



**Missoula City-County Health Department  
Emergency Operations Plan**

**Part 4 – Hazard Specific Annex 1**

**Pandemic Influenza Plan**

**January 2016**

## Emergency Contact Information

Missoula City-County Health Department Pandemic Influenza Plan				
Plan Activation		Key Contacts		
<p><b>WHEN TO ACTIVATE THIS PLAN:</b></p> <ul style="list-style-type: none"> <li>Whenever the Missoula City-County Health Department identifies the presence or anticipated presence of a novel influenza virus of concern in Missoula County based on data from WHO, CDC, MT DPHHS, or MCCHD surveillance.</li> </ul> <p><b>WHO MAY ACTIVATE THIS PLAN:</b></p> <ul style="list-style-type: none"> <li>Missoula City-County Health Officer or designee</li> </ul> <p><b>HOW TO ACTIVATE THIS PLAN:</b></p> <ul style="list-style-type: none"> <li>The Health Officer or designee will send an email, text message, and/or phone call to all members of the MCCHD Management Team.</li> <li>The team will convene and determine the appropriate Emergency Management Organization to establish and staff.</li> <li>The Health Officer will notify DPHHS, Missoula County DES, elected officials and the Health Emergency Advisory Team (HEAT).</li> </ul> <p><b>Publication Date: January 2016</b></p>		<b>Name</b>	<b>Title</b>	<b>Phone</b>
		24/7	Health Dept	911
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		Kate Siegrist	Health Services Director	258-4986
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		ID On-Call	24/7 ID Team	911
		Tammy Zunski	HEAT POC	329-2620
		Adriane Beck	OEM Director	258-3632
		Ross Miller	Chair, Board of Health	721-5570, Ext. 3186
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		On-Call	DPHHS epidemiologist	406-444-0273
		<p><b>Update annually on first Monday in January</b></p>		

### Promulgation

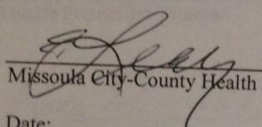
Government at all levels has the responsibility to plan for and respond to disasters and emergencies resulting from hazards that are known to threaten the jurisdiction. In view of this fact, the Missoula City-County Health Department (MCCHD) has assigned the tasks and responsibility for Public Health Emergency Preparedness, including prevention, protection, response, and recovery, to the MCCHD Emergency Preparedness Coordinator. Disasters and emergencies may require the Department to operate in a manner different from normal, day-to-day routines and may seriously overextend Department resources.

The purpose of the MCCHD Pandemic Influenza Plan is to focus on preplanning and allow for a graduated or tailored response to disasters and emergencies that requires coordination among Department Divisions, City/County Departments, Federal, State, and Local agencies, and Community Partners.

This Annex replaces and supersedes any previous MCCHD Pandemic Influenza Plan.

The MCCHD Director/Health Officer, all MCCHD managers and Public Information Officers should become familiar with this Annex and their respective roles and responsibilities during a disaster or emergency that affects the City or County of Missoula.

This letter promulgates the Pandemic Influenza Plan which becomes effective upon approval by the Director of the Missoula City-County Health Department.

  
Missoula City-County Health Department Director/Health Officer

Date:

12-31-15

**Approval and Implementation**

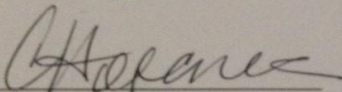
The purpose of the MCCHD Pandemic Influenza Plan is to provide guidance for the response to a novel influenza virus capable of causing widespread illness and loss of life in Missoula County. This Plan was developed to meet the requirements of the National Response Framework (NRF), the National Incident Management System (NIMS), the Montana Department of Public Health and Human Services, as well as of authorities and guidance from the Community, the State of Montana, and the United States Federal Government.

The Plan supersedes all previous MCCHD Pandemic Influenza Plans and is part of a suite of annexes developed to accompany the MCCHD Emergency Operations Plan (EOP).

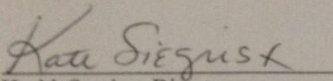
The MCCHD Emergency Preparedness Coordinator is responsible for supervising the development and maintenance of this plan in collaboration with the MCCHD Public Health Preparedness Managers Team. Any changes or modifications to this plan must be made with the coordination and approval of the MCCHD Director/Health Officer, and Division Directors.

**DISCLAIMER**

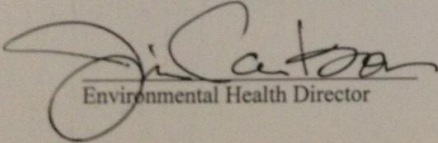
Procedures included in this plan are intended to be guidelines for MCCHD Staff to respond to disasters, emergencies or terrorist events. Actual response actions may vary depending on the requirements of the emergency. This plan will be updated as necessary by the Emergency Preparedness Coordinator in collaboration with the ERC Coordinator. This annex is hereby approved for implementation and supersedes all previous editions.

  
Health Promotion Director

1/5/16  
Date

  
Health Services Director

1/4/16  
Date

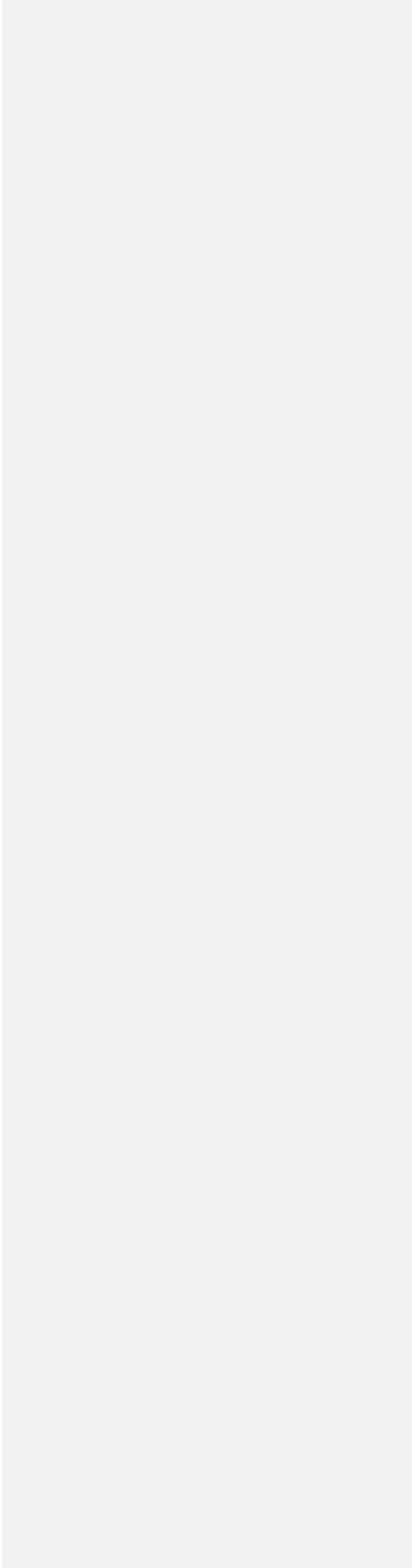
  
Environmental Health Director

1/4/16  
Date

## Record of Changes

#	Description	Date Entered	Posted By
1	Revised	January 15, 2015	Linda Noson
2	Revised – emergency contact information	Dec. 16, 2015	Heidi Kendall
3	Revised – county population estimate	Dec. 17, 2015	Heidi Kendall
4	Revised – September 2015 flu activity	Dec. 17, 2015	Heidi Kendall
5	Signatures	Jan. 5, 2016	Heidi Kendall

**Record of Distribution**

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## **1.0 Introduction**

Development of the MCCHD *Pandemic Influenza Plan* began in 2003. The Plan builds on work completed by the Missoula City-County Health Department Pandemic Planning Incident Command Team, the department's Public Health Emergency Preparedness Management Team, the Health Emergency Advisory Team (HEAT), and HEAT 2008 and 2009 Work Teams. The plan will continue to progress as new information emerges, other plans are updated, and new directives received.

An influenza pandemic is a worldwide outbreak of disease. A pandemic occurs when a new influenza virus circulates causing serious illness and spreading easily from person-to-person due to a lack of immunity within the population. A pandemic may result in: widespread illness and death; shortages of medical equipment and supplies (such as personal protective equipment, ventilators, and antiviral medications); overwhelmed hospitals and clinics; event cancellations; school and business closures; and social-economic impacts related to excessive absenteeism. See Appendix 6.1 for a glossary of terms.

According to the US Centers for Disease Control (CDC), effective planning and preparation can minimize the negative impacts of an influenza pandemic. Because specific epidemiologic, clinical, and behavioral characteristics of a novel influenza virus are generally not immediately known, this plan must be flexible, adaptable, and based on the best available data and guidelines. Uncertainties include: how severe the virus will be (virulence); how many who have been exposed will become ill (attack rate); how many people will die (mortality); how easily the virus is transmitted; who will become ill (age, co-morbidity); what treatment, if any, is effective; how soon a vaccine can be developed and distributed; and whether the new virus is stable or still changing.

### **1.1 Purpose**

The purpose of the Missoula City-County Health Department (MCCHD) Pandemic Influenza Plan is to reduce morbidity and mortality and minimize social and economic loss in Missoula City and County by providing health department staff and community partners with a guide for response to a pandemic. The plan describes the unique challenges posed by a pandemic that may necessitate specific leadership decisions, response actions, and communication mechanisms.

This plan is intended to achieve the following goals:

1. Maintain the health and survival of as many people as possible throughout a pandemic
2. Support community stability and resilience in the face of extraordinarily adverse conditions

### **1.2 Scope of the Plan**

*The Pandemic Influenza Plan* is a Hazard Specific annex of the MCCHD Emergency Operations Plan (EOP). The plan describes the situation, planning assumptions and emergency response actions specific to a pandemic incident. This plan is not a stand-alone plan, but is implemented congruently with appropriate sections of the MCCHD EOP. The EOP consists of:



- a Basic Plan describing the department’s emergency management policies, organization, and program elements;
- Functional Annexes providing guidance to staff carrying out public health functions exceeding routine operations and requiring a coordinated department response that may involve assistance from community partners;
- Support Annexes addressing cross departmental issues, such as continuity of operations and resource management; and,
- Hazard Specific Annexes detailing incident unique issues and concerns.

