Hospital Admissions</strong></td>
<td></td>
</tr>
<tr>
<td>Most Likely Scenario</td>
<td>177</td>
<td>Most Likely Scenario</td>
<td>296</td>
<td>Most Likely Scenario</td>
<td>414</td>
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<tr>
<td>Minimum Scenario</td>
<td>75</td>
<td>Minimum Scenario</td>
<td>125</td>
<td>Minimum Scenario</td>
<td>175</td>
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<tr>
<td>Maximum Scenario</td>
<td>234</td>
<td>Maximum Scenario</td>
<td>391</td>
<td>Maximum Scenario</td>
<td>547</td>
</tr>
<tr>
<td><strong>Total Deaths</strong></td>
<td></td>
<td><strong>Total Deaths</strong></td>
<td></td>
<td><strong>Total Deaths</strong></td>
<td></td>
</tr>
<tr>
<td>Most Likely Scenario</td>
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<td>Most Likely Scenario</td>
<td>61</td>
<td>Most Likely Scenario</td>
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<td>Minimum Scenario</td>
<td>23</td>
<td>Minimum Scenario</td>
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<td>Maximum Scenario</td>
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<td>Maximum Scenario</td>
<td>98</td>
<td>Maximum Scenario</td>
<td>138</td>
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</table>

_Vaccination Projections_

During a pandemic, the Montana Department of Public Health and Human Services (DPHHS), under the direction of the Centers for Disease Control and Prevention (CDC), will provide guidance to Cascade County on vaccine availability and distribution. CCHD will follow this when administering vaccine at the local level. The CDC will provide guidance on influenza vaccine Investigational New Drug (IND) protocols, in the event that the Food and Drug Administration has not approved the vaccine.

During a pandemic, CCHD will play an important role in the administration of influenza vaccine. In the 2009-2010 H1N1 pandemic, CCHD administered approximately 60% of the total vaccine administered to the Cascade County population. CCHD could administer a similar percentage of the vaccine in a pandemic or could be responsible for administering all vaccine doses in the County. Provider time needed to administer vaccine during a pandemic could differ significantly, especially if the vaccine is administered under an IND protocol.

Total vaccine doses in the following table were tabulated under the assumption that a single dose is needed for each patient and assuming normal CCHD and Cascade County vaccination rates. **In a pandemic, two doses may be required for immunity, doubling estimates shown in the table.**

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Table 3. Estimated Vaccine Doses for CCHD

<table>
<thead>
<tr>
<th>Group Receiving Vaccine</th>
<th>Total Population</th>
<th>Number of doses needed for a 30% county vaccination rate</th>
<th>Number of CCHD doses (60%) needed for a 30% vaccination rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age group 0-19</td>
<td>21,276</td>
<td>6,383</td>
<td>3,830</td>
</tr>
<tr>
<td>Age group 20-64 years</td>
<td>48,182</td>
<td>14,455</td>
<td>8,673</td>
</tr>
<tr>
<td>Age group + 65 years</td>
<td>12,738</td>
<td>3,821</td>
<td>2,293</td>
</tr>
<tr>
<td>TOTALS</td>
<td>82,178</td>
<td>24,659</td>
<td>14,796</td>
</tr>
</tbody>
</table>

Notes:
1. For age group 0-19 years, total doses does not reflect that two doses are needed for first time vaccination (≤ 9 years).
2. The total Cascade County population assumed in these calculations was 82,178 persons, taken from 2009 U.S. Census Bureau estimates.
3. The estimated H1N1 influenza vaccination rate of Cascade County during 2009-2010 was 34%.

If the vaccine is in short supply, which is likely during a pandemic, the CDC, in conjunction with advisory committees, will provide guidance for a rank order listing of priority groups for vaccination. The rank order will likely take the following factors into consideration:
- The need to maintain elements of community infrastructure that are essential to carrying out the pandemic response plan;
- Limiting mortality among high-risk groups;
- Reducing morbidity in the general population; and
- Minimizing social disruption and economic losses.5

Assumptions
- Advance planning for Cascade County’s emergency response could save lives and prevent substantial economic loss.
- Although pandemic influenza strains have emerged mostly from areas of Eastern Asia, variants with pandemic potential could emerge in Montana or elsewhere in the U.S.
- Cascade County and its neighboring jurisdictions may be affected simultaneously.
- A pandemic will pose significant threats to human infrastructure responsible for critical community services (in health and non-health sectors) due to widespread absenteeism.
- Effective preventive and therapeutic measures (e.g., vaccines and antiviral medications) may be in short supply.
- There may be critical shortages of health care resources such as staffed hospital beds, mechanical ventilators, morgue capacity, temporary holding sites with refrigeration for storage of bodies, and other resources.
- Assuming that prior influenza vaccination(s) may offer some protection, even against a novel influenza variant, the annual influenza vaccination program, supplemented by pneumococcal vaccination when indicated, will remain a cornerstone of prevention.

5 Patriarca PA, Strikas RA, Gensheimer KF, Cox NJ, Meltzer MI. Pandemic Influenza: A Planning Guide for State and Local Officials (Draft 2.1). Cascade City-County Health Department Emergency Response Plan Annex K: Pandemic Influenza Revised November 2013, December 2014 This document helps meet PHAB Standard 2.2.1
• Surveillance of influenza disease and virus will provide information critical to an effective response.
• It is very likely that public health will take the lead in distributing influenza vaccine. CCHD will work in partnership with health care providers to facilitate distribution. The federal government will likely not assume the costs for purchase of vaccines, antiviral medications, and related supplies.
• The vaccine will likely be administered under an Investigational New Drug (IND) protocol.
• An effective response to pandemic influenza will require coordinated efforts of a wide variety of organizations, both public and private, and health as well as non-health related.

CONCEPT OF OPERATIONS

Roles and Responsibilities
During an influenza pandemic, CCHD Prevention Services staff will be responsible for implementing the activities outlined in this annex, under the direction of the Prevention Services Division Manager. The Prevention Services Division Manager reports directly to the Health Officer.

The Prevention Services Division Manager will be responsible for the following:

• Initiating enhanced surveillance methods for the detection of influenza and for facilitating investigation and control interventions;
• Coordinating pandemic influenza media and public information activities with the Health Officer and Preparedness & Communications Officer;
• Coordinating local vaccine distribution with the Communicable Disease Control and Prevention Bureau of the Montana Department of Public Health and Human Services (DPHHS); and
• Communicating with partner agencies and the public on mitigation activities, including antiviral use, nonpharmaceutical interventions, and infection control.

While this annex serves as a guide for specific influenza intervention activities, during a pandemic the judgment of public health leadership, based on knowledge of the specific virus, may alter the strategies that have been outlined.

Community response partners may be asked for assistance, for example, in the event of mass vaccination operations (see CCHD Emergency Response Plan Annex L: Emergency Medical Countermeasures Plan).

CCHD will adopt the Incident Command System to organize response for a pandemic influenza event (see CCHD Emergency Response Plan).

The Health Officer, under direction from the Board of Health, will have ultimate authority over all activities taken in this plan.

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Resource Management and Distribution
During a pandemic influenza situation resources and materials, including personnel, personal protective equipment (PPE), and healthcare supplies and equipment may be in short supply. Additional resources and supplies may be requested from neighboring jurisdictions or DPHHS. See CCHD Emergency Response Plan.

Mass Care and Mass Fatality Considerations
CCHD may provide assistance in setting up, supplying, and coordinating an emergency care shelter or temporary clinic. CCHD will use the approved procedures for requesting resources and coordinating mass care operations (see CCHD Emergency Response Plan and Annex G: Mass Care).

In the event of a mass fatality situation due to pandemic influenza, the Health Officer will assist and provide guidance to the Cascade County Coroner, medical examiner(s), DES personnel, and first responders regarding the safe handling of the deceased. See CCHD Emergency Response Plan Annex P: Mass Fatality.

ACTIONS: INITIAL ACTIONS

Surveillance
Cascade County’s surveillance system is designed to quickly detect outbreaks of disease in order to facilitate early public health intervention. The system has two main components: passive surveillance and active surveillance.

In the event of an influenza pandemic, additional surveillance activities may be implemented, including: daily monitoring of hospitals for influenza activity, analysis of syndromic surveillance data, review of non-hospital influenza related deaths, assisting DPHHS in the collection and analysis of vaccine and antiviral adverse events data, and increased coordination of surveillance activities with neighboring counties.

Passive Surveillance
The first component of the existing influenza surveillance system, passive surveillance, utilizes influenza information received from physicians, medical care facilities, and laboratories as required by the Administrative Rules of Montana. Information is reported throughout the year to the Health Department and then relayed to the State Surveillance Coordinator (DPHHS) where it is tabulated weekly and forwarded to the CDC.