Functional Annexes of the EOP that support response to all communicable disease outbreaks include:

- Emergency Risk Communications (Annex F3)
- Public Health Surveillance and Epidemiological Investigations (F4)
- Laboratory Sample Transport (Annex F5)
- Emergency Medical Countermeasures (Annex F6) – e.g. dispensing/vaccination
- Community Mitigation (Annex F7 – TBD)
- Others as needed

*The Pandemic Influenza Plan* does not address measures that would be taken to contain an outbreak of disease in birds or other animal populations occurring in Missoula County. Federal and state departments of agriculture are primarily responsible for surveillance and control of disease outbreaks in domestic animals, although agricultural control measures interface with public health actions to prevent transmission into humans.

## **2.0 Situation and Planning Assumptions**

### **2.1 Situation**

#### **2.1.1 Seasonal Influenza**

Seasonal influenza, commonly called “the flu,” is caused by influenza viruses that infect the respiratory tract (i.e., the nose, throat, lungs). Seasonal flu activity usually peaks in January or February, but it can occur as early as October and as late as May. (According to Montana DPHHS, in 2015 flu activity was reported in early September.) Unlike many other viral respiratory infections, such as the common cold, the flu can cause severe illness and life-threatening complications in many people. It is estimated that in the United States, each year on average 5% to 20% of the population gets the flu and more than 200,000 people are hospitalized from seasonal flu-related complications. Over a period of 31 seasons, between 1976 and 2007, estimates of flu-associated deaths in the United States range from a low of about 3,000 to a high of 49,000 people per season (<http://www.cdc.gov/flu/keyfacts.htm>). Typically during a regular flu season, about 90 percent of deaths occur in people 65 years and older due to the weakening of the immune system with age.

The best protection against becoming infected with an influenza virus is to be vaccinated against the strains that research has identified as most likely to be circulating that season. The vaccine produces antibodies against those viruses that are a close match to the viruses used to prepare the vaccine. When the vaccine is not a good match, then that flu season may be more severe, though the vaccine will generally provide some protection.

### **2.1.2 Pandemic Influenza**

A pandemic may occur when a novel influenza virus spreads rapidly from person to person and, if unchecked, causes illness throughout the world. Depending on how easily the virus is transmitted and how severe the resulting illness, a pandemic caused by a novel influenza virus has the potential to cause catastrophic impacts.

Four influenza pandemics have occurred in the last century: 1918-1919, 1957, 1968, and 2009.

- The 1918-1919 influenza pandemic caused the worst natural disaster in modern times, killing at least 50 million people worldwide (CDC). It spread across the United States in a matter of weeks, resulting in an estimated 675,000 deaths. Many more deaths occurred among people aged 20-40 than typically occurs with seasonal influenza.
- Mortality rates associated with the pandemics of 1957 (69,800) and 1968 (33,800) were reduced in part by antibiotic therapy for secondary bacterial infections and more aggressive supportive care, yet both were associated with high rates of morbidity and social disruption.
- Final estimates for the 2009 H1N1 pandemic were published by the CDC in 2011. These final estimates from April 12, 2009 to April 10, 2010 indicated that there were approximately 60.8 million cases (range: 43.3-89.3 million), 274,304 hospitalizations (195,086-402,719), and 12,469 deaths (8868-18,306) in the United States. Unlike seasonal influenza, ninety percent of hospitalizations and deaths occurred in persons younger than 65 years of age.

Variations in mortality and morbidity of a new influenza virus occur because of a number of factors, including transmissibility of the virus, virulence, relationship to past viruses that may confer some immunity in the population to the new virus, ability to produce a new vaccine, sensitivity of the virus to available medication, availability of vaccine and medication, and infectious control practices.

Figure 1 illustrates how the implementation of community-based interventions, such as isolation, quarantine, cancellation of public events, social distancing, and infection control practices can delay transmission and diminish overall health impacts.

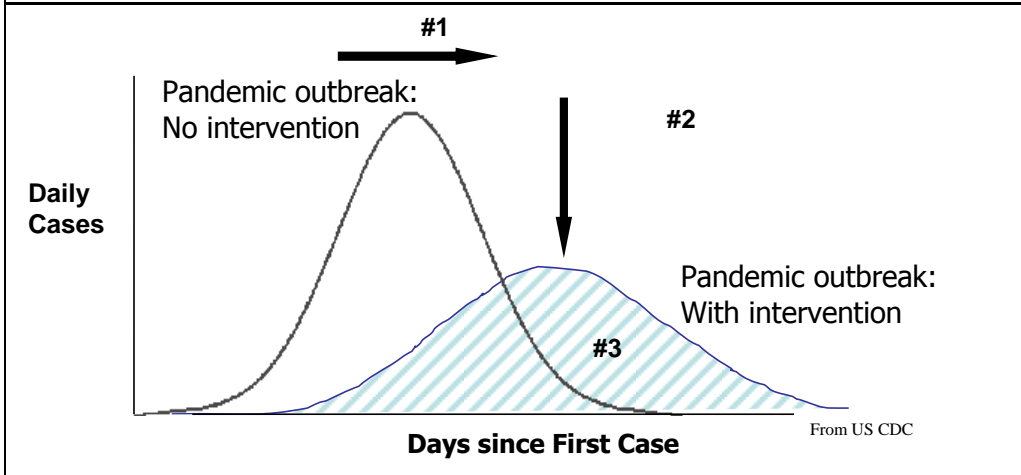
### **2.1.3 Pandemic Planning Scenario for Missoula County**

The 1918 influenza pandemic was chosen as the basis for Missoula County pandemic influenza planning because its effects: 1) are recorded; 2) fall within the estimated range for the illness rate and case fatality ratio set forth by the Centers for Disease Control for a Category 4 pandemic (Table 1); and 3) generate demand for medical care that exceeds current local medical capacity – a main planning objective as directed by the Missoula County Board of Health.

While a scenario is necessary to estimate the potential impact on the Missoula County healthcare system and to prepare plans to address the anticipated surge of patients requiring treatment, a scenario is not a prediction. The next pandemic will have its own unique characteristics. The Pandemic Influenza plan must be flexible to address the specific nature of the next novel influenza virus, including identifying which populations are most vulnerable, what treatments are most effective, how rapidly the virus will be transmitted, and how severe it will be.

**Figure 1. Effect of Community-Based Interventions**

1. Delay disease transmission and outbreak peak
2. Decompress peak burden on healthcare infrastructure
3. Diminish overall cases and health impacts



**Table 1 Pandemic Severity Index for the U.S.**

Characteristics	Phase 6: Pandemic Severity Index (PSI) for the U.S.				
	Category 1	Category 2	Category 3	Category 4	Category 5
Case Fatality Ratio (percentage)	<0.1	0.1 - <0.5	0.5 - <1.0	1.0 - <2.0	≥2.0
Excess Death Rate (per 100,000)	<30	30 - <150	150 - <300	300 - <600	≥600
Illness Rate (percentage of the population)	20-40	20-40	20-40	20-40	20-40
Potential Number of Deaths* (based on 2006 U.S. population)	<90,000	90,000 - <450,000	450,000 - <900,000	900,000 - <1.8 million	≥1.8 million
20 <sup>th</sup> Century U.S. Experience	Seasonal Influenza (illness rate 5-20%)	1957, 1968	None	None	1918 Pandemic

\* assumes 30% illness rate and unmitigated pandemic without interventions.

Source: Centers for Disease Control and Prevention, February 2007

Historical records document that the 1918-1919 influenza emerged in March 1918 as a novel virus similar in severity to seasonal influenza. This initial mild “wave” of illness was followed by a much more severe strain in the fall of 1918 causing much higher rates of illness and greater loss of life.

The epidemiological profile for the severe strain of the 1918 influenza pandemic, as recorded in Missoula County, is shown in Figure 2. Note the rapid onset of cases in October that peak two weeks later and then decrease over the next five weeks. This initial seven week wave was followed by a lengthy period of lesser waves lasting until March, six months later. A pandemic comparable to the 1918 influenza pandemic would swiftly outstrip local in-hospital and ambulatory health care resources and would require a community-wide effort to manage the impacts on Missoula County.

The epidemiological profile shown in Figure 2 can be extrapolated to a population of 100,000 to provide a planning basis for identifying resources and systems necessary to manage a pandemic in Missoula County. An estimated 20,000 people would be expected to become ill in Missoula County over a comparable six month period.

**Figure 2. Missoula County Projected cases at 20% illness rate**

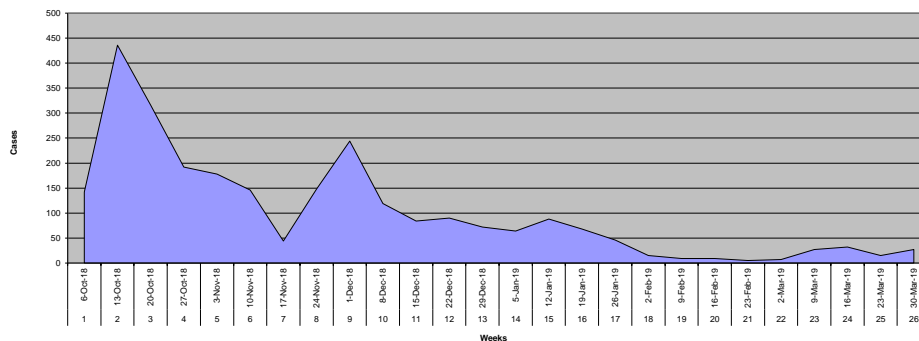


Table 2 shows projected cases for Missoula County by week for the first seven weeks, including the number of hospital admissions, the number not admitted, and the distribution of illness by age. An estimated 11,300 people could become ill within the first seven weeks followed by lesser waves of illness. The projected cases by week shown on Table 2 are based on the Missoula County 1918 epidemiological profile shown on Figure 2. The distribution by age, however, is based on the age distribution documented in the 2000 Census. Therefore, the age distribution does not reflect the actual distribution of illness by age in 1918. Since the 1918 influenza caused increased illness among those aged 20-40, Table 2 likely underestimates the number of cases in people younger than 40, while overestimating the number of cases in people over 64.

Table 2 also shows an estimate of the number of people likely to be ill, but not admitted to the hospital. Many of these people may need assistance of some kind during their illness, especially

if they are living alone. The Pandemic Influenza Plan addresses these needs through a Home Care Plan to check on those at home to determine if they need basic supplies, such as food and medications, and to provide information on home infection control and patient management.

**Table 2. Projected Missoula County influenza cases based on the 1918 Pandemic.**

Week	Projected Cases	%Total Missoula Population (assumes 100,000 population)	Hospital Admissions (CDC est. 7.7%)	Ill- NOT Admitted (92.3%)	< 5 (5.7%)	5 to 19 (21.3%)	20 to 64 (63%)	>64 (10%)
1	1100	1.1	85	1015	58	216	640	102
2	3400	3.4	262	3138	179	668	1977	314
3	2500	2.5	193	2308	132	491	1454	231
4	1500	1.5	116	1385	79	295	872	138
5	1400	1.4	108	1292	74	275	814	129
6	1100	1.1	85	1015	58	216	640	102
7	300	0.3	23	277	16	59	174	28
<b>Total 1st Wave - 7 weeks</b>	11,300	Total percent ill in first 7 weeks 11.3%	<b>870</b>	<b>10,430</b>	595	2220	6,571	1,043

- % Total Missoula Population ill in each week based on data from 1918 Pandemic Influenza in Missoula County;
- Estimated hospital admissions used CDC factor of 7.7%; remainder of projected total cases assumed ill, but not hospitalized
- Does not include potential impact from surrounding counties

Since the lack of immunity to a novel influenza virus is a key factor in the development of a pandemic, the Pandemic Influenza Plan must not only plan for the identification and care of those who are sick, but for the fact that all 112,000 people in the county could be susceptible to the novel virus. A critical part of pandemic influenza response will be providing accurate and timely information to the public on the characteristics of the novel virus, steps to avoid infection, and what to do if exposed to someone who is sick. This will help reduce the number of calls to healthcare providers.

While a severe pandemic in Missoula County would cause extensive and socially disruptive direct and indirect impacts, it is important to note that even in a severe pandemic, 70% to 80% of the population will likely remain healthy.

## 2.2 MCCHD Planning Assumptions

### MCCHD Planning Assumptions Underlying Missoula County Pandemic Influenza Plan

*The following are not predictions.* Rather, these assumptions are made for planning purposes and are based on a combination of previous pandemic experience and current literature. Assumptions from the Montana DPHHS Pandemic Influenza Plan (2005) are incorporated into the MCCHD plan as appropriate for local planning.

1. The strain of influenza that will cause the next influenza pandemic, its virulence, and the time and place of emergence cannot be determined in advance.
2. A novel influenza can spread rapidly causing illness across the country and within the state over a short period of time.
3. Montana may not be able to rely on resources from other states or the federal government resulting in shortages of critical medical supplies and equipment.
4. Outbreaks of a novel influenza may occur in one or more waves causing prolonged impacts on the population of Missoula County and requiring sustained response for a period that may last for months.
5. A novel influenza virus may continue to change becoming more or less severe over time.
6. The number of ill people requiring outpatient medical care and hospitalization may overwhelm the county's health care system resulting in the need for alternative strategies to meet the demand.
7. Timely and accurate information will be needed to provide guidance to the population and to reduce the number of people seeking information from healthcare providers, which will delay the care and treatment of those who are ill.
8. Vaccine, if one can be developed at all, may take months to produce, might be in short supply, and could have limited effectiveness.
9. The effectiveness and availability of antivirals against a novel virus will not be known in advance.
10. Voluntary quarantine of those exposed to a novel virus, but not sick, may help delay transmission and spread during the initial outbreak, but once the virus is established in the community, quarantine is unlikely to be an effective control measure.
11. Voluntary and ordered isolation of sick and contagious citizens will be justified and relied upon in the plan.
12. Restrictions on certain types and places of public congregation may be warranted.
13. An effective local response will rely heavily on support for the ill to remain at home when possible
14. Health-care workers and other first responders will likely be at even higher risk of exposure and illness than the general population, further reducing available personnel and impeding the care of victims.
15. Widespread illness in the community may also increase the likelihood of sudden and potentially significant shortages of personnel in other critical community services: military personnel, police, firemen, utility workers, and transportation workers, just to name a few.
16. Missoula County is a regional medical resource center and will see people from out of Missoula County seeking medical care.

### **2.3 Federal Planning Assumptions**

1. Susceptibility will be universal.
2. Civil disturbances and breakdowns in the public order may occur.
3. Typically, illness rates will be highest among school-aged children (about 40 percent) and decline with age. Among working adults, an average of 20 percent will become ill during a

community outbreak. Actual illness rates by age, however, will depend on the characteristics of the new virus and may vary from these rates.

4. Risk groups for severe and fatal infection cannot be predicted with certainty, but are likely to include infants, the elderly, pregnant women, and persons with chronic or immunosuppressive medical conditions.
5. In a severe pandemic, absenteeism rates of 40 percent or higher may result from individual illness, the need to care for ill family members, and fear of infection.
6. Typically, the risk of transmission (viral shedding) will be greatest during the first two days of illness. Children will play a major role in spreading the disease.
7. On average, an infected person will transmit infection to two other people.
8. Isolation and quarantine measures are likely, as are mandatory restrictions on domestic and international travel.
9. Epidemics will last six to eight weeks in affected communities.
10. Multiple waves of illness are likely to occur, with each wave lasting two to three months.

### 3.0 Roles and Responsibilities

**Table 3. Roles and Responsibilities**

Agency	Pandemic Influenza Responsibilities
Missoula City-County Health Department	<ul style="list-style-type: none"> <li>▪ Obtain accurate and up-to-date disease surveillance data from local reporting sources</li> <li>▪ Identify local and regional resources needed to deliver vaccine and antivirals to Missoula City-County residents, including identification of personnel and facilities.</li> <li>▪ Coordinate the dispensing of pharmaceuticals and vaccines to the public</li> <li>▪ Facilitate cooperation among all local involved parties (e.g., government officials, emergency responders, health professionals, industry and the general public)</li> <li>▪ Order or request voluntary isolation of symptomatic victims and quarantine of exposed individuals</li> <li>▪ Analyze surveillance data to determine epidemiological characteristics.</li> <li>▪ Protect the integrity of healthcare facility services and the safety of healthcare personnel and Emergency Medical Services personnel</li> <li>▪ Coordinate with Emergency Medical Services and other local response partners to provide appropriate transport of patients as indicated</li> <li>▪ Coordinate with local response partners to provide appropriate triage and treatment of patients as indicated</li> <li>▪ Participate in community public education efforts, including identifying potential audiences for public education, and distributing fact sheets and other educational information.</li> <li>▪ Prepare and distribute Health Alert Network Messages to members of the healthcare system.</li> </ul>
Missoula Public Health & Medical Services Planning Committee	<ul style="list-style-type: none"> <li>▪ A collaborative group of public and private entities proactively working on emergency plans to respond to public health and medical emergencies.</li> <li>▪ Temporary work teams may be established to focus on specific pandemic influenza planning needs.</li> <li>▪ Develop and promote pandemic influenza exercises.</li> </ul>
Health Emergency Advisory Team (HEAT)	<ul style="list-style-type: none"> <li>▪ A healthcare advisory group that consults with and advises the Missoula Health Officer, Incident Commander, and County EOC</li> <li>▪ Collaborates on the preparation of local guidance documents on the identification, treatment, and management of a public health and medical emergency in Missoula County, including the occurrence of local cases of a pandemic influenza</li> <li>▪ Helps distribute guidance to healthcare facilities and providers in Missoula County</li> <li>▪ The Missoula Public Health and Medical Services Planning Committee may help identify appropriate HEAT members according to the expertise needed</li> </ul>
Community Medical Center and Providence St. Patrick Hospital	<ul style="list-style-type: none"> <li>▪ Institute infection control procedures to reduce spread of disease among staff, patients, and visitors.</li> <li>▪ Provide required lab reports and surveillance data to support epidemiological investigations to MCCHD</li> <li>▪ Identify and report resource needs to the county if unable to obtain them through normal channels</li> <li>▪ Implement facility Emergency Operations Plan and Surge Plan (as needed)</li> <li>▪ Coordinate with County Corner on management of fatalities</li> </ul>
Partners in Home Care and Home Health in Montana	<ul style="list-style-type: none"> <li>▪ Implement agency Surge Plan</li> <li>▪ Coordinate with hospitals on early discharge procedures and patient care</li> <li>▪ Institute infection control procedures</li> </ul>
Fire Department EMS	<ul style="list-style-type: none"> <li>▪ Fire Districts in Missoula County (City of Missoula FD, Missoula Rural FD, Frenchtown FD, Seeley Lake FD, etc) respond to medical emergencies when dispatched by the Missoula County 911 Center</li> <li>▪ During a Pandemic, response to influenza victim calls may be deployed by 911 or by an Influenza Call Center</li> <li>▪ Enhanced infection control will be implemented to protect staff and equipment</li> </ul>