Active Surveillance
The second component of the influenza surveillance system is active surveillance. On a weekly basis, the Health Department contacts the hospital, out-patient clinics, laboratories, schools, and other key providers to monitor the number of patients presenting with influenza-like illness (ILI), however, only confirmed cases of influenza are reported to the State Surveillance Coordinator in Helena. The State Surveillance
Coordinator tabulates data from across the state in order to assess and classify the level of influenza activity (See *Influenza Activity Levels*).

*Influenza Activity Levels (at the State level)*
The influenza season in Montana typically runs from the October of one year through March or April of the following year. Data collected through surveillance is forwarded to DPHHS on a weekly basis. This information is used to monitor and define influenza activity in Montana during the flu season. The numbers do not represent all cases of influenza or influenza-like illness ILI; rather, they allow DPHHS to monitor the relative levels of activity and to provide the CDC with weekly reports on the status of influenza activity in Montana. Activity is characterized as no activity, sporadic, local, regional or widespread according to the definitions outlined in Table 4.

<table>
<thead>
<tr>
<th>No Activity</th>
<th>No laboratory-confirmed cases of influenza and no reported increase in the number of cases of ILI.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sporadic</td>
<td>Small numbers of laboratory-confirmed influenza cases or a single laboratory-confirmed influenza outbreak has been reported, but there is no increase in cases of ILI.</td>
</tr>
<tr>
<td>Local</td>
<td>Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in a single region of the state.</td>
</tr>
<tr>
<td>Regional</td>
<td>Outbreaks of influenza or increases in ILI and recent laboratory confirmed influenza in at least two but less than half the regions of the state with recent laboratory evidence of influenza in those regions.</td>
</tr>
<tr>
<td>Widespread</td>
<td>Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in at least half the regions of the state with recent laboratory evidence of influenza in the state.</td>
</tr>
</tbody>
</table>

http://www.cdc.gov/flu/weekly/overview.htm

*Pandemic Influenza Surveillance Activities*
During a pandemic, in addition to routine surveillance, other activities will be undertaken in order to assess and control the scope of the disease. Checklists of activities for all phases of pandemic influenza have been included in Appendix D. Key surveillance activities, which will begin during the Pandemic Alert phase and continue through the Transition Phase of the pandemic will include:
1. *Monitoring the hospital for influenza activity.* On a daily basis, CCHD will contact either Emergency Department staff or the Infection Control Coordinator at Benefis to monitor influenza activity levels. The number of Emergency Department visits, hospital admissions, and hospital deaths will be reviewed daily.
2. *Analysis of daily syndromic surveillance data for flu-like illnesses.*
3. *Daily review of influenza, pneumonia, or other respiratory infection causes of death from the County Coroner.* Prevention Services staff will review influenza related deaths that occur outside of hospitals and report them to DPHHS.
4. *Assisting DPHHS in the collection and analysis of vaccine adverse events data.*

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5. **Assisting DPHHS in the collection and analysis of antiviral adverse events data.** Recommendations for use of antiviral medications may be adjusted based on information learned from adverse event data analysis.

6. **Coordinating with neighboring counties.** CCHD will work with neighboring counties, to monitor influenza activity levels in the region. Special studies may be conducted as needed or as requested by DPHHS.

Enhanced surveillance measures, as outlined above, will be used to detect pandemic influenza activity levels across the region and to facilitate public health investigation and control interventions. When necessary, the Health Officer may implement additional surveillance measures in order to identify and control the spread of influenza.

For detailed surveillance procedures, see CCHD Emergency Response Plan Annex H: Communicable Disease Surveillance and Reporting.

CCHD follows applicable Administrative Rules of Montana (ARM) for investigating, confirming, and reporting cases of influenza (ARM 37.114.201, 37.114.204 (2), 37.114.205, 37.114.313, and 37.114.314). See Appendix F for the complete text of applicable ARM.

**Communication with Partners and the Public**
The primary communications goal of CCHD during a pandemic will be to ensure a timely, accurate, and consistent flow of information. Information may be developed for and distributed to any or all of the following:

- Health care partners
- First responders
- Community partners
- General public

Additionally, Public Health Nurses, under the direction of the Prevention Services Division Manager, may be available as needed to provide information and technical assistance directly to health care professionals on vaccine management, influenza surveillance, and infection control strategies.

Key communication activities of CCHD:
- Identification of CCHD spokesperson – the Health Officer or designee will be responsible for addressing pandemic influenza-related medical concerns.
- Distribution of timely and appropriate influenza bulletins to health care providers and community partners.
- Dissemination of information about influenza prevention and other non-pharmaceutical community interventions.
- Dissemination of information about vaccine availability and distribution plans to community partners.
• Dissemination of the influenza vaccine information sheet to clinic patients and area health care providers.
• Communication of the information about groups at high-risk for complications from influenza to health care providers and community partners.
• Weekly reporting on local influenza activity to DPHHS.

When utilizing key communication activities such as those outlined above, the following will also be considered:
• Past experience has shown that communicating directly with Primary Care Providers (e.g. physicians) via phone or email often proves to be unreliable. CCHD is committed to ensuring they receive vital information, therefore, methods such as redundant communications or messages passed on directly to the physician by nurses and other reliable staff may be utilized.
• During a pandemic or other public health emergency, there is a constant demand for up-to-date information. CCHD will endeavor to include the date and time on all communication so that recipients can quickly determine what is most up-to-date.
• Although the Health Alert Network (HAN) distribution list will be maintained and information involving their response will be included in CCHD’s communications when appropriate. CCHD will also include surrounding local health departments in any communication that may impact the North Central Montana region.
• CCHD will include references to CDC or DPHHS (as appropriate) regarding recommendations that impact the local response effort.

Throughout the pre-pandemic period, CCHD staff will develop risk communications messages for different vaccination scenarios.


CCHD must also have the ability to receive information from laboratories, healthcare providers, and other stakeholders. See CCHD Emergency Response Plan Annex E: 24/7 Emergency Contact Protocol and Emergency Response Plan Attachment 1: Contact Information.

**ACTIONS: INTERMEDIATE ACTIONS**

**Vaccine Management**

*Storage and Inventory*

CCHD has the following storage options in the event that a pandemic influenza necessitates mass vaccination:

1. CCHD can accommodate a modest-size vaccine shipment because there is limited refrigeration storage space.
   a. Currently there are two full-size refrigerators designated specifically for vaccine storage.
b. CCHD also has one portable vaccine refrigerator/freezer. This 60 Liter portable unit has several different options for a power source. There is a 12/24 volt power cord, a 110 volt power cord, a cigarette lighter adapter, and a UPS (Uninterruptible power supply) Battery Back-Up System. If normal 120-volt AC power is interrupted due to a power outage, the UPS Battery Back-Up System ensures that the vaccine refrigerator/freezer will continue to run from 2 to 4 days.

During a pandemic event, additional refrigeration may be acquired at the discretion of the Health Officer.

2. Depending on the size of the shipment, larger bulk packages may be broken down and separated into allotments that may be stored at designated mass clinic sites.

3. As required by CCHD Emergency Response Plan Annex F: Emergency Medical Countermeasures, CCHD has designated a warehouse facility that contains enough refrigerator storage to accommodate a rather large shipment of vaccine. The storage facility is the Four Seasons Arena located at the Montana Expo Park (400 3rd St. NW).

4. In the event that the options listed above are not adequate or accessible at the time needed, CCHD may coordinate with the Cascade County Disaster and Emergency Services Coordinator in order to make arrangements for renting a refrigerated trailer or acquiring additional refrigerated warehouse space.

5. CCHD will utilize its current vaccine inventory tracking system to maintain accurate records of supply. If necessary, the current system will be modified or a new system will be developed to meet the needs of the particular situation.

See Appendix J for guidelines on vaccine storage and shipment.

Vaccine Distribution
In the event that CCHD distributes vaccine to providers or needs to move vaccine for any reason, DPHHS and CDC recommendations for vaccine handling, cold chain management, and form completion will be followed.

CCHD will distribute the vaccine to designated points of dispensing (PODs) in accordance with CCHD Emergency Response Plan Annex L: Emergency Medical Countermeasures. Provisions for separate allotments may be made for Benefis Healthcare and the Great Falls Clinic. CCHD also had Memorandums of Understanding in place with Malmstrom Air Force Base and the Montana Air National Guard to act as closed PODs if necessary or applicable.

ACTIONS: CONTINUING ACTIONS

Mitigation Strategies
There are three main components to CCHD’s Pandemic Influenza plan that will assist in limiting the spread of influenza and decreasing the number of deaths caused by the disease. These plan components are vaccination, non-pharmaceutical interventions,
which includes infection control procedures, and the utilization of antiviral medication. Nonpharmaceutical interventions and antiviral use are discussed below.

Nonpharmaceutical Interventions (NPIs) and Infection Control Measures
The three major goals of using NPIs are to:
1. Delay the exponential increase in influenza cases and delay the epidemic peak in order to "buy time" for production and distribution of a well-matched vaccine.
2. Decrease the epidemic peak.
3. Reduce the number of incidents and, thus, reduce morbidity and mortality in the community.

The use of methods such as NPIs could potentially assist in accomplishing all 3 goals by reducing transmission.

The Centers for Disease Control and Prevention (CDC) have developed extensive guidance regarding the use of NPIs. During a pandemic, CCHD would follow CDC and DPHHS recommendations for these interventions, which may include the following:
1. Isolation of all persons with confirmed or probable pandemic influenza. Isolation may occur in the home or healthcare setting, depending on the severity of an individual’s illness and/or the current capacity of the healthcare infrastructure.
2. Voluntary home quarantine of individuals with confirmed or probable influenza case(s).
3. School dismissals (including public and private schools, colleges, universities, and child care facilities) and cancellations of school-based activities along with the utilization of social distancing measures for youth in the community.
4. Cancellation of large public gatherings in the community which could reduce contact among adults. Also use social distancing at work by altering the workplace environments and schedules to decrease social density and preserve a healthy workplace to the greatest extent possible without disrupting essential services. Implement workplace leave policies that align incentives and facilitate adherence with the nonpharmaceutical interventions (NPIs) outlined above.

Isolation/Quarantine
The Health Officer may determine the need for isolation/quarantine of potentially infected/exposed individuals. See CCHD Emergency Response Plan Annex J: Isolation and Quarantine and applicable ARM in Appendix F (37.114.306, 37.114.307, and 37.114.308).

The effectiveness of individual infection control measures (e.g. cough etiquette, hand hygiene) and the role of surgical masks or respirators in preventing the transmission of influenza is difficult to measure. However, CCHD will continue to recommend cough etiquette and hand hygiene universally and recognizes the use of surgical masks and respirators may be appropriate in certain settings. For more information regarding specific infection control measures, refer to Appendix B: Guidelines and Recommendations for Healthcare-Associated Infections and Appendix C: Infection Control Measures Implemented by CCHD.

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Influenza Antiviral Medications
As indicated, antiviral treatments serve an important role in a pandemic response and early antiviral treatment can reduce the risk of complications from influenza (e.g. pneumonia, respiratory failure, and death). Antiviral treatment is also recommended as early as possible for any patient with confirmed or suspected influenza who:

- Is hospitalized
- Has severe, complicated, or progressive illness
- Is at higher risk for influenza complications

See Appendix G: Recommendations for Use of Antivirals and Appendix H: Antivirals: Overview for Healthcare Providers for additional information regarding antiviral treatments.

Using CDC guidance, the Montana Department of Public Health and Human Services (DPHHS) will make recommendations for using antiviral agents based on availability during an actual pandemic. Actual medication and dosage regimens used will be determined by signed doctors’ orders.

Additional supplies of antiviral medications may be available through DPHHS or CDC through the Strategic National Stockpile. CCHD will remain in close contact with DPHHS regarding this issue. Formal request procedures will be followed (see CCHD Emergency Response Plan and Annex L: Emergency Medical Countermeasures).

CCHD’s control measures were determined by regulations outlined in ARM. See Appendix F for applicable ARM (37.114.501).

Test and Exercise Plan
Annual mass community flu shot clinics will serve as opportunities for CCHD to test and exercise this plan. These exercises involve a variety of community partners, and different dispensing methods, including drive through walk in clinics, are utilized. ICS is utilized for each event; debriefings are held and after action reports are created for each event.

ADDITIONAL RESPONSIBILITIES

Primary Agency
- **Annex Development and Maintenance**
  The development and maintenance of this annex is the responsibility of the CCHD Preparedness and Communications Officer.
## Appendix A: Overview for Healthcare Providers

Based on Recommendations of Advisory Committee for Immunization Practices (ACIP)

| Organism | \- Influenza virus – types A; (A is further categorized into subtypes); B; type C - rare cause of disease  
\- Frequent mutations of surface glycoprotein genes result in new influenza virus variants  
\- Antigenic shift → emergence of completely new subtypes (type A only; leads to pandemics)  
\- Antigenic drift → minor changes (all types; leads to frequent outbreaks & epidemics) |
| Reservoir | Type A – humans; swine; birds; types B & C – humans |
| Communicability | \- Person-to-person, primarily through coughing and sneezing of infected persons  
\- Communicable 1 day before onset of symptoms until approximately 5 days thereafter  
\- Disease usually peaks in U.S. from December to March.  
\- In pandemics, entire population susceptible; attack rates high among all ages |
| Mortality Rates | Deaths result from pneumonia and exacerbations of cardiopulmonary and other chronic conditions.  
\- **Interpandemic years**: 1972 through 1992 - 9.1 deaths per 100,000 Americans per season  
\- **Pandemics**: 1918 Spanish flu – 218.4 deaths per 100,000 Americans; 1957 Asian flu – 22 deaths per 100,000; 1968 Hong Kong flu – 13.9 deaths per 100,000 |
| Incubation period | 1-3 days |
| Symptoms | \- Influenza A – Abrupt onset of fever, myalgia, headache, severe malaise, sore throat, rhinitis, nonproductive cough (symptoms last limited number of days; cough can persist for 2 weeks)  
\- Influenza B – Similar but milder symptoms than type A; occurs primarily in children |
| Complications | High risk: Age 6-23 months, ≥65 yrs.; nursing home residents; persons w/ chronic cardiac, pulmonary, metabolic & renal conditions & hemoglobinopathies; immunocompromised; >12 wks of pregnancy  
\- Pneumonia - secondary bacterial (most frequent) and primary influenza viral  
\- Worsening of underlying medical conditions  
\- Rarely associated with Reye syndrome (occurs primarily in children with Influenza B taking aspirin); myocarditis; encephalopathy; transverse myelitis; myositis; pericarditis |
| Laboratory tests | Rapid antigen tests; viral culture; RT-PCR; serology |
| Infection control | Standard precautions, strict hand washing. For hospitalized cases: isolation; droplet precautions Airborne precautions may be advised during special circumstances such as a novel virus alert. |
| Prevention | **Primary strategy**: Vaccination annually before influenza season  
\- Antigenic drift necessitates annual reformulation of flu vaccine to incorporate ≥1 new strains  
\- Contraindications – allergy to egg or vaccine; avoid in persons with previous severe reaction  
\- Delay vaccination of persons with acute febrile illness but not minor illness, with or without fever  
\- Inactivated (i.e., killed) trivalent vaccine; approved for ages ≥6 months old; provides 70-90% protection in healthy adults; reduces complications by 50-60% and death by 80% among elderly in nursing homes  
\- Live attenuated influenza vaccine; approved only for healthy individuals ages 5-49 and not for persons with underlying medical conditions, immunocompromised persons, persons with asthma, reactive airway disease or other cardiac/pulmonary disorders, pregnant women, or children receiving aspirin therapy or other salicylates. Such individuals should receive the inactivated vaccine.  
**Adjunct strategy**: Chemoprophylaxis with antivirals for unvaccinated high risk & advanced HIV |
| Surveillance | Clinicians and laboratories are required to report influenza cases to CCHD within 7 days. |

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For more information, refer to: Centers for Disease Control and Prevention. Prevention and Control of Influenza: Recommendations of the Advisory Committee on Immunization Practices. MMWR 2003; 52 (RR08): 1-36.

Appendix B: Guidelines and Recommendations for Healthcare-Associated Infections

Influenza is a common cause of respiratory illness requiring outpatient health-care visits and hospitalization. During the influenza season, outbreaks of health care-associated influenza affect both patients and personnel in chronic care facilities and hospitals.

Transmission
Influenza transmission occurs predominantly by large respiratory droplets (particles >5 µ in diameter) that are expelled from the respiratory tract during coughing or sneezing. Particles usually do not remain suspended in the air, and close contact (<3 feet) usually is required for transmission. Transmission also occurs through direct contact with respiratory droplets or secretions, followed by touching the nose or mouth.

Prevention and Control Measures
Strategies for the prevention and control of influenza in health-care facilities include the following: influenza immunization for persons at high risk for complications, immunization for health-care workers, staff education, respiratory hygiene/ cough etiquette programs, standard precautions and droplet precautions, and visitor and worker restrictions.

Encourage persons at high risk for complications and health-care workers to receive influenza immunization according to national recommendations.

- Immunization is the primary measure to prevent influenza, limit transmission of influenza, and prevent complications from influenza.
- Influenza immunization is recommended before or during the influenza season for the following persons who are at increased risk for complications from influenza: children aged 6-23 months, adults aged ≥ 65 years, pregnant women in their second or third trimester during influenza season, and persons aged ≥ 2 years with certain underlying chronic conditions.
- Priority should be given for vaccinating persons at greatest risk for transmission of disease to persons at high risk for complications, including household contacts and health-care personnel.
- Use of inactivated influenza vaccine is preferred for vaccinating health-care workers taking care of severely immunocompromised patients because of concerns of potential risk for transmission of vaccine virus from recipients of live attenuated influenza vaccine to severely immunosuppressed contacts.