Agency	Pandemic Influenza Responsibilities
	<ul style="list-style-type: none"> <li>▪ Will provide just-in-time training on Pandemic Influenza Triage protocols, including assessment/screening and the state Do Not Transport rule. ....</li> </ul>
Missoula Emergency Services, Inc	<ul style="list-style-type: none"> <li>▪ Missoula County's only ambulance service</li> <li>▪ Provide mutual aid to Granite, Ravalli, Lake and Mineral Counties</li> <li>▪ Implement enhanced infection control procedures to protect staff, equipment and transport vehicles</li> <li>▪ Operate under Pandemic Influenza Triage protocols when implemented by City and/or County officials, including adhering to Do Not Transport protocol</li> </ul>
Missoula Office of Emergency Management	<ul style="list-style-type: none"> <li>▪ Coordinates disaster preparedness and response activities for Missoula County</li> <li>▪ Manages the Missoula County Emergency Operations Center.</li> <li>▪ Orders state resource for the Missoula City-County Health Department when emergency response needs exceed department capabilities and resources</li> <li>▪ Manages coordination of non-health and medical consequences of a pandemic</li> </ul>
MT State - DPHHS	<ul style="list-style-type: none"> <li>▪ Lead agency for communicable disease response</li> <li>▪ Prepare and maintain a pandemic influenza preparedness and response plan as an annex to the DPHHS <i>Human Disease/Public Health Emergency Plan</i></li> <li>▪ Monitor and distribute information from WHO and CDC</li> <li>▪ Collect and analyze epidemiologic information from LHJ's, i.e., characterize the outbreak in Montana</li> <li>▪ Coordinate with tribal health agencies to ensure equitable delivery of vaccine, antivirals and other health service provisions to Montana's Native Americans</li> <li>▪ Provide laboratory support for influenza testing</li> <li>▪ Determination of populations at highest risk of influenza, and strategies for vaccination and antiviral use</li> <li>▪ Make recommendations to local health officials to aid in controlling the spread of influenza</li> <li>▪ Manage and distribute supplies from the federal government, including the SNS (vaccines and antivirals) to LHJ's</li> <li>▪ Assist LHJ's in the development of local pandemic preparedness and response plans</li> <li>▪ Cooperate with local health agencies in public education efforts</li> <li>▪ Create and maintain current and consistent messages and information for the news media, the public, health care workers and other partners</li> <li>▪ Assessment of the efficacy of statewide control measures (e.g., travel restrictions, isolation and quarantine)</li> </ul>
Mt State DES	<ul style="list-style-type: none"> <li>▪ Coordinate disaster control activities among State Agencies, including the Montana National Guard</li> <li>▪ Coordinate non-governmental organizations such as the Red Cross, the Montana Hospital Association, the Montana Medical Association, the Montana Funeral Directors Association, Montana Emergency Medical Services Association.</li> <li>▪ Implement the Montana Emergency Response Framework</li> <li>▪ Distribute Health Alert Network messages to local health jurisdictions</li> </ul>
Federal	<ul style="list-style-type: none"> <li>▪ Vaccine research &amp; development</li> <li>▪ Coordinating national and international surveillance</li> <li>▪ Assessing &amp; potentially enhancing vaccine &amp; antiviral capacity and coordination of public sector procurement</li> <li>▪ Laboratory support, and reagent development and distribution</li> <li>▪ Developing an internet-based national information database and clearinghouse</li> <li>▪ Developing generic guidelines and information templates to be modified as needed at the state and local levels</li> <li>▪ Communicate essential health information to state response agencies</li> <li>▪ May issue a National Emergency or make an emergency declaration under the Stafford Act</li> </ul>
US Health and Human Services (HHS)	<ul style="list-style-type: none"> <li>▪ The Secretary of HHS, through the Office of the Assistant Secretary for Preparedness and Response (ASPR), coordinates national ESF #8 preparedness, response, and recovery actions.</li> <li>▪ Coordinate the deployment of Federal medical resources available through ESF#8</li> <li>▪ Provide guidance regarding surge capacity</li> <li>▪ Distribute stockpile medications and supplies</li> </ul>

<b>Agency</b>	<b>Pandemic Influenza Responsibilities</b>
Food and Drug Administration	<ul style="list-style-type: none"><li data-bbox="318 382 1154 403">▪ May issue a Public Health Emergency</li><li data-bbox="318 403 1154 443">▪ Issue Emergency Use Authorizations</li></ul>

## **4.0 Concept of Operations**

### **4.1 General**

This plan addresses the MCCHD response to a severe influenza pandemic. It includes those actions that the local public health department would take to save lives and to protect the health of those in Missoula County and the City of Missoula. This plan concentrates on operations involving duties that are statutorily mandated to MCCHD and the Missoula County Health Officer (Appendix 6.2). It recognizes the responsibilities and respects the autonomy of other health jurisdictions and response agencies at the following levels: local, state, tribal, federal, and international.

This plan provides for the coordination of activities among MCCHD staff, healthcare providers, healthcare facilities, non-profit organizations, private businesses, Montana Department of Public Health and Human Services (DPHHS), State DES, and local DES.

The Concept of Operations in the MCCHD Pandemic Influenza Plan is consistent with the National Incident Management System (NIMS), National Response Framework (NRF), and the World Health Organization (WHO) Pandemic Classification System's public health preparedness and response goals.

On November 9, 2004 the Governor of the State of Montana signed Executive Order #17-04 which formally recognized and adopted NIMS as the state's official disaster and emergency management model. The Missoula Board of County Commissioners adopted NIMS as the official incident management system to be used in Missoula County (Resolution 2004-130; December 22, 2004).

### **4.2 Pandemic Classification Systems: WHO, MCCHD, and CDC**

The MCCHD Pandemic Influenza plan aligns command & control, organizational structure, and preparedness and response actions with World Health Organization (WHO) periods and phases and CDC Pandemic Intervals (Table 4). WHO's Pandemic Classification System defines three periods (Interpandemic, Alert, and Pandemic) subdivided into phases. CDC defines 6 intervals: Investigation, Recognition, Initiation, Acceleration, Deceleration, and Preparation. MCCHD aligns these two classifications systems on Table 4 with four MCCHD Pandemic Periods: Interpandemic, Alert, Disease, and Recovery.

**Table 4 MCCHD Periods, World Health Organization (WHO) Pandemic Phases, and CDC Intervals**

<b>MCCHD Periods</b>	<b>WHO Pandemic Periods and Phases</b>	<b>CDC Intervals</b>
<p><b>Interpandemic Period</b></p> <p>Awareness that new virus subtypes emerge periodically in animals and may sometimes infect humans.</p> <p>Awareness that new virus subtypes may become adapted to humans and be transmitted globally causing wide spread disease.</p> <p>Awareness that a new virus subtype may originate anywhere in the world</p>	<p><b>Interpandemic Period</b></p> <p><b>Phase 1</b> – No new influenza virus subtypes detected in humans. An influenza virus subtype that has caused human infection may be present in animals. If present in animals, the risk of human infection or disease is considered low.</p> <p><b>Phase 2</b> - No new influenza virus subtypes detected in humans. However, a circulating animal influenza virus subtype poses substantial risk of human disease.</p> <p><b>Phase 3</b> – Human infection(s) are occurring with a new subtype, but no human to human spread or at most rare instances of spread to a close contact.</p> <p><b>Alert Period</b></p> <p><b>Phase 4</b> – Small cluster(s) of human infection with limited human-to-human transmission but spread is highly localized suggesting the virus is not well adapted to humans.</p>	<p><b>Investigation</b></p>
<p><b>Alert Period</b></p> <p>Awareness of human-to-human transmission of a novel influenza virus with substantial pandemic risk somewhere else in the world</p>	<p><b>Alert Period</b></p> <p><b>Phase 5</b> – Larger cluster(s) of human infection but <b>human-to-human spread is localized</b> suggesting that the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk).</p>	<p><b>Recognition</b></p>
<p><b>Disease Period</b></p> <p>Confirmed cases of the disease are present in the community/region. People have been exposed and infected. Pandemic severity will determine specific response protocols.</p>	<p><b>Alert Period</b></p> <p><b>Phase 4/5</b> - when disease in community/region</p> <p><b>Pandemic Period</b></p> <p><b>Phase 6</b> – Pandemic is declared. Increased and sustained transmission in the general population.</p>	<p><b>Initiation</b></p> <p><b>Acceleration</b></p> <p><b>Declaration of a pandemic</b></p>
<p><b>Recovery Period</b></p> <p>Recovery begins after the number of cases has peaked and a sustained decrease in new cases is identified. The concern at this phase is to minimize the possibility of a second peak, by carefully managing infection control measures, social distancing and immunization as vaccines</p>	<p><b>Transition</b></p>	<p><b>Preparation</b></p>

### 4.3 MCCHD Pandemic Preparedness and Response Actions

WHO phases are linked to recommended public health goals, providing guidance for appropriate preparedness and response actions. Table 5 aligns MCCHD actions with the corresponding public health goals defined by WHO.