Infection Control Measures
In addition to influenza immunization, the following infection control measures are recommended by CDC to prevent person-to-person transmission of influenza and to control influenza outbreaks in health care facilities:

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Staff Education
Staff should be educated annually about the prevention and control of influenza, focusing on infection spread. Staff should be reminded that they can spread the virus via their hands or fomites (e.g. towels, medication cart items, etc).

Respiratory Hygiene/Cough Etiquette
Respiratory Hygiene/Cough Etiquette programs should be implemented at the first point of contact with a potentially infected person to prevent the transmission of all respiratory tract infections in health-care settings, including influenza. A Respiratory Hygiene/Cough Etiquette program includes posting visual alerts instructing patients and persons who accompany them to inform health-care personnel if they have symptoms of respiratory infection; providing tissues to patients and visitors to cover their mouth and nose when coughing and sneezing; providing dispensers of alcohol-based hand rubs; ensuring that supplies for handwashing are available where sinks are located; offering masks to persons who are coughing; encouraging coughing persons to sit at least 3 feet away from others; and having health personnel observe Droplet Precautions in addition to Standard Precautions.

Standard Precautions
During the care of a patient with suspected or confirmed influenza:

- Wear gloves if hand contact with respiratory secretions or potentially contaminated surfaces is expected.
- Wear a gown if soiling of clothes with patient’s respiratory secretions is expected.
- Change gloves and gowns after each patient encounter and perform hand hygiene.
- Decontaminate hands before and after touching the patient, after touching the patient’s environment, or after touching the patient’s respiratory secretions, whether or not gloves are worn.
- When hands are visibly soiled or contaminated with respiratory secretions, wash hands with either a non-antimicrobial or an antimicrobial soap and water.
- If hands are not visibly soiled, use an alcohol-based hand rub for routinely decontaminating hands in clinical situations. Alternatively, wash hands with an antimicrobial soap and water.
- In physician offices, standard precautions should be followed, with strict adherence to hand washing.

Droplet Precautions
In addition to Standard Precautions, observe Droplet Precautions during the care of a patient with suspected or confirmed influenza:

- Place patient into a private room. If a private room is not available, place (cohort) suspected influenza patients with other patients suspected of having influenza; cohort confirmed influenza patients with other patients confirmed to have influenza. Scientific evidence is insufficient to make a recommendation upon the routine use of negative-pressure rooms for influenza patients.
Wear a surgical mask upon entering the patient’s room or when working within 3 feet of the patient. Remove the mask when leaving the patient’s room and dispose of the mask in a waste container.

If patient movement or transport is necessary, have the patient wear a surgical mask, if possible.

Visitor and Worker Restrictions
- Discourage persons with symptoms of a respiratory infection from visiting patients.
- Exclude health-care personnel with symptoms of respiratory infection from work for the duration of illness.

Control of Influenza Outbreaks in Health-care Settings
When influenza outbreaks occur in health-care settings, additional measures should be taken to limit transmission. These include:

- Identify influenza as the causative agent, early in the outbreak, by performing rapid influenza virus testing of patients with recent onset of symptoms suggestive of influenza. In addition, obtain viral cultures from a subset of patients to determine the infecting virus type and subtype.
- Implement Droplet Precautions for all patients with suspected or confirmed influenza.
- Separate suspected or confirmed influenza patients from asymptomatic patients.
- Restrict staff movement between units and buildings.
- For all patients without influenza illness in the involved unit and for whom the antiviral agent is not contraindicated, administer influenza antiviral prophylaxis according to current recommendations.
- Administer influenza antiviral therapy to patients acutely ill with influenza, within 48 hours of onset of illness.
- Administer current inactivated influenza vaccine to unvaccinated patients and health-care personnel.
- Offer influenza antiviral prophylaxis to unvaccinated personnel for whom the antiviral agent is not contraindicated and who work in the affected unit or who are taking care of high-risk patients.
- Consider prophylaxis for all health-care personnel, regardless of their vaccination status, if the outbreak is caused by a variant of influenza that is not well matched by the vaccine.
- Curtail or eliminate elective medical and surgical admissions and restrict cardiovascular and pulmonary surgery to emergency cases only, when influenza outbreaks, especially those characterized by high attack rates and severe illness, occur in the community or acute care facility.
Appendix C: Infection Control Measures Implemented by CCHD

The following infection control measures have been implemented by CCHD. These measures are recommended by CDC to prevent person-to-person transmission of influenza and to control influenza outbreaks in health care facilities. CCHD employees will always adhere to strict hand hygiene procedures and will follow standard precautions at all times.

Staff Education
Staff are educated about the prevention and control of influenza, focusing on infection spread. Staff will be reminded that they can spread the virus via their hands or fomites (e.g. towels, medication cart items, etc).

Respiratory Hygiene/Cough Etiquette
CCHD has a Respiratory Hygiene/Cough Etiquette program in place. This includes posting visual alerts instructing patients and persons who accompany them to inform health-care personnel if they have symptoms of respiratory infection; providing tissues to patients and visitors to cover their mouth and nose when coughing and sneezing; providing dispensers of alcohol-based hand rubs; ensuring that supplies for handwashing are available where sinks are located; offering masks to persons who are coughing; encouraging coughing persons to sit at least 3 feet away from others; and having health personnel observe Droplet Precautions in addition to Standard Precautions.

Standard Precautions for patient care
During the care of a patient with suspected or confirmed influenza CCHD employees will:

- Wear gloves if hand contact with respiratory secretions or potentially contaminated surfaces is expected.
- Wear a gown if soiling of clothes with patient’s respiratory secretions is expected.
- Change gloves and gowns after each patient encounter and perform hand hygiene.
- Decontaminate hands before and after touching the patient, after touching the patient’s environment, or after touching the patient’s respiratory secretions, whether or not gloves are worn.
- When hands are visibly soiled or contaminated with respiratory secretions, wash hands with either a non-antimicrobial or an antimicrobial soap and water.
- If hands are not visibly soiled, use an alcohol-based hand rub for routinely decontaminating hands in clinical situations. Alternatively, wash hands with an antimicrobial soap and water.
Appendix D: Planning Checklist

Interpandemic Phase
During this period, no new or unusual influenza activity patterns in humans or strains have been reported to health authorities.

- Review current emergency plans for inclusion of provisions for mass vaccination campaigns. Include security aspects in partnership with local law enforcement authorities.
- Conduct a county-wide resource inventory. Determine the availability of PODs (Points of Dispensing), shelters, firehouses, schools, gymnasiums, nursing homes, child care centers, and other potential sites for aggregate care. Work with Benefis Healthcare, Great Falls Clinic and other health care providers to identify appropriate sites to serve as triage centers, treatment centers, mass vaccination sites or as holding areas for acutely ill patients not able to be admitted to an acute care hospital. Confirm and/or make arrangements with the facilities for use. This could serve as an opportunity for the development of a Memorandum of Understanding for facility and/or personnel use.
- Work with the County Coroner and local funeral homes to identify facilities/resources with sufficient refrigerated storage to serve as temporary morgues, if necessary. If a plan for a temporary morgue has been developed, review this plan with applicable parties.
- Devise a plan for local distribution and administration.
- Work with local private and volunteer organizations to develop and synchronize local response to a pandemic.
- Review policies and procedures to find and remove any barriers to the annual influenza or pneumococcal vaccination programs. Work with local health care facilities to assess and improve health care worker immunization levels.
- Educate staff about the nature and significance of pandemic influenza and the local response.
- Establish a means of rapid, two-way communication between CCHD, Benefis Healthcare, Great Falls Clinic and other health care providers as necessary (infection control practitioners and emergency department directors).
- Review emergency department capacity, number of hospital beds, number of intensive care unit beds, number of ventilators, morgue capacity, and number of health care providers available to see patients.
- Investigate opportunities to work with hospitals, health systems and/or physicians to analyze daily reports of influenza-like illness in patients. Analysis could be conducted as a part of syndromic surveillance activities (future consideration). Discuss mechanisms for the local health department to obtain data related to the number of emergency department visits, hospitalizations, intensive care unit admissions and hospital deaths due to influenza during a pandemic.

Pandemic Alert Phase

This stage of planning is active when a novel influenza virus has been detected in one or more humans. The general population would have little or no immunity. During this phase, a pandemic is potential but not inevitable. Increased vigilance and careful risk assessment, at local, national, and global levels, will take place during this phase. If the risk assessments indicate that the new virus is not developing into a pandemic strain, a de-escalation of activities towards those in the interpandemic phase may occur.

- Notify Benefis Healthcare, Great Falls Clinic and other local providers of novel virus alert (local HAN- Health Alert Network).
- Disseminate bulletins received from the CDC or DPHHS regarding clinical, epidemiological, and virologic characteristics of variant strain.
- Work with providers to collect specimens for submission to the Montana Public Health Laboratory (MTPHL).
- If a novel virus is identified in a resident, conduct an epidemiologic investigation and determine possible exposure source(s), risk factors, and symptoms. Identify contacts, place under surveillance for illness, and work with the DPHHS to determine whether testing of contacts is appropriate.
- Review pandemic influenza response plans in coordination with DPHHS, Benefis, emergency medical services (EMS), local law enforcement, and local, private and public partners.
- Ensure that high-risk groups and others receive vaccine and antiviral medications, as appropriate.
- Review plan for distribution of vaccine.
- Provide DPHHS with a list of vaccine distribution sites.
- Enhance collection of clinical specimens and send to the Public Health Laboratory.
- Contact Benefis and the Great Falls Clinic to review their plans for distribution and administration of vaccine.
- Finalize surveillance plans with Benefis outlining mechanisms to obtain data on: number of emergency department visits, number of hospitalizations, number of intensive care unit admissions and number of hospital deaths related to influenza.

Pandemic Phase

This is the period of global spread of human influenza caused by a new subtype. Movement between the interpandemic, alert, and pandemic phases may occur quickly or gradually as indicated by the global risk assessment, principally based on virological, epidemiological, and clinical data.

- Coordinate use of available local resources during pandemic, including private, public, and volunteer resources.
- Report pandemic-related information, including influenza data obtained from Benefis and providers, regularly to DPHHS.
- Assess effectiveness of local response and available local capacity.
- Administer vaccine once it becomes available.
Work with Benefis to monitor emergency department for influenza activity, including a review of emergency department visits, hospital admissions, and hospital deaths.
- Review, evaluate, and modify as needed, the local pandemic response.
- Report pandemic-related information regularly to DPHHS.
- Continue to vaccinate.
- Monitor resources and staffing needs.

Transition Phase

As the assessed global risk reduces, de-escalation of global actions may occur, and reduction in response activities or movement towards recovery actions by countries may be appropriate, according to their own risk assessments.
- Assess local capacity to resume normal public health functions.
- Assess local capacity to resume normal health care delivery.
- Assess fiscal impact of pandemic response.
- Report results of assessment to public officials and community leaders.
- Report results of assessment to DPHHS.
- Modify the local Pandemic Influenza Response Plan based on lessons learned.
- Return to Inter-Pandemic Period
Appendix E: Sample Risk Communications Messages

**Key messages:** 7–9 second sound bites (21 – 27 words)

- Because we are faced with a limited supply of vaccine, it is vital that we look at ways to do the most good for the most people.
- 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.
- To ensure that our community is safe and has water, electricity and other services we all rely on, we must prioritize vaccinating essential services workers.
- *(Fill in age group)*-olds are more seriously affected by this strain of influenza. They are most at risk and, therefore, must be vaccinated early on.

**Supporting Facts:**

1. Track case numbers and mortality by age group and by locality.
2. Identify groups of essential services workers.
3. Develop clear explanations of risks associated with both the disease and the vaccination.  

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Σ Information was taken from: Centers for Disease Control and Prevention. Prevention and Control of Influenza: Recommendations of the Advisory Committee on Immunization Practices. MMWR 2003; 52 (RR08): 1-36.
Appendix F: Referenced Administrative Rules of Montana (ARM)

37.114.201 REPORTERS
(1) With the exception noted in (3) and (4), any person, including, but not limited to a physician, dentist, nurse, medical examiner, other health care practitioner, administrator of a health care facility or laboratory, public or private school administrator, or laboratory professional who knows or has reason to believe that a case exists of a reportable disease or condition defined in ARM 37.114.203 must immediately report to the local health officer the information specified in ARM 37.114.205(1) and (2).

(2) A local health officer must submit to the department, on the schedule noted in ARM 37.114.204, the information specified in ARM 37.114.205 concerning each confirmed or suspected case of which the officer is informed.

(3) A state-funded anonymous testing site for HIV infection is not subject to the reporting requirement in (1) with regard to HIV testing.

(4) With the exception of a licensed healthcare provider, reporters under (1) may report directly to the department at the department's request with approval of the local health authority.


37.114.204 REPORTS AND REPORT DEADLINES
(2) A local health officer must transmit by telephone or secure electronic means to the department the information required by ARM 37.114.205(1) and (2) for each suspected or confirmed case of one of the following diseases, within the time limit noted for each:

(a) Information about a case of one of the following diseases should be submitted within 24 hours by telephone by the local health officer:
   (i) Brucellosis;
   (ii) Diphtheria;
   (iii) Gastroenteritis outbreak;
   (iv) Influenza-associated hospitalization and mortality;
   (v) Novel influenza A virus infection;
   (vi) Measles;
   (vii) Rabies in a human;
   (viii) Rabies in an animal;
   (ix) Rubella;
   (x) Syphilis; and
   (xi) Yellow fever.

37.114.205 REPORT CONTENTS
(1) A report of a case of reportable disease or a condition which is required by ARM 37.114.204(1) or (2) must include, if available:

   (a) first and last name and middle initial, physical address including city, state and zip code, date of birth, gender, race, and ethnicity of the case;
(b) dates of onset of the disease or condition and the date the disease or condition was reported to the health officer;
(c) whether or not the case is suspected or confirmed;
(d) name and address of the case’s physician; and
(e) name of the reporter or other person the department can contact for further information regarding the case.

(2) The information required by (1) must be supplemented by any other information in the possession of the reporter which the department or local health officer requests and which is related to case management and/or investigation of the case.

(3) The name or other identifying information of any case with a reportable disease or condition and the name and address of the reporter of any such case are confidential and not open to public inspection.


37.114.306 TRANSPORTATION OF COMMUNICABLE DISEASE CASES

(1) Neither an infected person with a communicable disease for which subchapter 5 of this chapter prescribes isolation nor a contact made subject to quarantine by that subchapter may travel or be transported from one location to another without the permission of the local health officers with jurisdiction over the places of departure and arrival, except if, in the case of an infected person:
   (a) the infected person is to be admitted directly to a hospital for the treatment of the communicable disease; and
   (b) both local health officers are satisfied that adequate precautions are taken to prevent dissemination of the disease by the infected person en route to the hospital.


37.114.307 QUARANTINE OF CONTACTS: NOTICE AND OBSERVATION

(1) If a communicable disease requires quarantine of contacts, a local health officer or the department shall institute whatever quarantine measures are necessary to prevent transmission, specifying in writing the person or animal to be quarantined, the place of quarantine, the frequency with which possible or known contacts must be medically observed to determine if physiological signs of the disease are occurring, and the duration of the quarantine.

(2) A local health officer or the department must ensure such contacts are medically observed as frequently as necessary during the quarantine period.


37.114.308 ISOLATION OF PATIENT: NOTICE
(1) When isolation of a patient is declared, the agency declaring the isolation must supply to the infected person in writing a description of the place of isolation, the length of the isolation period, and the name and title of the person declaring the isolation.

(2) A local health officer or the department may inspect the place of isolation during the period of isolation to determine compliance with the isolation.


37.114.313 CONFIRMATION OF DISEASE

(1) Subject to the limitation in (2), if a local health officer receives information about a case of any of the following diseases, the officer must ensure that a specimen from the case is submitted to the department, when possible, which will be analyzed to confirm the existence or absence of the disease in question, or for use in surveillance:

(a) Anthrax;
(b) Botulism;
(c) Brucellosis;
(d) Campylobacteriosis;
(e) Carbapenem-Resistant Enterobacteriaceae (CRE);
(f) Cholera;
(g) Diphtheria;
(h) Escherichia coli, shiga toxin-producing (STEC);
(i) Gastroenteritis outbreak;
(j) Gonorrhea;
(k) Haemophilus influenzae invasive disease;
(l) Hantavirus pulmonary syndrome or infection;
(m) Human immunodeficiency virus (HIV);
(n) Influenza;
(o) Listeriosis;
(p) Measles (rubeola);
(q) Meningococcal disease (Neisseria meningitidis);
(r) Pertussis;
(s) Plague;
(t) Poliomyelitis, paralytic or non-paralytic;
(u) Rabies (human);
(v) Rubella (including congenital);
(w) Salmonellosis;
(x) Severe Acute Respiratory Syndrome-associated Coronavirus (SARS-CoV) disease;
(y) Shigellosis;
(z) Smallpox;
(aa) Syphilis;
(ab) Trichinellosis (Trichinosis);
(ac) Tuberculosis;
(ad) Typhoid fever;
(ae) Vancomycin-intermediate Staphylococcus aureus (VISA);
(af) Vancomycin-resistant Staphylococcus aureus (VRSA); and
(ag) Vibriosis.
(2) In the event of an outbreak of gastroenteritis, influenza, measles, or pertussis, analysis of specimens from each case is unnecessary after the disease organism is determined by the department.
(3) A laboratory professional or any other person in possession of a specimen from a case of a disease listed in (1)(a) through (af) must submit the specimen to the department upon request.
(4) If no specimen from the case is otherwise available and the case refuses to allow a specimen to be taken for purposes of (1), the case will be assumed to be infected and must comply with whatever control measures are imposed by the department, or the local health officer.