**Table 5 MCCHD Preparedness and Response Actions by Pandemic Period**

MCCHD Pandemic Periods	MCCHD Preparedness and Response Actions	WHO Public Health Goals
<p><b>Interpandemic Period</b> Awareness that new virus subtypes emerge periodically in animals and may sometimes infect humans.</p> <p>Awareness that new virus subtypes may become adapted to humans and be transmitted globally</p> <p>Awareness that a new virus subtype may originate somewhere in the world</p>	<p><b>Interpandemic Period Actions</b></p> <ul style="list-style-type: none"> <li>▪ Strengthen pandemic preparedness</li> <li>▪ Coordinate planning with healthcare system partners</li> <li>▪ Monitor Health Alert Network</li> <li>▪ Prepare and distribute HAN messages for Missoula County</li> <li>▪ Maintain passive surveillance including receipt and follow-up on lab and physician reports</li> <li>▪ Monitor school absenteeism</li> <li>▪ Maintain 24/7 Infectious Disease Team to interview patients with reportable diseases and ID contacts</li> </ul>	<p><b>Interpandemic Period (Phase 1, 2, 3)</b></p> <ul style="list-style-type: none"> <li>▪ Strengthen influenza pandemic preparedness at all levels.</li> <li>▪ Minimize the risk of transmission to humans. Detect and report such transmission rapidly if it occurs.</li> <li>▪ Ensure rapid characterization of the new virus subtype and early detection, notification, and response to additional cases</li> </ul> <p><b>Alert Period (Phase 4)</b></p> <ul style="list-style-type: none"> <li>▪ Contain the new virus within limited foci or delay spread to gain time to implement preparedness measures, including vaccine development.</li> </ul>
<p><b>Alert Period</b> Awareness of human-to-human transmission of a novel influenza virus with substantial pandemic risk. May be outside the US with potential to enter via travelers.</p> <p><i>Specific actions taken by MCCHD will depend on virulence, number of cases, geographic location, etc.</i></p>	<p><b>Alert Period Actions</b></p> <ul style="list-style-type: none"> <li>▪ Implement Public Education and Risk Communication Plan</li> <li>▪ Department may shift day-to-day operations</li> <li>▪ May activate Health Department Incident Management Team</li> <li>▪ Enhance Surveillance activities</li> <li>▪ May Prepare resource shortage plans</li> <li>▪ May Prepare for mass vaccination</li> <li>▪ May Implement just-in-time training</li> <li>▪ Review COOP Plan to identify potential staff available for emergency response</li> </ul>	<p><b>Alert Period (Phase 5)</b></p> <ul style="list-style-type: none"> <li>▪ Maximize efforts to contain or delay spread to possibly avert a pandemic and to gain time to implement response measures</li> </ul>
<p><b>Disease Period</b> Confirmed cases of the disease are present in community/region. People have been exposed and infected.</p> <p><i>Specific actions taken by</i></p>	<p><b>Disease Period Actions</b></p> <ul style="list-style-type: none"> <li>▪ These actions will be implemented as needed.</li> <li>▪ May continue actions from Alert.</li> <li>▪ Hold just-in-time trainings and exercises as needed.</li> <li>▪ Increase communications with community partners.</li> </ul>	<p><b>Alert Period (Phase 4,5)</b> (if in community/region)</p> <ul style="list-style-type: none"> <li>▪ Contain the new virus within limited foci or delay spread to gain time to implement preparedness measures, including vaccine development.</li> <li>▪ Maximize efforts to contain or</li> </ul>

<b>MCCHD Pandemic Periods</b>	<b>MCCHD Preparedness and Response Actions</b>	<b>WHO Public Health Goals</b>
<p><i>MCCHD will depend on virulence, number of cases, geographic location, etc</i></p>	<ul style="list-style-type: none"> <li>▪ Consider monitoring, quarantine, and isolation options.</li> <li>▪ Consider infection control, social distancing, and other NPI measures</li> <li>▪ Open mass vaccination clinics, if vaccine available to reduce number susceptible among high risk groups</li> <li>▪ Implement resource shortage plans (personnel, supplies, equip.)</li> <li>▪ Establish home care program (TBD)</li> <li>▪ Implement pandemic community triage and call screening (TBD)</li> </ul>	<p>delay spread to possibly avert a pandemic and to gain time to implement response measures</p> <p><b>Pandemic Period (Phase 6) Sustained Response</b></p> <ul style="list-style-type: none"> <li>▪ Minimize the impacts of the pandemic.</li> </ul>
<p><b>Recovery Period</b> Recovery begins after the number of cases has peaked and a sustained decrease in new cases is identified</p> <p>The Recovery Phase will end when a majority of the population has been exposed or vaccinated, disease transmission is back to pre-incident levels, and MCCHD operations have been normalized.</p>	<p><b>Recovery Period</b></p> <ul style="list-style-type: none"> <li>▪ Minimize possibility of 2<sup>nd</sup> peak by carefully managing infection control measures, social distancing, and immunizations</li> <li>▪ Restock emergency supplies</li> <li>▪ Normalize department operations</li> <li>▪ Complete After Action Report</li> </ul>	

### 4.3.1 Response Actions Common to All Infectious Disease Response

Many response actions to an influenza pandemic are identical to the steps taken to identify, investigate, and mitigate any communicable disease outbreak. Table 6 identifies where to find guidance for routine MCCHD infectious disease response actions in functional annexes to the MCCHD EOP.

**Table 6 MCCHD Response Actions Common to Any Communicable Disease Outbreak**

Action	MCCHD Functional Annex
Establish a local response, coordination and decision making framework incorporating MCCHD, Missoula Office of Emergency Management, the health care system in Missoula County, City-County agencies and private entities.	MCCHD EOP - Basic Plan
Provide accurate and timely information to the general population on how to stay well, when to seek help and where to go for assistance	Annex F3 - Risk Communication
Identify increases in Influenza Like Illness (ILI), complications of influenza, and increases in death due to pneumonia or influenza	Annex F4-Public Health Surveillance & Epidemiology
Set-up a coordinated surveillance system to identify, profile, and track people exposed and infected by a pandemic virus	
Continually monitor the course and characteristics of an influenza pandemic and promptly revise control strategies as needed.	
Provide vaccination and antiviral treatment to those most in need according to the availability of resources	Annex F-6 Emergency Medical Countermeasures, including Vaccine

### 4.3.2 Non-Pharmaceutical Interventions

The CDC has identified non-pharmaceutical interventions aligned to the Pandemic Severity Index (Table 1) that may be implemented to slow or prevent the transmission of influenza and the development of secondary complications. These actions are shown on Table 7.

**Table 7 Non-Pharmaceutical Interventions by Pandemic Severity Index Rating**

Interventions by Setting	Pandemic Severity Index		
	1	2 and 3	4 and 5
<b>Home</b> Voluntary isolation of ill at home (adults and children); combine with use of antiviral treatment as available and indicated	Recommend <sup>2,3</sup>	Recommend <sup>2,3</sup>	Recommend <sup>2,3</sup>
Voluntary quarantine of household members in homes with ill persons <sup>4</sup> (adults and children); consider combining with antiviral prophylaxis if effective, feasible, and quantities sufficient	Generally not recommended	Consider <sup>5</sup>	Recommend <sup>6</sup>
<b>School</b> <b>Child social distancing</b> -dismissal of students from schools and school-based activities, and closure of childcare programs -reduce out-of-school social contacts and community mixing	Generally not recommended	Consider: ≤4 weeks <sup>6</sup>	Recommend: ≤12 weeks <sup>7</sup>
<b>Workplace / Community</b> <b>Adult social distancing</b> -decrease number of social contacts (e.g., encourage teleconferences, alternatives to face-to-face meetings) -increase distance between persons (e.g., reduce density in public transit) -modify or cancel selected public gatherings to promote social distance (e.g., postpone indoor stadium events) -modify work place schedules and practices (e.g., telework, staggered shifts)	Generally not recommended	Consider	Recommend
	Generally not recommended	Consider	Recommend
	Generally not recommended	Consider	Recommend
	Generally not recommended	Consider	Recommend



**Non-Pharmaceutical Public Health Interventions (2)**

Human surveillance	Community Restrictions	Patient Management	Contact Management
<b>Case reporting</b> ↳ Early rapid viral diagnosis <b>Infection Control</b> ↳ Disinfection ↳ Hand hygiene ↳ Respiratory etiquette ↳ Surgical and N95 Masks ↳ Other personal protective equipment 1	↳ School closures ↳ Workplace closures ↳ Cancellation of group events ↳ International and domestic travel restrictions 4	↳ Isolation of sick individuals ↳ Provision of social support services to the isolated	↳ Quarantine 2 ↳ Voluntary sheltering 3 ↳ Contact tracing

- 1 Gowns, gloves and protective eye covers
- 2 Separating exposed individuals from others
- 3 Voluntary sequestration of healthy persons to avoid exposure
- 4 Exit and entry screening, travel advisories