37.114.314 INVESTIGATION OF A CASE
(1) Immediately after being notified of a case or an outbreak of a reportable disease, a local health officer must investigate and take whatever steps are necessary to prevent transmission of the disease.
(2) If the local health officer finds that the nature of the disease and the circumstances of the case or outbreak warrant such action, the local health officer must:
(a) examine or ensure that a health care provider examines any infected person in order to verify the diagnosis;
(b) make an epidemiologic investigation to determine the source and possible transmission of infection;
(c) take appropriate steps, as outlined in the "Control of Communicable Diseases Manual, An Official Report of the American Public Health Association" (19th edition, 2008), to prevent or control the transmission of disease; and
(d) notify contacts as defined in ARM 37.114.101 of the case and give them the information needed to prevent contracting the disease.
(3) Whenever the identified source of a reportable disease or a person infected or exposed to a reportable disease who should be quarantined, interviewed, or placed under surveillance is located outside of the jurisdiction of the local health officer, the local health officer must notify the department who will then notify the health officer of the relevant jurisdiction.

37.114.501 MINIMAL CONTROL MEASURES
(1) The department, except as otherwise provided in this subchapter, adopts and incorporates by reference the control measures in the "Control of Communicable Diseases Manual, An Official Report of the American Public Health Association" (19th
Unless a particular control measure specifies who is responsible, the local health officer or the authorized representative of a local health officer must:

(a) employ the minimum control measures; or

(b) ensure that minimal control measures are employed by a health care provider or other person caring for a person with a reportable disease.

Appendix G: Recommendations for Use of Antivirals

Chemoprophylaxis is not a substitute for vaccination.

There are two primary antivirals recommended for the treatment and chemoprophylaxis of influenza. These are oseltamivir and zanamivir. Amantadine and rimantadine were previously recommended but influenza A has shown a high level of resistance. Further information and important points regarding the use of these antivirals are summarized below.

Early antiviral treatment can reduce the risk of complications from influenza (e.g., pneumonia, respiratory failure, and death). Antiviral treatment is recommended as early as possible for any patient with confirmed or suspected influenza who
- is hospitalized;
- has severe, complicated, or progressive illness; or
- is at higher risk for influenza complications.

Persons at higher risk for influenza complications recommended for antiviral treatment include:
- children aged <2 years;*
- adults aged ≥65 years;
- persons with chronic pulmonary (including asthma), cardiovascular (except hypertension alone), renal, hepatic, hematological (including sickle cell disease), metabolic disorders (including diabetes mellitus), or neurologic and neurodevelopment conditions (including disorders of the brain, spinal cord, peripheral nerve, and muscle such as cerebral palsy, epilepsy [seizure disorders], stroke, intellectual disability [mental retardation], moderate to severe developmental delay, muscular dystrophy, or spinal cord injury);
- persons with immunosuppression, including that caused by medications or by HIV infection;
- women who are pregnant or postpartum (within 2 weeks after delivery);
- persons aged <19 years who are receiving long-term aspirin therapy;
- American Indians/Alaska Natives;
- persons who are morbidly obese (i.e., body-mass index ≥40); and
- residents of nursing homes and other chronic-care facilities.

Clinical judgment, on the basis of the patient’s disease severity and progression, age, underlying medical conditions, likelihood of influenza, and time since onset of symptoms, is important to consider when making antiviral treatment decisions for high-risk outpatients. When indicated, antiviral treatment should be started as soon as possible after illness onset.

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1 Information in Appendix H, excluding the nine recommendations for chemoprophylaxis, was taken from: Centers for Disease Control and Prevention. Prevention and Control of Influenza: Recommendations of the Advisory Committee on Immunization Practices. MMWR 2003; 52 (RR08): 1-36.

The greatest benefit is when antiviral treatment is started within 48 hours of influenza illness onset. However, antiviral treatment might still be beneficial in patients with severe, complicated, or progressive illness and in hospitalized patients when administered >48 hours from illness onset.

Antiviral treatment also can be considered for any previously healthy, symptomatic outpatient not at high risk with confirmed or suspected influenza on the basis of clinical judgment, if treatment can be initiated within 48 hours of illness onset.†

Recommended antiviral medications include oseltamivir and zanamivir, on the basis of recent viral surveillance and resistance data indicating that >99% of currently circulating influenza virus strains are sensitive to these medications. Amantadine and rimantadine should not be used because of the high levels of resistance to these drugs among circulating influenza A viruses, but information about these drugs is provided for use if current recommendations change because of the reemergence of adamantane-susceptible strains.

Oseltamivir may be used for treatment or chemoprophylaxis of influenza among infants aged <1 year when indicated.

Antiviral treatment also may be considered on the basis of clinical judgment for any outpatient with confirmed or suspected influenza who does not have known risk factors for severe illness if treatment can be initiated within 48 hours of illness onset.

Because antiviral resistance patterns can change over time, clinicians should monitor local antiviral resistance surveillance data.

* Although all children aged <5 years are considered at higher risk for complications from influenza, the highest risk is for those aged <2 years, with the highest hospitalization and death rates among infants aged <6 months. Because many children with mild febrile respiratory illness might have other viral infections (e.g., respiratory syncytial virus, rhinovirus, or parainfluenza virus, or human metapneumovirus), knowledge about other respiratory viruses as well as influenza virus strains circulating in the community is important for treatment decisions. The likelihood of influenza virus infection in a patient depends on the prevalence of influenza activity in the local community and on the patient’s signs and symptoms. Information about influenza activity in the United States during the influenza season is available at http://www.cdc.gov/flu/weekly. For information on local community influenza activity, clinicians should contact their local and state health departments.

† Recommended antiviral medications (neuraminidase inhibitors) are not licensed for treatment of children aged <1 year (oseltamivir) or those aged <7 years (zanamivir). Oseltamivir was used for treatment of 2009 pandemic influenza A (H1N1) virus infection in children aged <1 year under an Emergency Use Authorization, which expired on June 23, 2010. Limited information regarding use of oseltamivir for children from birth through age 1 year is available (see Appendix G, Table 4). Confirmation of influenza virus infection may be performed by different influenza testing methods. Information on influenza testing is available at http://www.cdc.gov/flu/professionals/diagnosis/index.htm. In areas with limited antiviral medication availability, local public health authorities might provide additional guidance about prioritizing treatment within groups at higher risk for complications. Current CDC guidance on treatment of influenza should be consulted; updated recommendations from CDC are available at http://www.cdc.gov/flu.
The following points should be considered when utilizing antivirals for treatment or prophylaxis:

- Benefits of using antiviral agents in the treatment of influenza are limited.
- When administered within two days of illness onset, antivirals may reduce duration of uncomplicated influenza illness by approximately 1 day.
- None of the four antiviral agents have been demonstrated to be effective in preventing serious influenza-related complications such as bacterial or viral pneumonia.
- Death from influenza is much more likely to occur in the event of a serious influenza-related complication, especially among high-risk individuals. Preventing influenza rather than attempting to shorten the duration of illness can achieve maximum benefit. Therefore, in the event of an influenza pandemic, use of antivirals (excluding oseltamivir) should be prioritized for prophylactic rather than treatment purposes.

Recommendations for chemoprophylaxis are provided primarily to help health care providers make decisions regarding persons who are at greatest risk of severe illness and complications from influenza. Prophylactic use of antivirals should be considered for the following groups:³

1. Individuals targeted to receive vaccine who cannot be vaccinated due to anaphylactic hypersensitivity to eggs or other components of the influenza vaccine or individuals with a history of Guillain-Barre’ syndrome
2. Unvaccinated persons aged ≥ 65 years of age
3. Unvaccinated residents of nursing homes and other chronic-care facilities that house individuals of any age with chronic medical conditions
4. Unvaccinated adults and children who have chronic disorders of the pulmonary or cardiovascular systems, including children with asthma
5. Unvaccinated adults and children who have required regular medical follow-up or hospitalization during the preceding year because of chronic metabolic diseases (including diabetes mellitus), renal dysfunction, hemoglobinopathies, or immunosuppression caused by medications or by human immunodeficiency virus
6. Unvaccinated children and adolescents (aged 6 months-18 years) who are receiving long-term aspirin therapy and therefore, may be at risk of developing Reye syndrome after influenza infection
7. Unvaccinated employees of nursing homes, chronic-care facilities, and assisted living residences who have contact with patients or residents
8. Unvaccinated individuals who provide home care to persons at high-risk
9. Unvaccinated household members (including children) of persons at high-risk

**Drug Resistance**

To limit the potential transmission of drug-resistant virus during institutional outbreaks, measures should be taken to reduce contact as much as possible between persons taking antiviral drugs for treatment and other persons, including those taking the same drugs for chemoprophylaxis.