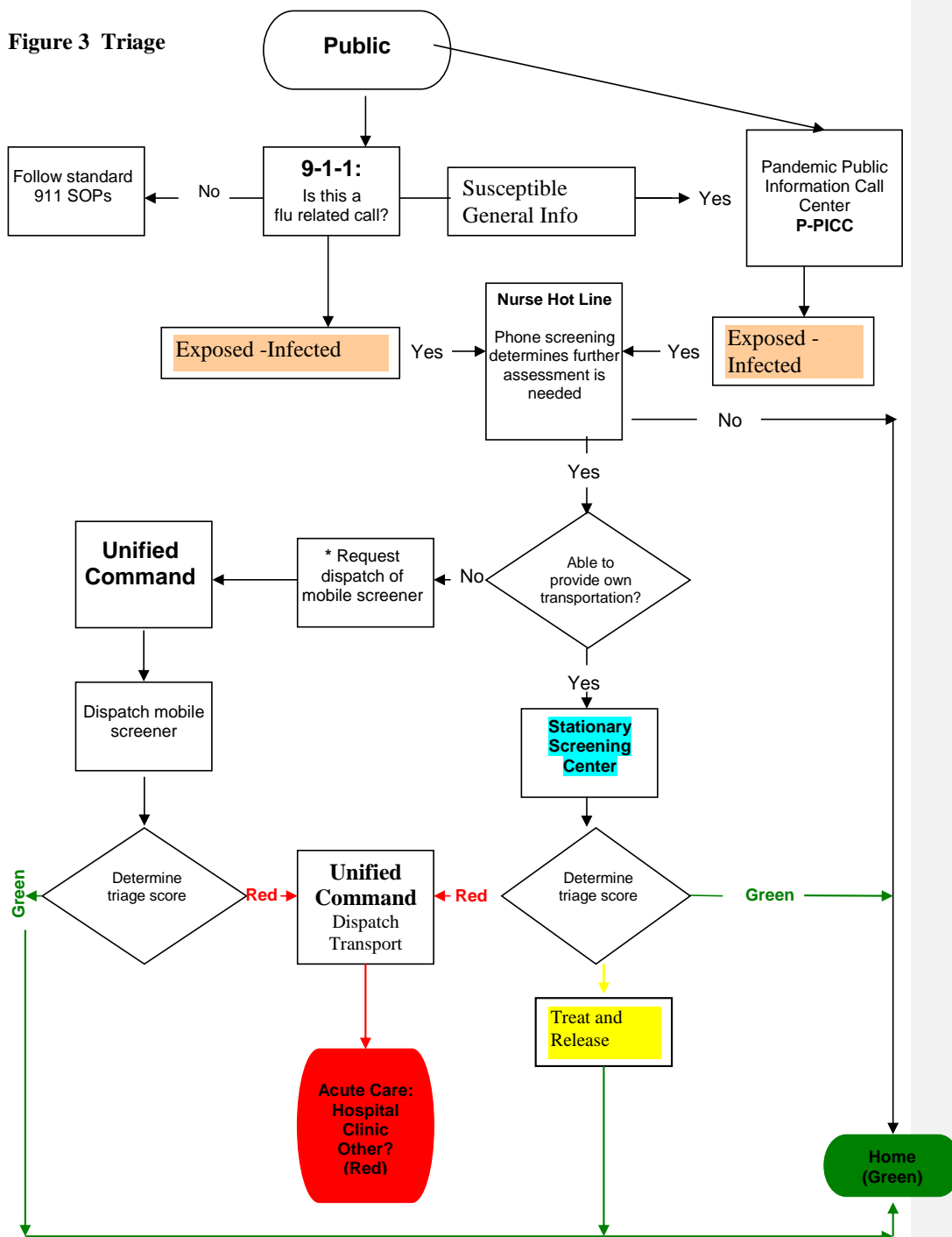
**4.3.3 Medical Surge**

Should a severe communicable disease outbreak or pandemic be identified in Missoula County, there will likely be a surge of people needing medical treatment. While Missoula County has two hospitals, the day to day census is typically close to the available bed count and staffing needed to provide patient care. In the event of a pandemic, a number of actions have been suggested that need additional work to be actionable. These actions include:

- Establishing a home care program to ensure people have sufficient resources (food, medication if available, and assistance) to recover from the influenza in a home environment.
- Re-scheduling/canceling elective surgery and shifting staffing and other resources to the care of those with influenza
- Coordinating between home health care programs and hospital discharge to ensure patients that have been discharged early have appropriate care.
- Identifying how, when and by whom alternate standards of care would be implemented within the county to enable fewer staff to care for additional patients.

- Set-up a Missoula County pre-hospital triage system (Figure 3) that:
  - Provides a common, coordinated approach to screen the sick by telephone for use by medical call centers, clinicians offices, and other healthcare facilities
  - Establishes a pre-hospital triage center(s) to augment hospital capacity by providing in-person screening of the sick to manage the flow of influenza patients into emergency departments
  - Supports the hospitals in operating at an overflow surge capacity by establishing a Home Care program to help the sick remain and recuperate at home

Figure 3 Triage



\* Flu requests to 9-1-1 EMD shall NOT require additional EMD questions or contact with the patient.

#### 4.4 Direction and Control

The Director General of WHO has the authority to formally declare a global pandemic phase and adjust the phase level (Table 4) to correspond to pandemic conditions around the world. For each phase the Global Influenza Preparedness Plan identifies response measures that WHO will take and recommends goals that countries around the world should use to develop preparedness and response actions (Table 5).

Based on information from WHO and from US State and Local Health Departments, the Secretary of the US Department of Health and Human Services determines the need to declare a US Public Health Emergency.

The Missoula County Health Officer or designated authority:

- Reviews international, national, and state guidance and local situation reports in consultation with State Officials, the Health Department Emergency Management Team, and the Health Emergency Advisory Team (HEAT) to determine appropriate response actions. Figure 4 shows an example of what the initial MCCHD Incident Management Team might look like.
- Determines the need to declare a local Public Health Emergency and in consultation with the Disaster Emergency Services Coordinator prepares an Emergency Declaration for the consideration of the Board of County Commissioners and the Mayor of Missoula.
- May decide to activate the Health Department Command Center (HDCC) to coordinate department response actions during the MCCHD Alert and/or Disease Phase (Figure 5).
- May determine Unified Command is necessary to coordinate health and medical response actions among public and private agencies within Missoula County and request the implementation assistance of the DES Coordinator
- Provides regular briefings to the Missoula County Commissioners, the Mayor of Missoula, and other local elected officials. Briefings will address the nature of the disease, its communicability and virulence, availability of vaccines and antivirals, actions that are being taken to minimize the impact, and health information being shared with the public and health care providers.
- Missoula City-County officials may activate the County EOC during the MCCHD Disease Phase to coordinate consequence response and assist in the implementation of a Unified Health Command.
  - MCCHD will provide staff to the Missoula County EOC ESF 8 – Public Health and Medical Services sections as needed.
- During the MCCHD Interpandemic Period (WHO Phases 1, 2, 3,4), MCCHD will lead countywide preparedness and education efforts for pandemic influenza.
- During the MCCHD Alert Phase (WHO Phase 5), MCCHD will:
  - Communicate with DES and health system partners through HEAT
  - Coordinate and manage health care system resources and information.
  - Assess the viability of community containment options and establish criteria for recommending their implementation to local elected officials

- Implement active surveillance for early detection leading to notification, and response to novel influenza virus subtype
- Facilitate rapid characterization of new influenza subtype within Missoula County.
- During the MCCHD Disease Phase (corresponding to WHO Alert Period, Phase 4/5 if disease in community/region or WHO Pandemic Period, Phase 6), MCCHD will:
  - Implement actions to contain the new virus within limited foci or delay spread to gain time to implement response measures, including preparation for vaccine administration and distribution.
  - Maximize efforts to contain or delay spread to gain time to implement response measures
  - Minimize the impacts of disease on community/region.
- During the MCCHD Recovery Phase, MCCHD will:
  - Normalize health department operations

Figure 4. MCCHD Pandemic Alert Period – Initial Incident Management Team

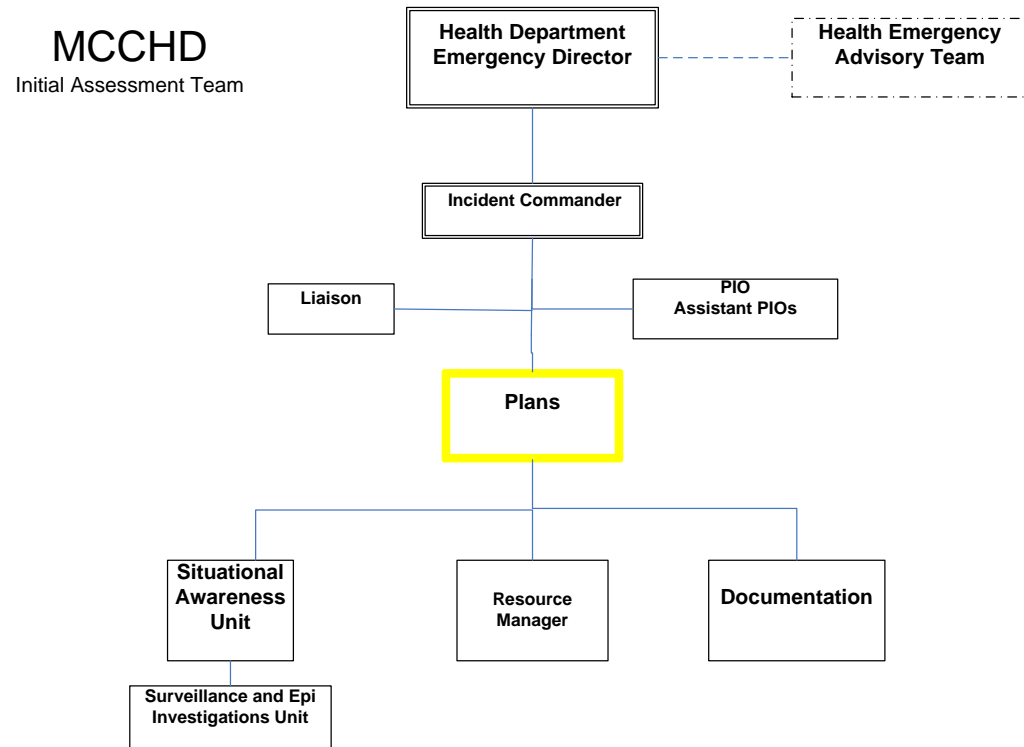
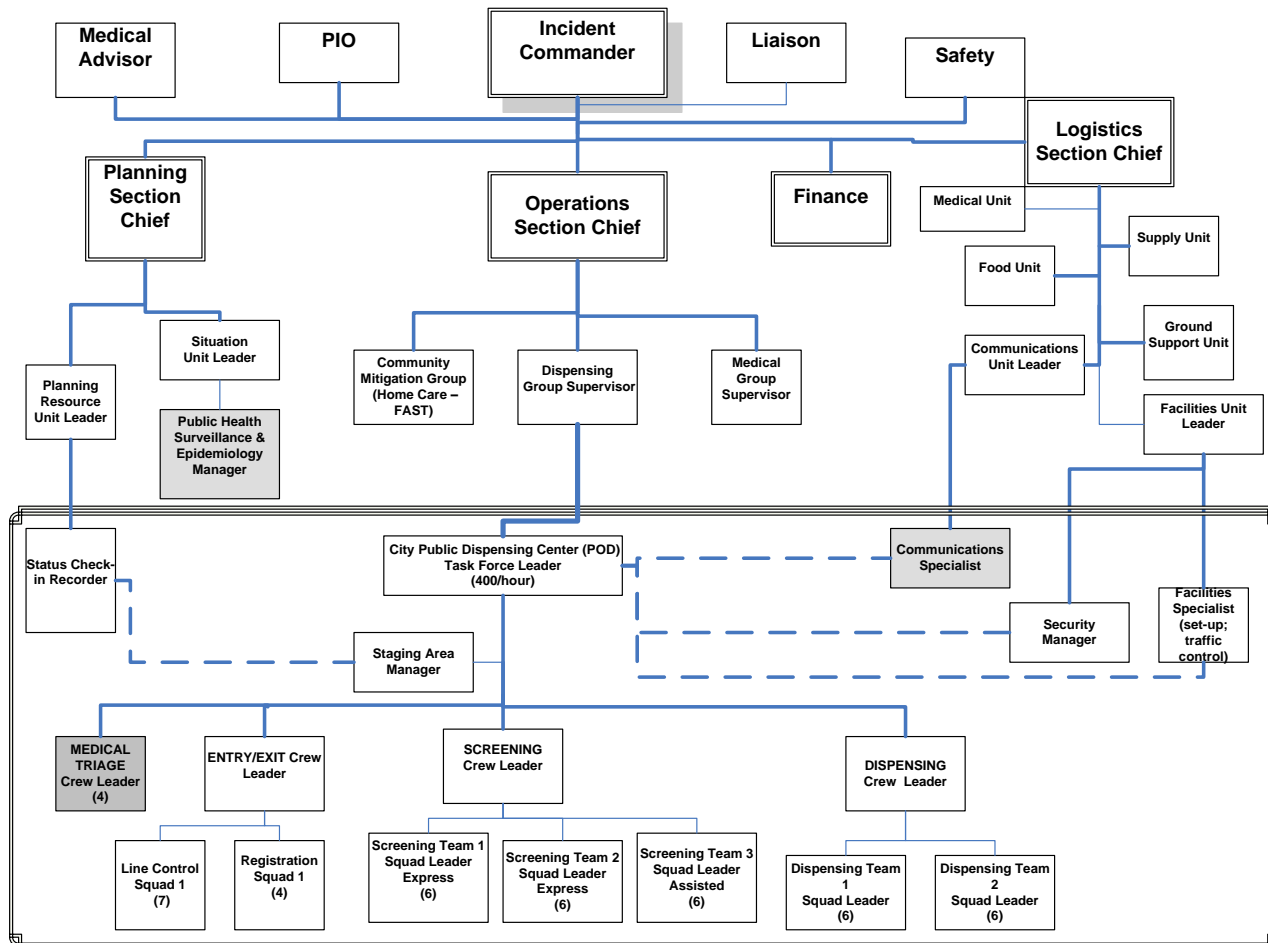
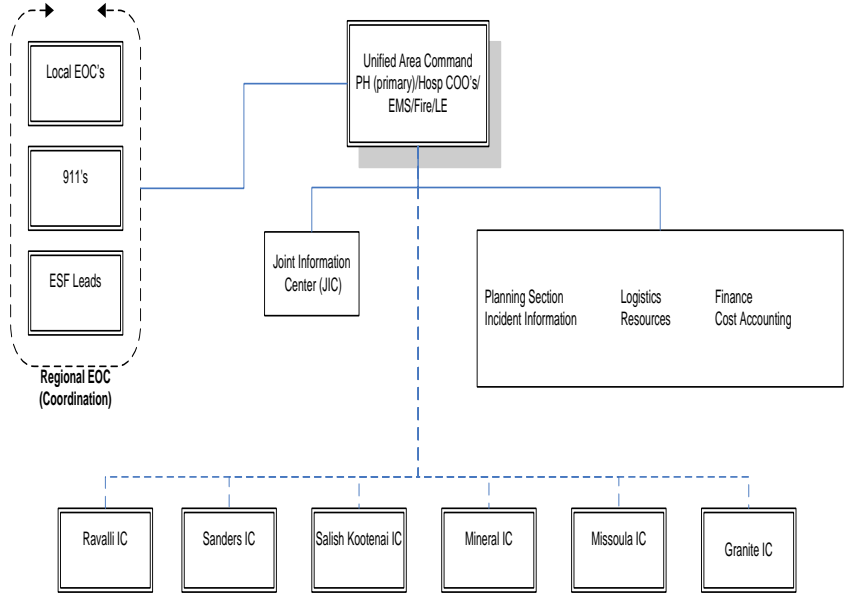