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Combination of Antiviral Medications

No published data are available concerning the safety or efficacy of using combinations of any of these four influenza antiviral drugs. For more detailed information concerning potential drug interactions for any of these influenza antiviral drugs, the package insert should be consulted.

It is important to be aware of persons already taking one of these medications for another purpose so that they will not be prescribed an additional amount, and thus receive too large a dose of the drug.

See Appendix H: Antivirals: Overview for Healthcare Providers for more information regarding the use and dosage of antiviral medication.
Appendix H: Antivirals: Overview for Healthcare Providers

The guidance included in the next 4 Tables was released by the Centers for Disease Control and Prevention in 2011 regarding the usage and dosing of antivirals as well as a summary of their shown resistance.

Table 1: Recommendations for the selection of antiviral treatment using laboratory test results and viral surveillance data*

<table>
<thead>
<tr>
<th>Rapid antigen, RT-PCR or other laboratory test</th>
<th>Preferred medication(s)†</th>
<th>Alternative (combination antiviral treatment)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not performed or negative but clinical suspicion for influenza†</td>
<td>Oseltamivir or zanamivir</td>
<td>None</td>
</tr>
<tr>
<td>Positive A or positive A+B§</td>
<td>Oseltamivir or zanamivir</td>
<td>None</td>
</tr>
<tr>
<td>Positive 2009 influenza A(H1N1)</td>
<td>Oseltamivir or zanamivir</td>
<td>None</td>
</tr>
<tr>
<td>Positive A(H3N2), or B</td>
<td>Oseltamivir or zanamivir</td>
<td>None</td>
</tr>
</tbody>
</table>

Abbreviation: RT-PCR = reverse transcription-polymerase chain reaction.

* Antiviral recommendations might change over time. Influenza antiviral medications used for treatment are most beneficial when initiated within the first 2 days of illness. Clinicians should consult the package insert of each antiviral medication for specific dosing information, approved indications and ages, contraindications/warnings/precautions, and adverse effects.

† Influenza viral surveillance data might help guide antiviral choices if oseltamivir resistance becomes more prevalent among circulating influenza viruses. Consult guidance from local or state public health laboratories or CDC for further information regarding currently circulating viruses. CDC viral surveillance data are updated weekly during the influenza season and is available at http://www.cdc.gov/flu/weekly.

§ Positive A+B indicates a rapid antigen test that cannot distinguish between influenza A and influenza B viruses.

Table 2: Recommended dosage and schedule of influenza antiviral medications* for treatment† and chemoprophylaxis§

<table>
<thead>
<tr>
<th>Antiviral</th>
<th>1–6</th>
<th>7–9</th>
<th>10–12</th>
<th>13–64</th>
<th>≥65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zanamivir</td>
<td>Treatment, influenza A and B</td>
<td>NA</td>
<td>10 mg (2 inhalations) twice daily</td>
<td>10 mg (2 inhalations) twice daily</td>
<td>10 mg (2 inhalations) twice daily</td>
</tr>
<tr>
<td>Chemoprophylaxis, influenza A and B</td>
<td>NA for ages 1–4</td>
<td>Ages 5–910 mg (2 inhalations) once daily</td>
<td>10 mg (2 inhalations) once daily</td>
<td>10 mg (2 inhalations) once daily</td>
<td>10 mg (2 inhalations) once daily</td>
</tr>
</tbody>
</table>

§ Centers for Disease Control and Prevention. Antiviral Agents for the Treatment and Chemoprophylaxis of Influenza: Recommendations of the Advisory Committee on Immunization Practices. (ACIP) MMWR January 21, 2011; RR/Volume 60/Number 1.
### Oseltamivir

<table>
<thead>
<tr>
<th><strong>Oseltamivir</strong></th>
<th>Treatment, **</th>
<th>Dose varies by child’s weight**</th>
<th>Dose varies by child’s weight**</th>
<th>Dose varies by child’s weight**</th>
<th>75 mg twice daily</th>
<th>75 mg twice daily</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Treatment, influenza A and B</strong></td>
<td><strong>Chemoprophylaxis, influenza A and B</strong></td>
<td>&gt;40 kg = adult dose</td>
<td>&gt;40 kg = adult dose</td>
<td>&gt;40 kg = adult dose</td>
<td>75 mg once daily</td>
<td>75 mg once daily</td>
</tr>
</tbody>
</table>

**Abbreviation:** NA = not approved

* Zanamivir is manufactured by GlaxoSmithKline (Relenza — inhaled powder). Zanamivir is approved for treatment of persons aged ≥7 years and approved for chemoprophylaxis of persons aged ≥5 years. Zanamivir is administered through oral inhalation by using a plastic device included in the medication package. Patients will benefit from instruction and demonstration of the correct use of the device. Zanamivir is not recommended for those persons with underlying airway disease. Oseltamivir is manufactured by Roche Pharmaceuticals (Tamiflu — tablet). Oseltamivir is approved for treatment or chemoprophylaxis of persons aged ≥1 year. Oseltamivir is available for oral administration in 30 mg, 45 mg, and 75 mg capsules and liquid suspension. No antiviral medications are approved for treatment or chemoprophylaxis of influenza among children aged <1 year. This information is based on data published by the Food and Drug Administration (FDA), available at [http://www.fda.gov/Drugs/DrugSafety/InformationbyDrugClass/ucm100228.htm](http://www.fda.gov/Drugs/DrugSafety/InformationbyDrugClass/ucm100228.htm).

† Recommended duration for antiviral treatment is 5 days. Longer treatment courses can be considered for patients who remain severely ill after 5 days of treatment.

§ Recommended duration is 10 days when administered after a household exposure and 7 days after the most recent known exposure in other situations. For control of outbreaks in long-term care facilities and hospitals, CDC recommends antiviral chemoprophylaxis for a minimum of 2 weeks and up to 1 week after the most recent known case was identified.

¶ See Table 4 for information about use of oseltamivir for infants aged <1 year. A reduction in the dose of oseltamivir is recommended for persons with creatinine clearance <30 mL/min.

** The treatment dosing recommendation for oseltamivir for children aged ≥1 year who weigh ≤15 kg is 30 mg twice a day. For children who weigh >15 kg and up to 23 kg, the dose is 45 mg twice a day. For children who weigh >23 kg and up to 40 kg, the dose is 60 mg twice a day. For children who weigh >40 kg, the dose is 75 mg twice a day.

†† The chemoprophylaxis dosing recommendation for oseltamivir for children aged ≥1 year who weigh ≤15 kg is 30 mg once a day. For children who weigh >15 kg and up to 23 kg, the dose is 45 mg once a day. For children who weigh >23 kg and up to 40 kg, the dose is 60 mg once a day. For children who weigh >40 kg, the dose is 75 mg once a day.
### Table 3: Dosing recommendations for treatment or chemoprophylaxis of children aged <1 year using oseltamivir*

<table>
<thead>
<tr>
<th>Age</th>
<th>Recommended treatment dose for 5 days†</th>
<th>Recommended chemoprophylaxis dose for 10 days†</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;3 months</td>
<td>3 mg/kg/dose twice daily</td>
<td>Not recommended unless situation judged critical because of limited data on use in this age group</td>
</tr>
<tr>
<td>3–11 months</td>
<td>3 mg/kg/dose twice daily</td>
<td>3 mg/kg/dose once daily</td>
</tr>
</tbody>
</table>

* Oseltamivir is not approved by the Food and Drug Administration (FDA) for use in children aged <1 year. An Emergency Use Authorization (EUA) was issued by the FDA on April 28, 2009, and expired on June 23, 2010 (available at http://www.fda.gov/downloads/Drugs/DrugSafety/PostmarketDrugSafetyInformationforPatientsandProviders/UCM216494.pdf). This EUA allowed use of oseltamivir for treatment or chemoprophylaxis of 2009 pandemic influenza A (H1N1) virus infection during the pandemic in infants aged <1 year. Currently circulating 2009 H1N1, seasonal influenza A (H3N2), and B viruses have similar sensitivity to oseltamivir.

† Current weight-based dosing recommendations are not appropriate for premature infants. Premature infants might have slower clearance of oseltamivir because of immature renal function, and doses recommended for full-term infants might lead to very high drug concentrations in this age group. Very limited data from a small cohort of premature infants suggested that oseltamivir concentrations among premature infants administered oseltamivir 1 mg/kg twice daily would be similar to those observed with the recommended treatment dose in term infants (3 mg/kg twice daily). Observed drug concentrations were highly variable among premature infants. These data are insufficient to recommend a specific dose of oseltamivir for premature infants.

---

### Table 4: Summary of antiviral resistance among influenza viruses worldwide, December 2010*

<table>
<thead>
<tr>
<th>Influenza A viruses</th>
<th>Influenza B viruses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2009 H1N1</strong></td>
<td><strong>H3N2</strong></td>
</tr>
<tr>
<td><strong>Adamantanes</strong> (not recommended currently)</td>
<td>Resistant</td>
</tr>
<tr>
<td><strong>Oseltamivir</strong></td>
<td>Susceptible</td>
</tr>
<tr>
<td><strong>Zanamivir</strong></td>
<td>Susceptible</td>
</tr>
</tbody>
</table>

* Information regarding antiviral resistance is updated weekly and is available at http://www.cdc.gov/flu/weekly. Rare instances of infection with oseltamivir-resistant 2009 H1N1 virus strains have been reported; >99% of influenza viruses circulating since September 2009 have been sensitive to oseltamivir.

† Yamagata and Victoria lineages
### Appendix I: Population and Hospital Statistics

#### Cascade County

**Population:** 81,327 (per U.S. Census 2009 Estimates)
- 0-4 yrs old: ~ 5,534 (6.8%)
- 5-19 yrs old: ~ 15,224 (18.7%)
- 20-64 yrs old: ~ 47,879 (58.9%)
- 65+ yrs old: ~ 12,690 (15.6%)

#### Students

**Schools:** 39 (per U.S. Census 2009 Estimates)

**Student population:** ~ 19,979
- Preschool: 1,101
- Kindergarten: 1,026
- Elementary: 8,550
- High School: 4,915
- University of Great Falls/State Colleges: 4,387

#### Licensed Daycares: 38

**Population:** ~ 1,780 (population estimate does not include unlicensed daycare centers)

#### Developmentally Disabled

**Facilities:** 14 (Mobile 14:Non-Mobile 0)

**Population:** ~ 96

#### Nursing Homes

**Population:** ~ 615 Max

- Benefis Extended Care Center: 146
- Missouri River Care & Rehabilitation Center: 278
- Park Place Healthcare Center: 189

#### Assisted Living

**Facilities:** 22

**Population:** ~ 650 Max

#### Mobility/Self Care Limitations

**Population:** ~ 14,000 (approximately 19.7% of general population – U.S. Census 2009)
- 5-20 yrs old: ~ 1,630
- 21-64 yrs old: ~ 8,092
- 65+ yrs old: ~ 4,236

#### Correctional Facilities

**Facilities:** 3

**Population:** ~ 348

- Cascade County Regional Detention Center: 152
Juvenile Detention Center: 24
Pre-Release Center: 138 Male / 34 Female

State Institutions
Facilities: 1
Population: ~ 55

Montana School for the Deaf & Blind:
Students ~ 55
Residents ~ 20

Hospitals
Facilities: 2

Benefis Health System

<table>
<thead>
<tr>
<th>Licensed Beds – 478 beds</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute</td>
<td>320 beds</td>
</tr>
<tr>
<td>Long Term Care</td>
<td>146 beds</td>
</tr>
<tr>
<td>Hospice</td>
<td>12 beds</td>
</tr>
</tbody>
</table>

East Campus (1101 26th St S)
Ortho/Neuro 28
Surgical 28
Oncology 28
Intensive Care (ICU) 18
ICU/Medical Overflow 13
Progressive Care (PCU) 14
Medical 42
Cardio Services 11
Cardiovascular (CVU) 33
Neonatal Intensive Care (NICU) 24
Pediatrics 16
Labor & Deliver, Recovery, Post Partum (LDRP) 24

Total 279 beds

Emergency Room 20 beds
(Not counted as licensed beds)

West Campus (500 15th Ave S)
Behavioral Health 21
Rehab 20

Total 41 beds

Benefis Extended Care (2621 15th Ave S)
146 beds (includes Transitional Care Unit on West Campus)

Hospice (2600 15th Ave S)
12 beds
<table>
<thead>
<tr>
<th><strong>Ventilators</strong></th>
<th><strong>Isolation Rooms</strong></th>
</tr>
</thead>
</table>
| 23 vents (adult & pediatric use) | East Campus – 40 rooms  
| | West Campus – 5 rooms |

<table>
<thead>
<tr>
<th><strong>Operating Rooms</strong></th>
<th><strong>Morgue</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>10 rooms</td>
<td>7 – 8 (realistically)</td>
</tr>
</tbody>
</table>

**Great Falls Clinic Medical Center**

| **Hospital Beds** | ~ 30 |
APPENDIX K: GUIDELINES FOR VACCINE STORAGE AND SHIPMENT

To ensure vaccine viability, influenza vaccine should be shipped and stored according to the following guidelines:

- **Shipping Requirements**: Influenza vaccine should be delivered in the shortest possible time. It should not be exposed to excessive temperatures. Vaccine is generally shipped in insulated containers with coolant packs.
- **Condition on Arrival**: Vaccine should not have been frozen. Refrigerate immediately upon arrival.
- **Storage Requirements**: Influenza vaccine should be refrigerated at 2° to 8°C (35° to 46°F). **Do not freeze**.
- **Shelf Life**: Vaccine is formulated for use within the current influenza season. Check expiration date on viral manufacturer-filled syringe.
- **Instructions for Reconstitution or Use**: Inspect visually for extraneous particulate matter and/or discoloration. If these conditions exist, the vaccine should not be used. Shake vial or manufacturer-filled syringe well before use. Discard vaccine if it cannot be resuspended with vigorous shaking.
- **Shelf Life after Opening**
  - **Single-Dose Vials**: The vaccine should be administered shortly after withdrawal from the vial.
  - **Multidose Vials**: Withdraw single dose of vaccine into separate sterile needle and syringe for each immunization. The vaccine should be administered shortly after withdrawal from the vial. Unused portions of multidose vials may be refrigerated at 2° to 8°C (35° to 46°F) and used until expired if not contaminated or unless otherwise stated in the manufacturer’s product information.
  - **Manufacturer-Filled Syringes**: The vaccine should be administered shortly after the needle is attached to the syringe.
- **Stock Rotation**: Vaccine will be rotated so that the earliest out-dates will be used first.
Appendix J: References

In addition to the references identified as footnotes, the following sources were utilized for information:

<table>
<thead>
<tr>
<th>Print name and date of birth for each person to receive medications</th>
<th>If you have any of the following conditions</th>
<th>For Official use only</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Your Name (last, first)</td>
<td><em>Allergy to eggs</em></td>
<td>Injection Site:</td>
</tr>
<tr>
<td>Age</td>
<td><em>Fever in the last 24 hours</em></td>
<td>Lot #:</td>
</tr>
<tr>
<td>Date of Birth</td>
<td><em>History of Guillain-Barre’ Syndrome</em></td>
<td>Expiration Date:</td>
</tr>
<tr>
<td>Signature</td>
<td><em>Pregnant</em></td>
<td>Manufacturer:</td>
</tr>
<tr>
<td>2. Name (last, first)</td>
<td><em>Allergy to eggs</em></td>
<td>Injection Site:</td>
</tr>
<tr>
<td>Age</td>
<td><em>Fever in the last 24 hours</em></td>
<td>Lot #:</td>
</tr>
<tr>
<td>Date of Birth</td>
<td><em>History of Guillain-Barre’ Syndrome</em></td>
<td>Expiration Date:</td>
</tr>
<tr>
<td>Signature</td>
<td><em>Pregnant</em></td>
<td>Manufacturer:</td>
</tr>
<tr>
<td>3. Name (last, first)</td>
<td><em>Allergy to eggs</em></td>
<td>Injection Site:</td>
</tr>
<tr>
<td>Age</td>
<td><em>Fever in the last 24 hours</em></td>
<td>Lot #:</td>
</tr>
<tr>
<td>Date of Birth</td>
<td><em>History of Guillain-Barre’ Syndrome</em></td>
<td>Expiration Date:</td>
</tr>
<tr>
<td>Signature</td>
<td><em>Pregnant</em></td>
<td>Manufacturer:</td>
</tr>
<tr>
<td>4. Name (last, first)</td>
<td><em>Allergy to eggs</em></td>
<td>Injection Site:</td>
</tr>
<tr>
<td>Age</td>
<td><em>Fever in the last 24 hours</em></td>
<td>Lot #:</td>
</tr>
<tr>
<td>Date of Birth</td>
<td><em>History of Guillain-Barre’ Syndrome</em></td>
<td>Expiration Date:</td>
</tr>
<tr>
<td>Signature</td>
<td><em>Pregnant</em></td>
<td>Manufacturer:</td>
</tr>
<tr>
<td>5. Name (last, first)</td>
<td><em>Allergy to eggs</em></td>
<td>Injection Site:</td>
</tr>
<tr>
<td>Age</td>
<td><em>Fever in the last 24 hours</em></td>
<td>Lot #:</td>
</tr>
<tr>
<td>Date of Birth</td>
<td><em>History of Guillain-Barre’ Syndrome</em></td>
<td>Expiration Date:</td>
</tr>
<tr>
<td>Signature</td>
<td><em>Pregnant</em></td>
<td>Manufacturer:</td>
</tr>
</tbody>
</table>

POD Location

Screener: ____________ Vaccinator: ____________