Figure 5 MCCHD Disease Phase – Health Department Command Center –Dispensing Operations



**Figure 6. MCCHD Disease Period – Proposed Unified Area Command (Regional)**



**Comment [LN1]:** Proposed by HEAT Command Structure Work Team. NOT DEVELOPED



## **5.0 Plan Management and Maintenance**

### **Training**

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

All Health Department staff will complete IS-100 to provide familiarity with the Incident Command System and the National Incident Management System. Staff working 20 hours or more will complete IS-100, IS-200, and IS-700. Managers and supervisors will complete IS-100, IS-200, IS-300 and IS-400 to provide guidance on implementing, staffing and managing an emergency management organization.

### **Plan Maintenance**

The Health Promotion Director and Emergency Preparedness Coordinator are responsible for the further development and maintenance of this plan and the appropriate supporting SOPs as referenced here and set forth in the MCCHD Emergency Operation Plan.

The Public Health Preparedness Management Team will ensure an annual review of this plan is conducted by all health department staff involved in its execution. The Health Promotion Director and Emergency Preparedness Coordinator will coordinate this review and any plan revision and distribution found necessary.

### **Exercises**

The plan will be tested at least once a year in the form of an exercise (seminar, workshop, drill, functional, or full-scale) in order to provide practical, controlled experience to those tasked within the plan. The Emergency Preparedness Coordinator will complete an After Action Report that includes a corrective action plan.

## 6.0 Appendices

### 6.1 Glossary

**Attack rate, or case rate**, is a proportion measuring cumulative incidence often used for particular groups, observed for limited periods and under special circumstances, as in an epidemic; it is usually expressed as percent (cases per 100 in the group). The **secondary attack rate** is the number of cases among familial or institutional contacts occurring within the accepted incubation period following exposure to a primary case, in relation to the total of exposed contacts; the denominator may be restricted to susceptible contacts when determinable. (See Incidence Rate)

**Avian Influenza** A viral illness of birds caused by an influenza virus strain which is adapted to birds and, thus, spreads readily among birds but not humans. Avian influenza strains can be of high pathogenicity or low pathogenicity

**Bird Flu** (See avian influenza)

**Case-fatality rate**—Usually expressed as the percentage of persons diagnosed as having a specified disease who die as a result of that illness within a given period. This term is most frequently applied to a specific outbreak of acute disease in which all patients have been followed for an adequate period of time to include all attributable deaths. The case-fatality rate must be clearly differentiated from the mortality rate (q.v.). (Synonyms: fatality rate, fatality percent-age, case-fatality ratio)

**Command Staff** The incident management staff consisting of the Incident Command and the special staff positions of Public Information Officer, Safety Officer, Liaison Officer, and other positions as required, who report directly to the Incident Commander

**Comorbidity** is the presence of one or more additional disorders (or diseases) **co**-occurring with a primary disease or disorder; or the effect of such additional disorders or diseases. The additional disorder may also be a behavioral or mental disorder

**Epidemic**—The occurrence in a community or region of cases of an illness (or an outbreak) with a frequency clearly in excess of normal expectancy. The number of cases indicating presence of an epidemic will vary according to the infectious agent, size and type of population exposed, previous experience or lack of exposure to the disease, and time and place of occurrence; epidemicity is thus relative to usual frequency of the disease in the same area, among the specified population, at the same season of the year. A single case of a communicable disease long absent from a population or the first invasion by a disease not previously recognized in that area requires immediate reporting and epidemiologic investigation; two cases of such a disease associated in time and place are sufficient evidence of transmission to be considered an epidemic.

**General Staff** A group of incident management personnel organized according to function and reporting to the Incident Commander

**Health Alert Network** An internet-based computer application to communicate health and emergency information among health colleagues

**HSPD-5** Homeland Security Presidential Directive-5 which specifies that the U.S. Department of Homeland Security is the lead federal agency in charge of preparedness and response to national disaster and emergencies

**Incident Command System** A standardized emergency management construct specifically designed to provide for the adoption of an integrated organizational structure that reflects the complexity and demands of single or multiple incidents without being hindered by jurisdictional boundaries

**Incident Commander** The individual responsible for all incident activities, including the development of strategies and tactics and the ordering and the release of resources

**Incidence rate**—The number of new health-related events or cases of a disease in a population exposed to that risk during a particular period of time, divided by the total number in that same population.

The number of new cases of a specified disease diagnosed or reported during a defined period of time, divided by the number of persons in a stated population in which the cases occurred. This is usually expressed as cases per 1,000 or 100,000 per annum. This rate may be expressed as age- or gender-specific or as specific for any other population characteristic or subdivision. (See *Morbidity rate* and *Prevalence rate*.) **Attack rate**, or **case rate**, is a proportion measuring cumulative incidence often used for particular groups, observed for limited periods and under special circumstances, as in an epidemic; it is usually expressed as percent (cases per 100 in the group). The **secondary attack rate** is the number of cases among familial or institutional contacts occurring within the accepted incubation period following exposure to a primary case, in relation to the total of exposed contacts; the denominator may be restricted to susceptible contacts when determinable. **Infection rate** is a proportion that expresses the incidence of all identified infections, manifest and unapparent.

**Incubation Period** The interval of time between the infection of an individual by a pathogen and the appearance of disease symptoms resulting from the infection

**Influenza** A clinical condition characterized in humans by high fever, headache, chills, muscle aches, cough, sore throat and fatigue

**Influenza-Like Illness** The presentation in humans of fever > 100° F, with a cough or sore throat

**Isolation** The separation of people who are ill with a communicable disease from those who are healthy

**Morbidity rate**—An incidence rate (q.v.) used to include all persons in the population under consideration who become clinically ill during the period of time stated. The population may be limited to a specific gender or age group, or to those with certain other characteristics.

**Mortality rate**—The number of deaths in a population divided by the total population. A rate calculated in the same way as an incidence rate (q.v.), by dividing the number of deaths occurring in the population during the stated period of time, usually a year, by the number of persons at risk of dying during the period. A total or crude mortality rate utilizes deaths from all causes, usually expressed as deaths per 1,000. A disease-specific mortality rate covers deaths due to only one disease and is often reported on the basis of 100,000 persons. The population base may be defined by gender, age or other characteristics. The mortality rate must not be confused with case-fatality rate (q.v.). (Synonym: death rate)

**National Incident Management System** A system mandated by HPSD-5 that provides a consistent nationwide approach for Federal, State, local and tribal governments, the private Sector and nongovernmental organizations to work effectively and efficiently together to prepare for, respond to, and recover from domestic incidents, regardless of cause, size or complexity

**National Response Plan** A plan mandated by HSPD-5 that integrates federal domestic prevention, preparedness, response and recovery plans into one all-discipline, all-hazards plan

**Pandemic Influenza** A global outbreak of influenza that results from the emergence of a novel influenza strain that causes serious human disease and spreads readily among people due to the absence of herd immunity

**Prevalence rate**—The number of new and old cases of a disease in a population in a given period of time, divided by the total number in that population.

The total number of persons sick or portraying a certain condition in a stated population at a particular time (point prevalence), or during a stated period of time (period prevalence), regardless of when that illness or condition began, divided by the population at risk of having the disease or condition at the point in time or midway through the period in which they occurred.

**Quarantine** The physical separation or restriction of activities of people who are not ill with a particular disease, but are likely to have been exposed to the disease

**Rate** =  $\frac{\text{number of cases occurring during a given time period}}{\text{population at risk during the same time period}} \times 10^n$

**Surveillance** The collection, analysis and dissemination of health and disease data

## 6.2 - Authorities (replace with Authorities from the Ebola Response Plan?)

**Table A1-1. Federal, State, and Local Authorities**

### Federal

Agency	Citation	Authority
Department of Homeland Security (DHS)	Homeland Security Presidential Directive (HSPD) 5 (Feb. 28, 2003)	Mandates the adoption of the National Incident Management System (NIMS) to provide a consistent, nationwide template for standardized command and management structures to guide preparedness, response, and recovery actions.
DHS	HSPD 21 (Oct 18, 2007)	Establishes a “National Strategy for Public Health and Medical Preparedness.” HSPD 21 defines the four most critical preparedness components of public health and medical preparedness as bio-surveillance, countermeasure distribution, mass casualty care, and community resilience.
Federal Emergency Management Agency (FEMA)	Public Law 93-288, The Robert T. Stafford Disaster Relief Act as amended	Provides the authority for the Federal government to respond to disasters and emergencies in order to provide assistance to save lives and protect public health, safety, and property.
Occupational Safety and Health (OSHA)	29 Code of Federal Regulations (CFR) 1910 subpart 1 Personal Protective Equipment	PPE... shall be provided, used, and maintained in a sanitary and reliable condition wherever it is necessary by reason of hazards ... of environment (...), capable of causing injury or impairment (...) through absorption, inhalation or physical contact.  The employer shall assess the workplace to determine if hazards are present, or are likely to be present, which necessitate the use of PPE.

### Montana State and Local. Statutory Authorities

Agency	Citation	Authority
Montana Department of Military Affairs (DMA)	MCA 10-1-102	Power & duty of DMA to coordinate and supervise state disaster control activities
DMA	MCA 10-1-106	Proclamation of martial law
DMA	MCA 10-1-702	Montana home guard ruled by the Governor
DMA	MCA 10-3-103	Disaster definition amended in 2009 to include “outbreak of disease” ”
DMA	MCA 10-3-104(2)(a)	Authorizes governor to suspend laws that would hinder the response to a disaster or emergency
DMA	MCA 10-3-104(2)(b)	Authorizes governor to direct the evacuation of populations from an emergency or disaster area
DMA	MCA-10-3-104(3)	Under this section, the governor may issue executive orders, proclamations, and regulations and amend and rescind them. All executive orders or proclamations declaring or terminating a state of emergency or disaster must indicate the nature of the emergency or disaster, the area threatened, and the conditions that have brought about the declaration or that make possible termination of the state of emergency or disaster.
DMA	MCA 10-3-105(2)	Establishes Disaster and Emergency Services (DES) and its responsibility for disaster and emergency services of the state

Agency	Citation	Authority
DMA	MCA 10-3-111	Personnel immune from liability during an incident disaster or emergency; including licensed and registered out-of-state volunteer professionals
DMA	MCA 10-3-201	Establishes local agency responsible for emergency and disaster preparedness and response
DMA	MCA 10-3-204	Establishes interstate mutual aid compacts
DMA	MCA 10-3-302	Governor's declaration of state of emergency
DMA	MCA 10-3-305	Governor as commander-in-chief during emergencies
DMA	MCA 10-3-313	Authorizes state to purchase or lease temporary housing units for disaster or emergency victims
DMA	MCA-10-3-505	In the event of enemy attack, the governor has extraordinary powers for management and allocation of resources. Involves legislature and judicial review.
DMA	MCA 10-3-901	The "Statewide Mutual Aid System Act"
DMA	MCA 10-3-1001	Emergency Management Assistance Compact
	MCA 50-1-103	Enforcement of Public Health Laws. Either the county attorney of a county where a cause of action arises or the department may bring an action necessary to abate, restrain, or prosecute the violation of public health laws. (2) Except as otherwise provided in the public health laws administered by the department, the department may, through the attorney general or appropriate county attorney, sue in district court to enjoin any violation of the public health laws, rules, or orders adopted or issued under the public health laws administered by the department
Department Public Health & Human Services (DPHHS0)	MCA 50-1-202(1)	Authorizes DPHHS to receive disease reports
DPHHS	MCA 50-1-202(2)	Mandates DPHHS to control diseases (2) The department: (a) has the power to use personnel of local public health agencies to assist in the administration of laws relating to public health services and functions; and
DPHHS	MCA 50-1-202(18)	Grants DPHHS disease control rule-making authority
DPHHS	MCA 50-1-204	Authorizes DPHHS to adopt and enforce quarantine and isolation measures in order to control diseases
Local Government (LC)	MCA 7-1-2101	Missoula County is a general powers county. The Montana Constitution says the powers of general powers counties shall be liberally construed. (Art. XI, § 4). In an emergency, Missoula County has a duty to maintain order and to protect the public health, safety and welfare of the public.
Local Health Jurisdictions (LHJ's )	MCA 50-2-116	Powers and Duties of Local Health Board
LHJ's	MCA 50-2-116(1)(g)	Authorizes local health boards to protect the public from the introduction and spread of communicable disease or other conditions of public health importance
LHJ's	MCA 50-2-116(1)(i)	Authorizes local health boards to bring and pursue actions and issue orders necessary to abate, restrain, or prosecute the violation of public health laws, rules, and local regulations
	MCA-50-2-116 (2)(c)	Local boards of health may adopt regulations that do not conflict with rules adopted by the department: (i) for the control of communicable diseases:

Agency	Citation	Authority
		(vi) to implement the public health laws;
LHJ's	MCA 50-2-118(1)	Local health officer shall make inspections for conditions of public health importance and issue written orders for compliance or for correction, destruction, or removal of the condition
LHJ's	MCA 50-2-118(2)	Local health officer shall take steps to limit contact between people in order to protect the public health from imminent threats, including but not limited to ordering the closure of buildings or facilities where people congregate and canceling events;
LHJ's	MCA 50-2-118(3)	Local health officer shall report communicable diseases to the department as required by rule
LHJ's	MCA 50-2-118(4)	Local health officer shall establish and maintain quarantine and isolation measures as adopted by the local board of health;
LHJ	MCA 50-2-118(5)	Local health officer shall pursue action with the appropriate court if this chapter or rules adopted by the local board or department under this chapter are violated
LHJ's	MCA 50-2-120	Provides for assistance from law enforcement
LHJ's	MCA 50-2-122	Unlawful to obstruct a local health officer in the performance of duties by hindering the performance of duties; removing or defacing any placard or notice; or by violating a quarantine
LHJ's	MCA-50-2-123	Authorizes the health officer to initiate an action to obtain compliance with a written order of the local health officer and to obtain expenses from a person who fails to comply.

### Missoula County Authorities

Agency	Citation	Authority
Disaster and Emergency Services Office	Missoula County Disaster Plan (Section 1.10, Page A-19, 20)	Specifies policies for the use of certain extraordinary powers by the Incident Commander. Identifies when and how extraordinary powers can be used. The listed extraordinary powers include evacuation, closure of roads, buildings and public places, restricting access, removal of debris and entry onto private property.  The Missoula County Disaster Plan does not set out explicit provisions for requisitioning of private goods and does not provide a process for doing so.
MCCHD	Quarantine and Isolation Policy adopted by the Health Board January 15, 2004	Establishes a process for the local health officer to use, upon receiving a report of a communicable disease to determine the need for quarantine or isolation. Includes a process for requesting or ordering quarantine. May be voluntary or mandatory.
MCCHD	Communicable Disease Reporting Protocol adopted by the Health Board July 20, 2009	

## 7.0 References (incomplete)

This draft plan draws from several sources. Most of the general Introduction and some of the section Overviews have been excerpted verbatim from “Pandemic Influenza: A Planning Guide for State and Local Officials” (US DHHS, National Vaccine Program Office, August 2004). Other sources include “State and Local Health Department Guidance” (Annex 1 of the US DHHS *Pandemic Influenza Preparedness and Response Plan*, August 2004) and “State and Local Reference Points for Developing or Revising Pandemic Influenza Plans” (US DHHS, November 2004).

Montana State Plans (Disease, Pandemic Plans)

“Pandemic Influenza: A Planning Guide for State and Local Officials” (US DHHS, National Vaccine Program Office, August 2004).

“State and Local Health Department Guidance” (Annex 1 of the US DHHS *Pandemic Influenza Preparedness and Response Plan*, August 2004)

State and Local Reference Points for Developing or Revising Pandemic Influenza Plans” (US DHHS, November 2004).

Santa Clara, San Mateo, Seattle-King County – Pandemic Influenza Plans

<http://www.antimicrobe.org/v11.asp>

### **Influenza**

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